



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

Fiscal Year 1999 Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments



PB98-141534

Report of the Secretary of Transportation
to the United States Congress
Pursuant to 49 U.S.C. 5309(m)(3)



1998

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THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

May 1, 1998

The Honorable Alfonse M. D'Amato
Chairman, Committee on Banking,
Housing, and Urban Affairs
United States Senate
Washington, D.C. 20510-6075

Dear Mr. Chairman:

I am pleased to transmit to you a copy of the enclosed "Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments" in response to the requirements of 49 U.S.C. 5309(m)(3). As required by this section, the report makes recommendations on the allocation of funds for new fixed guideway systems and extensions for FY 1999.

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

Sincerely,

A handwritten signature in black ink, reading 'Rodney E. Slater', is positioned above the printed name.

Rodney E. Slater

Enclosure



THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

May 1, 1998

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 transmit to you a copy of the enclosed "Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments" in response to the requirements of 49 U.S.C. 5309(m)(3). As required by this section, the report makes recommendations on the allocation of funds for new fixed guideway systems and extensions for FY 1999.

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

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Rodney E. Slater

Enclosure



THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

May 1, 1998

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

Dear Mr. Chairman:

I am pleased to transmit to you a copy of the enclosed "Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments" in response to the requirements of 49 U.S.C. 5309(m)(3). As required by this section, the report makes recommendations on the allocation of funds for new fixed guideway systems and extensions for FY 1999.

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Rodney E. Slater

Enclosure



THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

May 1, 1998

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

Dear Congressman Oberstar:

I am pleased to transmit to you a copy of the enclosed "Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments" in response to the requirements of 49 U.S.C. 5309(m)(3). As required by this section, the report makes recommendations on the allocation of funds for new fixed guideway systems and extensions for FY 1999.

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

Sincerely,

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Rodney E. Slater

Enclosure

Fiscal Year 1999 Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments

Report of the Secretary of
Transportation to the
United States Congress

1998

Prepared by:
Federal Transit Administration

Pursuant to:
Title 49, United States Code, §5309(m)(3)

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

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

Cover photo courtesy of Santa Clara County Transit District (SCCTD)

Project maps produced by Federal Transit Administration staff, using Geographic Information System (GIS) technology.

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(m)(3) requires the Secretary of Transportation to submit to the Committee on Public Works and Transportation (now known as the Committee on Transportation and Infrastructure) of the House of Representatives, and the Committee on Banking, Housing, and Urban Affairs of the Senate, a proposal on the allocation of amounts to be made available to finance grants and loans for capital projects for new fixed guideway systems and extensions to existing fixed guideway systems (“new starts”) among applicants for those amounts. It is also formally submitted to the Appropriations Committees of both the House and Senate. It is provided to transit operators, metropolitan planning organizations (MPOs), State departments of transportation, and generally made available to the public at large.

This report is a companion document to the President’s annual budget request to Congress. It details the Administration’s recommendations for allocating discretionary new starts funding for Federal Fiscal Year 1999.

The report is organized into two sections: an Executive Summary, which provides an overview of the Administration’s funding recommendations and the mechanism behind them, and the body of the report detailing the specific funding recommendations by project and providing background information at both the project level and the FTA program level. In addition, the three appendices provide a detailed summary of each proposed project in the “pipeline” (including maps where available), a listing of Major Investment Study (MIS) activities where a transit alternative is under consideration, and a description of FTA’s revised evaluation criteria for determining project justification.

This report is available in alternative formats upon request. 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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Executive Summary

This report provides the U.S. Department of Transportation's recommendations to Congress for allocation of funds to be made available under 49 U.S.C. §5309 for construction of new fixed guideway systems and extensions (major capital investments or "new starts") for Fiscal Year 1999. The report is required by 49 U.S.C. §5309(m)(3).

The President's budget for FY 1999 proposes that \$876.11 million be made available for the §5309 major capital investment program. After setting aside a percentage of these funds for oversight activities as specified in §5327, \$869.54 million is available for project grants. This report recommends 14 projects for funding in FY 1999, all of which have existing Federal funding commitments in the form of Full Funding Grant Agreements (FFGA).

The Department historically has recommended that these funds be allocated to major capital investments in accordance with these principles:

- Any project recommended for new funding commitments should meet the project justification, finance, and process criteria established by §5309(e) and be consistent with Executive Order 12893, "Principles for Federal Infrastructure Investments," issued January 26, 1994.
- Existing FFGA commitments should be honored before any additional funding recommendations are made, to the extent that funds can be obligated for these projects in the coming fiscal year.
- The FFGA defines the terms of the Federal commitment to a specific project, including funding. Upon completion of an FFGA, the Federal funding commitment has been fulfilled. Additional project funding will not be recommended.
- Funding for initial planning efforts such as Major Investment Studies (MISs) is provided through §5303 Planning or §5307 Formula Grants programs; §5309 funds should not be used for this purpose.
- Firm funding commitments, embodied in FFGAs, should not be made until preliminary engineering is substantially complete since costs, benefits, and impacts are not accurately known until this level of engineering approaches completion.
- Funding should be provided to the most worthy projects to allow them to proceed through the process on a reasonable schedule, to the extent that funds can be obligated to such projects in the upcoming fiscal year. In establishing whether particular projects are "worthy," FTA considers the relative merits of each project under the statutory project justification criteria.

- Letters of Intent (LOI) (ultimately anticipating FFGAs) authorized by §5309(g) may be considered when a project has progressed to the point (generally through an MIS, at a minimum) that its justification and level of local financial commitment can be established with some certainty.

The \$876.11 million in major capital investment funds recommended for FY 1999 is sufficient to fully fund all active projects that are currently under FFGAs. As noted above, after accounting for oversight activities a total of \$869.54 million is available for project grants. This level of funding will fulfill the annual funding commitments specified in the FFGAs, and covers shortfalls in prior year appropriations. Specific recommendations for these funds are as follows:

- \$59.76 million (and \$37.10 million in future funds) to the North Line Extension project in Atlanta, under the December 20, 1994 FFGA for this project;
- \$88.46 million (and \$53.96 million in future funds) to Phase 1 of Boston's South Boston Piers Transitway project, under the FFGA issued for this project on November 5, 1994;
- \$47.24 million (and \$47.00 million in future funds) to the Southwest Corridor project in Denver, under the May 9, 1996 FFGA;
- \$68.97 million (and \$52.77 million in future funds) to the Houston Regional Bus plan, under the FFGA issued on December 30, 1994;
- \$100.00 million to the Los Angeles MOS-3 project, under the FFGA as restated and revised on June 9, 1997, to keep construction on the North Hollywood segment on schedule;
- \$17.62 million to the MARC extension to Frederick, Maryland, & System Improvements project, to complete the Federal commitment under the June 19, 1995 FFGA;
- \$74.19 million (and \$371.07 million in future funds) to the Hudson-Bergen light rail element of the Urban Core program of projects in northern New Jersey, under the October 15, 1996 FFGA;
- \$36.59 million to the Westside light rail extension to Hillsboro in Portland, to complete the Federal commitment under the November 1, 1996 FFGA for this project;
- \$24.13 million (and \$58.90 million in future funds) to the Sacramento South light rail extension, under the June 20, 1997 FFGA;
- \$70.00 million (and \$37.41 million in future funds) to the South LRT in Salt Lake City, under the August 2, 1995 FFGA;
- \$100.59 million (and \$535.68 million in future funds) to the extension of the BART system to San Francisco International Airport, under the June 30, 1997 FFGA for this project;

- \$38.67 million (and \$20.00 million in future funds) to the Tasman West LRT project in San Jose, under the July 2, 1996 FFGA;
- \$78.99 million (and \$200.00 million in future funds) to the San Juan Tren Urbano project, under the FFGA issued on March 13, 1996; and
- \$64.32 million (and \$110.00 million in future funds) to the St. Clair extension of the St. Louis Metrolink light rail system under the October 17, 1996 FFGA.

Two additional projects with FFGAs are not included in these recommendations because the Federal commitment has been fulfilled. These projects are Phase 1 of the Airport Busway in Pittsburgh, and the Secaucus Transfer in New Jersey. The scope of the Airport Busway has been revised, due to changes in local conditions, though the total amount of Federal funding remains the same. Funding for the Airport Busway was completed in FY 1998. Sufficient funding was also provided in the FY 1998 appropriation to complete funding for the Secaucus Transfer.

Table ES-1 summarizes the recommendations for FY 1999 funding and overall funding commitments. For each project recommended for funding, the first column indicates the amount of FY 1997 and prior year funds that have been obligated by each project, and the second column shows the amount which has not yet been obligated. The third column shows the amount of funds available as a result of the FY 1998 DOT Appropriations Act (adjusted to account for oversight activities). The fourth column summarizes the recommendations for funding in FY 1999, and the fifth column shows the maximum amount of \$5309 outyear funding recommended to be committed to these projects. The last column in Table ES-1 sums the first five columns and shows the total amount which would be made available for each project from \$5309 over the life of that project.

These recommendations are intended to bring greater focus to and improve the management of the New Starts/Major Capital Investments program. As demand increases for Federal major capital improvement funds for transit, the cost of completing all projects in the development process at any one time far exceeds the amount of Federal funds likely to be available. In addition to those projects to which Federal funds have already been committed, the new starts caseload consists of 34 proposed projects seeking discretionary Federal new starts funds, and more than 90 additional Major Investment Studies or other significant planning efforts that include consideration of a fixed guideway transit alternative.

The funding allocations recommended in this report provide for the timely and efficient completion of those projects which have received a Federal funding commitment and have made requisite progress in accordance with project implementation schedules. A failure to focus funds in the recommended manner risks creating additional expectations that may be difficult to meet in the current budget environment.

The commitments described in this report total \$3.138 billion in FY 1999 and outyear funds. FTA intends to manage the New Starts/Major Capital Investments caseload so that as other individual projects meet the necessary requirements in the development process, negotiations for FFGA's can proceed while keeping the total Federal commitments within both the available funding authority and the annual program level that can be accommodated within the budget caps.

Table ES-1

**FY 1999 Funding for New Start Projects
(Millions of Dollars)**

City/Project	FY 1997 and		FY 1998	FY 1999	Maximum	Total
	Prior Year Earmarks	Unobligated				
	Obligated	(As of 12/31/97)	Earmarks	Recommended Funding	Outyear Funds	Recommended Funding
Atlanta - North Line Extension	\$99.73	\$63.96	\$44.46	\$59.76	\$37.10	\$305.01
Boston - Piers Transitway Phase 1	142.20	0.00	46.10	88.46	53.96	330.73
Denver - Southwest LRT	2.83	0.00	22.93	47.24	47.00	120.00
Houston - Regional Bus Plan	287.02	40.31	50.93	68.97	52.77	500.00
Los Angeles - MOS-3	510.23	0.00	61.30	100.00	744.97	1,416.49
Maryland - MARC Ext. to Frederick	89.99	0.00	30.90	17.62	FFGA Complete	138.51
New Jersey/Urban Core - Hudson-Bergen LRT	99.02	0.00	59.81	74.19	371.07	604.09
New Jersey/Urban Core - Secaucus	417.26	0.00	26.91	FFGA Complete		444.17
Pittsburgh/Airport Busway/Wabash HOV	130.93	0.00	4.98	FFGA Complete		135.91
Portland - Westside LRT	530.28	0.00	63.19	36.59	FFGA Complete	630.06
Sacramento - South Corridor LRT	9.92	0.00	20.23	24.13	58.90	113.18
Salt Lake City - South LRT	73.39	0.00	63.19	70.00	37.41	243.98
San Francisco - BART Airport Extension	83.92	0.00	29.80	100.59	535.68	750.00
San Jose - Tasman LRT	102.75	0.00	21.33	38.67	20.00	182.75
San Juan - Tren Urbano	12.37	6.06	14.95	78.99	200.00	312.37
St. Louis - St. Clair County (IL) LRT	48.19	0.00	29.90	64.32	110.00	252.41
TOTAL	\$2,640.03	\$110.33	\$590.92	\$869.54	\$2,268.86	\$6,479.67

Introduction

This is the annual report called for by 49 U.S.C. 5309(m)(3), which requires a "proposal on the allocation of amounts to be made available to finance grants and loans for capital projects for new fixed guideway systems and extensions to existing fixed guideway systems among applicants for those amounts."

The purpose of this report is to describe the Department's recommendations for allocating the funds for New Starts under §5309. New fixed guideway systems and extensions (e.g., a light rail line, a subway line or a busway/high occupancy vehicle (HOV) facility) are referred to in this document as "new starts" and are considered to be major capital investments.

This report is a collateral document to the FY 1999 budget submitted by the President. 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 at the beginning of the appropriations cycle for the next fiscal year.

This report is available on the Internet via the World Wide Web. The Universal Resource Locator (URL) address for the FTA home page is <http://www.fta.dot.gov>. Multimedia and text-only options are available. For information on the availability of other alternative formats, please contact the FTA Office of Public Affairs.

Changes Made to This Report

A number of changes to both the format and content of this report have been made since the last issue. The most significant of these is the incorporation of the revised criteria for making the statutorily-required determination of project justification. These revisions were announced in a Federal Register Notice issued December 19, 1996. In response to questions raised in a series of training seminars throughout 1997, an amendment was issued on November 12, 1997, to clarify and correct certain aspects of the original Notice. The amendment also adopts a revised value of travel time, consistent with Department-wide valuations issued by the Secretary on April 9, 1997. Appendix C contains a complete copy of the revised Federal Register Notice.

Other changes have been made to enhance the usability and readability of this document, as well as its appearance. The individual project profiles in Appendix A have been revised to reflect the new evaluation criteria, and the layout has been changed to provide additional summary tables for "at-a-glance" reference. The text of the report includes a new foreword and a reformatted executive summary, and the tables have been reordered to flow with the text. The foreword describes the statutory requirement for this report, its organization and availability. The executive summary now includes its own table summarizing the funding recommendations (Table ES-1), and is now capable of "standing alone" apart from the main body of the report. The "main" table (Table 1 in prior reports), which lists past appropriations and proposed future funds for all proposed projects, has been moved to the section on funding recommendations and is now Table 3. The project rating summary table (Table 2 in prior reports) now appears first in the report, and is now Table 1. When applicable, this table will also include revised ratings for

projects receiving new FFGAs since the last report. There is also a new Table 2, which presents a supplemental analysis of the ratings with respect to annualized project cost.

There are also fewer project profiles than in previous years. Individual profiles for Major Investment Study (MIS) activities have been replaced by a collective listing of all MIS activities known to contain a transit component, which can be found in Appendix B. In past editions of this report, an attempt was made to include complete profiles for selected MIS activities, most notably those with authorization or appropriations earmarks. The success of this effort was limited, due primarily to the nature of the MIS process itself. The purpose of an MIS is to define a needed transportation improvement at the local level that will be proposed for Federal funding; thus, there is no "project" on which to report until the MIS is complete. A large number of these MIS profiles therefore contained gaps in information, which gave the mistaken impression of an incomplete report, incomplete analysis, or poor local planning. In addition, by including only those MIS activities for which funds had been earmarked, the report left the false impression that, in order to "get into the report," one had to first secure a Congressional earmark. For these reasons, individual profiles are no longer provided for MIS activities; instead, brief summaries are provided in Appendix B.

Principles for Allocations of Funds

This report recommends the allocation of these funds among the various New Starts projects that have been proposed. The recommendations are based on the following principles:

- Any project recommended for new funding commitments should meet the project justification, finance, and process criteria established by §5309(e), and be consistent with Executive Order 12893, "Principles for Federal Infrastructure Investments," issued January 26, 1994.
- Existing FFGA commitments should be honored before any additional funding recommendations are made, to the extent that funds can be obligated for these projects in the coming fiscal year.
- The FFGA represents a contract between the Federal government and project sponsors to provide a specified amount of financial assistance for a specific project over a specified amount of time, subject to appropriations. Upon its completion, the Federal funding commitment has been fulfilled. Additional project funding will not be recommended.
- Funding for initial planning efforts such as Major Investment Studies (MISs) is provided through §5303 Planning or §5307 Formula Grants programs; §5309 funds should not be used for this purpose.
- Firm **funding** commitments, embodied in FFGAs, should not be made until preliminary **engineering** is substantially complete since costs, benefits, and impacts are not accurately known until this level of engineering approaches completion.

- Funding should be provided to the most worthy projects to allow them to proceed through the process on a reasonable schedule, to the extent that funds can be obligated to such projects in the upcoming fiscal year.
- Letters of Intent (LOI) (ultimately anticipating FFGAs) authorized by §5309(g) may be considered when a project has progressed to the point (generally through an MIS, at a minimum) that its justification and level of local financial commitment can be established with some certainty.

The Process

Proposed projects become candidates for discretionary New Starts funding by virtue of having successfully completed the appropriate steps in the planning and project development process, as described in §5303 through §5306, and §5309.

The steps in the process begin with the development of a long-range transportation plan, during which future needs and strategies for addressing those needs are identified. Where the need for a major transportation investment in a specific corridor is identified as part of a region's long-range planning process, local project sponsors undertake a major investment study to evaluate the merits of alternative technologies and alignments in that corridor and identify a locally-preferred transportation investment (the "locally-preferred alternative," or LPA). These planning studies and subsequent preliminary engineering are used to develop information on the justification for the projects and the financial plans which demonstrate the sponsor's ability to meet the local matching share and to build and operate the projects. Finally, projects undergo final design, during which detailed engineering takes place.

The Criteria

As projects proceed through the stages of the planning and development process, they are evaluated against the full range of project justification criteria contained in §5309(e) to determine whether consideration of a Federal funding commitment is warranted. Section 5309(e) requires that projects be justified based on a comprehensive review of mobility improvements, environmental benefits, operating efficiencies, cost-effectiveness, and other factors such as land use and economic development. In addition, stable and dependable local funding must be sufficient to assure that the project will be completed in a timely manner, that the project will be operated as planned, and that local financial resources are available to operate the proposed system. Consistent with Executive Order 12893, "Principles for Federal Infrastructure Investment," issued January 26, 1994, this analysis includes both quantifiable measures of benefits and costs as well as qualitative measures reflecting values that are not readily quantified.

The Section 5309(e) justification criteria apply to projects at all stages of development. As a project progresses through these stages and becomes increasingly refined, a higher degree of accuracy and certainty is expected. Comparisons among the projects, based on the evaluation of these criteria for each, are used to determine the best candidates for consideration of Federal

discretionary funding. Projects that are (or are expected to be) under construction or in final design by the upcoming fiscal year, and are ready for Federal discretionary funds to be obligated, are considered to be candidates for FFGAs. In some cases, FTA may acknowledge its willingness to commit to a project but require that outstanding issues be resolved before an FFGA is negotiated. In addition, in certain cases a project may require only minimal funding to complete the Federal commitment; when such funds can reasonably be provided in a single fiscal year, an FFGA is generally not considered to be necessary, and a single-year grant would be issued instead.

Section 5309(e) also provides for exemptions from the project justification criteria under certain circumstances. Specifically, a project is exempt from the criteria if it is located in an extreme or severe nonattainment area for air quality standards and is part of a transportation control measure required under a State Implementation Plan, requires Federal major capital investment funding for less than one-third of the total project cost, or requires less than \$25.00 million in major capital investment funding. In addition, a number of individual projects were specifically exempt from the criteria under ISTEA. In these cases, FTA may still report ratings for such projects with respect to the §5309(e) criteria, but has been prohibited from using these ratings as a basis for funding recommendations.

Revisions to the Criteria

On December 19, 1996, FTA published a Federal Register Notice describing revisions to the criteria used to evaluate candidate projects for discretionary New Starts funding, as required by statute. The purpose of these revisions was to more formally adopt the broader project justification criteria found in §5309(e), which were expanded by ISTEA. This is the first formal update of FTA's policy since the 1984 "Statement of Policy on Major Urban Mass Transportation Capital Investments," although the ISTEA factors have been considered in project evaluations since 1993.

Briefly, §5309(e) requires that FTA make a determination that a project proposed for discretionary New Starts funding is "justified" based on a "comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, and operating efficiencies," and is "supported by an acceptable degree of local financial commitment, including evidence of stable and dependable financial sources to construct, maintain, and operate" the project. In making this determination, §5309(e)(3)(C) also notes that "mass transportation supportive existing land use policies and future patterns" are also to be considered. The Notice adopts a "multiple measures" method of performing this evaluation, with separate ratings given for each factor. These ratings are summarized in Table 1; complete information appears in the individual project descriptions found in Appendix A.

The revised criteria introduce four major changes to the project evaluation process:

- Quantitative measures now compare the build alternative (i.e., the proposed major transit investment) to both the no-build and Transportation System Management (TSM) alternative; in the past, the build alternative was compared only to the TSM alternative.

- Technical changes have been introduced to the calculation of the cost effectiveness criterion, no longer subtracting the value of travel time savings from costs.
- Revised measures for three additional criteria — mobility improvements, environmental benefits, and operating efficiencies — have been introduced.
- A new measure — a combined rating of transit supportive existing and future land use and future patterns — has been added.

These criteria were subsequently amended in response to the adoption of standardized assumptions for the value of travel time by the Department for all modes of travel. The amended Notice was published in the Federal Register on November 12, 1997, and contained a number of technical corrections to the original Notice in addition to adopting the new travel time values. A copy of the revised Notice is provided in Appendix C.

It is important to note that these criteria apply *only* to those projects proposed for Federal discretionary new starts funds under §5309. They will be used *internally* by FTA *only* for purposes of recommending the allocation of funds under this program, and do *not* represent an additional requirement imposed upon the local project development process. However, FTA does expect that the MIS process will serve as the primary source of information for purposes of evaluation under these criteria.

The New Start project evaluation criteria, as amended, are defined as follows:

- Mobility Improvements
 - The projected value of aggregate travel time savings per year (forecast year) anticipated from the investment; and
 - The absolute number of low-income households located within ½-mile of boarding points associated with the proposed system increment.
- Environmental Benefits
 - The annual forecast change in criteria pollutant and greenhouse gas emissions, calculated in tons;
 - The forecast change per year in the consumption of energy (in BTUs); and
 - Current EPA air quality designations.
- Operating Efficiencies
 - The forecast change in operating cost per passenger-mile, for the entire transit system, expressed in terms of absolute dollar value.
- Cost Effectiveness
 - The incremental change in total capital and operating cost per incremental rider, based on the forecast change in annual transit ridership and the annualized total capital investment

and operating cost (Federal and local). (Note: Travel time savings are now calculated separately under the Mobility Improvements criterion, and are no longer included in the measure for cost effectiveness.)

- **Transit-Supportive Existing Land Use Policies and Future Patterns**
 - The degree to which local land use policies and patterns are likely to foster transit-supportive land use, measured in terms of the kinds of policies in place, and the commitment to these policies.
- **Other Factors**
 - The degree to which the institutions (local transportation planning, programming and parking policies, etc.) are in place as assumed in the forecast;
 - Project management capability; and
 - Additional factors relevant to local and national priorities and to the success of the project.
- **Local Financial Commitment¹**
 - The capital financing commitment, including the local share of project costs and the strength of the proposed financing plan; and
 - The stability and reliability of sources of funds to operate the system.

Detailed information and guidance on the application of the revised criteria and their use in evaluating potential new starts projects is provided in FTA's Technical Guidance on Section 5309 New Starts Criteria, dated September 1997.

Evaluations

Table 1 provides a listing of the projects now in the "pipeline" of new starts projects, and a summary evaluation of each project in terms of project justification and local financial commitment. Ratings are established for proposed projects in Preliminary Engineering and later stages of development only; no attempt is made to evaluate potential projects undergoing MIS activities, as it would be premature to evaluate a project that has typically not yet been defined as a transit or highway investment. Projects for which FFGAs have been issued also are not listed, as the statutory determination of project justification was made at the time of commitment; an exception is made in cases of newly-issued FFGAs, where updated rating information will appear in Table 1. Appendix A provides a more detailed profile for each project, including the basis for the evaluation of the project.

Candidate projects for FFGAs are chosen according to the relative merits of each as measured by the criteria shown in Table 1. Projects are considered to be candidates for FFGAs when their ratings in these categories justify a Federal commitment and they are ready for funds to be obligated.

1. Note: While the Federal Register Notice addressed Local Financial Commitment as one of the criteria, the measures and methods of assessment have not changed from previous years.

Table 1
Summary of FY 1999 New Starts Ratings

Phase and City (Project)	Mobility Improvements		Operating Efficiencies		Cost Effectiveness		Environmental Benefits			
	Value of Annual Travel Time Savings (millions \$)	Low-Income Households Within 1/2-Mile	Systemwide Operating Cost per Passenger-Mile		Incremental Cost per Incremental Passenger	Annual Reduction in Greenhouse Gas Emissions (tons CO2)	Annual Reduction in Regional Energy Consumption (million BTUs)			
	New Start vs. No-Build	TSM	No-Build	New Start	New Start vs. No-Build	TSM	No-Build	TSM		
Final Design										
Dallas/Fort Worth-RAILTRAN Phase 2	\$10	407	\$0.04	\$0.05	\$4.50	\$9.30	852	563	11,238	7,492
Dallas-North Central Corridor	\$221	1,525	\$0.41	\$0.41	\$16.90	\$13.50	18,068	22,162	122,760	203,870
Ft. Lauderdale-Tri County Commuter Rail	\$25	10,892	\$0.25	\$0.25	\$7.00	NA	[5,393]	NA	[69,257]	NA
New Orleans-Canal Streetcar Spine	\$2	8,522	\$0.76	\$0.71	\$8.50	\$11.30	1,750	636	20,595	2,270
San Diego County-LOSSAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Preliminary Engineering										
Austin-Northwest/North Central	\$3	3,200	\$0.18	\$0.19	\$7.30	\$12.90	5,471	1,460	71,762	19,221
Boston-South Boston Piers Phase 2	\$6	1,231	NA	\$0.58	\$10.50	NA	NA	NA	56,569	NA
Cleveland-Euclid Corridor	NA	N/A	NA	NA	NA	NA	NA	NA	NA	NA
Denver-Southeast Corridor	\$26	1,595	\$0.38	\$0.39	\$13.00	\$6.80	NA	NA	17,327	NA
Kansas City-Southtown Corridor	\$1	N/A	NA	NA	\$18.10	\$18.40	NA	NA	NA	NA
Las Vegas-Resort Corridor	\$659	3,791	\$0.21	0.35	-\$4.60	\$2.40	38,328	87,958	489,934	1,096,406
Little Rock-River Rail Project	NA	N/A	NA	NA	NA	NA	NA	NA	NA	NA
Los Angeles-Eastside Corridor Extension	NA	N/A	NA	NA	NA	NA	NA	NA	NA	NA
Memphis-Medical Center Extension	NA	3,488	NA	\$1.06	\$2.90	NA	NA	NA	10,300	NA
Miami-East/West Corridor	\$98	849	\$0.35	NA	\$20.25	NA	NA	NA	NA	NA
Miami-North 27th Avenue Corridor	\$9	1,383	\$0.41	\$0.39	\$13.30	\$17.90	17,450	24,227	98,975	98,875
New York City-LIRR East Side Access	\$70	3,700	\$0.24	\$0.24	\$47.10	\$44.80	NA	NA	152,403	48,062
Norfolk-Virginia Beach	\$2	1,871	\$0.52	\$0.48	NA	NA	NA	NA	NA	NA
Northern New Jersey-Newark/Elizabeth	\$3	3,645	\$0.47	NA	\$5.70	NA	2,740	NA	22,090	NA
Oklahoma City-MAPS Link	NA	N/A	NA	NA	NA	NA	NA	NA	NA	NA
Orange County-Irvine/Fullerton Corridor	\$212	18,141	\$0.37	\$0.25	\$6.80	\$19.30	NA	NA	NA	NA
Orlando-Central Florida LRT	\$27	2,168	\$0.46	\$0.46	\$8.90	\$9.80	6,840	11,091	65,791	118,471
Pittsburgh-Martin Luther King, Jr. Busway	NA	N/A	NA	NA	NA	NA	NA	NA	NA	NA
Pittsburgh-Stage II LRT Reconstruction	\$24	650	NA	NA	\$10.50	\$7.00	921	1,096	9,395	13,662
Portland-South/North Corridor	\$108	6,077	\$0.40	\$0.43	\$7.30	\$9.50	11,923	20,760	158,049	260,122
Raleigh-Regional Transit Plan	\$12	1,325	\$0.22	\$0.21	NA	\$11.60	NA	NA	NA	NA
Salt Lake City-Airport to University LRT	\$70	4,732	\$0.27	\$0.26	\$6.80	\$37.60	16,719	18,688	167,655	192,648
San Diego-Mid Coast Corridor	\$18	402	\$0.27	\$0.26	\$9.00	\$10.50	24,724	7,503	320,749	95,824
San Diego-Mission Valley East LRT	\$14	1,152	\$0.18	\$0.18	\$10.30	\$14.20	6,213	4,354	81,521	48,434
San Diego County-Oceanside/Escondido	\$17	1,903	\$0.17	\$0.17	\$3.70	\$5.30	4,070	2,113	53,932	28,814
San Francisco-Third Street LRT	\$8	5,988	\$0.55	\$0.55	NA	\$30.60	NA	NA	NA	NA
San Juan-Minillas Extension	\$12	4,350	\$0.17	\$0.17	NA	\$6.90	NA	48,564	NA	488,977
Seattle-Sound Move Regional System	\$321	NA	\$0.17	\$0.23	\$9.30	NA	99,270	94,500	3,030,000	2,830,000
Washington-Largo Corridor Metrolrail	\$139	15,145	\$0.36	\$0.27	\$8.40	\$10.40	2,737	1,796	19,498	6,418
	\$33	45	\$0.36	\$0.36						

NA = Not Available TSM = Transportation System Management Alternative BTU = British Thermal Units Data in [] represents an increase in emissions

Note: The Section 5309 New Starts criteria are discussed in Section II of this Report, in the Appendix A Background, and in Appendix C. Also, documentation is provided in Technical Guidance on Section 5309 New Starts Criteria.

-Continued-

Table 1 (continued)
Summary of FY 1999 New Starts Ratings

Phase and City (Project)	Environmental Benefits (cont'd)		Transit Supportive Land Use (c)	Local Financial Commitment					Stability & Reliability of Operating Assistance
	EPA Classification (b)			Total Capital Cost (a) (million \$)	Total \$5309 Funding (millions \$)	\$5309 Funds as Share of Capital Cost (%)	Financing Commitment		
Final Design Dallas/Fort Worth-RAIL TRAN Phase 2 Dallas-North Central Corridor Ft. Lauderdale-Tri County Commuter Rail New Orleans-Canal Streetcar Spine San Diego County-LOSSAN	Ozone	Carbon Monoxide	Low	\$119 (\$97)	\$51	43%	Medium	Medium	
	Moderate	Non-Attainment	Medium	\$503 (YOE)	\$333	66%	High	High	
	Moderate	Non-Attainment	Medium	\$573 (\$97)	\$271	47%	Low	Low-Medium	
	Attainment	Maintenance	Low-Medium	\$136 (YOE)	\$109	80%	Low-Medium	Low-Medium	
	NA	NA	Not Rated	\$80 (\$96)	\$55	NA	Not Rated	Not Rated	
Preliminary Engineering Austin-Northwest/North Central Boston-So. Boston Piers Phase 2 Cleveland-Eucild Corridor Denver-Southeast Corridor Kansas City-Southtown Corridor Las Vegas-Resort Corridor Little Rock-River Rail Project Los Angeles-Eastside Extension Phase 2 Memphis-Medical Center Extension Miami- East/West Corridor Miami-North 27th Avenue Corridor New York City-LIRR East Side Access Norfolk-Virginia Beach Northern New Jersey-Newark/Elizabeth Oklahoma City (MAPS Link) Orange County-Irvine/Fullerton Corridor Orlando-I-4 Central Florida LRT Pittsburgh-Martin Luther King, Jr. Busway Pittsburgh-Stage II LRT Reconstruction Portland-South/North Corridor Raleigh-Regional Transit Plan Salt Lake City-West/East LRT San Diego-Mid Coast Corridor San Diego-Mission Valley East LRT North San Diego-Oceanside/Escondido San Francisco-Third Street LRT San Juan-Minillas Extension Seattle-Sound Move Regional System Washington-Metrorail to Largo Town Ctr.	Attainment	Attainment	Medium-High	\$182 (\$95)	\$80	49%	Medium-High	Medium-High	
	Serious Non.-Attain.	NA	Medium-High	\$258 (\$96)	\$206	80%	Low-Medium	Low-Medium	
	NA	NA	Low-Medium	\$333 (\$96)	\$266	80%	Low-Medium	Low-Medium	
	Non-Attainment	Serious Non.-Attain.	Medium	\$480 (\$97)	\$384	80%	Medium	Low-Medium	
	Maintenance	Maintenance	Low-Medium	\$490 (\$97)	\$480	80%	Low-Medium	Low-Medium	
	Attainment	Serious Non.-Attain.	Medium	\$380 (\$96)	\$171	45%	Medium	Medium	
	NA	NA	Medium	\$11 (\$97)	\$8	80%	Medium-High	Medium-High	
	NA	NA	Medium	\$1,216 (YOE)	\$254	28%	Not Rated	Not Rated	
	Maintenance	Maintenance	Low-Medium	\$30 (\$95)	\$24	80%	Medium-High	Medium	
	Maintenance	Attainment	Medium-High	\$2,002 (YOE)	\$808	40%	Low	Low	
	Maintenance	Attainment	Low-Medium	\$473 (\$97)	\$331	70%	Low	Low	
	Severe Non.-Attain.	Mod. Non-Attainment	Not Rated	\$3,400 (\$97)	N/A	NA	Not Rated	Medium-High	
	Attainment	Attainment	Low	\$377 (\$96)	\$132	35%	Low-Medium	Low-Medium	
	Severe Non.-Attain.	Mod. Non-Attainment	Medium-High	\$141 (\$95)	NA	NA	Low-Medium	Low-Medium	
	NA	NA	Not Rated	\$21 (\$96)	\$13	NA	Not Rated	Not Rated	
	Extreme Non-Attain.	Serious Non.-Attain.	Low-Medium	\$1,600 (\$96)	\$800	50%	Low-Medium	Low-Medium	
	Attainment	Attainment	Medium-High	\$879 (\$97)	\$439	50%	Low-Medium	Low-Medium	
	NA	NA	Not Rated	\$63 (\$96)	\$10	NA	Not Rated	Not Rated	
	Mod. Non-Attainment	NA	Low-Medium	\$493 (YOE)	\$163	80%	Low-Medium	Low-Medium	
	Attainment	Attainment	High	\$1,002 (\$96)	\$487	49%	High	Medium-High	
	Mod. Maintenance	Maintenance	Low-Medium	\$250 (\$96)	\$100	40%	Low-Medium	Low-Medium	
	Maintenance	Non-Attainment	Low-Medium	\$374 (\$96)	\$374	100%	Low	Low	
	Serious Non-Attain.	Mod. Non-Attainment	Medium	\$98 (\$97)	\$62	63%	Low-Medium	Medium	
	Serious Non-Attain.	Mod. Non-Attainment	Medium-High	\$332 (\$97)	\$281	79%	Medium	Low-Medium	
	Serious Non-Attain.	Mod. Non-Attainment	Medium	\$194 (\$95)	\$107	55%	Medium	Low-Medium	
	Maintenance	Non-Attainment	High	\$446 (YOE)	N/A	NA	Medium	Medium-High	
	Attainment	Attainment	Medium-High	\$432 (YOE)	\$32	7%	Medium	Medium-High	
	Attainment	Attainment	Medium-High	\$3,068 (\$95)	\$550	18%	Medium-High	Medium-High	
	Serious Non-Attain.	Mod. Non-Attainment	Medium	\$397 (YOE)	\$316	80%	Low	Low-Medium	

NA = Not Available TSM = Transportation System Management Alternative BTU = British Thermal Units Data in [] represents an increase in emissions

(a) Costs are shown in current year dollars (e.g., \$95, \$96, \$97) or in escalated (YOE- year of expenditure) dollars, and are based on most recent cost estimates. For projects in the early stages of Preliminary Engineering, the estimate is likely to change as more detailed engineering is performed.

(b) EPA classifications for ozone and carbon monoxide are shown to illustrate the severity of the region's air quality problem. In order of severity, the ozone classifications are: extreme, severe, serious, moderate, marginal, sub-marginal, transitional and attainment. Carbon monoxide classifications are: serious, moderate, not classified and attainment. The Project Profiles in Appendix A present data (where available) on each project's impact on emissions.

(c) The land use ratings shown in this table have been assigned by FTA, based on the land use plans developed by the local project sponsors and land use reviews performed by FTA's land use consultants, Booz Allen & Hamilton, and Cambridge Systematics, Inc.. The criteria used to rate the land use plans are described in Appendix A.

(d) The local share and financial ratings shown in this table are based on the financial plans developed by the local project sponsors and financial reviews performed by FTA's financial consultants, Booz Allen & Hamilton, KPMG Peat-Marwick, and Volpe National Transportation Systems Center. The criteria used to rate the local financial plans are described in Appendix A.

Upon full consideration of the relative merits of each project under the project justification criteria, the Administration must determine which projects represent the best use of Federal discretionary funds. To make this determination, FTA considers whether 1) the project has been fully developed; 2) the results reported for the project justification criteria are the result of reasonable and reliable planning assumptions; 3) consistent methodologies were applied among the criteria and the project alternatives (no-build, TSM and new start); 4) the financial plan is realistic, particularly in terms of local funding; and 5) the local project sponsors have the capacity to carry out a major transit investment. After accounting for variations in local conditions among proposed projects, such as air quality, traffic congestion, and land use patterns and policies, FTA weighs the evidence and draws a conclusion as to which projects are “worthy” of a Federal investment.

Under the multiple measure approach required by Section 5309(e), it is not possible to set thresholds for establishing which projects are worthy of Federal investment based on any one of the justification criteria set out therein. Nor is it appropriate to weight the criteria to combine the results of the analysis on each into a single overall measure of project merit. Further, because monetary values are not established for some of the measures of project benefit, it is not possible to create a single cost/benefit measure which could be used to judge project justification.

However, it can be said that in weighing all the factors, and consistent with Executive Order 12893, FTA looks for projects in which benefits exceed costs. For example, a project which has annual travel time savings in excess of annualized project capital and operating costs would have already demonstrated that benefits were in excess of costs on that measure alone. Similarly, a project with a very low incremental cost per incremental passenger is likely to be well justified, again on the basis of that single measure. On the other hand, projects which have systemwide operating costs per passenger mile for the New Start alternative in excess of the No-Build or TSM alternative may still be well justified because the higher cost service may produce other benefits, such as reduced congestion or improved air quality. Finally, projects which produce large amounts of reduced emissions, particularly in non-attainment areas, may be well justified, particularly if they result from large reductions in congestion reflected in savings in travel time.

FTA also expects a project to have strong local financial support. Thus, projects which have “Low” financial ratings are unlikely to be considered favorably until the deficiencies in the financial plan are improved.

Projects are also expected to be well-supported with local land use policies. Projects rated “Low” on transit supportive land use would be carefully scrutinized to assure that the project is justified based on the full range of other criteria. On the other hand, projects rated well in terms of transit supportive land use may be better justified than their ratings on the other justification measures may indicate, because the full range of land use benefits are not quantified in their calculation.

Supplemental Analysis of Criteria and Ratings

As this report is being compiled, a multi-year transportation reauthorization act has not yet been enacted. Various reauthorization proposals contain provisions that would require FTA to begin to report the new starts criteria on the basis of project benefits, as measured by the criteria and factored by some basis of project unit cost. Such an analysis may prove beneficial in rating and comparing projects. The current practice, as reported in Table 1, only reports the absolute value of the criteria and measures.

For informational purposes only, FTA has completed a supplemental analysis of selected new starts criteria and measures. Table 2 presents an analysis of the project evaluation data, normalized by a factor of total project cost, for the following criteria and measures: 1) mobility improvements (measures of the value of annual travel time savings and the number of low-income households within one-half mile of transit stations); and, 2) environmental benefits (measures of annual reduction in greenhouse gas emissions and annual reduction in regional energy consumption). Data for each of these criteria and measures, as reported in Table 1, have been factored by the annualized project capital cost.

Table 2 presents the annualized project capital cost, the annual value of travel time savings per annualized project cost, the number of low-income households within one-half mile per annualized project cost, the annual reduction in greenhouse gas emissions per annualized project cost, and the annual reduction in regional energy consumption per annualized project cost. Data are reported for the comparison of the new start to the no-build and TSM alternatives. Capital costs are reported in either current year dollars (e.g., \$95, \$96, \$97) or in escalated, year-of-expenditure (YOE) dollars. Annualization of capital costs are based on a consistent set of assumptions on the useful life of specific cost components, annualization factors, and a 7 percent discount rate. Procedures on the annualization of capital costs are document in the *Technical Guidance on Section 5309 New Starts Criteria*. "NA" indicates that data are not available at this time for specific measures.

Again, the purpose of this analysis is to determine what the results of a cost-per-benefit analysis might be. Public notice will be provided before any permanent changes are made to FTA's project evaluation process.

A Word About Full Funding Grant Agreements (FFGAs)

The Full Funding Grant Agreement (FFGA) is the principal means used by FTA to manage the New Starts caseload and provide Federal financial assistance for New Starts projects. FTA also has the discretion to use an FFGA in awarding Federal assistance for other major capital projects.

The FFGA defines the project, including cost and schedule; commits to a maximum level of Federal financial assistance (subject to appropriation); establishes the terms and conditions of Federal financial participation; covers the period of time for completion of the project; and helps to manage the project in accordance with Federal law. The FFGA assures the grantee of predictable Federal financial support for the project (subject to appropriation) while placing a ceiling on the amount of that Federal support.

Table 2
Supplemental Analysis of FY 1999 New Starts Ratings (a)

Phase and City (Project)	Year of Dollar Value	Annualized Project Capital Cost (b)		Annual Value of Travel Time Savings Per Annualized Project Cost (in \$ dollars)		Low Income Households Within ½-Mile Per Annualized Project Cost (in \$ millions)		Annual Reduction in Greenhouse Gas Emissions Per Annualized Project Cost (tons CO2 per \$ millions)		Annual Reduction in Regional Energy Consumption Per Annualized Project Cost (million BTUs per \$ millions)	
		New Start vs. No-Build	TSM	New Start vs. No-Build	TSM	New Start vs. No-Build	TSM	New Start vs. No-Build	TSM	New Start vs. No-Build	TSM
Final Design											
Dallas/Fort Worth-Rail-TRAN Phase 2	(97)	\$9.8	\$8.0	\$1.01	\$1.28	42	51	87	70	1,147	937
Dallas-North Central Corridor	(YOE)	\$29.3	\$24.5	\$7.53	\$16.00	52	62	617	905	4,190	8,321
Ft. Lauderdale-Tri County Commuter Rail	(97)	\$35.8	NA	\$0.69	NA	304		(151)		(1,935)	NA
New Orleans-Canal Streetcar Spine	(YOE)	\$8.3	\$7.9	\$0.22	\$0.22	1,027	1,086	211	81	2,481	289
San Diego County-LOSSAN	(96)	\$4.8 (c)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Preliminary Engineering											
Austin-Northwest/North Central	(95)	\$15.9	\$11.7	\$0.16	\$0.22	201	274	344	125	4,513	1,643
Boston-South Boston Piers Phase 2	(96)	\$20.8	NA	\$0.27	NA	59	NA	NA	NA	2,720	NA
Cleveland-Euclid Corridor	(96)	\$26.6 (c)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Denver-Southeast Corridor	(97)	\$38.6	\$13.5	\$0.69	\$1.95	41	118	NA	NA	449	NA
Kansas City-Southtown Corridor	(97)	\$39.2 (c)	NA	\$0.03	NA	NA	NA	NA	NA	NA	NA
Las Vegas-Resort Corridor	(96)	\$84.5 (c)	\$39.6 (c)	\$7.80	\$6.27	45	96	454	2,212	5,798	27,687
Little Rock-River Rail Project	(97)	\$0.9 (c)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Los Angeles-Eastside Corridor Extension	(YOE)	\$97.3 (c)	NA	NA	NA	1,453	NA	NA	NA	4,292	NA
Memphis-Medical Center Extension	(95)	\$2.4 (c)	NA	NA	NA	9	9	NA	NA	NA	NA
Miami- East/West Corridor	(YOE)	\$90.2	\$51.4 (c)	\$1.09	NA	36	38	460	667	2,611	2,724
Miami-North 27th Avenue Corridor	(97)	\$37.9	\$36.3	\$0.24	\$0.17	14	NA	NA	NA	560	NA
New York City-LIRR East Side Access	(97)	\$272.0 (c)	NA	\$0.26	NA	62	NA	NA	NA	NA	NA
Norfolk-Virginia Beach	(96)	\$30.2 (c)	NA	\$0.06	NA	419	NA	315	NA	2,539	NA
Northern New Jersey-Newark/Elizabeth	(95)	\$8.7	NA	\$0.36	NA	115	NA	NA	NA	NA	NA
Oklahoma City-MAPS Link	(96)	\$1.7 (c)	NA	NA	NA	30	31	94	160	904	1,705
Orange County-Irvine/Fullerton Corridor	(96)	\$158.1	\$141.1	\$1.34	\$0.35	NA	129	NA	NA	NA	NA
Orlando-Central Florida LRT	(97)	\$72.8	\$69.5	\$0.37	\$0.19	NA	NA	NA	NA	NA	NA
Pittsburgh-Martin Luther King, Jr. Busway	(96)	\$5.0 (c)	NA	NA	NA	23	45	33	77	334	955
Pittsburgh-Stage II LRT Reconstruction	(YOE)	\$28.1	\$14.3	\$0.86	\$0.79	55	77	108	NA	1,430	NA
Portland-South/North Corridor	(96)	\$110.5	NA	\$0.97	\$0.67	155	186	546	736	5,479	7,585
Raleigh-Regional Transit Plan	(96)	\$21.7	\$17.2	\$0.97	NA	56	63	3,434	1,183	44,548	15,114
Salt Lake City-Airport to University LRT	(96)	\$30.6	\$25.4	\$2.29	NA	43	62	234	234	3,065	2,604
San Diego-Mid Coast Corridor	(97)	\$7.2	\$6.3	\$2.43	\$0.79	119	131	254	146	3,371	1,987
San Diego-Mission Valley East LRT	(97)	\$26.6 (c)	\$18.6	\$0.53	\$0.44	276	276	NA	NA	NA	NA
San Diego County-Oceanside/Escondido	(95)	\$16.0	\$14.5	\$1.06	\$0.52	NA	NA	NA	NA	NA	NA
San Francisco-Third Street LRT	(YOE)	\$35.7 (c)	\$21.7	NA	\$0.56	81	106	528	663	16,117	19,846
San Juan-Minillas Extension	(YOE)	NA	\$34.6 (c)	\$9.28	NA	2	2	94	64	672	229
Seattle-Sound Move Regional System	(95)	\$188.0	\$142.6 (c)	\$0.74	\$0.77						
Washington-Largo Corridor Metrolink	(YOE)	\$29.0	\$28.0	\$1.12	\$0.81						

NA = Not Available TSM = Transportation System Management Alternative BTU = British Thermal Units Data in () represents an increase in emissions

(a) The Section 5309 New Starts criteria, as presented in Tables 1 and 2, are discussed in the main section of this Report, in the Background section of Appendix A, and in Appendix C. Additional documentation is provided in FTA's Technical Guidance on Section 5309 New Starts Criteria.

(b) Capital costs are reported in current year dollars (e.g. \$95, \$96, \$97) or in escalated, year-of-expenditure (YOE) dollars. Capital costs are annualized based on a consistent set of assumptions on the useful life of specific cost components, annualization factors, and a 7% discount rate. Procedures on the annualization of capital costs are documented in the Technical Guidance on Section 5309 New Starts Criteria.

(c) When indicated, FTA estimated annualized costs for specific projects based on average factors from other New Starts projects.

An FFGA also limits the exposure of FTA and the Federal government to cost overruns that may result if project design, engineering and/or planning is not adequately performed at the local level. FTA is primarily a financial assistance agency; it is not directly involved in the design and construction of new starts projects. While FTA is responsible for ensuring that planning projections are based on realistic assumptions and that design and construction follow acceptable industry procedures, it is the responsibility of project sponsors to ensure that proper planning, design and engineering have been performed.

Additional information and guidance on developing FFGAs is contained in FTA Circular C 5200.1, Full Funding Grant Agreements Guidance, dated July 2, 1993.

New Starts Allocations and Recommendations

The President's budget for FY 1999 proposes that \$876.11 million be made available for the §5309 major capital investment program. Once funding for FTA oversight activities is subtracted from this amount, as authorized by §5327, \$869.54 million remains available for projects. These funds will be allocated among projects with existing Federal funding commitments. Complete descriptions of these projects can be found in Appendix A.

Table 2 summarizes the recommendations for FY 1999 funding and overall funding commitments. For each project, the first column indicates the amount of FY 1997 and prior year funds that have been obligated by each project, and the second column shows any unobligated amounts. The third column shows the amount of funds available as a result of the FY 1998 DOT Appropriations Act (adjusted for the oversight takedown). The fourth column shows the FY 1999 funding recommendations contained in the President's budget request. For those projects with FFGAs, the fifth column shows the maximum amount of outyear funding to be committed to these projects. Finally, the last column sums the first five columns and shows the total amount to be made available over the life of the project from Federal transit major capital investment funds.

Sixteen projects have existing FFGAs that commit FTA to provide specified levels of major capital investment funding. Two of these projects are not included in the funding recommendations because the Federal funding commitment has been fulfilled; these projects are the Secaucus Transfer station in Northern New Jersey and the Pittsburgh Airport Busway (Phase 1). The status of these projects and the funding recommendations for FY 1999 are described below.

Table 3
FY 1999 Funding for New Start Projects
(Millions of Dollars)

City/Project	FY 1997 and		FY 1998 Earmarks	FY 1999 Recommended Funding	Remaining FFGA Funding	Total Recommended Funding
	Prior Year Earmarks					
	Obligated (As of 12/31/97)	Unobligated (As of 12/31/97)				
TOTALS BY PHASE						
Full Funding Grant Agreements/LOI's	\$2,640.03	\$110.33	\$590.92	\$869.54	\$2,268.86	\$6,479.67
Final Design	84.57	28.02	32.89	0.00		
Preliminary Engineering	35.36	17.17	113.53	0.00		
Additional FY 1998 Earmarks			60.06			
GRAND TOTAL	\$2,759.96	\$155.52	\$797.41 ¹	\$869.54 ²	\$2,268.86	\$6,479.67
FULL FUNDING GRANT AGREEMENTS						
Atlanta - North Line Extension	\$99.73	\$63.96	\$44.46	\$59.76	\$37.10	\$305.01
Boston - Piers Transitway Phase 1	142.20	0.00	46.10	88.46	53.96	330.73
Denver - Southwest LRT	2.83	0.00	22.93	47.24	47.00	120.00
Houston - Regional Bus Plan	287.02	40.31	50.93	68.97	52.77	500.00
Los Angeles - MOS-3	510.23	0.00	61.30	100.00	744.97	1,416.49
Maryland - MARC Ext. to Frederick	89.99	0.00	30.90	17.62	FFGA Complete	138.51
New Jersey/Urban Core - Hudson-Bergen LRT	99.02	0.00	59.81	74.19	371.07	604.09
New Jersey/Urban Core - Secaucus	417.26	0.00	26.91	FFGA Complete		444.17
Pittsburgh/Airport Busway/Wabash HOV	130.93	0.00	4.98	FFGA Complete		135.91
Portland - Westside LRT	530.28	0.00	63.19	36.59	FFGA Complete	630.06
Sacramento - South Corridor LRT	9.92	0.00	20.23	24.13	58.90	113.18
Salt Lake City - South LRT	73.39	0.00	63.19	70.00	37.41	243.98
San Francisco - BART Airport Extension	83.92	0.00	29.80	100.59	535.68	750.00
San Jose - Tasman LRT	102.75	0.00	21.33	38.67	20.00	182.75
San Juan - Tren Urbano	12.37	6.06	14.95	78.99	200.00	312.37
St. Louis - St. Clair County (IL) LRT	48.19	0.00	29.90	64.32	110.00	252.41
SUBTOTAL	\$2,640.03	\$110.33	\$590.92	\$869.54	\$2,268.86	\$6,479.67
FINAL DESIGN						
Dallas - Ft. Worth -- RAILTRAN Phase 2	\$11.39	\$15.14	\$7.97	\$0.00		
Dallas - North Central Corridor	16.36	0.00	10.96	0.00		
Fort Lauderdale - Tri-County Commuter Rail	43.32	0.00	7.97	0.00		
New Orleans - Canal Streetcar Spine	13.50	12.88	5.98	0.00		
San Diego County - LOSSAN Rail Corridor	19.89	0.00	0.00	0.00		
SUBTOTAL	\$84.57	\$28.02	\$32.89	\$0.00		
PRELIMINARY ENGINEERING						
Austin - Northwest/North Central Corridor	\$0.00	\$0.00	\$1.00	\$0.00		
Boston - South Boston Piers Phase 2	0.00	0.00	0.00	0.00		
Cleveland - Euclid Corridor	6.52	0.00	0.00	0.00		
Denver - Southeast Corridor	0.00	0.00	0.00	0.00		
Kansas City - Southtown LRT	4.02	0.00	0.00	0.00		
Las Vegas - Resort Corridor	0.00	0.00	4.98	0.00		
Little Rock - River Rail Project	0.00	1.99	0.00	0.00		
Los Angeles - Eastside Corridor Extension	0.00	0.00	0.00	0.00		
Memphis - Medical Center Extension	0.50	4.25	1.00	0.00		
Miami - East/West Corridor	0.00	1.49	4.98	0.00		
Miami - North 27th Avenue Corridor	2.97	0.99	4.98	0.00		
New York - LIRR East Side Access	0.00	0.00	19.94	0.00		
New Jersey/Urban Core - Newark-Elizabeth	11.95	0.00	0.00	0.00		
Norfolk - Virginia Beach Corridor	0.00	0.00	1.99	0.00		
Oklahoma City - MAPS Link	0.00	1.99	1.59	0.00		
Orange County (CA) - Irvine-Fullerton Corridor	0.00	0.00	1.99	0.00		
Orlando - Central Florida LRT	1.99	0.00	31.70	0.00		
Pittsburgh - Martin Luther King, Jr. E. Busway E	0.00	0.00	0.00	0.00		
Pittsburgh - Stage II LRT Reconstruction	0.00	0.00	0.00	0.00		
Portland - South/North Corridor	5.96	0.00	0.00	0.00		
Raleigh - Regional Transit Plan	0.00	1.99	11.96	0.00		
Salt Lake City - Airport to University LRT	0.00	0.00	3.99	0.00		
San Diego - Mid Coast Corridor	1.45	1.49	1.50	0.00		
San Diego - Mission Valley East LRT	0.00	0.00	1.00	0.00		
San Diego County - Oceanside-Escondido	0.00	0.00	2.99	0.00		
San Francisco - Third St. LRT (Bayshore)	0.00	0.00	0.00	0.00		
San Juan - Minillas Extension	0.00	0.00	0.00	0.00		
Seattle - Sound Move Regional System	0.00	2.98	17.94	0.00		
Washington - Metrorail to Largo Town Center	0.00	0.00	0.00	0.00		
SUBTOTAL	\$35.36	\$17.17	\$113.53	\$0.00		

Note: Any errors are due to rounding.

1) Excludes \$2.59 million for oversight activities. Total FY 1998 appropriations were \$800.00 million.

2) Excludes \$6.57 million for oversight activities. Total FY 1999 Funding recommendation is \$876.11 million.

Atlanta/North Line Extension

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is constructing a 1.9-mile, 2-station extension of the North Line from the Dunwoody station to North Springs. When completed, this extension will serve the rapidly-growing area north of Atlanta, which includes Perimeter Center and north Fulton County, and will connect this area with the rest of the region by providing better transit service for both commuters and inner-city residents traveling to expanding job opportunities.

The total cost (Federal and non-Federal) of this project has increased from \$381.30 million to an estimated \$487.70 million since the FFGA was issued for this project in 1994. The increase is due primarily to the need to address anticipated service level increases, station parking enhancements, and impacts to the project right-of-way from the proposed widening of the adjacent GA 400 freeway. It now includes the purchase of 56 rail cars, twice the number included in the original plan to which FTA committed. As noted earlier in this report and specified in the FFGA, any additional costs beyond the scope of the Federal funding commitment are the responsibility of the grantee, not FTA.

On December 20, 1994, FTA issued an FFGA committing a total of \$305.01 million in new starts funding to this project. Of this commitment, a total of \$163.69 million has been appropriated through FY 1997. The FY 1998 budget provided an additional \$44.46 million. This leaves \$96.86 million required to complete the Federal commitment to this project. It is recommended that \$59.76 million be provided to this project in FY 1999; this includes \$7.65 million to account for prior year appropriations shortfalls. The remaining \$37.10 million would be provided in future years.

Boston/South Boston Piers Transitway Phase 1

The Massachusetts Bay Transportation Authority (MBTA) is developing an underground transitway in two phases to connect the existing transit system with the South Boston Piers area. The Piers area, which is connected to the central business district (CBD) by three local bridges, is currently being developed. A 1.5-mile tunnel, to be constructed in two phases, will extend from the existing Boylston Station to the World Trade Center; five underground stations will provide connections to the MBTA's Red, Orange, and Green Lines. Electric trolleybuses or dual-mode vehicles will operate in the transitway tunnel and on surface routes in the eastern end of the Piers area.

Phase 1 of this project consists of a 1-mile, three-station bus tunnel between South Station and the World Trade Center, with an intermediate stop at Fan Pier. Part of the construction is being coordinated with the Central Artery highway project. South Station serves the existing MBTA Red Line, as well as Amtrak and commuter rail and bus service. The total estimated cost of Phase I is \$413.40 million, though this does not include recently calculated cost increases. Any escalation of the total project cost is the responsibility of local project sponsors. Phase II would

extend the transitway to Boylston Station on the Green Line and the Chinatown Station on the Orange Line.

Section 3035(j) of ISTEA directed FTA to enter into an FFGA for this project. On November 5, 1994, an FFGA was issued for Phase 1, committing a total of \$330.73 million in major capital investment funding. Through FY 1997, a total of \$142.20 million has been provided for this project, all of which has been obligated. The FY 1998 budget provided an additional \$46.10 million. This leaves \$142.43 million required to complete the Federal commitment to this project. It is recommended that funds in the amount of \$88.46 million be provided in FY 1999; this includes \$34.48 million to compensate for prior year appropriations shortfalls. The remaining \$53.96 million would be provided in future years. Phase 1 is now expected to open for revenue service in December 2002.

Denver/Southwest LRT

The Regional Transit District (RTD) in Denver is constructing an 8.7-mile light rail extension between Denver and Littleton. The double-track line extends from the I-25/Broadway station on the existing Central Corridor line south to Mineral Avenue in Littleton, running parallel to Santa Fe Drive over an exclusive, grade-separated right-of-way. This extension is expected to serve 8,400 daily passengers when it opens for revenue service in July 2000, with an estimated 22,000 daily riders by 2015.

FTA issued an FFGA for this project on May 9, 1996, which will provide a total of \$120.00 million in §5309 new starts funding. Through FY 1997, a total of \$2.83 million has been provided to this project, with an additional \$22.93 million appropriated in FY 1998. This leaves \$94.24 million required to complete the Federal funding commitment. It is recommended that \$47.24 million be provided to this project in FY 1999, accounting for both the FFGA funding schedule and a \$7.24 million shortfall in prior year appropriations; the remaining \$47.00 million would be provided in future years.

Houston/Regional Bus Plan

Houston Metro's \$1 billion Regional Bus Plan consists of a package of improvements to its existing bus system. The package includes service expansions in most of the region, new and extended HOV (High-Occupancy Vehicle, or "carpool") facilities and ramps, new buses, several transit centers and park-and-ride lots, and supporting facilities. This collection of projects was selected as the locally-preferred alternative over a proposed rail project in 1992.

An FFGA was issued on December 30, 1994, to provide a total of \$500.00 million for the Regional Bus project. To date, a total of \$327.32 million has been provided through FY 1997, of which \$287.02 million has been obligated. The FY 1998 budget provided an additional \$50.93 million. The FY 1999 budget recommends \$68.97 million for this project, which includes \$9.30 million to compensate for prior year appropriations shortfalls under the FFGA. The remaining \$52.77 million needed to complete the Federal commitment to this project would be provided in future years.

Los Angeles/MOS-3 Metro Rail Extensions

The Metro Rail Red Line Project in Los Angeles is being implemented in three phases, or "Minimum Operable Segments" (MOSSs). The first of these segments, MOS-1, opened for revenue service in January 1993. A three-station Wilshire Boulevard section of MOS-2 opened in July 1996; the remainder of MOS-2 is under construction, the Federal funding commitment has been fulfilled and is scheduled to open for revenue service in December 1998. On May 14, 1993, an FFGA was issued to the Los Angeles County Metropolitan Transportation Authority (LACMTA) for the third construction phase, MOS-3.

MOS-3 was defined under ISTEA to include three segments: the North Hollywood segment, a 6.3-mile, three-station subway extension north from the MOS-2 terminus at Hollywood and Vine Street; the Mid-City segment, a 2.3-mile, two-station subway extension west of the MOS-2 terminus at Wilshire and Western Avenue; and an undefined segment of the Eastside project, to the east from the existing Red Line terminus at Union Station. LACMTA later defined this eastern segment as a 3.7-mile, four-station extension under the Los Angeles River to First and Lorena in East Los Angeles. On December 28, 1994, the FFGA for MOS-3 was amended to include this definition of the eastern segment, bringing the total commitment of Federal new starts funds for MOS-3 to \$1,416.49 million.

The North Hollywood Extension is under construction and within budget, and has a revenue operations date of December 2000. The two other extensions, however, have experienced substantial delays. Core sampling of the planned right-of-way for the Mid-City segment revealed previously unknown deposits of naturally-occurring hydrogen sulfide gas at the planned depth of the tunnels, prompting LACMTA to seek alternative alignments for this segment and reopen the public environmental review process.

In response to these delays, projected revenue shortfalls and escalating costs, in December 1996 FTA asked LACMTA to develop a Recovery Plan for MOS-3, detailing the agency's plans to complete those segments that are under construction (MOS-2 and North Hollywood) and restoring project schedules for Eastside and Mid-City. However, on January 14, 1998, the LACMTA board of directors voted to suspend for at least six months all work on the Eastside and Mid-City segments (as well as a separate, locally-funded extension of the light rail Blue Line to Pasadena), and authorized LACMTA staff to initiate demobilization activities for these three projects as well.

On June 9, 1997, FTA and LACMTA negotiated a "restated and revised" FFGA covering the North Hollywood segment (Part 1-A) of MOS-3, which is proceeding as scheduled. The status of the Eastside (Part 1-B) and Mid-City (Part 1-C) segments will be revised once their future has been determined by LACMTA.

To date, a total of \$510.23 million in FY 1997 and prior year funds has been committed to the MOS-3 project, under the existing FFGA. An additional \$61.30 million was provided in the FY 1998 appropriation. In order that construction of the North Hollywood segment may remain

on schedule, FTA recommends that an additional \$100.00 million be provided in FY 1999. The Federal commitment to the entire MOS-3 project totals \$744.97 million in future year funding; however, actual future funding allocations will likely require adjustment once the LACMTA determines the future of the other two segments.

The FY 1999 funding recommendation reflects a provision in the Conference Report accompanying the FY 1998 DOT Appropriations Act, which specified that \$24.00 million of the funds appropriated for the MOS-3 project were to be made available for the Eastside extension. However, the Conference Committee set a number of provisions for the release of these funds, including the preparation by LACMTA of a financially constrained rail recovery plan and renegotiation of Parts 1-A and 1-B of the MOS-3 FFGA. In light of the actions taken by the LACMTA Board on January 14, 1998 to suspend work on the Eastside and Mid-City projects and begin demobilization activities, it may be appropriate for the Committee to revisit the FY 1998 report language.

Maryland/MARC Extension to Frederick & System Improvements

The Mass Transit Administration of Maryland (MTA) is extending the Maryland Commuter Rail (MARC) system from Point of Rocks to Frederick, Maryland. This extension will provide service from suburban Montgomery and Frederick counties to Baltimore, Maryland and Washington, D.C. The project involves track, signal, and station improvements along an existing freight line. MTA will also be providing for a small storage yard for three trains along the Frederick extension near Interstate 70. In addition, MTA is purchasing up to 50 bi-level coaches and six locomotives to meet anticipated systemwide demand on the MARC system and provide service on this extension. Manufacturing of the coaches is underway, with delivery expected to begin in the spring of 1998. The locomotive procurement is being undertaken jointly with Amtrak; delivery is expected to begin by 2000. Protracted negotiations with CSXT over right-of-way purchase terms have resulted in project delays; MTA now expects to begin MARC service on the Frederick extension by 2001.

An FFGA was issued on June 19, 1995, committing a total of \$105.25 million to complete the project. This does not include the \$33.26 million in FY 1994 and prior year funding appropriated before the FFGA, which brings total Federal funding for this project to \$138.51. Through FY 1997, a total of \$89.99 million has been appropriated for this project. The FY 1998 appropriation provided an additional \$30.90 million, leaving \$17.62 million needed to fulfill the FFGA. It is recommended that these remaining funds be provided in FY 1999 to complete the Federal funding commitment to this project.

Northern New Jersey/Hudson-Bergen LRT

The New Jersey Transit Corporation (NJ Transit) is constructing a 9.6-mile, 16-station light rail line along the Hudson River Waterfront in Hudson County, from the Hoboken Terminal to 34th Street in Bayonne and Westside Avenue in Jersey City. This line is intended as the "initial operating segment" of a larger 20.1-mile, 33-station line extending from the Vince Lombardi park-and-ride lot in Bergen County to Bayonne, passing through Port Imperial in Weehauken,

Hoboken, and Jersey City. A requested change in the alignment to Hoboken terminal is currently the subject of an environmental assessment. The core of the completed system will serve the high-density commercial centers in Jersey City and Hoboken, and provide connections with NJ Transit commuter rail service, PATH trains to Newark and Manhattan, and the Port Imperial ferry from Weehauken to Manhattan. The initial operating segment is being constructed under a turnkey contract to design, build, operate, and maintain the system, which was awarded in October 1996.

This project is a major component of the Urban Core program of interrelated projects defined in ISTEA, designed to enhance mobility significantly in the Northeastern New Jersey area. ISTEA specifically exempted these projects from the FTA New Starts evaluation criteria.

The Department issued an FFGA on October 15, 1996, that commits \$604.09 million in §5309 new starts funding for the initial operating segment. This includes \$99.02 million in FY 1997 and prior year funds that have already been obligated to the Hudson-Bergen LRT. The FY 1998 budget provided an additional \$59.81 million. It is recommended that \$74.19 million be provided to this project in FY 1999; this includes \$4.19 million to compensate for prior year appropriations shortfalls under the FFGA. The remaining \$371.07 million needed to complete the Federal funding commitment would be provided in future years. The initial operating segment is scheduled to open for revenue service in July 2000.

Northern New Jersey/Secaucus Transfer

As part of its Urban Core program of interrelated projects, New Jersey Transit Corporation (NJ Transit) is constructing a major commuter rail transfer station in Secaucus, at the point where its Main and Bergen Lines intersect with the Northeast Corridor Line. The project consists of a new, three-level transfer station; track expansions; track, signal and bridge upgrades; and construction of a new platform and elevated walkway. It will allow commuters on the Main Line, Bergen County Line, Pascack Valley Line, and Port Jervis Line to transfer to Northeast Corridor commuter trains destined for Penn Station in midtown Manhattan or Penn Station in Newark. Located in the Meadowlands, this project is part of a potential public/private partnership which could include a major commercial center. Construction is underway, with revenue operation scheduled to begin in June 2002.

Section 3031 of ISTEA identified the Secaucus Transfer Station as an element of the New Jersey Urban Core program of projects, and required FTA to enter into a Full Funding Grant Agreement (FFGA) for elements that can be fully funded in FY 1992 through FY 1997. In addition, §3031(c) specifically exempted these projects from the project justification requirements of §5309(e)(2)-(7) and from FTA's major capital investment policy.

An FFGA was issued for the Secaucus Transfer project on December 6, 1994, to provide a total of \$444.25 million in §5309 new starts funding. A total of \$417.26 million in FY 1997 and prior year funds have been appropriated for this project; the FY 1998 budget provided the final \$26.91 million required to complete the Federal commitment to this project. Therefore, no additional funds are needed in FY 1999.

Pittsburgh/Phase 1 Airport Busway/Wabash HOV

The Port Authority of Allegheny County (PATransit) is constructing a 5-mile busway and a 1.1-mile HOV (High-Occupancy Vehicle, or "carpool") facility to serve a 20-mile corridor between downtown Pittsburgh and the Greater Pittsburgh International Airport. Initial plans called for a dedicated busway along existing railroad right-of-way from Carnegie into the downtown area, and a new bridge to carry HOV traffic across the Monongahela river. However, increased costs and delays associated with the purchase of necessary rights-of-way from Conrail and other design alterations necessitated a change in the scope of the project.

Under the revised project, the busway will follow sections of active and abandoned right-of-way from Carnegie to an intersection with West Carson Street, about 1.5-miles west of the downtown area. Buses will operate in mixed traffic on West Carson Street and any of the three existing bridges to reach Downtown Pittsburgh. The HOV facility will still pass through a rehabilitated Wabash Tunnel, but the new bridge has been dropped from the project at the present time. Instead, HOVs will follow West Carson Street and cross the existing Smithfield Street Bridge into the downtown area. For the remaining 12 miles of the corridor from the outer terminal at Carnegie to the airport, buses will operate in mixed traffic on the Parkway West (I-279) as originally planned. Most of the alignment is under construction, with revenue operation now scheduled to commence in 2001.

An FFGA was issued for this project on October 27, 1994, committing a total of \$121.00 million in Federal new starts funds. Sufficient funds to complete the Federal commitment under the FFGA were provided in FY 1996; however, Congress appropriated additional funds in subsequent years to replace anticipated funding from other Federal sources that did not materialize. The FY 1997 appropriation provided another \$9.93 million to this project, and an additional \$4.98 million was appropriated in FY 1998, bringing the total of Federal new starts funds appropriated for this project to \$135.91 million.

Due to significantly changed conditions after the FFGA was signed, it became apparent that the project could not be completed without exceeding the original budget and schedule. In September 1997, FTA accepted in principle a recovery plan prepared by PATransit, pending environmental analysis and public review. The Recovery Plan modified the project by removing the new bridge and a segment of exclusive busway that was to follow the Conrail "shelf" along the Monongahela River. Consistent with Congressional direction, the original budget is retained. A revised FFGA remains under negotiation. Since the total amount of Federal new starts funding committed to this project has already been provided in FY 1998 and prior years, no further funding is required for this project.

Portland/Westside LRT to Hillsboro

The Tri-County Metropolitan Transportation District (Tri-Met) in Portland, Oregon is constructing an extension of the existing Banfield LRT line ("MAX") from its downtown Portland terminus west to downtown Hillsboro. The project consists of a 17.7-mile, double-track fixed

guideway with 20 stations and nine park-and-ride lots. The route includes a 3-mile twin-tube tunnel under the West Hills, essentially paralleling the Sunset Highway. Also included are 36 low-floor light rail vehicles, the first to be placed in service in the United States. In August 1997, 12 of these vehicles went into service on the existing MAX system. An additional seven low-floor vehicles have been ordered to augment the fleet and meet projected additional ridership increases.

The original FFGA for this project was issued in September 1992, for a segment to S.W. 185th Avenue in Washington County, and was amended in December 1994 to include the remaining segment to Hillsboro. Consistent with Congressional authorization, it was amended again on November 1, 1996 to commit a total of \$630.06 million in §5309 new starts funding to this project. Of this, \$530.28 million has been provided in FY 1997 and prior years. The FY 1998 budget provided an additional \$63.19 million, leaving \$36.59 million required to complete this project. It is recommended that this final funding increment be provided in FY 1999 to complete the Federal funding commitment.

Tri-Met initiated revenue service to the first two stations on the Westside extension in August 1997; full service over the entire line is scheduled for September 1998.

Sacramento/South Corridor LRT

The Sacramento Regional Transit District (RT) is developing an 11.3-mile light rail transit (LRT) project in the South Sacramento Corridor. The system will follow existing Union Pacific right-of-way from downtown Sacramento to Calvine/Auberry. To maximize the use of available State and local capital funds, RT will implement this project in several phases. The first phase, a 6.3-mile "Interim Operable Segment" (IOS), would operate between downtown Sacramento and Meadowview Road. Population and employment in this corridor are expected to grow at rates faster than the regional average, resulting in severe congestion on the two major highways in the corridor.

On June 20, 1997, an FFGA was issued for the 6.3-mile IOS, committing a total of \$111.20 million in Federal new starts funding. This does not include \$1.98 million in prior year funds that were obligated before the FFGA was issued, which brings the total amount of §5309 new starts funding to \$113.18 million. A total of \$9.92 million in FY 1997 and prior year funding has been allocated to this project, and an additional \$20.23 million was appropriated in FY 1998. It is recommended that \$24.13 million be provided under the FFGA in FY 1999, with the remaining \$58.90 million provided in future years. Final design activities commenced on July 1, 1997, and construction is expected to begin in late 1998. The project is projected to open for revenue service by September 2003.

Salt Lake City/South LRT

The Utah Transit Authority (UTA) is constructing a 15-mile light rail transit (LRT) line from downtown Salt Lake City to the southern suburbs. The line would operate on city streets downtown (2 miles) and then follow a lightly-used railroad alignment owned by UTA to the

suburban community of Sandy (13 miles). This project is one component of the Interstate 15 corridor improvement initiative, which includes reconstruction of a parallel segment of I-15. Construction is underway, with an estimated completion date of December 2000.

Salt Lake City has been selected as the site for the 2002 Winter Olympic Games. This project will connect major hotels and local residential areas with the Olympic venues for figure skating, medal rounds for ice hockey, and the International Broadcast Center, and will connect with bus service to venues for speed skating, curling, and the Nordic alpine events.

On August 2, 1995, FTA issued an FFGA for this project that commits a total of \$237.39 million in Federal new starts funding. This does not include \$6.60 million in prior year funds that were provided before the FFGA was issued, which brings the total amount of \$5309 new starts funding to \$243.99 million. A total of \$73.39 million has been appropriated in FY 1997 and prior years. The FY 1998 budget provided an additional \$63.19 million for this project, leaving \$107.41 million needed to complete the FFGA. It is recommended that \$70.00 million be provided in FY 1999, with the remaining \$37.41 million to be provided in future years. This project will be operational in December 2000, well before the opening of the 2002 Winter Olympics.

San Francisco/BART Airport Extension ("BART-SFO")

Bay Area Rapid Transit (BART) in San Francisco and the San Mateo County Transit District (SamTrans) are implementing an 8.2-mile, 4-station extension of the BART rapid transit system to provide service to San Francisco International Airport. The project consists of a 7.4-mile mainline extension from the existing BART station at Colma, through Colma, south San Francisco, and San Bruno, terminating at the Millbrae Avenue BART/CalTrain Station. An additional 0.8 mile spur from the main line north of Millbrae will take BART trains directly into the airport, to a station adjoining the new International Terminal.

The San Francisco International Airport is a major partner in this project. All structures and facilities to be constructed on airport property and installation of related equipment are being funded, designed and constructed by the airport for BART. This project is also participating in the FTA Turnkey Demonstration program to determine if the design/build approach will reduce implementation time and cost. On July 24, 1997, the first contract was awarded for site preparation and utility relocation associated with this project. Bids opened in November 1997 for the main contract for construction of the line, trackwork and related systems were higher than anticipated in the FFGA or by the project engineers.

On June 30, 1997, FTA entered into an FFGA for the BART-SFO extension, committing a total of \$750.00 million in Federal new starts funds to the project. Through FY 1997, a total of \$83.92 million has been allocated to this project. An additional \$29.80 million was provided in FY 1998, leaving \$636.27 million of the total commitment remaining. It is recommended that \$100.59 million be provided in the FY 1999 budget to keep this project progressing on schedule; this includes \$26.59 million to compensate for prior year appropriations shortfalls under the

FFGA. The remaining \$535.68 million would be provided in FY 2000 and future funds. This extension is expected to open for service in September 2001.

San Jose/Tasman LRT West Extension

The Santa Clara County Transit District (SCCTD) is planning a 12.4-mile light-rail system from northeast San Jose to downtown Mountain View, connecting with both the Guadalupe LRT in northern Santa Clara County and the Caltrain commuter rail system. The project is proceeding in two phases: the Phase 1 West Extension will connect the northern terminus of the Guadalupe Light Rail System in Santa Clara with the Caltrain Commuter Rail station in downtown Mountain View, a distance of 7.6 miles; the future Phase 2 East Extension will complete the remaining 4.8 miles.

Based on the distribution of Federal and state/local funds for Phase 1, Federal participation for Phase 2 will be structured to obtain a 50/50 Federal/local share for the combined Phase 1 & 2 project costs. This is required as a result of ISTEA provision Section 3032(b)(2) which states that the Federal share for all Tasman Corridor project costs may not exceed 50 percent (unless the Metropolitan Transportation Commission modifies Resolution No. 1876 in a manner that would allow such Federal share to be increased to 80 percent).

An FFGA was issued for this project on July 2, 1996, providing a total of \$182.75 million in §5309 new starts funding for Phase 1. A total of \$102.75 million was provided in FY 1997 and prior years, and an additional \$21.33 million was provided in FY 1998. It is recommended that \$38.67 million be provided in the FY 1999 budget under the FFGA, including \$3.67 million to compensate for prior year appropriations shortfalls. The remaining \$20.00 million would be provided in future years.

San Juan/Tren Urbano

The Puerto Rico Department of Transportation and Public Works (DTPW) is constructing a 10.7-mile, 14-station rapid rail line between Bayamon Centro and the Sagrado Corazon area of Santurce in the San Juan metropolitan area. The system consists of a double-track line operating over at-grade and elevated rights-of-way, with a short below-grade segment. The project includes a maintenance facility and provisions for two future stations. This project has been selected as one of FTA's turnkey demonstration projects, which incorporates contracts to design, build, operate, and maintain the system. This type of procurement is expected to expedite the implementation of the project and develop the institutional capability needed to operate the system. During 1996 and 1997, seven design-build contracts were awarded for different segments of the project. These contracts exceeded the FFGA budgeted amount by \$122.00 million.

On March 13, 1996, FTA issued an FFGA to provide a total of \$307.41 million to complete the project. This does not include \$4.96 million in Federal new starts funding provided prior to FY 1996, which brings total Federal funding for this project to \$312.37 million under the new starts program. A total of \$18.43 million has been allocated to the Tren Urbano project in FY 1997 and prior year funds, and an additional \$14.95 million was appropriated in FY 1998. It

is recommended that \$78.99 million be provided to this project in FY 1999 under the FFGA, including \$18.99 million to compensate for prior year appropriations shortfalls. The remaining \$200.00 million would be provided in future years.

At the time the FFGA was issued, the total cost of the project (Federal and non-Federal) was projected to be \$1,250.00 million. PRHTA now estimates a total project cost of \$1,550.00 million, and has proposed that FTA provide an increase of \$110.00 million in Federal new starts funds beyond the commitment specified in the FFGA. As stated earlier in this report and in the FFGA itself, any cost increases beyond the total cost specified in the Federal funding commitment are the responsibility of the grantee. FTA intends to honor the original commitment of \$307.41 million, but will not recommend additional funding beyond this amount.

St. Louis/St. Clair County LRT

The Bi-State Development Agency (Bi-State) is developing a 26-mile extension of the Metrolink light rail line from downtown East St. Louis, Illinois to the Mid America Airport in St. Clair County. A 17.4-mile Interim Operating Segment (IOS) will extend from the current Metrolink terminal in downtown East St. Louis to Belleville Area College. This segment consists of eight stations, seven park-and-ride lots, 20 new light rail vehicles, and a new maintenance facility in East St. Louis. The route makes extensive use of abandoned railroad rights-of-way. Final Design was initiated in December 1996 and is expected to take 16 months. Right-of-way and real estate acquisition is proceeding as scheduled. Solicitations for construction bids on first phase demolition work and vehicle procurement were issued in December 1997. Construction bids for other phases will be issued in early 1998. Revenue service is scheduled to begin in May 2001.

On October 17, 1996, FTA and Bi-State entered into an FFGA that commits a total of \$243.93 million in §5309 new starts funding to complete the 17.4-mile IOS. This does not include \$8.49 million in Federal new starts funding provided prior to FY 1996, which brings total Federal funding for this project to \$252.41 million under the new starts program. Through FY 1997, a total of \$48.19 million has been appropriated for this project. The FY 1998 budget provided an additional \$29.90 million, leaving \$174.32 million needed to fulfill the Federal funding commitment. It is recommended that \$64.32 million be provided to this project in FY 1999, with the remaining \$110.00 million provided in FY 2000 and future year funds.

Long-Term Management of New Starts Program

The recommendations contained in this Report are intended to bring greater focus to and improve the management of the New Starts program. As the program becomes increasingly oversubscribed, the cost of completing all projects in the development process at any one time far exceeds the amount of Federal funds likely to be available. In addition to the 16 projects with FFGAs, the new starts caseload consists of another 33 proposed projects seeking discretionary Federal new starts funds, and 90 additional Major Investment Studies (MISs) that contain a transit alternative.

FTA will allocate funds according to the following strategy: All projects recommended for funding must have received a favorable evaluation under the statutory justification criteria. Projects with existing FFGA commitments will be funded first, with funding levels adjusted as necessary to compensate for appropriations shortfalls or unforeseen circumstances that affect the ability of project sponsors to obligate funds as scheduled. Projects expected to receive Federal funding commitments over the next year will be funded based on the ability of project sponsors to obligate funds on a timely basis. Finally, single-year grants will be allocated to projects requiring minimal Federal funding to complete, again based on sponsors' ability to obligate funds in a timely manner. Additional projects may then be considered for funding, provided funds can be obligated. For those projects where the Federal funding commitment specified in an FFGA has been fulfilled, additional Federal funding beyond that commitment will not be recommended.

Funding commitments for many of these projects will necessarily span authorizations. In the short term, this will be accommodated through the contingent commitment device. Over the long term, these commitments will be fulfilled as part of the reauthorized program. As additional projects in the new starts caseload mature, they will be funded as the program allows.

Reauthorization

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) expired at the end of Federal fiscal year 1997, on September 30, 1997. As this report is being compiled, a multi-year transportation reauthorization act has not yet been enacted. Until a reauthorization act can be passed, Federal surface transportation programs are operating under a short-term extension of ISTEA authority, the Surface Transportation Extension Act of 1997 (STEA), until May 1, 1998.

The funding recommendations made in this report, as well as the underlying logic and procedures, are consistent with the Administration's reauthorization proposal, known as the National Economic Crossroads Transportation Efficiency Act (NEXTEA). The Major Capital Investments Program proposed in NEXTEA essentially continues the existing discretionary program for new starts, with few minor changes from current practice. The biggest change is that the Major Capital Investments Program will be the only discretionary capital program under NEXTEA. The current discretionary programs for fixed guideway modernization and bus and bus-related facilities will be folded into the Urbanized Area Formula Program.

APPENDIX A

NEW STARTS PROJECT PROFILES

As of November 1997

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

Project maps produced by Federal Transit Administration Staff

Appendix A New Start Project Profiles

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Background

The New Start project profiles presented in this Appendix provide background information supporting the Department of Transportation's New Start funding recommendations for FY 1999. The Department's funding recommendations are being provided to the Congress pursuant to 49 U.S.C. 5309(m)(3) (formerly Section 3(j) of the Federal Transit Act). The funding recommendations are based in part on the decision criteria defined in 49 U.S.C. 5309(e) (formerly Section 3(i)(1) of the Federal Transit Act).

Under 49 U.S.C. 5309(e), discretionary capital grants and loans for the construction of a new fixed guideway system or the extension of an existing system may be made only if the Secretary determines that the proposed project is:

- (A) based on the results of an alternatives analysis and preliminary engineering;
- (B) justified based on a comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, and operating efficiencies; and
- (C) supported by an acceptable degree of local financial commitment, including evidence of stable and dependable funding sources to construct, maintain, and operate the system or extension.¹

The 49 U.S.C. 5309(e) criteria provide a basis for selecting, from among the eligible projects, those which are the most worthy of Federal funds. To this end, the New Start project profiles describe the fixed guideway projects that are most advanced, and evaluate them in terms of the 5309(e) criteria.

Profiles have been prepared for each proposed project or study undergoing Final Design and Preliminary Engineering. In addition, profiles have been prepared for projects that are under construction if additional funds are needed in FY 1999 to fulfill Full Funding Grant Agreements.

In general, the profiles for projects in Final Design and Preliminary Engineering include five sections. These include

- (1) **Description.** The description section briefly describes a project's physical characteristics and presents the latest estimates of cost and ridership. Unless otherwise noted, cost

¹ The new start criteria do not apply where (a) the project was in preliminary engineering or final design on January 1, 1987; (b) the project is located within an extreme or severe nonattainment area, is a transportation control measure as defined in the Clean Air Act, and is required to carry out an approved State Implementation Plan; (c) Section 5309 New Start funding accounts for less than \$25 million; or (d) Section 5309 New Start funding accounts for less than one third of the total cost of the project or an appropriate program of projects. While such projects need not satisfy Section 5309(e) to be eligible for funding, they must compete for funds with other eligible projects.

estimates are expressed in escalated (year of construction) dollars. This section includes a summary description of key project elements.

- (2) **Status.** This section identifies where the project is in the major investment planning and project development process. It indicates, for example, whether alternatives analysis (or a major investment study) and preliminary engineering have been completed. If not, it indicates when current studies are expected to be completed. This section also cites relevant statutory requirements.
- (3) **Evaluation.** This section presents an evaluation of the project's merit based on the criteria cited in 49 U.S.C. 5309(e), and updated in Federal Register Notices on December 19, 1996 and November 12, 1997 (documented in Appendix C). Criteria addressed in this section include: mobility improvements; environmental benefits, operating efficiencies, cost effectiveness. This section also includes FTA's rating of the project in terms of transit-supportive existing land use and future patterns.
- (4) **Local Financial Commitment.** This section reports the proposed local share (non-Federal) share of total project capital costs, and provides FTA's ratings of the following: the stability and reliability of the capital financing plan; and, the stability and reliability of the operating financing plan.
- (5) **Other Factors (Optional).** Other rating factors which may be useful in identifying the most meritorious projects are described in this section. This optional section highlights projects where local officials have demonstrated community support for transit by means of commitments to supportive land use, economic development, and transportation policies.

The profiles for projects covered by Full Funding Grant Agreements include the project description and status sections only, since a decision to fund the project has already been reached.

How the Ratings were Developed

As part of the normal system planning and project development process, local agencies develop the information that FTA uses to assess projects in terms of project evaluation and local financial commitment. The specific information used for these evaluations is outlined below.

Project Evaluation

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) greatly broadened the criteria to evaluate New Start projects. The Section 5309 New Starts criteria were updated in Federal Register Notices on December 19, 1996 and November 12, 1997 (documented in Appendix C). This year's evaluations and ratings address the full range of New Starts criteria, including: mobility improvements; environmental benefits, operating efficiencies, cost effectiveness, transit-supportive existing land use and future patterns, and other factors.

The revised criteria, introduced for the first time in the FY 1999 Report, include four major changes to the previously applied criteria:

- 1) Quantitative measures now compare the Build alternative to the No-Build as well as to the Transportation Systems Management (TSM) alternatives. In the past, the Build alternative was compared only to the TSM alternative.
- 2) Technical changes have been introduced to the calculation of the cost-effectiveness criterion, no longer subtracting value of travel time savings from costs.
- 3) Revised measures for three additional criteria -- mobility improvements, environmental benefits, and operating efficiencies -- have been introduced.
- 4) A new measure, a combined rating of transit supportive existing land use and future patterns, has been introduced.

In September 1997, the Federal Transit Administration's Office of Planning and the Office of Budget and Policy released the *Technical Guidance on Section 5309 New Starts Criteria* to assist local agencies in the completion of the revised criteria. In addition, these offices offered national workshops from June 1997 to October 1997 to offer technical assistance to local agencies.

In reporting project profiles for this FY 1999 report, some local agencies were not able to report all of the New Starts criteria at this time. In some cases, previous planning analyses may not have included estimation of data for the proposed New Start, the No-Build, and the TSM alternative which are required as inputs to calculate measures of mobility improvements, environmental benefits, operating efficiencies, and cost effectiveness. Each of these cases are discussed in the specific project profiles, and an N/A is reported to indicate that data are not available at this time.

A brief description of the Section 5309 New Starts criteria follows.

Mobility Improvements

The first measure, Value of Travel Time Savings, is defined as the projected dollar value of the aggregate travel time savings in the forecast year anticipated from the New Start compared to both the No-Build and TSM alternatives. The measure is expressed as the dollar value of the projected travel time savings for the study area, with the dollar value per hour based on standardized values developed by FTA following USDOT guidance released in April 1997.

The second measure reflects the Absolute Number of Low-Income Households Located Within ½ Mile of "Boarding Points" Associated with the New Investment or System. Low income is defined as the number of households below the poverty level. This measure is reported for stations or stops directly related to the proposed fixed guideway project or system

Environmental Benefits

The first measure is the Change in Criteria Pollutant Emissions and Greenhouse Gas Emissions in the Forecast Year, comparing the New Start to the No-Build and TSM alternatives. The measure will be expressed as the change in the number of tons of emissions for carbon monoxide (CO), nitrogen oxides (NO_x), volatile organic compounds (VOC) or hydrocarbons (HC), particulate matter (PM₁₀), and carbon dioxide (CO₂).

Energy consumption is measured as the Net Change in the Forecast Year in the Regional Consumption of British Thermal Units (BTU), comparing the New Start to the no-build and TSM alternatives.

The third measure includes the Current Regional Designation by the Environmental Protection Agency (EPA) for National Ambient Air Quality Standards.

Operating Efficiencies

The sole measure for this criteria reports the Change in Operating Cost per Passenger-Mile in the Forecast Year, comparing the New Start to the No-Build and TSM alternatives. This measure, expressed in terms of absolute dollar value, is to address the impact on operating efficiencies for the entire regional transit system.

Cost-Effectiveness

The previously applied "cost per new rider" index has been replaced by a revised measure, the Incremental Change in Total Capital and Operating Cost per Incremental Passenger in the Forecast Year. The index is based on the annualized total (including Federal and local) capital investment and operating cost divided by the forecast change in annual transit system ridership, comparing the New Start to the No-Build and TSM alternatives. The new cost-per-incremental rider measure has been revised from the previously applied index in that it no longer subtracts the value of travel time savings from annualized incremental costs (travel time savings are now reported separately under mobility improvements).

Transit Supportive Existing Land Use and Future Patterns

Assessment of land use is a new criteria and measure, introduced in the spirit of ISTEA and consistent with FTA initiatives to encourage transit supportive land use and development. The measure, expressed in terms of a combined rating of "high," "medium/high," "medium," "low/medium", or "low", addresses the degree to which existing development patterns and local land use policies are likely to foster transit supportive land use. The combined rating considers each of the following factors: existing land use; containment of sprawl; transit-supportive corridor policies; supportive zoning regulations; tools to implement land use policies; and, performance of land use policies. The FY 1999 evaluations were supported by reviews conducted by FTA's contractors: Booz-Allen & Hamilton, Inc., and Cambridge Systematics, Inc.

Local Financial Commitment

FTA's evaluation of the local financial commitment to a proposed project focuses on the proposed local share of project costs, the strength of the proposed capital financing plan, and the stability and reliability of the operating financing plan. The FY 1999 evaluations were supported by reviews conducted by FTA's contractors: Booz-Allen & Hamilton, Inc., KPMG Peat Marwick, Inc., and the Volpe National Transportation Systems Center.

Local share refers to the percentage of capital costs to be met with non-Federal funding, and includes both the local match required by Federal law and any capital "overmatch." Overmatch is accounted for in the rating process because it reduces the required Federal commitment, thus leveraging limited Federal funds, and because it indicates a strong local commitment to the project. The use of flexible funds and innovative financing techniques is noted, where appropriate.

The evaluation of each project's proposed capital financing plan takes two principal forms. First, the plan is reviewed to determine the stability and reliability of each proposed source of local match. This includes a review of inter-governmental grants, tax sources, and debt obligations. Each revenue source is reviewed for availability within the project timetable. Second, the financing plan is evaluated to determine if adequate provisions have been made to cover unanticipated cost overruns. The strength of the capital finance plan is rated "high," "medium/high", "medium", "low/medium", or "low". The indicators used to assign these ratings are further explained in Table A-1.

The third component of the financial rating is an assessment of the ability of the local transit agency to fund operation of the system as planned once the guideway project is built. This rating focuses on the operating revenue base and its ability to expand to meet the incremental operating costs associated with a new fixed guideway investment and any other new services and facilities. The strength of the operating finance plan is rated "high," "medium/high", "medium", "low/medium", or "low". The indicators used to assign these ratings are further explained in Table A-2.

Other Factors (Optional)

This criteria has traditionally been included as an option to provide an opportunity to identify any additional factors which may be relevant to local and national priorities and relevant to the success of the project. These may include a variety of factors including: the degree to which local policies and institutions are in place (local planning, programming, parking policies; project management experience and capabilities; and, other local initiatives such as public-private partnerships, etc.). These additional factors may provide FTA with an added assessment of the likelihood of the feasibility of a successful transit investment, measured against regional considerations.

TABLE A-1
FINANCIAL RATINGS: CAPITAL FINANCING COMMITMENTS

Final Design	High/Medium	FTA considers the applicant to be in reasonably sound financial condition based upon the reviews outlined in FTA's Financial Capacity Circular.
		The applicant has committed or dedicated sufficient funds to cover the entire non-Federal share of the overall undertaking, including provision for contingent cost overruns.
	Low	FTA does not consider the applicant to be in reasonably sound financial condition.
		The applicant has not yet committed or dedicated sufficient funds to cover the entire non-Federal share of the overall undertaking, including provision for contingent cost overruns. For example, an "unacceptable" rating would be given where significant events such as the renewal of expiring authorizing legislation, satisfactory resolution of conditions imposed by funding entities, the passage of new legislation, or a referendum still must occur to put adequate local funding in place.
Preliminary Engineering	High	FTA considers the applicant to be in sound financial condition based upon the reviews outlined in FTA's Financial Capacity Circular.
		The applicant has committed or dedicated sufficient funds to cover all or nearly all of the non-Federal share of the overall undertaking, including provision for contingent cost overruns.
	Medium	FTA considers the applicant to be in reasonably sound financial condition based upon the reviews outlined in FTA's Financial Capacity Circular.
		The applicant has adopted a realistic capital finance plan that adequately covers projected non-Federal capital costs. The plan may be vulnerable to economic downturns and other funding uncertainties, but these vulnerabilities can probably be managed without significant disruptions to capital programs and/or operations.
	Low	FTA does not consider the applicant to be in reasonably sound financial condition based upon the reviews outlined in FTA's Financial Capacity Circular.
		The applicant has not adopted a capital finance plan, or FTA considers the adopted finance plan to be inadequate or infeasible. The plan may be so vulnerable to economic downturns and other funding uncertainties that implementation of the project would put capital programs and operations at significant risk.

TABLE A-2
FINANCIAL RATINGS: STABLE AND RELIABLE OPERATING REVENUE

Final Design	High/Medium	Dedicated transit funding sources are in place, or there has been a clear pattern of general appropriations from State or local governments, which regularly provide a balanced budget for the existing system.
		Existing transit facilities have been adequately maintained and replaced through continuing reinvestment in the system.
		Financial projections show that the applicant currently has adequate financial capacity to operate and maintain the locally preferred alternative, supporting feeder systems, other programmed projects, and other elements of its transit system, under reasonably conservative assumptions.
	Low	Sources of local transit funding have not kept pace with costs. Financial conditions have led to a pattern of service level cuts to reduce operating costs.
		The applicant has a history of deferring capital replacement and/or routine maintenance.
		Financial projections show that the applicant does not currently have the financial capacity to operate the proposed project, supporting feeder system other programmed projects, and other elements of its transit system under reasonably conservative assumptions.
Preliminary Engineering	High	Ample dedicated funding sources are in place, or there has been a clear pattern of general appropriations from State or local governments, which regularly provide a balanced budget for the existing system.
		Existing transit facilities have been well maintained and improved through continuing reinvestment in the system.
		Financial projections show that the applicant currently has ample financial capacity to operate and maintain the locally preferred alternative, supporting feeder systems, other programmed projects, and other elements of its transit system under reasonably conservative assumptions.

Preliminary Engineering (cont'd)	Medium	Dedicated transit funding sources are in place, or there has been a clear pattern of general appropriations from State or local governments, which regularly provide a balanced budget for the existing system.
		Existing transit facilities have been adequately maintained and replaced through continuing reinvestment in the system. The applicant's funding plan demonstrates an ability to continue with an adequate maintenance and replacement program.
		The applicant has adopted a realistic financial plan which, once implemented, would provide adequate financial capacity to operate and maintain the locally preferred alternative, supporting feeder systems, other programmed projects and other elements of its transit system under reasonably conservative assumptions.
	Low	Sources of local transit funding have not kept pace with costs. Financial conditions have led to a pattern of service level cuts to reduce operating costs.
		The applicant has a history of deferring capital replacement and/or routine maintenance. Or, implementation of the project would create deficiencies in the applicant's ability to provide timely maintenance and capital replacement.
		The applicant has not yet adopted a finance plan, or has adopted a plan that is unrealistic or inadequate. For example, a "low" rating would be given where the region has demonstrated an unwillingness to adopt new funding sources with the required level of financial capacity, or where the operating plan is dependent upon unreasonable passenger revenue projections. A "low" rating would also be appropriate where financial projections show that, even if the adopted plan is fully implemented, the applicant would still not have the financial capacity to operate the proposed project, other programmed projects, and other elements of its transit system under reasonably conservative assumptions.

TABLE A-3
LAND USE ASSESSMENT RATINGS

1. EXISTING LAND USE		
Preliminary Engineering/ Final Design	High	Current levels of population in the corridor are sufficient to support a major transit investment.
	Medium	Current levels of population and employment in the corridor are only marginally supportive of a major transit investment. Projected levels of growth must be realized.
	Low	Current and projected levels of population and employment are not sufficient to support a major transit investment.
Ratings are based on the following assessment: <ul style="list-style-type: none"> ♦ Existing land use mix ♦ Share of jobs located in CBD and employment centers served by project, and employment density within corridor ♦ Existing high transit trip generators along project corridor ♦ Existing pedestrian friendly development 		
2. CONTAINMENT OF SPRAWL		
Preliminary Engineering/ Final Design	High	Adopted and enforceable urban containment and growth management policies are in place.
	Medium	Significant progress has been made toward implementing urban containment and growth management policies.
	Low	Limited consideration has been given to implementing urban containment and growth management policies.
Ratings are based on the following assessment: <ul style="list-style-type: none"> ♦ Existing and planned land use mix ♦ Planned density and market trends for suburban and urban development ♦ Growth management policies ♦ Existing and planned pedestrian friendly development 		

3. TRANSIT SUPPORTIVE CORRIDOR POLICIES		
Preliminary Engineering/ Final Design	High	A detailed corridor plan and related policies which encourage and facilitate transit supportive development have been adapted in the proposed major transit investment corridor.
	Medium	Significant progress has been made toward completing a corridor plan and implementing related policies which encourage and facilitate transit supportive development in the proposed major transit investment corridor.
	Low	Limited progress, to date, toward preparing and adopting a corridor plan and implementing related policies which encourage and facilitate transit supportive development in the proposed major transit investment corridor.
Ratings are based on the following assessment: <ul style="list-style-type: none"> ◆ Policies encouraging transit friendly and transit oriented development ◆ Process for development of corridor and station area plans ◆ Promotion of mixed land use and high density land use ◆ Growth management policies ◆ Promotion of pedestrian friendly design ◆ Parking Management 		
4. SUPPORTIVE ZONING REGULATIONS NEAR TRANSIT STATIONS		
Final Design	High	Detailed station area plans and related local zoning and land use regulations have been adopted.
	Medium	Significant progress is being made toward preparing and adopting station area plans and related zoning.
	Low	No more than initial efforts have begun to prepare station area plans and related zoning.
Preliminary Engineering	High	Significant progress is being made toward preparing and adopting station area plans and related zoning.
	Medium	Initial efforts have begun to prepare station area plans and related zoning.
	Low	Limited consideration has been given to preparing station area plans and related zoning.

Ratings are based on the following assessment:

- ♦ Existing comprehensive plans, zoning ordinances, parking and pedestrian access policies to support transit within the corridor (including recent accomplishments and initiatives to amend existing plans, ordinances, and policies)
- ♦ Promotion of mixed land use and high density land use
- ♦ Promotion of pedestrian friendly design

5. TOOLS TO IMPLEMENT LAND USE POLICIES

Final Design	High	Infrastructure and other local investments are being made in station areas which implement the local land use policies and which leverage the Federal investment in the proposed major transit investment corridor.
	Medium	Local capital improvement programs and development initiatives have been adopted to implement local land use policies and which leverage the Federal investment in the proposed major transit corridor.
	Low	No more than initial efforts to prepare local capital improvement programs and development initiatives which support station area plans have begun.
Preliminary Engineering	High	Local capital improvement programs and development initiatives have been adopted to implement local land use policies and which leverage the Federal investment in the proposed major transit corridor.
	Medium	Efforts to prepare local capital improvement programs and development initiatives that support station area plans have begun.
	Low	Limited consideration has been given to local capital improvement programs and development initiatives that support station area plans.

Ratings are based on the following assessment:

- ♦ Promotion of pedestrian friendly design
- ♦ Promotion for development of corridor and station area plans
- ♦ Organizational participation in the economic development and planning process
- ♦ Process for public and private sector involvement and corridor and station area planning
- ♦ Level of jurisdictional endorsement for corridor and station area plans

6. PERFORMANCE OF LAND USE POLICIES

Final Design	High	Significant amount of transit supportive housing and employment development is occurring in the corridor.
	Medium	Moderate amount of transit supportive housing and employment development is occurring in the corridor.
	Low	Limited number of proposals for transit supportive housing and employment development in the corridor are being received. have begun.
Preliminary Engineering	High	Moderate amount of transit supportive housing and employment development is occurring in the corridor.
	Medium	Proposals for transit supportive housing and employment development in the corridor are being received.
	Low	Limited progress, to date, toward achieving transit supportive development in the corridor.

Ratings are based on the following assessment:

- ♦ Existing comprehensive plans, zoning ordinances, parking and pedestrian access policies to support transit within the corridor (include recent accomplishments and initiatives to amend existing plans, ordinances, and policies)
- ♦ Joint development organizations, transportation management associations, tax increment financing and improvement districts, tax abatement programs, or downtown associations
- ♦ Short range and long term development targets for the corridor
- ♦ Station area development proposals and any joint development proposals received

PROJECTS WITH FULL FUNDING GRANT AGREEMENTS

North Line Extension

Atlanta, Georgia
(November 1997)

Description The Metropolitan Atlanta Rapid Transit Authority (MARTA) is constructing a 1.9 mile, two-station extension of the North Line from just north of the Dunwoody Station to North Springs. The extension will connect with the North Line segment from Buckhead to Dunwoody, which opened for service in June 1996. The extension will serve the rapidly growing area north of Atlanta, including Perimeter Center and north Fulton County. The 1.9 mile extension is now estimated to cost \$487.7 million (escalated dollars) and includes 56 rail vehicles (the FFGA reflects a total cost of \$381.3 million and includes 28 rail vehicles). Daily ridership on the rail extension in the year 2005 is estimated at 33,000 riders, including 11,000 new riders.

Status Section 3035 (tt) of ISTEA required FTA to negotiate and sign a multi-year grant agreement for North Line extension from Medical Center to North Springs.

FTA awarded \$92.49 million for final design and construction of the segment from Medical Center through the Dunwoody Station in 1991 and 1992.

In December 1994, MARTA and FTA entered into a Full Funding Grant Agreement (FFGA) in the amount of \$305.01 million in Section 5309 New Start funds for the extension from Dunwoody through North Springs. Through FY 1998, a total of \$208.14 million in Section 5309 New Start funds has been allocated to this project (\$179.77 million in Congressional appropriations and \$28.37 million in prior year deobligated funds).

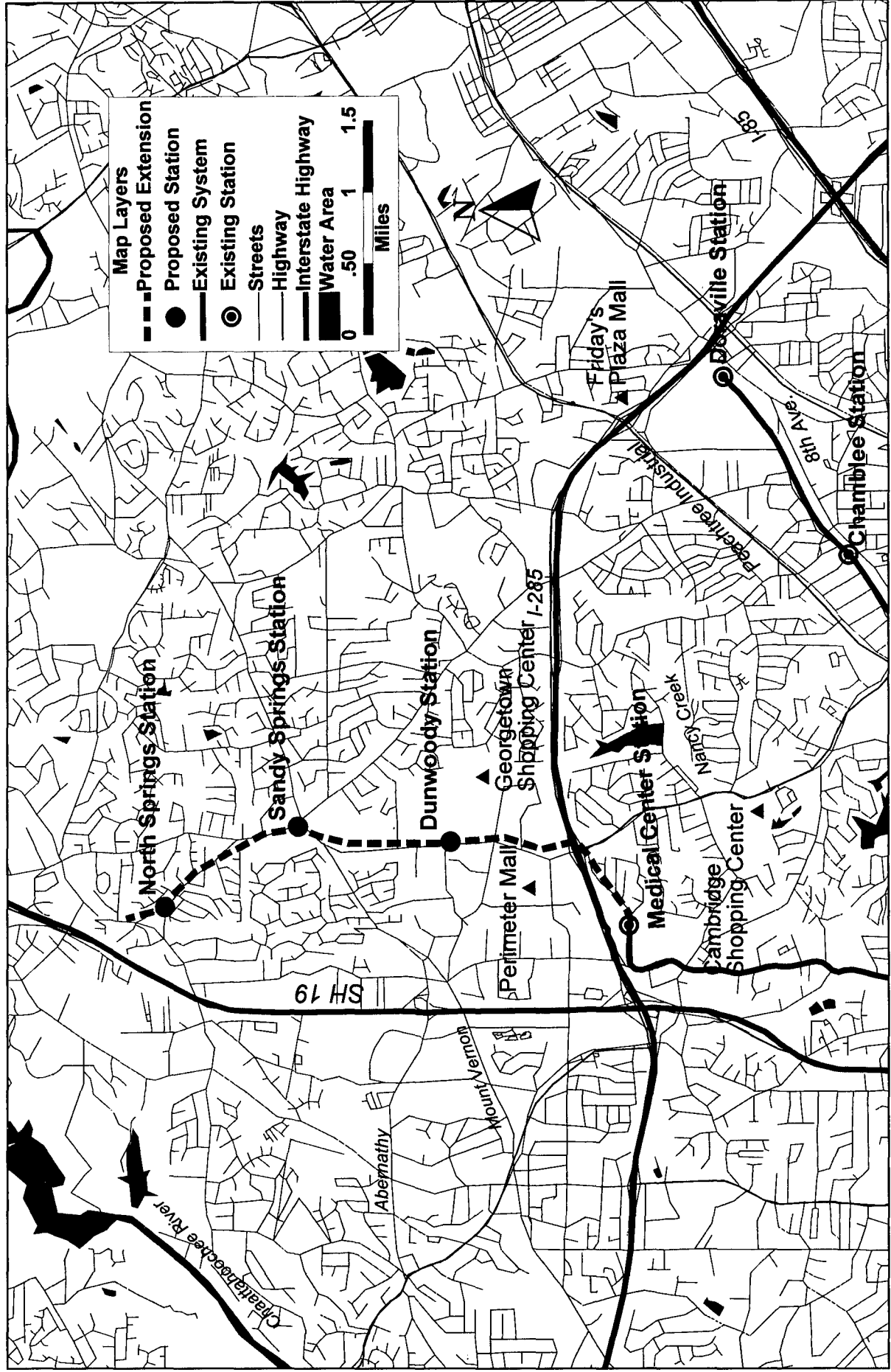
The original total estimated cost for this extension as reflected in the FFGA was \$381.3 million and included the purchase of 28 rail vehicles. Due to changed conditions, recent scope enhancements (outside the FFGA) and additional rail car requirements, the total project cost is currently estimated at \$487.7 million. The expanded scope requirements are due to the need to address expected increases in estimated service levels, station parking enhancements, and rights of way impacts stemming from the proposed widening of the adjacent GA 400 freeway. As specified in the FFGA, any costs exceeding the \$381.3 million cap are to be derived from non-Federal sources.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$305.01 (\$280.14 million appropriated through FY 1998)
Regional Sales Tax:	76.30 (\$49.58 million appropriated through FY 1998)
*TOTAL	\$381.31

NOTE: Current cost estimate totals \$487.7 million (escalated dollars). Terms of the FFGA state that cost increases are the responsibility of the grantee. Source of the additional \$103.39 million to be determined by the grantee.

North Line Extension

Atlanta, GA



South Boston Piers Transitway - Phase I

Boston, Massachusetts

(November 1997)

Description

The Massachusetts Bay Transportation Authority (MBTA) is developing an underground transitway connecting the MBTA's existing transit system with the South Boston Piers area. The Piers area, which is connected to Boston's central business district by three local bridges, is slated for significant future development. Dual mode trackless trolleys will operate in the transitway and on limited surface routes in the eastern end of the Piers area. Phase I of the project, a one-mile connector between South Station and the World Trade Center, is estimated to cost \$413.4 million (escalated dollars). South Station serves the MBTA Red Line and local bus, commuter rail, intercity bus, and Amtrak. Daily ridership for the Transitway is estimated to range from 22,000 trips in the lower-growth scenario to 34,100 trips in the high-growth scenario. Phase II would extend the Transitway to the Chinatown Station on the Orange Line and the Boylston Station on the Green Line.

Status

Section 3035(j) of ISTEA directed FTA to enter into a multiyear grant agreement with the MBTA for \$278 million. The MBTA completed alternatives analysis and selected a locally preferred alternative in February 1993. The final EIS was published in December 1993. The project has commenced with final design and construction activities.

In November 1994, the FTA signed a Full Funding Grant Agreement (FFGA) with the MBTA for \$330.73 million in Section 5309 New Starts funds, which included a contingent commitment for \$53 million. The agreement covers final design and construction of Phase I. The project is now expected to open for revenue service in December 2002.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$330.73 (\$188.3 million appropriated through FY 1998)
State Bond Funds:	82.68
Local	0.00
TOTAL	\$413.41 (for Phase I)

South Boston Piers Transitway, Phase 1

Boston, MA



Southwest LRT

Denver, Colorado

(November 1997)

Description

The Regional Transportation District (RTD) is implementing an 8.7-mile light rail transit (LRT) extension from the I-25/Broadway interchange in Denver parallel to Santa Fe Drive to Mineral Avenue in Littleton. The LRT will operate over an exclusive, grade-separated right-of-way and connect with the existing 5.3-mile Central Corridor light rail line, which was constructed entirely with local funds and opened in October 1994.

The capital cost for the project is \$176.32 million (escalated dollars). This estimate includes local costs already incurred by RTD for right-of-way acquisition, a portion of an existing LRT maintenance and storage facility, transit improvements along the Southwest corridor, and preliminary engineering, as well as new costs for final design, construction, and the acquisition of rolling stock. The project is estimated to carry 8,400 passengers per day in the year 2000 (opening year) and 22,000 passengers per day in 2015.

Status

FTA issued the Final Environmental Impact Statement (FEIS) in February 1996 and signed the Record of Decision in March 1996. RTD and FTA entered into a Full Funding Grant Agreement (FFGA) in May 1996, committing \$120 million in Section 5309 New Start funding.

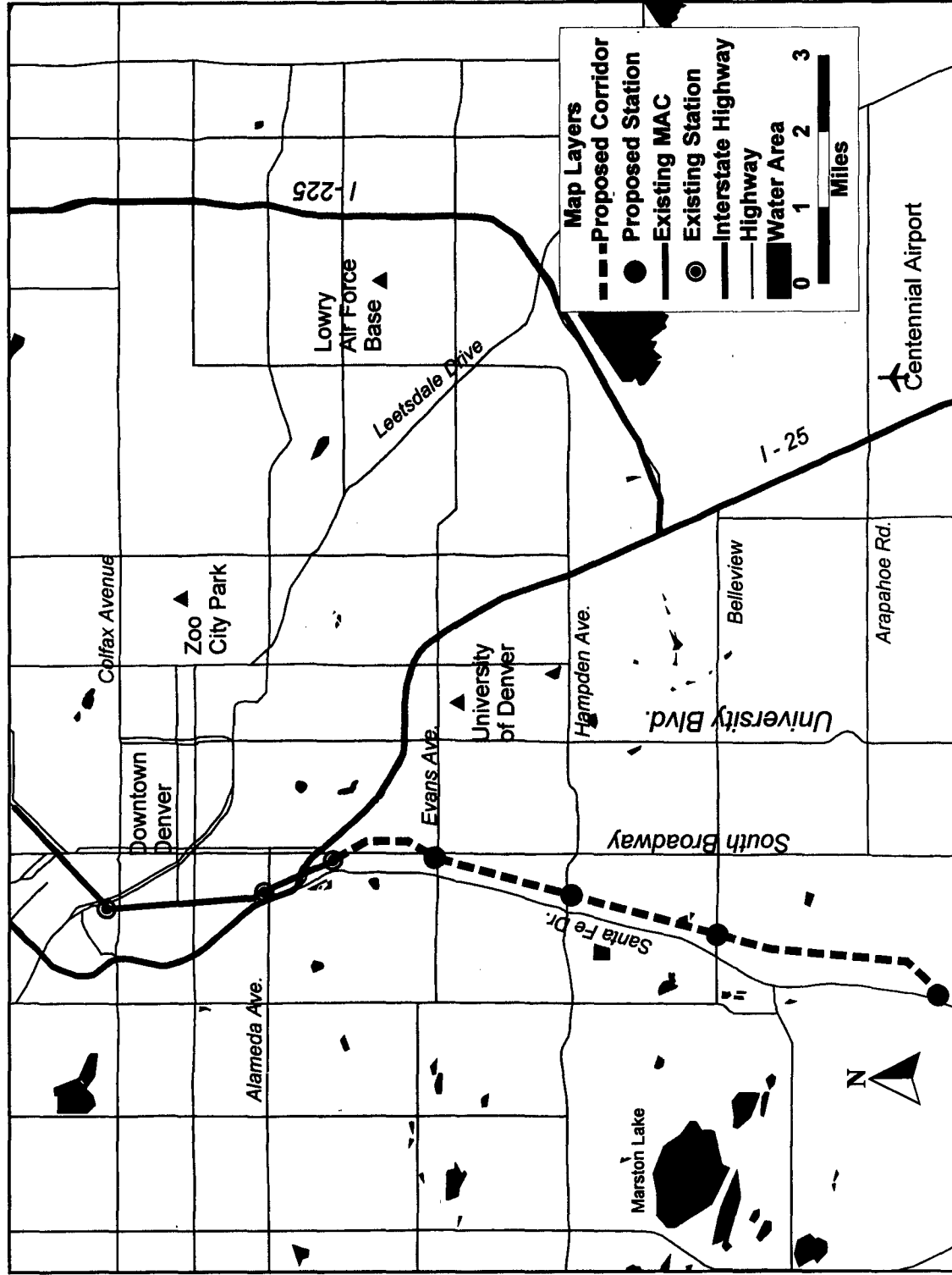
Through FY 1998, Congress has appropriated \$24.42 million in Section 5309 New Start funds. An additional \$1.34 million was provided in FY 1997 from reprogrammed funds for a total of \$25.76 million made available to the project.

Final design is underway with an estimated completion date of December 1997. Construction is estimated to be completed in July 2000.

<u>Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>(escalated dollars)</u>
Federal:		
Section 5309 New Start FFGA Amount	\$120.00	(\$25.76 million appropriated through FY 1998, including \$1.34 million provided from reprogrammed funds)
Section 5307	18.88	(\$18 million in Flexible funds)
Local:		
RTD Sales and Use Tax and in-kind contributions	37.44	
TOTAL	\$176.32	

Southwest LRT

Denver, CO



Regional Bus Plan

Houston, Texas
(November 1997)

Description

Houston Metro's Regional Bus Plan (RBP) is a package of improvements to the bus system. The \$625 million project includes new and extended high occupancy vehicle (HOV) facilities and ramps, several transit centers and park & ride lots, bus acquisitions, bus service expansion, and supporting facilities.

Status

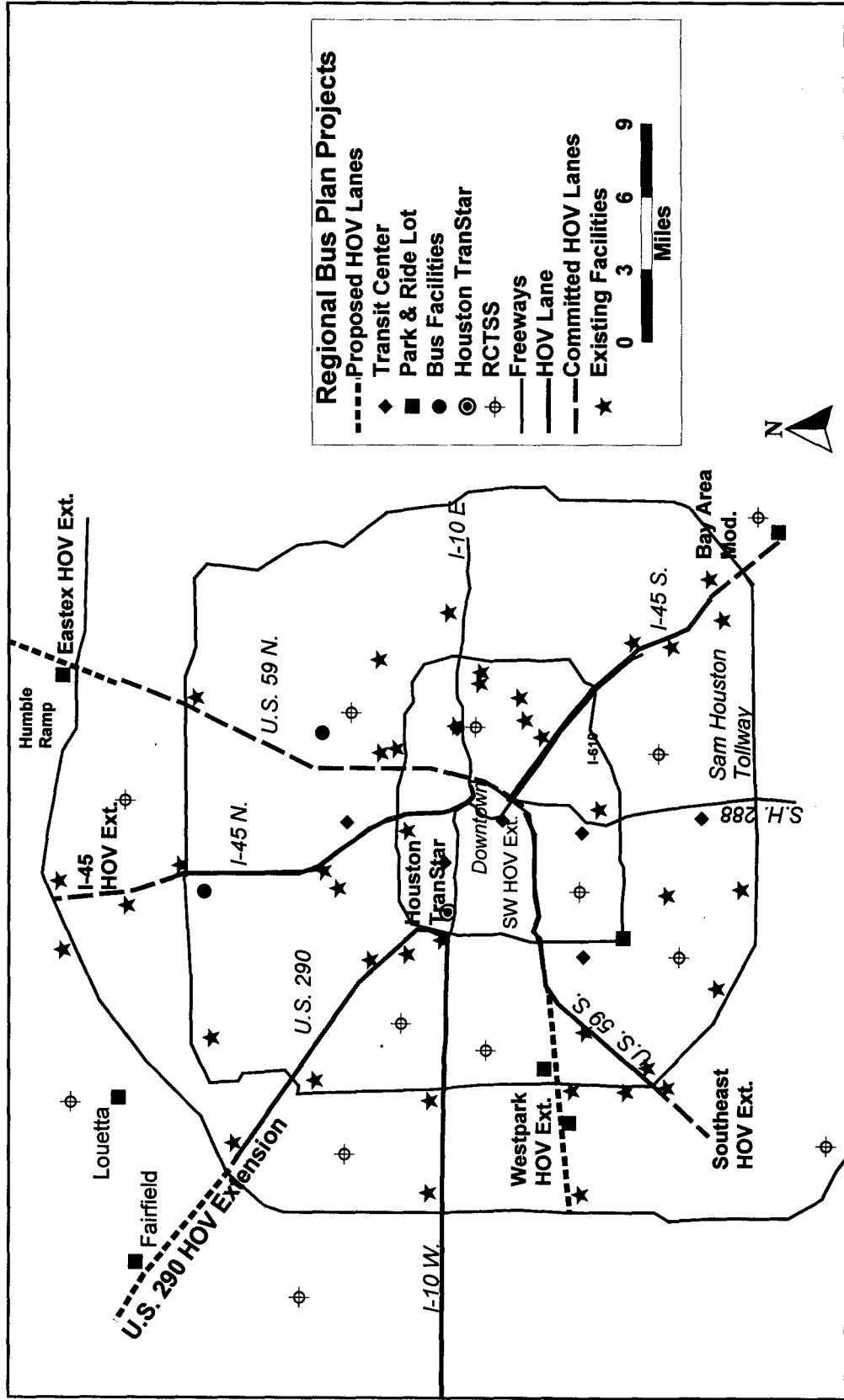
Section 3035(uu) of ISTEA directed FTA to negotiate and sign a multiyear grant agreement for \$500 million. In December 1994, FTA and Houston Metro signed a Full Funding Grant Agreement (FFGA) for \$500 million (80 percent) in Section 5309 New Starts funds. In addition to the \$125 million (20 percent local share) for projects in the FFGA, Houston Metro intends to fund additional projects costing \$375 million entirely with local funds.

Houston received Section 5309 New Start appropriations between FY 1989 and 1998 totaling \$378.26 million. Houston is currently in the construction phase of the Regional Bus Plan. All projects are expected to be completed by December 2002.

<u>Source of Funds</u>	<u>Total Funding (\$million (escalated dollars))</u>
Federal:	
Section 5309 New Start FFGA Amount	\$500.00 (\$378.26 million appropriated through FY 1998)
Local	125.00
TOTAL	\$625.00

Regional Bus Plan

Houston, TX



MOS-3 Extensions of Metro Rail

Los Angeles, California

(November 1997)

Description

The 23-mile, \$5.7 billion Metro Rail Red Line Project in Los Angeles is being planned, programmed and constructed in phases through a series of "minimum operable segments" (MOSs). The 4.4-mile, 5-station segment called MOS-1 opened for revenue service in January 1993. A 2.1-mile, three-station segment of MOS-2 opened along Wilshire Boulevard in July 1996. The additional 4.6-mile, 5-station segment in MOS-2 is under construction and is scheduled to open in December 1998. The FTA financial commitment to MOS-2, as set forth in the Full Funding Grant Agreement (FFGA) of April 1990 between FTA and the Los Angeles County Metropolitan Transportation Authority (LACMTA), has been fulfilled.

Section 3034 of ISTEA directed FTA to enter into a multiyear agreement for the Los Angeles Metro Rail Project including MOS-3, adding three Metro Rail Red Line extensions:

1. The *North Hollywood Extension* is 6.3 miles in length with three stations, all in subway. It extends the Hollywood branch of MOS-2 generally to the north through the Santa Monica mountains into North Hollywood in the San Fernando Valley. The estimated cost is \$1.31 billion (escalated dollars). Total daily ridership for this segment is estimated to be 33,000.
2. The *Eastside Extension* (initial segment) is 3.7 miles in length with four stations, originally designed as subway. It extends MOS-1 from Union Station into neighborhoods east of downtown. The estimated cost is \$1,049 million (escalated dollars). Total daily ridership for this segment is now estimated at 28,000 (as documented in the FEIR/FEIS).
3. The *Mid-City Extension* extends the Wilshire Boulevard branch generally to the west beyond the current MOS-2 terminus at Western Avenue. It adds 2.3 miles, originally designed as subway, and two stations to the system. The estimated cost is \$683 million (escalated dollars). Total daily ridership for the MOS-3 extension is estimated at 26,000 daily boardings.

Status

LACMTA and FTA signed a FFGA for MOS-3 in May 1993 which provided \$1.230 billion in Section 5309 New Start funds for the three extensions of MOS-3. Subsequently, the FFGA was amended on December 28, 1994 to provide an additional \$186.49 million for a total commitment of \$1,416.49 billion in Section 5309 New Start funding, representing 51 percent of MOS-3 total costs. A restated FFGA for the North Hollywood segment (Phase I-A) of MOS-3 was signed on June 9, 1997. Additional restated FFGAs covering East Side (Phase I-B) and Mid-City (Phase I-C) would be negotiated once LACMTA submits an acceptable financial plan, also known as the Recovery Plan. FTA's financial commitment to MOS-3 remains unchanged at this time.

Through 1998, Congress has appropriated \$571.53 million in New Start funds for MOS-3. LACMTA plans to fund \$240.5 million (9 percent) of MOS-3 with Federal flexible funds such as STP and CMAQ.

LACMTA has planned to submit a Revised Recovery Plan covering the period through the year 2010. Current status follows:

The *North Hollywood Extension* is under construction and within budget, leading to a scheduled opening in May 2000.

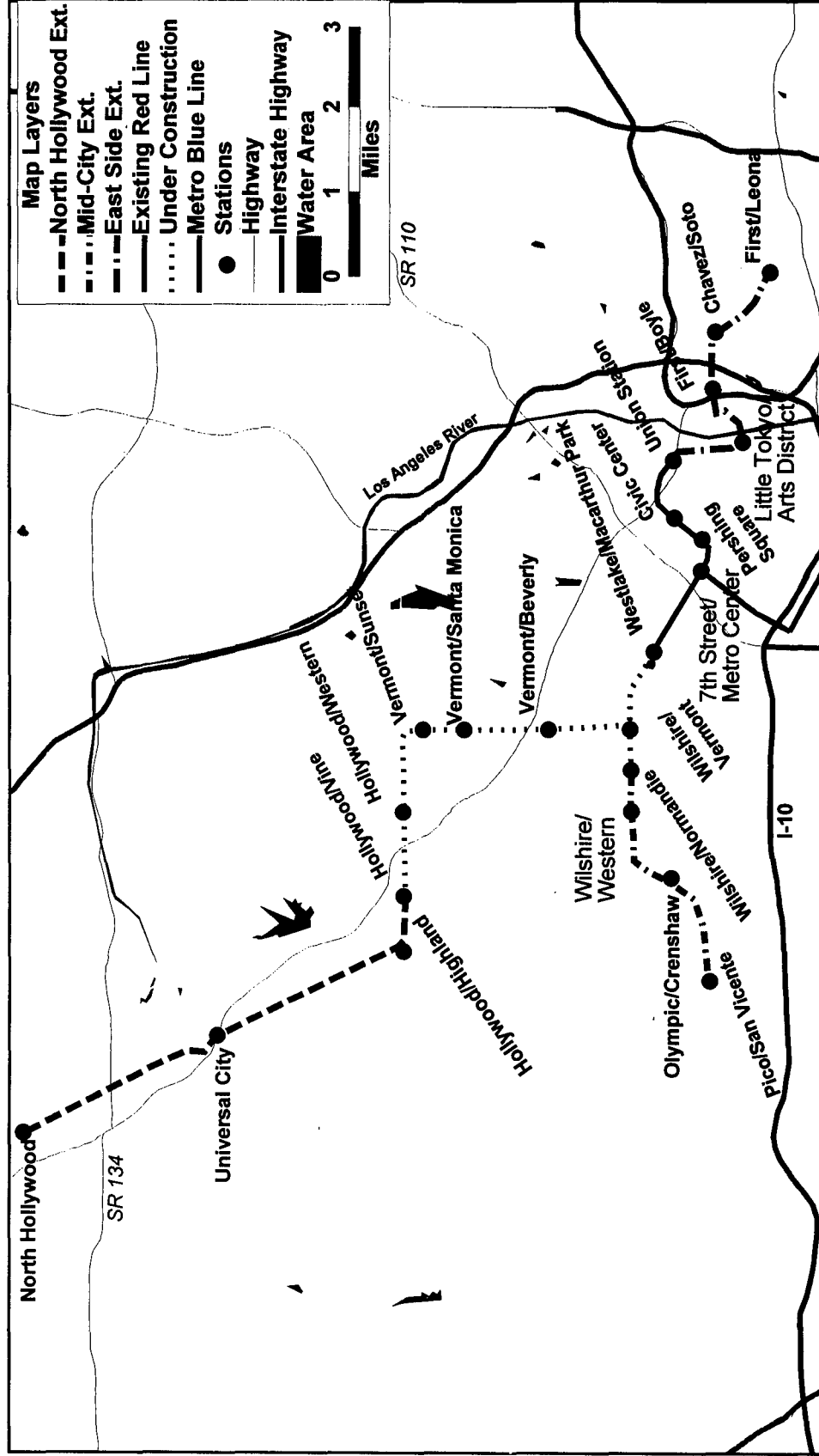
The *Eastside Extension* is in final design (which is 90% completed). Most properties required to build stations and portals have been acquired.

The *Mid-City Extension* has reverted back to the planning and environmental review phase. LACMTA reconsidered alternative horizontal and vertical alignments and reopened the public environmental review process. Environmental documents are currently under review. Current estimates identify project completion now to be 2008, nine years later than the FFGA scheduled opening in July 1999.

However, on January 14, 1998, the LACMTA Board of Directors voted to suspend for at least six months all work on the Eastside and Mid-City segments.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$1,416.49 (\$571.53 million appropriated through FY 1998)
Flexible Funds	240.50
Local:	1,124.10
TOTAL	\$2,781.09

MOS-3 Segments of Metro Rail Los Angeles, CA



MARC Frederick Extension & Rolling Stock Procurement

Maryland
(November 1997)

Description

The Mass Transit Administration (MTA) of Maryland is extending the Maryland Commuter Rail (MARC) system to provide service from Point of Rocks to Frederick, Maryland. The MARC system presently consists of two lines between Washington, D.C., and Baltimore, Maryland, (one of which extends into north of Baltimore into Perryville, Maryland) and a third line between Washington, D.C., and Brunswick, Maryland, with extended service into Martinsburg, West Virginia. In addition, MTA is embarking on a major procurement of additional commuter rail coaches and locomotives for MARC to meet anticipated system-wide demand. The estimated cost of projects covered by the Full Funding Grant Agreement is \$131.6 million. Ridership forecast for the year 2015 is 1,600 daily passengers on this extension to Frederick.

The Frederick extension will involve track, signal, and station/yard improvements on an existing freight line.

Status

Section 3035(nn)(2) of ISTEA directed FTA to enter into a Full Funding Grant Agreement (FFGA) with MTA totaling \$160 million, including \$60 million in fiscal year 1993 and \$50 million in each of the Fiscal Years 1994 and 1995, to carry out MARC service extensions and other improvements including the purchase of rolling stock and station improvements and expansions.

In June 1995, MARC was awarded an FFGA for \$105.25 million in Section 5309 New Starts funds. Through FY 1998, \$87.63 million has been appropriated to this project. An additional \$33.25 million not covered by the FFGA was appropriated by Congress for MARC commuter rail improvements in prior years.

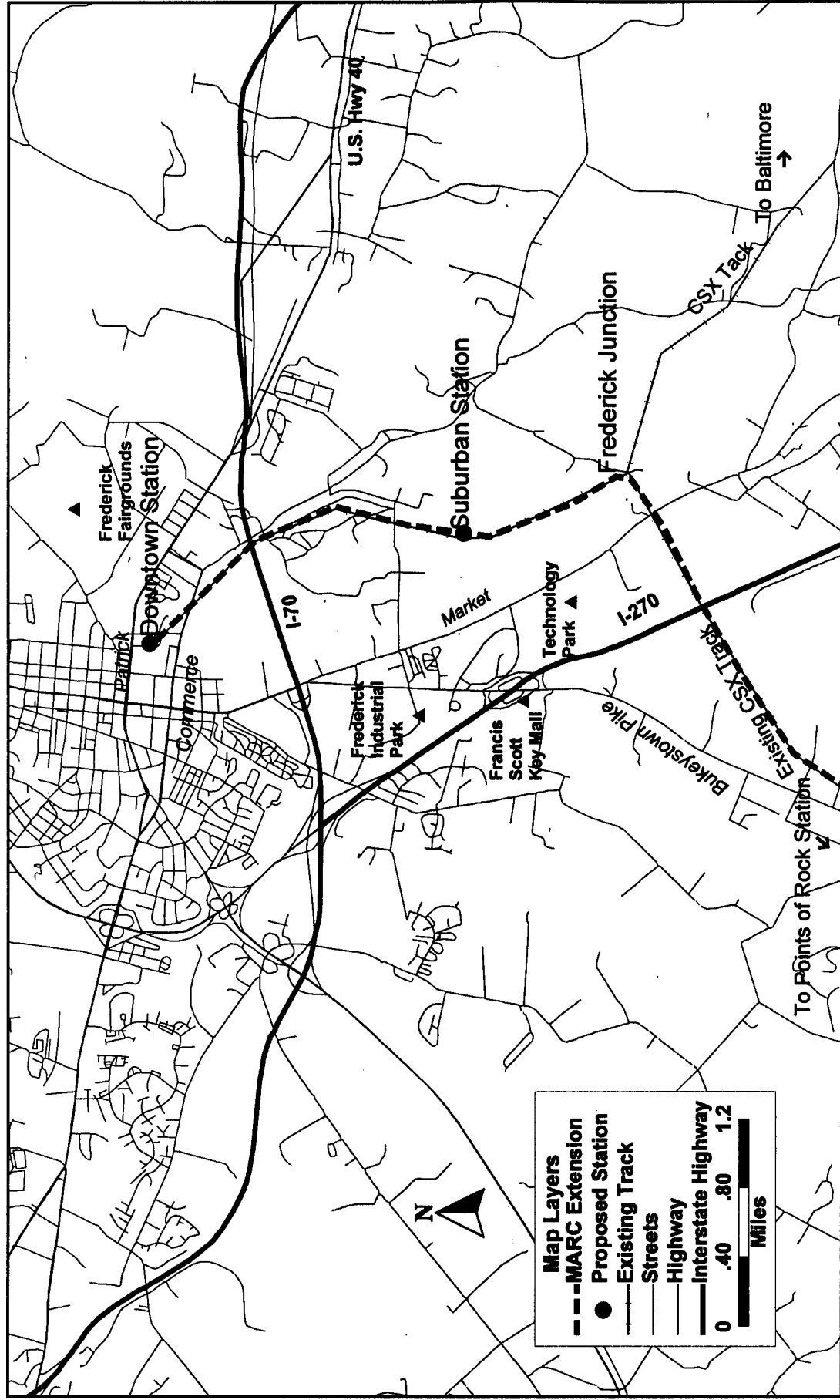
An Environmental Assessment was completed, which resulted in a Finding of No Significant Impact. Two station sites have been selected and Final Design is underway. The FFGA commits \$38.7 million in Section 5309 New Start funds for the Frederick Extension (out of the total FFGA amount of \$105.25 million). MTA expects to begin MARC commuter rail service on this extension by 2001. This represents a significant delay caused by protracted negotiations between MARC and CSXT, the owner of most of the right-of-way for the extension.

In December 1994, the MTA began steps to purchase up to 50 bi-level commuter rail cars and six electric locomotives for systemwide capacity improvements throughout the MARC commuter rail system. Final design of the coaches is completed and manufacturing is underway, with delivery expected to begin by Spring 1998. MTA is also doing some bridge clearance work near Union Station in Washington, D.C., to accommodate the bi-level cars. That work is not part of the FFGA. The procurement of the locomotives is being done as a joint procurement with Amtrak. Delivery of the locomotives is expected to begin by the year 2000.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$105.25 (\$87.63 million appropriated through FY 1998)
Local	26.31
TOTAL	\$131.56

NOTE: An additional \$33.25 million was appropriated before the FFGA, bringing total Section 5309 appropriations to \$120.89 million and the total Section 5309 cost to \$138.51 million.

MARC Extensions - Point of Rocks to Frederick Maryland



Hudson-Bergen Waterfront Light Rail Transit System

Northern New Jersey

(November 1997)

Description

The New Jersey Transit Corporation (NJ Transit) is constructing a light rail transit (LRT) line along the Hudson River waterfront in Hudson County. The full project is a 20.1-mile, 33-station at-grade LRT line from the Vince Lombardi Park-and-Ride lot in Bergen County to Bayonne. The project passes through Port Imperial in Weehauken, Hoboken and Jersey City. The outer ends would provide 8,800 park-and-ride spaces. The core of the system will serve the high density commercial and residential centers in Jersey City and Hoboken and connect to ferries, PATH, and NJ Transit commuter rail lines. A 9.6-mile "initial operating segment" (IOS), currently under construction, would connect the Hoboken Terminal to 34th Street Bayonne and Westside Avenue in Jersey City.

The full 20.1-mile system is expected to cost \$1.6 billion (escalated dollars) and to carry 81,400 riders per day. The 9.6 mile initial operating segment (IOS) is expected to cost \$992.14 million (escalated dollars) and carry 31,300 riders per day.

Status

In February 1993, NJ Transit selected, as its locally preferred alternative, a 26-station at-grade LRT line from the Vince Lombardi Park-and-Ride lot through Hoboken and Jersey City to Route 440 in Southwest Jersey City. Later in 1993, NJ Transit added a 7-station extension to southern Bayonne, resulting in a 20.1-mile project.

A Final Environmental Impact Statement (FEIS) for the project was completed in the summer of 1996. A Record of Decision (ROD) was issued by FTA in October 1996. In January 1997, the Governor of New Jersey, in conjunction with the Mayor and the City Council of Hoboken, agreed to alter the alignment in Hoboken to the west of the city. An Environmental Assessment is underway to examine the environmental impacts of the change.

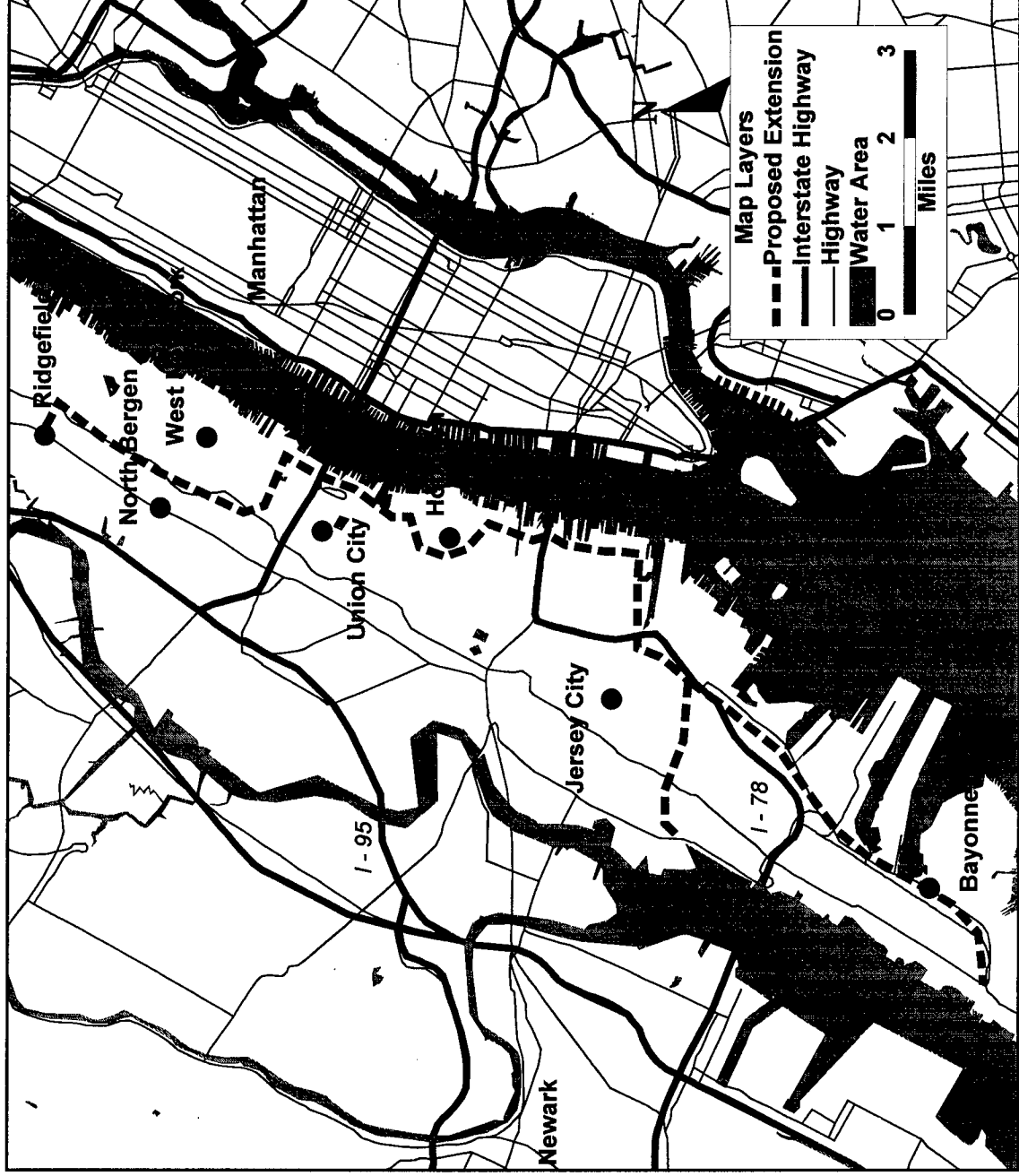
Section 3031 of ISTEA directed FTA to negotiate and enter into a Full Funding Grant Agreement (FFGA). In October 1996, an FFGA was signed committing \$604.09 million in Section 5309 New Start funds to support the 9.6-mile IOS. The Hudson-Bergen LRT project is one of eight elements eligible for funding as part of the New Jersey Urban Core Project. Through FY 1998, Congress has appropriated \$158.82 million in Section 5309 New Start funds to the IOS and a total of \$609.08 million in Section 5309 New Start funds for Urban Core Projects.

NJ Transit is using a turnkey procurement to implement the project. A design/build/operate/maintain contract was signed in October 1996, and notice to proceed was given to the contractor on November 1, 1996. Project construction began in December 1996. The Revenue Operation Date is scheduled for July 2000.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$604.09 (\$158.82 million appropriated through FY 1998)
Section 5307 Formula	281.65
State:	106.40
TOTAL	\$992.14 (for the IOS)

Hudson - Bergen LRT

Northern New Jersey



Federal Transit Administration, 1998

Secaucus Transfer Station

Northern New Jersey

November 1997

Description

The New Jersey Transit Corporation (NJ Transit) is constructing a major commuter rail transfer station in Secaucus where its Main, Bergen County, Pascack Valley and Port Jervis Lines intersect the Northeast Corridor (NEC) Line. Passengers on the Main, Bergen, Pascack Valley and Port Jervis lines will be able to transfer to the NEC for more direct rail service to Midtown Manhattan via Penn Station NY and southern New Jersey via Penn Station Newark. Located in the New Jersey Meadowlands, the project is being constructed as part of a potential public/private partnership which would include the development of a major commercial center.

The Secaucus Transfer Station (STS) project includes construction of a three-level 200,000 square foot transfer station at the intersection of the NEC, Main and Bergen County lines. The station foundations and structural system will support future commercial developments over the station. It also includes modification of 2 miles of the NEC from two to four tracks with improved signal, power and communication systems. Similar upgrading of tracks on the Main and Bergen County Lines near the new station are also included. The total STS project is estimated to cost \$444.25 million (escalated dollars).

Status

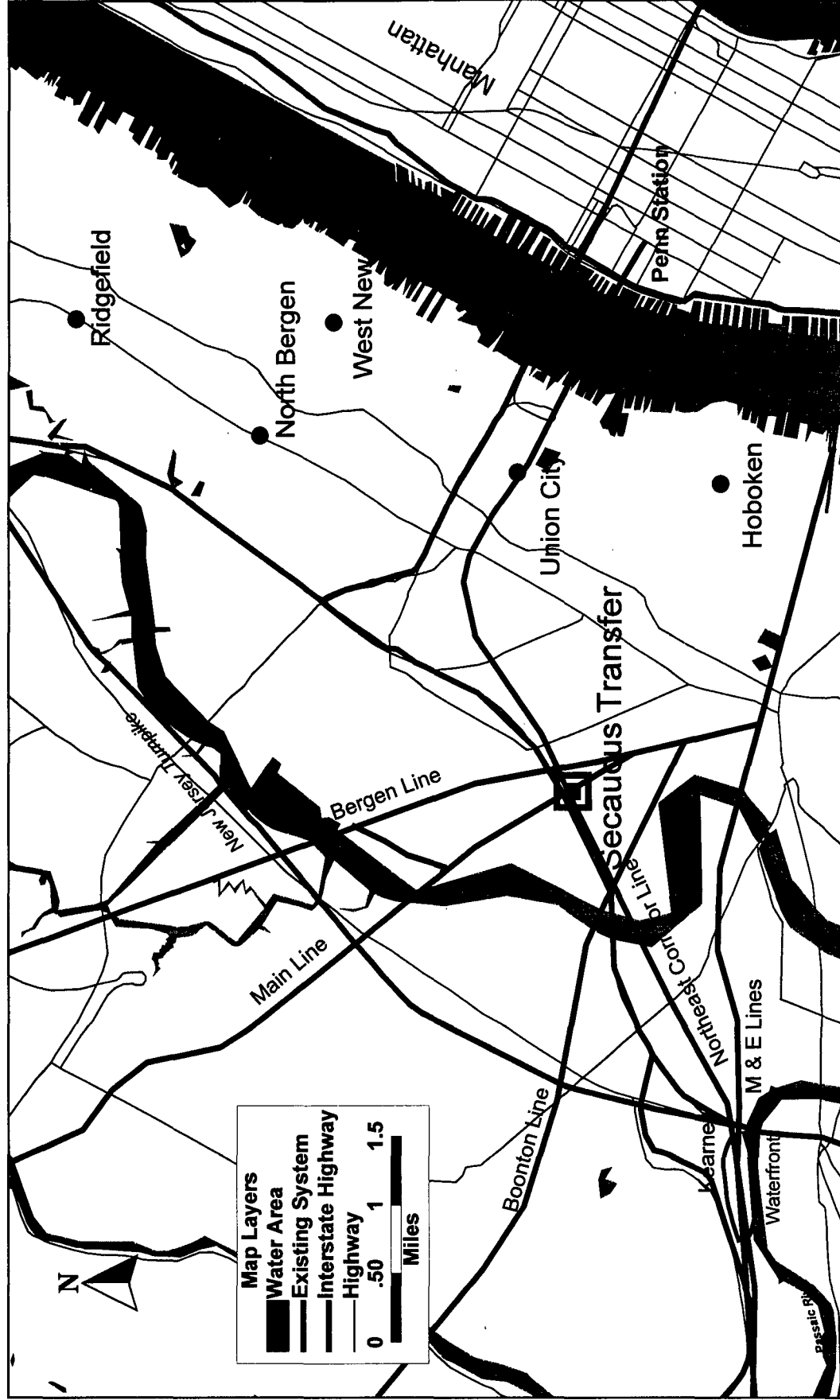
Section 3031 of ISTEA directed FTA to consider non-Federal contributions to the capital cost of the NJ Urban Core Project made since 1987 as required local matching funds for the project. In addition, Section 1044 of ISTEA allowed certain highway toll revenues which are used to build, improve, or maintain the highways, bridges or tunnels that serve interstate commerce to be credited as local matching funds for any federally assisted highway or transit project. Sufficient non-Federal funds to constitute local match for the STS, in accordance with Sections 1044 and 3031 of ISTEA, have already been expended as part of the NJ Urban Core Project.

In December 1994, FTA signed a Full Funding Grant Agreement (FFGA) with NJ Transit totaling \$444.25 million in Federal Section 5309 New Start funds for construction of the STS. The FFGA identifies the specific expenditures by NJ Transit that constitute local matching funds. NJ Transit began construction immediately with revenue operations scheduled for 2002. Through FY 1998, Congress has appropriated \$444.17 million in Section 5309 New Start funds to this project, completing Federal commitment to the FFGA.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$444.25 (\$444.17 million appropriated through FY 1998)
Local	0.00
TOTAL	\$444.25

Secaucus Transfer

Northern New Jersey



Phase I Airport Busway/Wabash HOV Facility

Pittsburgh, Pennsylvania

(November 1997)

Description

The Port Authority of Allegheny County (PATransit) is constructing a 5-mile busway and a 1.1-mile HOV facility to serve a 20-mile corridor between the airport and downtown Pittsburgh. The busway, extending from Carnegie to downtown Pittsburgh, will follow sections of active and abandoned railroad right-of-way from Carnegie to an intersection with West Carson Street about 1.5 miles west of Downtown. Buses would use West Carson Street and any of three existing bridges to access Downtown Pittsburgh. The 1.1 mile HOV facility will use a rehabilitated Wabash Tunnel; HOVs would use West Carson Street and the Smithfield Street Bridge to access Downtown. In the remaining 12 miles of the corridor, from Carnegie to the Airport, buses will operate in mixed traffic on the relatively uncongested Parkway West (I-279). There will be a direct ramp connection in Carnegie between the Busway and the Parkway West. New daily transit and carpool trips are estimated to be 17,900.

Original cost estimates totaled \$326.8 million when the Full Funding Grant Agreement (FFGA) was signed in October 1994. Due to significantly changed conditions after the FFGA was signed, it became apparent that the project could not be completed without exceeding its original budget and schedule. Port Authority prepared a Recovery Plan for the FFGA in June, 1997. In September 1997, FTA accepted the Recovery Plan in principle, pending environmental analysis and public review. The project description, above, reflects the two major modifications which the Recovery Plan made to the project originally described in the FFGA. First, the project will not include an exclusive Busway on the Conrail Shelf which runs parallel to the Monongahela River. Instead, buses will travel in mixed traffic along West Carson Street. Second, the project will not include a new bridge over the Monongahela River. Instead, buses and HOVs will access Downtown Pittsburgh by utilizing existing bridges. The Recovery Plan, consistent with Congressional direction, retains the FFGA total project budget of \$326.71 million.

Status

In 1992, the PATransit Board completed alternatives analysis and selected the Busway as the locally preferred alternative. The Final Environmental Impact Statement (FEIS) was approved in June 1994.

Section 1069 and Section 1108 of Title I of ISTEA authorized \$39.5 million and \$9.8 million, respectively, for design and construction of a busway linking downtown Pittsburgh and Pittsburgh Airport. In October 1994, FTA and PATransit entered into an FFGA for

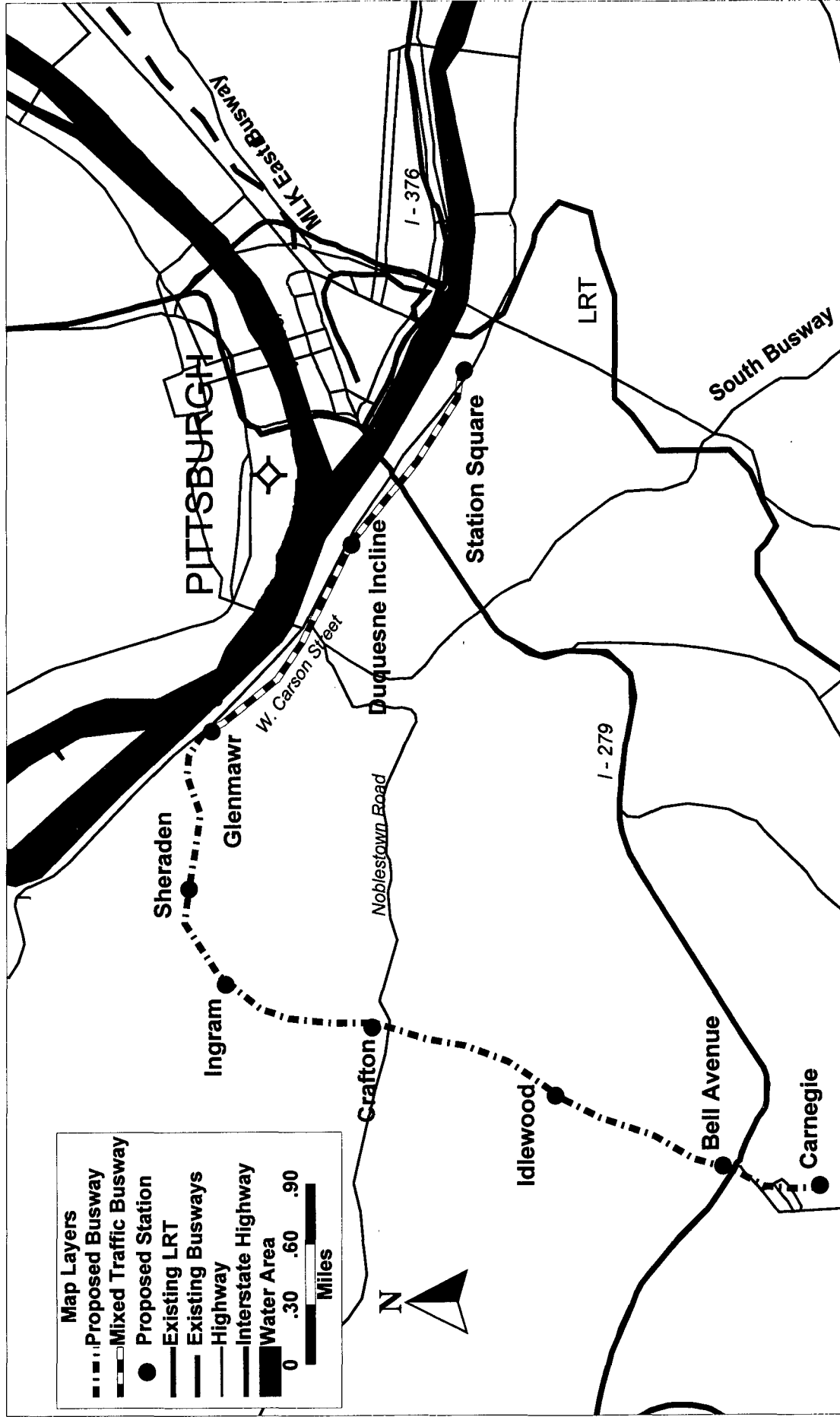
\$121.00 million in Section 5309 New Start funds, based on a total project cost of \$326.80 million. The remainder of the project budget is funded through Section 5309 bus funds, CMAQ funds, intermodal funds pursuant to ISTEA Sections 1108 and 1069, and funds from the Commonwealth of Pennsylvania. Congress appropriated an additional \$9.90 million in Section 5309 New Start funds in FY 1997 and \$4.98 million in FY 1998 to replace previously anticipated Section 1069 funding which did not materialize. The FFGA was subsequently amended to include these funds, bringing the total FFGA commitment to \$135.91 million in Section 5309 New Start funds.

Through FY 1998, Congress appropriated \$135.91 million in Section 5309 New Start funds, \$18.93 million in Section 5309 bus funds, \$15.8 million in ISTEA Section 1069 funds, and \$9.57 million in Section 1108 funds. The FY 1998 Transportation Appropriations Act appropriated \$4.98 million in Section 5309 New Starts funds, completing FFGA Federal funding for the project.

<u>Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>(escalated dollars)</u>
Federal:		
Section 5309 New Start FFGA Amount	\$135.91	(\$135.91 million appropriated through FY 1998)
Section 5309 Bus	18.93	
CMAQ	76.50	
Section 1108	9.57	
Section 1069	15.80	
State:		
State Bond Funds	70.00	
TOTAL	\$326.71	

Phase 1 Airport Busway / Wabash HOV

Pittsburgh, PA



Westside-Hillsboro Corridor

Portland, Oregon
(November 1997)

Description The Tri-County Metropolitan Transportation District of Oregon (Tri-Met) is constructing the Westside-Hillsboro Light Rail Project which extends the existing MAX system from the terminus in downtown Portland to downtown Hillsboro. The route includes a three-mile twin tube tunnel under Portland's West Hills. The project is 17.7 miles long with 20 stations, nine park and ride lots, and parking spaces for approximately 3,700 automobiles. The projected revenue operation date is September 1998. The project is expected to carry 27,100 passengers on an average weekday in 2005. The project is estimated to cost \$963.52 million.

The project will include 36 low-floor light rail vehicles, the first low-floor light rail vehicles in service in the United States. In August 1997, 12 vehicles went into service on the existing line.

Status Section 3035(b) of ISTEA authorized \$515.00 million in Section 5309 New Start funds and directed FTA to enter into a multiyear grant agreement with Tri-Met.

In September 1992, FTA and Tri-Met entered into a Full Funding Grant Agreement (FFGA) for the segment from downtown Portland to 185th Avenue. The Section 5309 New Start share for this segment was \$515.99 million. Final design and construction for the Hillsboro extension commenced under a Letter of No Prejudice issued by FTA in August 1994. Consistent with Section 325 of the Fiscal Year 1992 Department of Transportation and Related Agencies Appropriations Act (P.L. 102-143), a restated FFGA with a Federal commitment of \$590.06 million was signed in December 1994. The 1994 FFGA for the Westside-Hillsboro project provided a contingent commitment of New Start funds of \$74.06 million to fund one-third of the 6-mile Hillsboro extension.

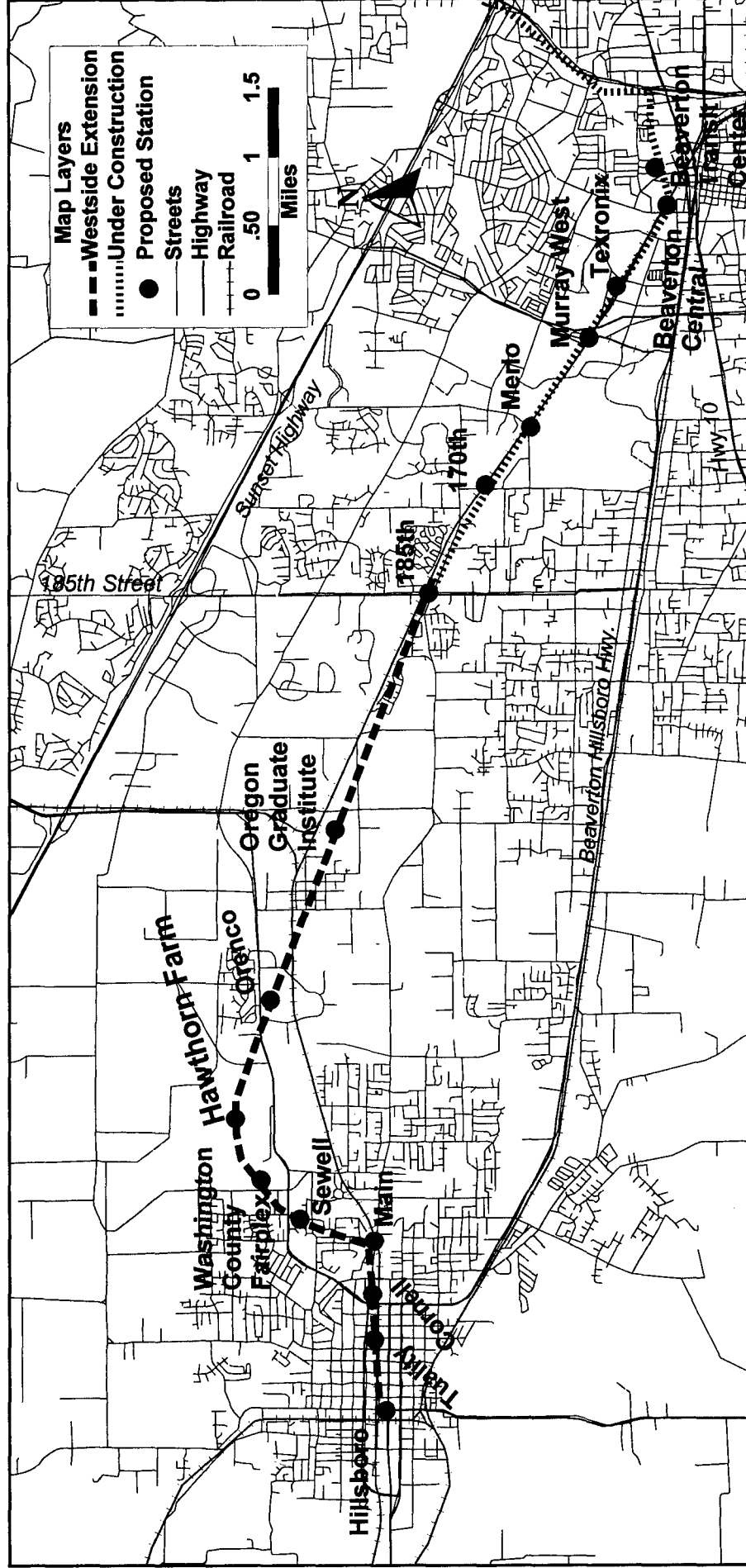
In 1996 Congress authorized an additional \$40 million for the project. FTA amended the FFGA to reflect this additional authorization in November 1996, increasing the total commitment to \$630.06 million in Section 5309 New Start funds. Through FY 1998, Congress has appropriated \$593.47 million for the project.

Construction is nearing completion along the entire alignment with approximately \$922 million committed and \$792 million spent through September 1997. Tri-Met initiated revenue service to the project's first two stations in August 1997 with full service over the entire line scheduled for September 1998.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$630.06 (\$593.47 million appropriated through FY 1998)
Section 5307	30.00
Flexible Funds	44.00
Local	259.46
TOTAL	\$963.52

Westside - Hillsboro Corridor

Portland, OR



South Corridor LRT

Sacramento, California

(November 1997)

Description

The Sacramento Regional Transit District (RT) is developing an 11.3-mile light rail project on the Union Pacific right-of-way in the South Sacramento Corridor. RT has elected to phase the project to apply all available state and local capital funds and to correspond with available operating funds. Phase 1, known as the Interim Operable Segment (IOS), consists of a 6.3-mile segment of the full project. The segment would operate between downtown Sacramento and Meadowview Road and has been forecast to carry 25,000 trips per day in the year 2015. The estimated capital cost of the IOS is \$222.0 million (escalated dollars). Phase 2 is estimated to cost an additional \$222 million (1995 dollars).

Status

Section 3035 (xx) of ISTEA directed FTA to enter into a multiyear grant agreement with RT for \$26 million to provide for the completion of alternatives analysis, preliminary engineering, and final design. Through FY 1998, Congress has appropriated \$30.15 million in Section 5309 New Start funds, of which \$28.17 million is included in the scope of the FFGA.

The Major Investment Study/Alternatives Analysis/Draft EIS was completed in September 1994. The preferred alternative was selected in January 1995. The Final Environmental Impact Statement (FEIS) was completed in December 1996. In March 1997, FTA issued a Record of Decision for the South Corridor Project IOS, and in June 1997, FTA and RT entered into a Full Funding Grant Agreement for \$111.2 million in Section 5309 funds for final design and construction. The final design phase of the project began in July 1997. Construction is anticipated to begin in late 1998 and revenue service is projected to begin in September 2003.

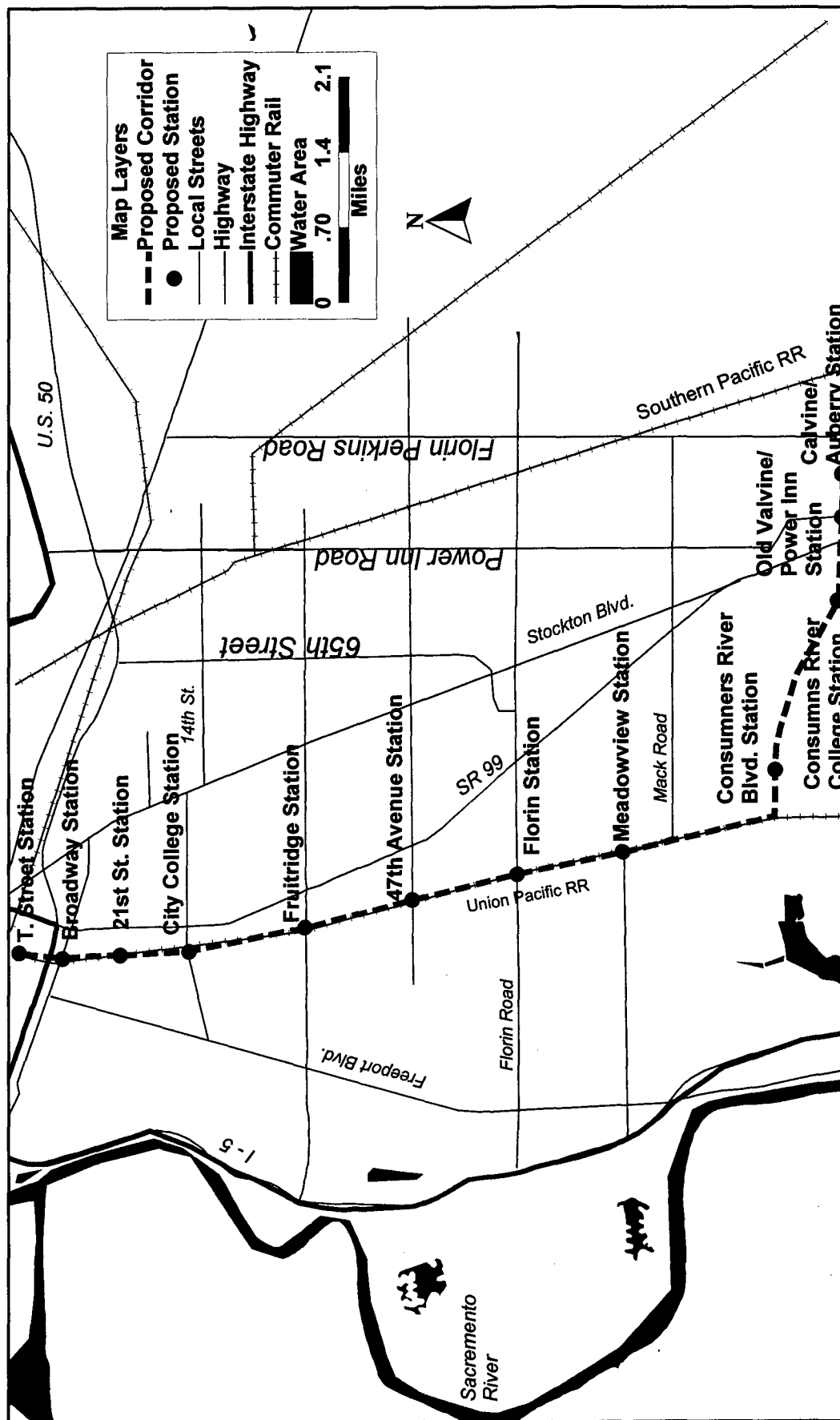
RT expects to begin preliminary engineering for Phase 2 as soon as additional operating funds can be secured. A one cent state gas tax is to be voted on in 1998.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$111.20 (\$28.17 million appropriated through FY 1998)
State/Local	110.80
TOTAL	\$222.00 (for the Phase I IOS)

NOTE: An additional \$1.98 million was appropriated prior to award of the FFGA and was utilized for planning activities; this brings the total amount of Section 5309 funds for this project to \$113.18 million, of which \$30.15 million has been appropriated to date.

South Corridor LRT

Sacramento, CA



South LRT
Salt Lake City, Utah
(November 1997)

Description

The Utah Transit Authority (UTA) is implementing a 15-mile light rail transit (LRT) line from downtown Salt Lake City on State Street parallel to I-15 to suburban areas to the south. The South LRT line will operate at-grade on city streets in downtown Salt Lake City (two miles) and in a railroad right-of-way (13 miles) owned by UTA to the suburban community of Sandy. The total cost of this project is estimated at \$312.50 million (escalated dollars). The South LRT is estimated to carry 14,000 passengers per day in the year 2000 (opening year) and 23,000 passengers per day in 2010. The South LRT project is one component of the Interstate 15 corridor improvement initiative, which includes reconstruction of a parallel segment of I-15.

Status

Section 3035(f) of ISTEA directed FTA to enter into a multiyear grant agreement with UTA which provides \$131 million in Section 5309 New Start funds to carry out the construction of the project. In August 1995, FTA and UTA entered into a Full Funding Grant Agreement (FFGA) for \$237.39 million in Section 5309 New Start funds. Through FY 1998, Congress has appropriated \$129.98 million (including \$15.52 million in funds from fiscal years prior to ISTEA) for right-of-way acquisition, engineering, design and construction activities within the scope of the FFGA.

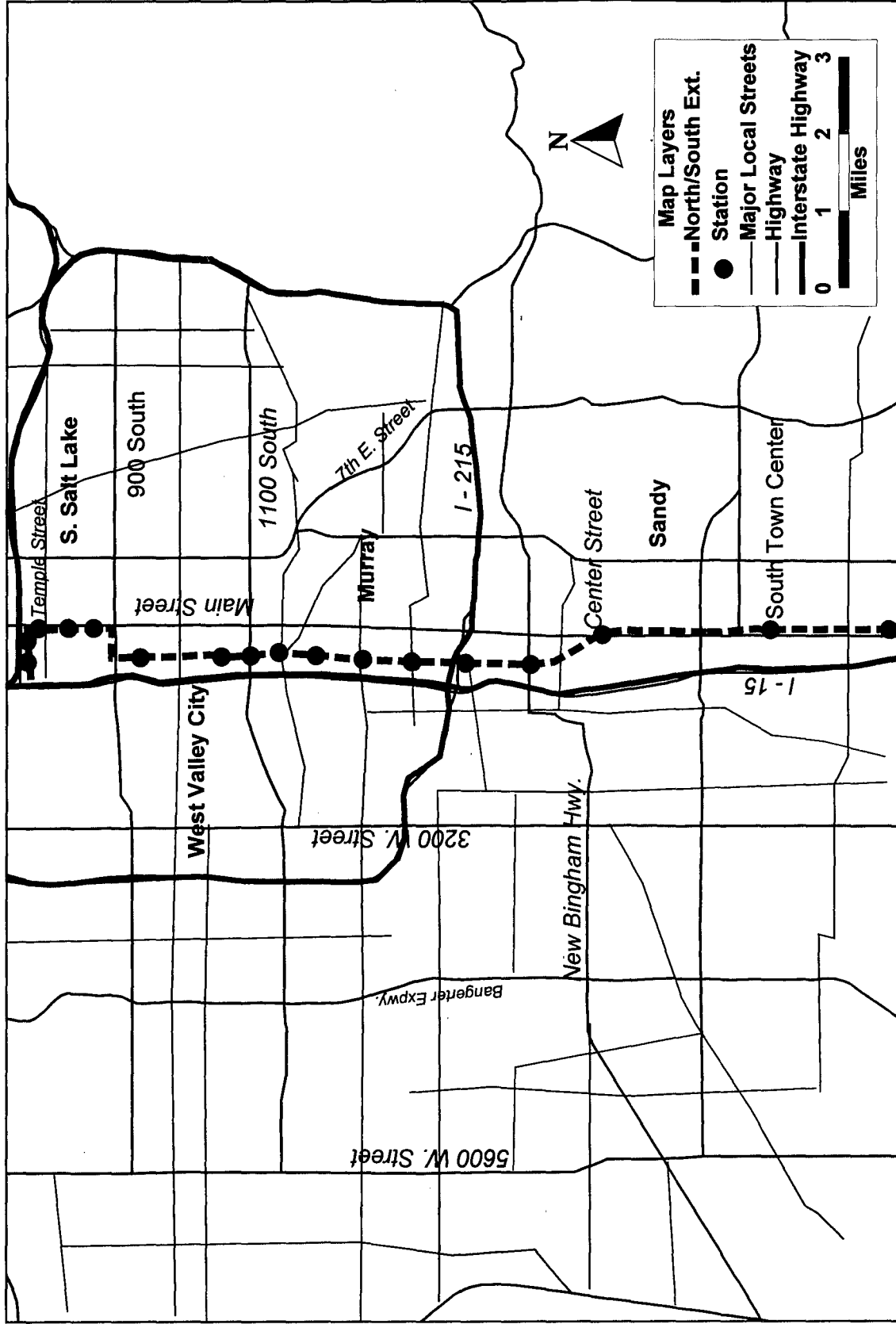
FTA issued the Final Environmental Impact Statement (FEIS) in September 1994 and signed the Record of Decision in November 1994. Construction is underway and is estimated to be completed by December 2000.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$237.39 (\$129.98 million appropriated through FY 1998)
Section 5309 Bus	4.00
Local:	71.10
TOTAL	\$312.49

NOTE: An additional \$6.60 million was appropriated and obligated prior to award of the FFGA; this brings the total amount of Section 5309 funds for this project to \$243.99 million, of which \$136.58 million has been appropriated to date.

South LRT

Salt Lake City, UT



Page 10 of 10

BART to San Francisco International Airport

San Francisco, California

(November 1997)

Description

The Bay Area Rapid Transit (BART) and San Mateo County Transit District (SamTrans) are developing a 8.2-mile, 4-station BART extension south from the Colma BART Station through Colma, South San Francisco, San Bruno, an east-west aerial "wy" (Y) stub perpendicular to the CalTrain alignment into the San Francisco International Airport (SFO), and terminating at the Millbrae Avenue BART/CalTrain Station. This project is estimated to cost \$1.167 billion (escalated dollars). Ridership is projected to be 68,600 trips per day by 2010, including approximately 17,800 daily trips by air travelers and airport employees.

Status

Section 3032(c) of ISTEA directed FTA to approve the construction of the Locally Preferred Alternative for the BART San Francisco Airport Extension, including Phase 1a to Colma and Phase 1b to San Francisco International Airport. Section 3032(c)(2) mandated the execution of a multiyear grant agreement with BART to permit expenditure of funds for the construction of the BART-SFO Extension.

An Alternatives Analysis/Draft EIS/EIR was completed in 1992, resulting in a locally preferred alternative. New alignments were later evaluated and, in April 1995, BART and SamTrans revised the preferred alternative. Due to MTC and Congressional direction to evaluate lower cost options, an aerial design option into the Airport was evaluated in a Focused Recirculated DEIR/Supplemental #2 DEIS. The Final EIS was completed in June 1996 and a Record of Decision (ROD) was issued in August 1996.

Through FY 1998, \$255.3 million of the \$512.75 million of Section 5309 New Start funds authorized in ISTEA for projects in the San Francisco Bay Area has been appropriated and allocated by the MTC among the Colma BART extension, the BART-SFO project, and the Tasman LRT project. In accordance with a regional Memorandum of Understanding executed in December 1993, the affected agencies worked with MTC to determine allocations consistent with FFGA schedules. The Colma BART extension opened for revenue service in February 1996.

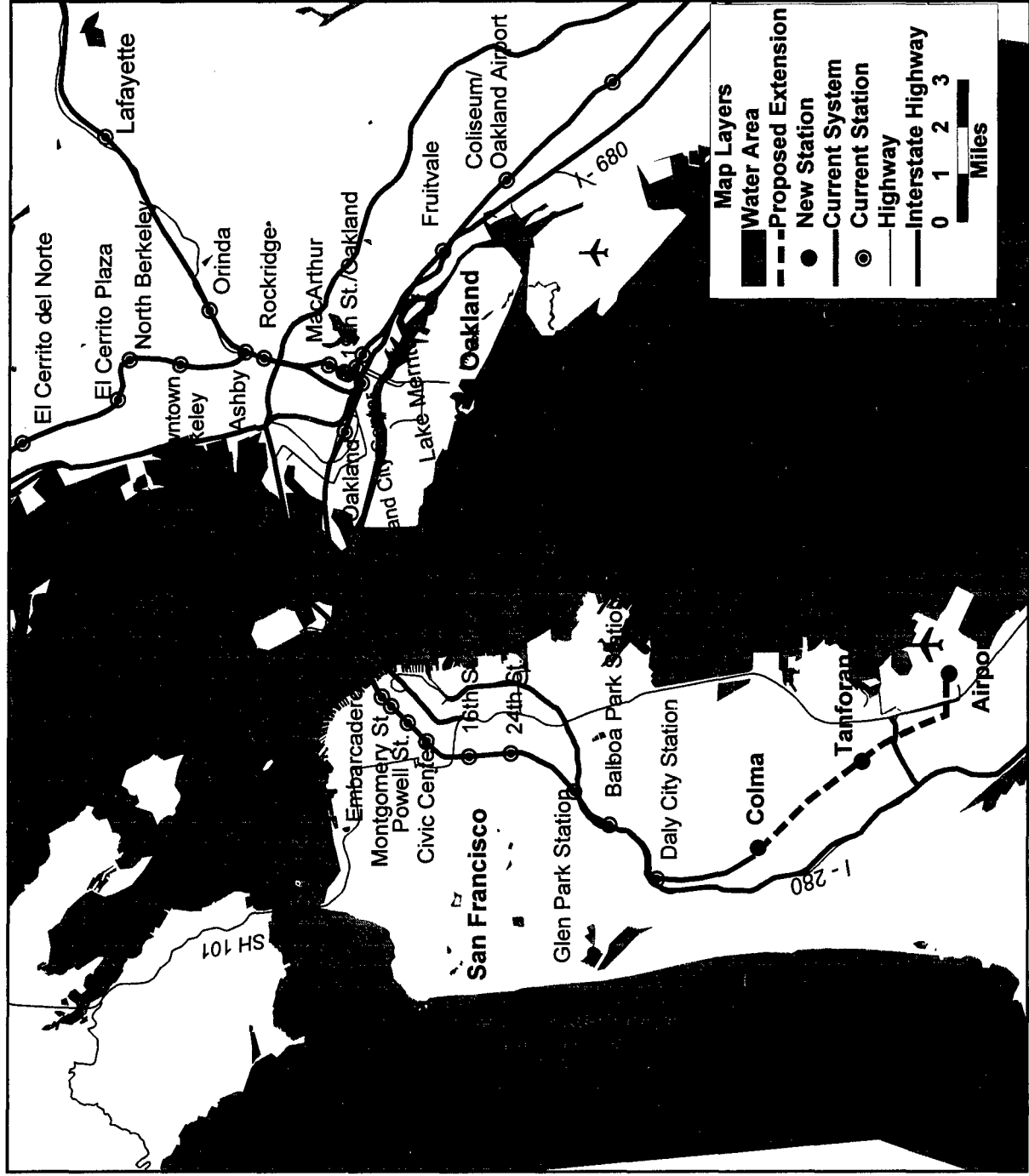
On June 30, 1997, FTA entered a Full Funding Grant Agreement (FFGA) for the BART/SFO Extension for \$749.99 million in Federal Section 5309 New Start funds. Through FY 1998, \$113.73 million has been appropriated and allocated to the BART-SFO Extension project (out of the total \$255.30 million appropriated for Bay Area projects).

The BART-SFO project is participating in the FTA Turnkey Demonstration Program, initiated by ISTEA to determine if the turnkey (design/build) approach will reduce implementation time and cost. The first BART-SFO contract for Site Preparation and Utility Relocation was awarded on July 24, 1997. The main contract for construction of the Line, Trackwork, and Systems was advertised for bid in August 1997. This is the first of the four design-build contracts. The bid opening for line and system work was made on November 25, 1997. The Revenue Operation Date for the BART-SFO extension is anticipated by September 30, 2001, in accordance with the terms and conditions of the FFGA.

The San Francisco International Airport (SFIA) is a major partner in this extension project. The activities to be designed and constructed on the airport property consist mainly of construction of structures and facilities and the installation of related equipment. These activities are being funded, designed, and constructed by SFIA for BART.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$750.00 (\$113.73 million appropriated through FY 1998)
Airport Commission:	200.00 (up to \$200.0 million)
State/Local:	217.00
TOTAL	\$1,167.00

BART to Airport Extension San Francisco, CA



Phase I Tasman LRT West Extension

San Jose, California

(November, 1997)

Description

The Santa Clara County Transit District (SCCTD) originally developed a 12.4-mile extension to the existing light rail line, which would provide service from northeast San Jose to Capitol/Hosletter and downtown Mountain View. The total project includes 19 stations and 35 light rail vehicles. The State of California invalidation of the Measure A sales tax caused the development of new financing alternatives and the separation of the project into two phases, Phase I (West Extension) and Phase 2 (East Extension).

The Phase I West Extension, which is covered in this profile, consists of 7.6 miles of surface LRT from the northern terminus of the Guadalupe LRT in Santa Clara County, west through Sunnyvale, to the CalTrain commuter rail station in Mountain View. The project will include 11 stations and will be double tracked except for partial single tracking between the Mountain View and Lockheed stations. The Phase I West Extension is estimated to cost \$342.5 million (escalated dollars). Ridership on the West Extension is projected to be 7,500 per day by 2005.

Status

Section 3032 of ISTEA directed FTA to approve the construction of the locally preferred alternative not later than 90 days after the completion of preliminary engineering, and to enter into a multiyear grant agreement for 50 percent of the project's cost unless this percentage is changed by the Metropolitan Transportation Commission (MTC).

Section 3032 of ISTEA directed that the Tasman Corridor Project be included in a program of interrelated projects as part of the San Francisco Bay Area Rail Extension Program. Preliminary engineering was completed in August 1992, and final design is now virtually complete. In April 1994, FTA issued a Letter of Intent to fund 50 percent of the cost of the total 12.4 mile project as originally proposed.

In July 1996, FTA and SCCTD entered into a Full Funding Grant Agreement (FFGA) for \$182.75 million in Federal Section 5309 New Start funds for the West Extension.

Through FY 1998, Congress has appropriated \$124.08 million of Section 5309 New Start funds to the project. The East Extension is being deferred until additional funding is identified and secured.

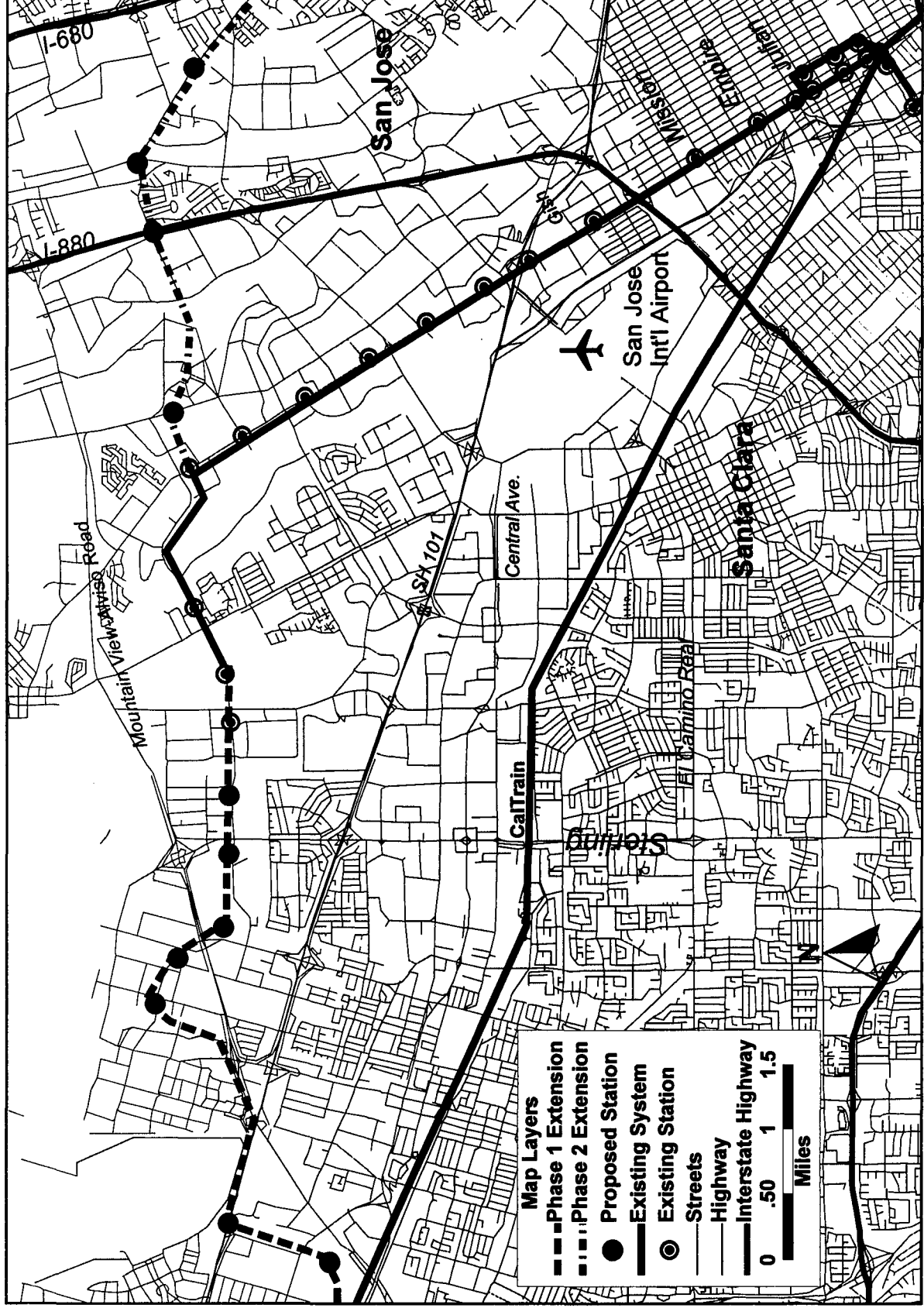
<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$182.75 (\$124.08 million appropriated through FY 1998)
California Flexible Congestion Relief Program*	37.25
CMAQ	15.92
STP	26.28
State	54.02
Local:	26.28
TOTAL	\$342.50 (Phase I West Extension)

*California Flexible Congestion Relief Program reflects a State administered allocation of Federal Flexible Funds.

NOTE: The project total of \$342.50 million listed above includes project enhancements outside the scope of the FFGA (the FFGA total budget equals \$325.00 million).

Phase I Tasman LRT Westside Extension

San Jose, CA



Tren Urbano
San Juan, Puerto Rico
(November 1997)

Description The Puerto Rico Department of Transportation and Public Works (DTPW), through its Highway and Transportation Authority (HTA), is constructing a 10.7-mile (17.2 km) double-track guideway between Bayamon Centro and the Sagrado Corazon area of Santurce in San Juan. Approximately 40 percent of the alignment is at or near grade. The remainder, aside from a short below-grade segment in the Centro Medico area as well as an underground segment through Rio Piedras, is generally elevated above roadway rights-of-way. The project includes 16 stations and a vehicle and trackway maintenance/storage facility.

The estimated capital cost for the project as specified in the Full Funding Grant Agreement totals \$1.250 billion (escalated dollars). The Tren Urbano project is expected to carry 113,300 riders per day in 2010.

Status In 1993, the Federal Transit Administration (FTA) selected Tren Urbano as one of the Turnkey Demonstration Projects under the Intermodal Surface Transportation Efficiency Act (ISTEA). The Tren Urbano project is being constructed and will be operated under a turnkey procurement in order to expedite the implementation of the project and to develop the institutional capability necessary for its operation.

The Tren Urbano Phase 1 environmental review process was completed in November 1995 and included 14 stations. The alignment design allowed for the future addition of two stations, one in Rio Piedras and one in Hato Rey. A Record of Decision (ROD) was issued in February 1996. In March 1996, FTA entered into a Full Funding Grant Agreement (FFGA) for the Tren Urbano project providing a Federal commitment of \$307.40 million in Section 5309 New Start funds out of a total project cost of \$1.250 billion.

An additional \$4.96 million in Section 5309 New Start funds not included in the FFGA was awarded in January 1995. The remaining funding for the project would be provided by local revenues from the Puerto Rico Highway and Transportation Authority (PRHTA) and flexible funds. All operating costs, as well as debt service on PRHTA bonds, would be paid as part of the PRHTA annual budget, established in accordance with standard PRHTA budget procedures.

Subsequent to the FFGA, three environmental assessments were prepared which revised the alignment at the Villa Nevarez station and added new stations, in Rio Piedras at the University of Puerto Rico, and in Hato Rey at

Domenech Street. Findings of No Significant Impact (FONSI) by the FTA were issued for these three environmental assessments in November 1996, February 1997, and July 1997, respectively.

The Project has entered the construction phase of development. During 1996 and 1997, seven design-build contracts were awarded for different segments of the Tren Urbano Phase 1 system. The Systems Test Track and Turnkey contract, awarded in August 1996, provided for the purchase of rolling stock, design and installation of all systemwide components, construction of one of the civil segments, and operation and maintenance of Tren Urbano Phase 1 for an initial period of five years.

Through FY 1998, Congress has appropriated \$33.38 million in Section 5309 New Start funds for the project, of which \$28.42 million is included in the scope of the FFGA.

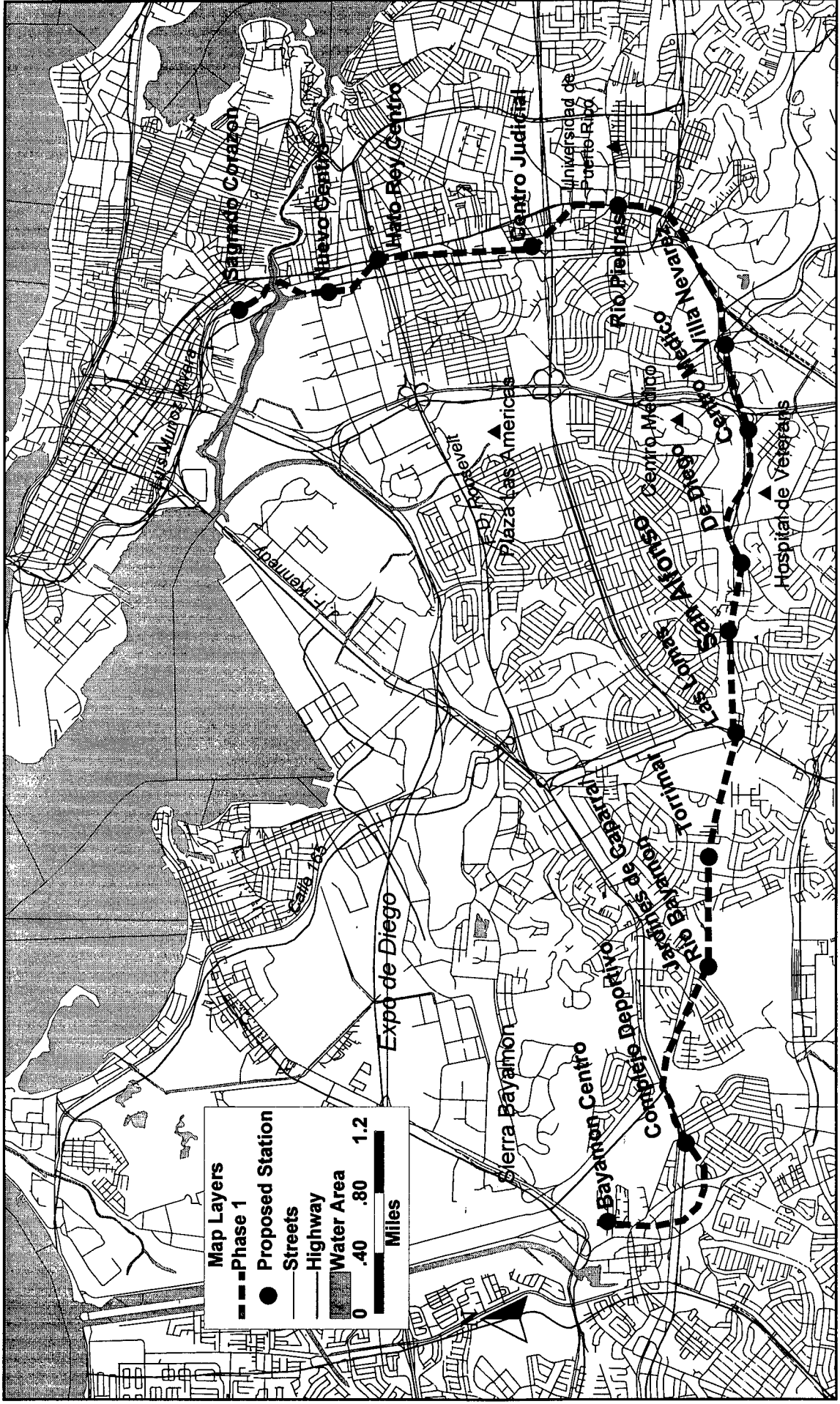
PRHTA now estimates that total project costs have increased to \$1.550 billion (escalated dollars) reflecting locally approved enhancements, which will be funded from local sources.

<u>Source of Funds</u>	<u>Total Funding</u> <u>(\$million (escalated dollars))</u>
Federal:	
Section 5309 New Start FFGA Amount	\$307.40 (\$28.42 million appropriated through FY 1998)
Local Financing:	942.90
TOTAL \$1,250.30	

NOTE: An additional \$4.96 million was obligated to the project in prior years but was not included in the FFGA scope, bringing total appropriated to \$33.38 million and the total Section 5309 cost to \$312.37 million.

Tren Urbano

San Juan, Puerto Rico



St. Clair County, Illinois Corridor

St. Louis, Missouri Metropolitan Area

(November 1997)

Description

The Bi-State Development Agency (Bi-State) is proposing a 26-mile light rail line between downtown East St. Louis, Illinois, and the Mid America Airport in St. Clair County. The project would extend the MetroLink light rail project which opened in July 1993. The adopted alignment generally follows the former CSXT railroad right-of-way from East St. Louis to Belleville, IL, serving the Belleville Area College (BAC) and Mid America Airport / Scott Air Force Base. A 17.4 mile "Interim Operating Segment" (IOS), which is covered in this profile, would terminate at BAC. The IOS includes 8 stations (seven with park and ride lots), 20 new light rail vehicles, and a new light rail vehicle maintenance facility in East St. Louis, Illinois.

The full project is estimated to cost \$426.7 million (1996 dollars) and is projected to carry 16,000 riders per day in the year 2010. The "Interim Operating Segment" (IOS) is estimated to cost \$339.2 million (escalated dollars).

Status

The East-West Gateway Coordinating Council (the MPO) completed a Major Investment Study and Draft Environmental Impact Statement (DEIS) in 1995. A Final Environmental Impact Statement (FEIS) was issued in August 1996.

In October 1996, FTA entered into a Full Funding Grant Agreement (FFGA) for \$243.93 million in Section 5309 New Start funds contributing to the total estimated cost of \$339.20 million (escalated dollars). The St. Clair County Transit District will provide \$95.3 million in local funds from a 3/4 cent county sales tax.

Through FY 1998, Congress has appropriated \$69.61 million in Section 5309 New Start funds for the project.

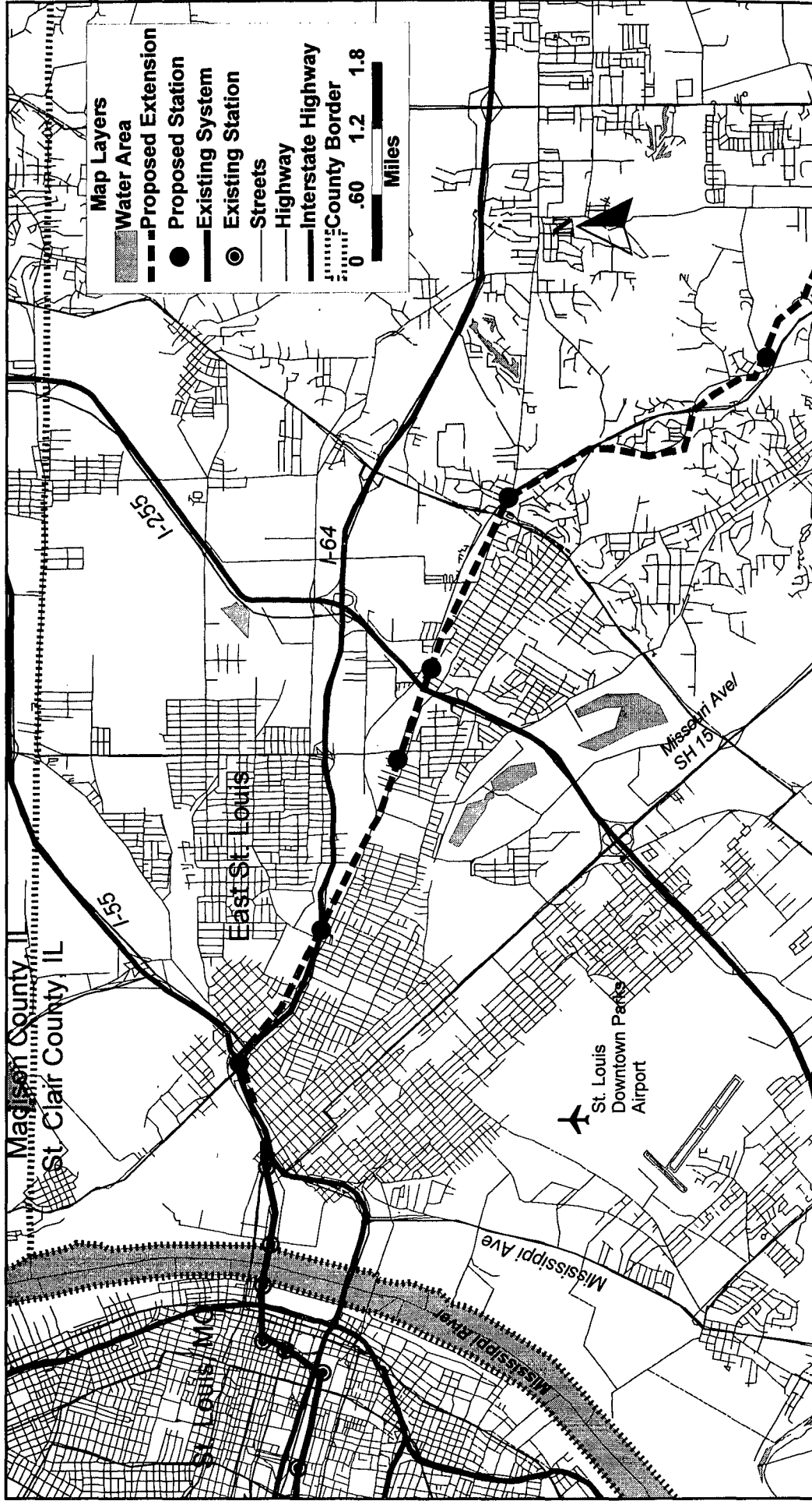
Illinois Department of Transportation (IDOT) and the St. Clair County Transit District have provided \$3 million for final design of the additional 8.6 miles segment beyond the IOS, from BAC to Mid America Airport / Scott Air Force Base, which includes three additional stations.

<u>Source of Funds</u>	<u>Total Funding (\$million) (escalated dollars)</u>
Federal:	
Section 5309 New Start FFGA Amount	\$243.93 (\$69.61 million appropriated through FY 1998)
Local:	
3/4% sales tax	95.27
TOTAL	\$339.20 (for IOS)

NOTE: An additional \$8.49 million was obligated to the project in prior years but was not included in the FFGA scope, bringing total Section 5309 appropriations to \$78.10 million and the total Section 5309 cost to \$252.41 million.

St. Clair County, Illinois LRT

St. Louis, MO



PROJECTS IN FINAL DESIGN

North Central Corridor

Dallas, Texas
(November 1997)

Description Dallas Area Rapid Transit (DART) plans to build a North Central Corridor light rail transit (LRT) extension beyond the existing Park Lane Station. The DART starter system opened in three phases from June 1996 to May 1997. The proposed extension from the current northern terminus at Park Lane Station is 12.3 miles long with 8 stations, terminating in Plano with two additional stations deferred for future development. Original plans proposed that the southern 7.3 miles of the corridor from Park Lane to Richardson Transit Center would be double tracked and the northern 5.0 miles from Richardson to Parker Road in Plano would be single tracked with limited station development. However, in 1997 the DART Board of Directors approved double tracking the entire extension and recommended advancing one of the deferred stations. DART estimates that over 17,000 daily riders will use this extension in the year 2010. The project is estimated to cost \$503.0 million (escalated dollars).

Summary Description

Proposed Light Rail Extension	12.3 miles in length with 8 stations (2 additional stations in future)
Total Capital Cost: \$ 503 million (\$ escalated)	2015 Ridership Forecasts (Average Weekday)
Annual Operating Cost: \$ 9.8 million (\$ 1994)	- 17,000 daily on LRT Extension - 6,800 new riders

Status The proposed extension is now in the Final Design phase of project development. The following changes to project definition have been proposed by DART: 1) advancement of the deferred Campbell Road Station (now referred to as the Galatyn Park Station); and, 2) grade separations at Plano Parkway and Renner Road. DART anticipates submitting these changes to FTA for consideration.

The project is included in the regionally adopted Metropolitan Transportation Plan and Transportation Improvement Program that are in conformance with the State Implementation Plan for Air Quality.

Through FY 1998, Congress has appropriated \$27.32 million in Section 5309 New Start funds to this project.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*.

Mobility Improvements

The LRT extension is estimated to produce 6,800 more daily transit trips than the TSM alternative, and would result in the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 220.5 million	\$ 392.1 million
Hours	18.3 million	41.9 million

Based on the 1990 census, there are an estimated 1,525 low-income households within a 1/2 mile radius of the proposed 9 stations.

Environmental Benefits

Dallas/Fort Worth is classified as a "moderate" non-attainment area for ozone. DART estimates that the extension would result in the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	28	24
Nitrogen Oxide (NOx)	240	255
Volatile Organic Compounds (VOC)	54	71
Particulate Matter (PM ₁₀)	5	5
Carbon Dioxide (CO ₂)	18,068	22,162

Values reflect annual tons of emissions reductions

DART estimates that in 2010, the LRT extension would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	122,760 million	203,870 million

Values reflect annual BTU reductions

Operating Efficiencies

DART estimates a slight decrease in the systemwide operating cost per passenger mile in the year 2010.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2010)	\$0.41	\$0.42	\$0.41

Cost Effectiveness

DART estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$16.90	\$13.50

Values reflect 2010 ridership forecast, 1997 capital dollars, and 1994 operating dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium**

The North Central corridor contains a mix of land uses while several station areas contain large undeveloped parcels. Six prominent employment centers are located within one-half mile of the corridor. Planning is underway for selected high density development projects in the corridor. However, no formal growth management policies are enacted or proposed in the Dallas region. Given the success of DART's starter LRT system, local municipalities are realizing the importance of transit supportive land use policies and have initiated station area planning studies which are expected to encourage mixed use development in the corridor. DART is implementing a Joint Development Program. Developer interest in sites around the existing DART LRT and in transit supportive development seems generally strong. DART, in conjunction with the Chamber of Commerce, held an economic development summit addressing transit supportive development. No formal parking management policies have been initiated in the corridor.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 34 %

DART is proposing \$333 million (66%) in Federal New Start funding and \$170 million (34%) in local funding for this project. The North Central LRT is part of a 20-year, \$5.6 billion transit capital program adopted in FY 1996. DART plans to seek \$1.05 billion in Federal funds for the total program.

Stability and Reliability of Capital Financing Plan

Rating: High

Overall, DART presents a sound financial plan. The local financial commitment is proposed to be funded through the 1% local sales tax dedicated to DART. Sales tax revenue forecasts have recently been updated based on the latest revenue yield rates and personal income/retail sales trends, and provide a conservative future revenue outlook. The most recent actual sales tax revenue yields have been higher than previously expected.

Stability and Reliability of Operating Financing Plan

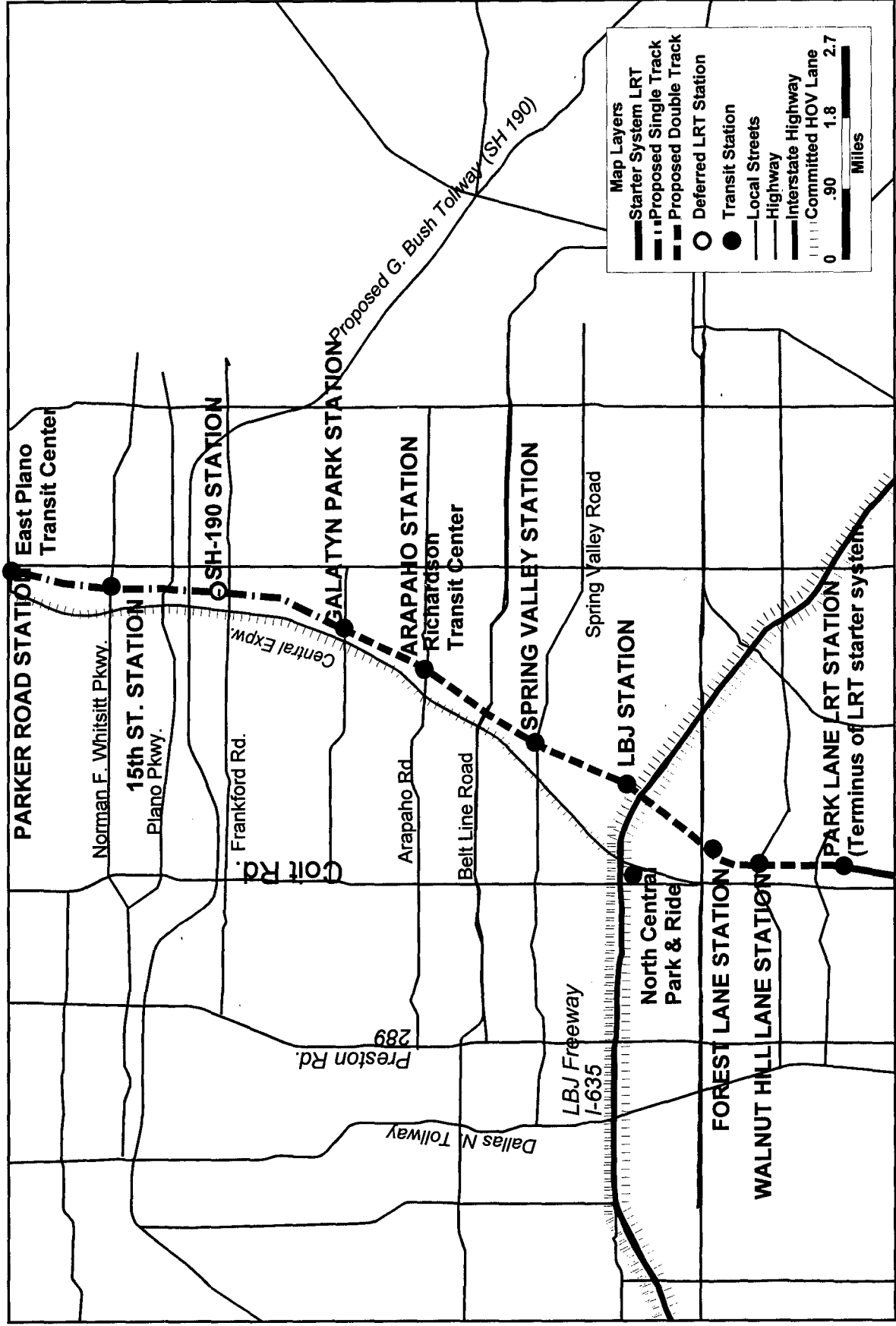
Rating: High

Local operating financing is also funded from the 1% sales tax, and appears sound. North Central LRT operating cost estimates have recently been increased to better account for actual operating experiences from the DART LRT starter system. DART has maintained a cash reserve plus a working capital requirement throughout the 20-year financial planning period. In addition, the cash account reflects a positive cash flow of over \$2.0 billion at the end of the 20-year plan period.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in escalated dollars)
Federal:	
Section 5309 New Start	\$333.00 (\$27.32 million appropriated through FY 1998.)
Local:	
1% Dedicated Sales Tax	170.10
TOTAL	\$503.10

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

North Central LRT Dallas, TX



RAILTRAN Phase 2

Dallas-Ft. Worth, Texas
(November 1997)

Description The RAILTRAN project is planned to provide commuter rail service between Dallas and Fort Worth. Phase 1 initiated 10 miles of service between Dallas and South Irving in December 1996. Phase 2 is planned for an additional 25 miles between South Irving and Fort Worth, and serves the Fort Worth Intermodal Transportation Center. Phase 2 is estimated to carry 10,950 daily riders in the year 2010 at a capital cost of \$118.6 million (1997 dollars). Long term plans call for Phase 3 to extend service to Dallas-Fort Worth International Airport.

Phase 2 includes five passenger stations, track and signal improvements to the existing rail line, construction of 1.5 miles of new main track on a new alignment in downtown Fort Worth, expansion of the existing Irving Yard commuter rail maintenance facility, and purchase of rolling stock. Stations include two in downtown Fort Worth, including the site of the Intermodal Transportation Center, and three stations in suburban locations.

Summary Description

Proposed Commuter Rail Extension 25 miles in length, 5 stations

Total Capital Cost:
\$ 118.6 million (\$1997)

2010 Ridership Forecasts
(Average Weekday)
- 10,950 daily riders for Phase 2

Annual Operating Cost:
\$ 9.2 million (\$2000)

Status

In 1984, the RAILTRAN right-of-way between Dallas and Fort Worth was purchased with FTA assistance as directed by Congress. Since then the Union Pacific and Burlington Northern Santa Fe have been operating freight service on the tracks.

Section 3035(x) of ISTEA directed FTA to negotiate and sign a multiyear grant agreement with the Cities of Dallas and Fort Worth in the amount of \$5.7 million for preliminary engineering and construction of improvements to the Dallas/Fort Worth RAILTRAN system. Through FY 1998, Congress has appropriated \$34.5 million in Section 5309 New Start funds for this project.

The Fort Worth Transportation Authority (FWTA) and Dallas Area Rapid Transit (DART) have signed an agreement on the construction, operation and financing of the RAILTRAN service. Phase 1 opened in December 1996, and

Phase 2 is scheduled to open in 2000. FWTa is the lead local agency in the development of Phase 2.

The location of the Fort Worth Intermodal Transportation Center has been relocated from the T&P Building to 9th Street Station. An Environmental Assessment Amendment is being processed for this change and a finding is expected in early 1998. Final design and property acquisitions in areas of the project not affected by the program change are underway and construction will begin in 1998. Procurement of rolling stock has also begun.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*.

Mobility Improvements

FWTA estimates the following annual travel time savings .

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 9.9 million	\$ 10.2 million
Hours	0.6 million	0.7 million

There are an estimated 407 low-income households within a 1/2 mile radius of the proposed 5 stations.

Environmental Benefits

Dallas/Fort Worth is classified as a "moderate" non-attainment area for ozone. FWTA estimates that RAILTRAN Phase 2 would result in the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	4	4
Nitrogen Oxide (NOx)	13	13
Volatile Organic Compounds (VOC)	121	115
Particulate Matter (PM ₁₀)	3	3
Carbon Dioxide (CO ₂)	852	563

Values reflect annual tons of emissions reductions

FWTA estimates that Phase 2 would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	11,238 million	7,492 million

Values reflect annual BTU reductions

Operating Efficiencies

FWTA estimates a slight increase in the systemwide operating cost per passenger mile in the year 2010

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2010)	\$0.038	\$0.046	\$0.052

Cost Effectiveness

FWTA estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$4.50	\$9.30

Values reflect 2010 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Low

Land development density and extent of land use mix is generally low along the entire length of the corridor, except for downtown Fort Worth at the western end of the corridor. The proposed commuter rail alignment generally lies adjacent to industrial, vacant, or agricultural land, while a few stations have small clusters of residential and commercial development. The historic Texas & Pacific Railroad Terminal Building will serve as the terminus in the Central Business District (CBD). The Ft. Worth Transportation Authority bought the lobby portion of the building under a commercial condominium arrangement and plans to refurbish it for the Railtran commuters. The City of Fort Worth is drafting a Transit Oriented Development amendment to the zoning ordinance to encourage dense, mixed use development around transit stations. Transit supportive development proposals are evident in the Mosier Valley and Rock Island Bottom areas along the corridor. No parking is required for developments within the Fort Worth CBD or within the Hospital

District, since they are designated as Employment Centers.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 23 %

The financial plan includes \$50.7 million (43%) in Section 5309 New Start funds, \$1.0 million (1%) in Section 5307 formula funds, \$39.5 million (33%) in Federal flexible funds, and \$27.4 million (23%) in State and local funds.

Stability and Reliability of Capital Financing Plan

Rating: Medium

DART and the RAILTRAN Authority both appear to have financial capacity to meet the funding commitments to the project. FWTa faces only modest capital investment commitments beyond the Phase 2 of the RAILTRAN project. FWTa's \$12.1 million local match is to be derived from the agency's local sales tax (0.5%). Even though the financial plan's cash flow projections for this source are reasonable given the historic flow of funds from this source, these funds remain insufficient to fully fund both operating and capital uses over the early years of the project. FWTa must draw down from its significant cash balances to cover unanticipated cost overruns.

Stability and Reliability of Operating Financing Plan

Rating: Medium

The RAILTRAN Authority, FWTa and DART appear to have sound operating financial capacity. The projected annual costs of \$9 million beginning in FY 2000 are reasonable given the system size and type of service. Any operating deficit for Railtran is to be financed from the agency's local sales tax revenue source or from their positive cash balances and will cover the project's total operating needs. Operations of the completed commuter rail line is to be contracted out to a private operator. The local agencies have selected the name "Trinity Railway Express" (TRE) for the commuter service and it has been operating in Dallas since December 1996.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1997 dollars)
Federal:	
Section 5309 New Start	\$50.70 (\$34.5 million appropriated through FY 1998.)
Section 5307 Formula	1.00
Flexible Funds	39.50
State and Local:	27.40
TOTAL	\$118.60 (for Phase II)

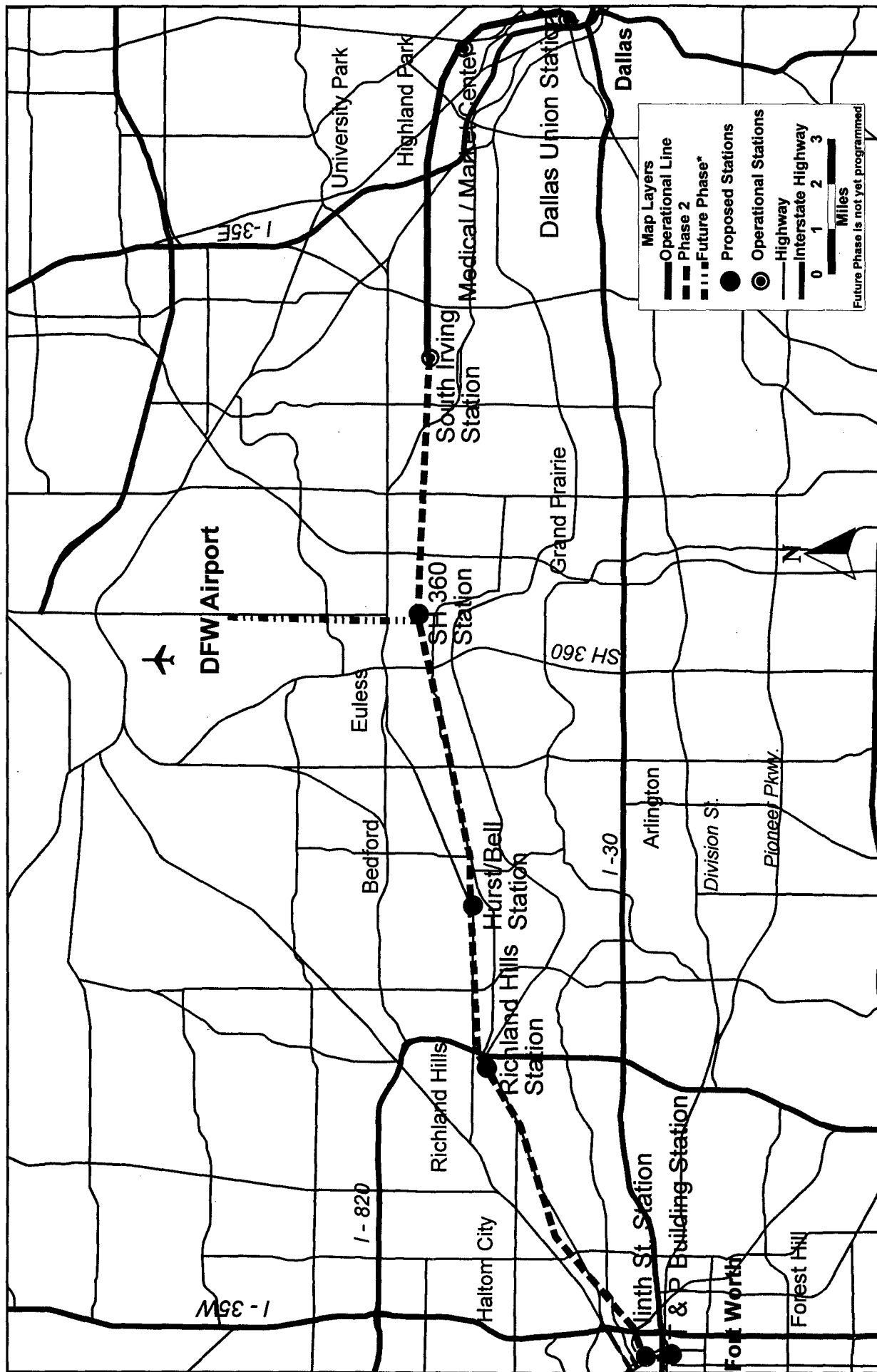
NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Other Factors

Downtown Fort Worth Strategic Action Plan: The City of Fort Worth, Downtown Fort Worth, Inc., and FWTa jointly produced a plan which supported the establishment of a housing community development corporation, the expanded presence of retail activities, and several urban design guidelines and street environment improvements. The plan also endorses the establishment of the Intermodal Transportation Center and commuter rail service.

RAILTRAN Phase 2

Dallas - Fort Worth, TX



Tri-County Commuter Rail

Fort Lauderdale, Florida

(November 1997)

Description The Tri-County Commuter Rail Authority (Tri-Rail) operates a 71 mile regional transportation system connecting Palm Beach, Broward and Dade Counties in South Florida. Tri-Rail's short-range capital improvement program includes the laying of a second mainline track along the current 71 mile corridor (existing sidings will be incorporated into the track design), rehabilitating the signal system, and related station improvements/parking expansions. The Double-Tracking Project, to be implemented in 10 phases, will include about 58.9 miles of new track, corresponding signal works and improvements to 20 stations. The project is anticipated to be completed within a seven-to ten-year period, depending on funding availability.

Tri-Rail and FDOT are currently pursuing the implementation of Phase B of the Operating and Maintenance Plan (OMAPB) which will allow FDOT, in conjunction with Tri-Rail, to directly operate the corridor. Potential corridor needs include additional rolling stock necessary to accommodate the anticipated 20 - 30 minutes headways resulting from double-tracking the corridor.

Summary Description

Proposed Commuter Rail Improvements	71 miles, 20 stations (double-track and station improvements)
Total Capital Cost: \$ 573.1 million (\$1997)	2015 Ridership Forecasts (Average Weekday) - 17,978 new riders
Annual Operating Cost: \$ 26.1 million (\$1997)	

Status Through FY 1998, Congress has appropriated \$51.28 million in Section 5309 New Start funds for Tri-Rail double tracking improvements. This figure does not include the \$4.52 million of allocated Fixed Guideway Modernization funds which Tri-Rail also utilizes towards the Double Tracking Project.

The Tri-Rail capital improvement program to double-track the 71-mile corridor with other related improvements will be implemented in ten phases and is expected to be completed within 7 to 10 years, depending on funding availability. Construction of Phase I of the double-tracking/signal rehabilitation project began in the Spring of 1995 and was completed in April 1997. This phase, an 8.1 mile portion of the rail corridor in Broward County

from Pompano Beach to Broward Boulevard, included three bridges and the re-configuration of the Cypress Creek Station. Tri-Rail's FY93 and FY95 grants included funding for Phase I construction, the Cypress Creek Station construction and the rehabilitation of the C-13 Canal bridge.

Phase II, currently underway and estimated to be completed in Spring 1998, is the southern extension of the line terminating at the new Miami International Airport (MIA) Station. Construction of Phase III, from south of the proposed Boca Raton/Glades Road Station to south of the Pompano Beach station, is anticipated to begin in Spring 1998. Tri-Rail's FY96 and FY 97 grants included Phase III double-tracking and design and engineering for the Deerfield Beach and the Pompano Beach stations, as well as the construction of the Deerfield Beach Station. Environmental requirements have been satisfied with categorical exclusions.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Improvements included in Tri-Rail's capital improvement program along the entire 71-mile system were used to develop the criteria. Tri-Rail indicates that no TSM alternative is currently under consideration. Therefore, criteria comparing the New Start to the TSM alternative are not available. N/A indicates that data are not available at this time.

Mobility Improvements

The proposed corridor double-tracking is intended to allow for 20 to 30-minute commuter headways, as opposed to the one-hour headways that currently exist. Phase I improvements provided commuters with a 30-minute headway during peak-hour travel periods. End-to-end travel time has decreased by approximately 14 minutes.

Tri-Rail estimates that by the year 2015, the improved system would attract 17,978 new riders and would result in the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 24.7 million	N/A
Hours	1.9 million	N/A

Based on 1990 Census data, there are an estimated 10,892 low-income households within a 1/2 mile radius for 19 stations, including the existing Boca Raton Station.

Environmental Benefits

Air quality in the three metropolitan areas of West Palm Beach, Fort Lauderdale, and Miami, has recently been reclassified to attainment/maintenance.

Tri-Rail estimates that in 2015, the project would result in the following increase in regional emissions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	(45)	N/A
Nitrogen Oxide (NO _x)	(100)	N/A
Hydrocarbons	(8)	N/A
Particulate Matter (PM ₁₀)	(12)	N/A
Carbon Dioxide (CO ₂)	(5,393)	N/A

Values reflect annual tons of emissions reductions. Data in () parentheses reflects annual increases in emissions.

Tri-Rail estimates that in 2015, the improvements will result in the following increase in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	(69,257 millions)	N/A

Values reflect annual BTU reductions. Data in () parenthesis reflects annual increases in energy consumption.

Operating Efficiencies

Tri-Rail estimates an increase in the systemwide operating cost per passenger mile in the year 2015 for the project compared to the TSM and No-Build.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.25	\$0.25	\$0.29

Cost Effectiveness

Tri-Rail estimates the following cost-effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$7.00	N/A

Values reflect 2015 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium**

There are several potential trip generators located along the Tri-Rail corridor including three international airports and the three central business districts containing major employment centers in Palm Beach, Fort Lauderdale and Miami. (Connections to the Fort Lauderdale and Miami CBDs require transfers to additional transit services.) However, the overall zoned residential density throughout the corridor appears generally low.

Growth and development within the tri-county Tri-Rail service area of Palm Beach, Broward, and Miami-Dade Counties is strictly contained within a 12-mile radius bounded by the Atlantic Ocean on the east and the Palmetto Expressway on the west in Miami-Dade County and the Sawgrass Expressway on the west in both Broward and Palm Beach Counties. This zone is referred to as the Urban Development Boundary in Miami-Dade County only. All three counties have recently amended their comprehensive plans to accommodate transit-supportive land development policies, and in conjunction with the State of Florida, the regional planning councils and Florida Department of Community Affairs (DCA) have developed policies supporting both urban infill and prevention of urban sprawl. The development of specific policies, plans and designs for station areas is on-going. However, implementation of these policies relies on the individual local jurisdiction. Citizen participation is incorporated in the land development planning process as well as in the development of the Station Site Planning Guidelines.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 39 %

The financial plan includes \$270.7 million (47%) in Section 5309 New Start funds, \$24.3 million (4%) in Section 5309 Bus funds, \$54.0 million (9%) in Federal flexible funds, and \$224.1 million (39%) in State and local funds.

Stability and Reliability of Capital Financing Plan

Rating: **Low**

The rating reflects the current lack of specificity regarding funding sources and cash flow analyses for the project. A 1996 letter from Florida Department of Transportation (FDOT) expresses policy level support for continued state funding.

Stability and Reliability of Operating Financing Plan

Rating: **Low-Medium**

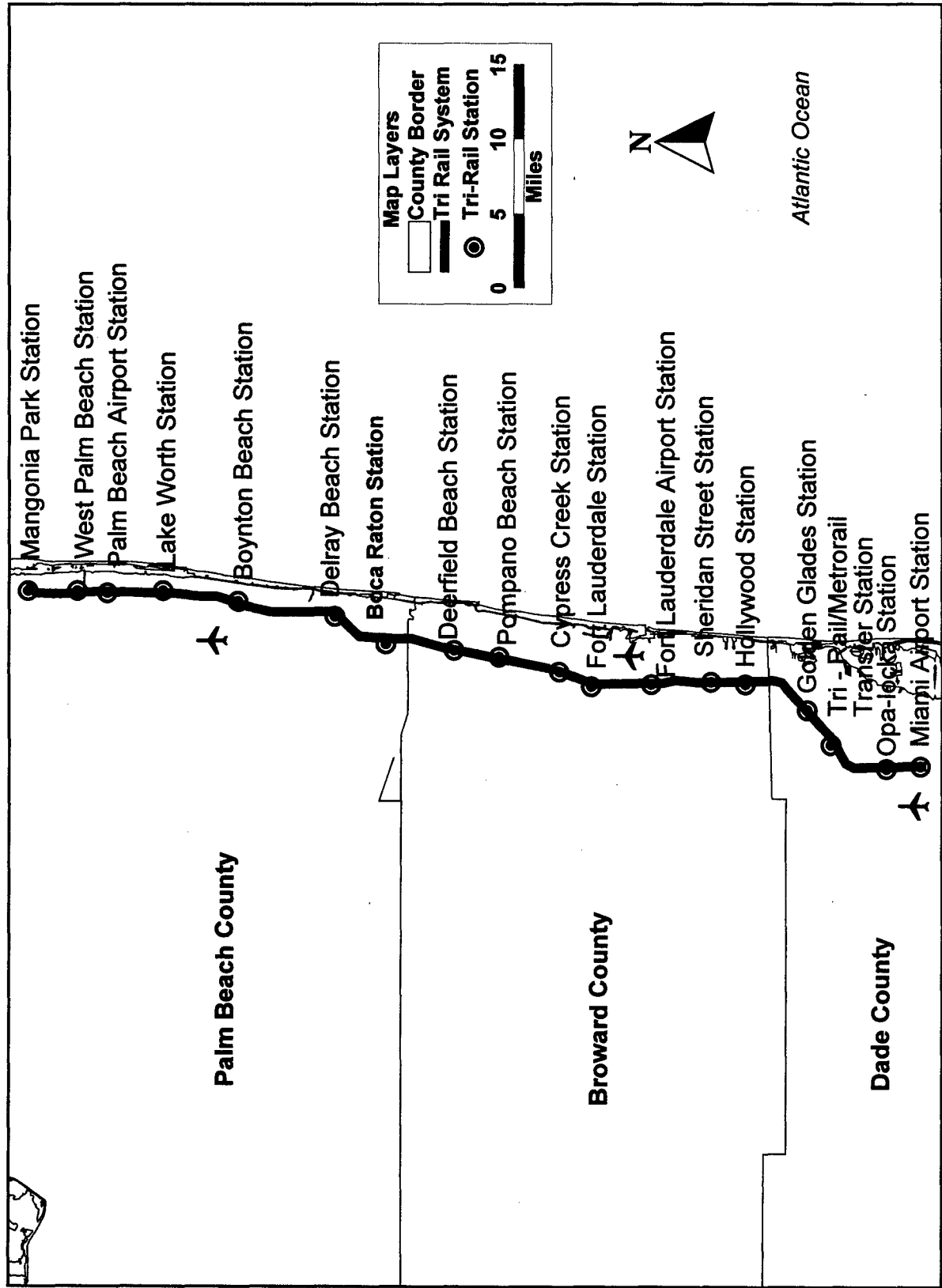
Tri-Rail was created in 1989 as a traffic mitigation project during the state widening of Interstate 95 (I-95). At which time the Florida Department of Transportation (FDOT) purchased the 71 mile South Florida Rail Corridor. Since Tri-Rail's inception, FDOT has contributed \$100 million towards the continuation and improvements of the commuter rail system. FDOT is required under State statute to fund up to 50 percent of Tri-Rail's net deficit with the stipulation that its total contributions cannot exceed the local contribution of the three counties. In 1994, Tri-Rail entered into a five-year Interlocal Agreement with Palm Beach, Broward, and Miami-Dade Counties, the three counties in the service area, that specifies each county to contribute an amount equal to one-third of FDOT's contribution. This agreement has been continually maintained and Tri-Rail will renegotiate the same terms in FY 1999. Materials submitted by Tri-Rail did not clearly indicate the financial capacity for the expansion of the system.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1997 dollars)
Federal:	
Section 5309 New Start	\$270.70 (\$51.28 million appropriated through FY 1998.)
Section 5309 Bus	24.30
Flexible Funds	54.00
State:	224.10
TOTAL	\$573.10

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Tri-County Commuter Rail

Fort Lauderdale, FL



Canal Streetcar Spine

New Orleans, Louisiana

(November 1997)

Description

The Regional Transit Authority (RTA) is developing a 4.7-mile streetcar project in downtown New Orleans. The Canal Streetcar Spine would extend along the median of Canal Street from the Canal Ferry at the Mississippi River in the Central Business District, through the Mid-City neighborhood, to two outer termini at the Cemeteries and City Park/Beauregard Circle. The capital cost estimate is \$136.4 million (escalated dollars). Upon completion, the ridership is estimated to be 31,600 passengers per day for the forecast year (2015).

Summary Description

Proposed Light Rail Streetcar	4.7 miles in length, 31 stations
Total Capital Cost: \$ 136.4 million (\$ escalated)	2015 Ridership Forecasts (Average Weekday) - 31,600 daily on Canal Streetcar Spine
Annual Operating Cost: \$5.5 Million (\$1997)	

Status

Section 3035(f)(f) of ISTEA directed FTA to negotiate and sign a multiyear grant agreement with the City of New Orleans in the amount of \$4.8 million for the completion of alternatives analysis, preliminary engineering, and an environmental impact statement. Through FY 1998, Congress has appropriated \$32.36 million in Section 5309 New Start funds to this project.

A Major Investment Study/Alternatives Analysis was completed in March 1995 with the selection of the preferred alternative including the Canal Spine and Carrollton spur to City Park. FTA approved the initiation of preliminary engineering (PE) and the preparation of a draft Environmental Impact Statement (DEIS) in September 1995. The DEIS was published in March 1997. The Final Environmental Impact Statement (FEIS) was published in July 1997. The Record of Decision for the project was issued by FTA on August 28, 1997. In September 1997, FTA approved the initiation of Final Design.

The project is included in the MPO's financially constrained and conforming Transportation Plan and Transportation Improvement Plan.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*.

Mobility Improvements

RTA estimates the following annual travel time savings. Only daily travel time for transit passengers in the corridor is reported by the regional forecasting model used by the Regional Planning Commission (MPO) as part of the FEIS.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 1.84 million	\$ 1.75 million
Hours	0.2 million	0.2 million

Based on 1990 Census data, there are an estimated 8,522 low-income households within a 1/2 mile radius of the line's boarding points.

Environmental Benefits

The New Orleans metropolitan area is an attainment area for carbon monoxide and a maintenance area for ozone. RTA estimates the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	59	47
Nitrogen Oxide (NOx)	8	7
Volatile Organic Compounds (VOC)	8	7
Particulate Matter (PM ₁₀)	No Change	No Change
Carbon Dioxide (CO ₂)	1,750	636

Values reflect annual tons of emissions reductions

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

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	20,595 millions	2,270 millions

Values reflect annual BTU reductions

Operating Efficiencies

RTA estimates a decrease in the systemwide operating cost per passenger mile in the year 2015.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.76	\$0.71	\$0.59

Cost Effectiveness

FTA estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$8.50	\$11.30

Values reflect 2015 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Low-Medium**

There are relatively high densities, mixed-use development, high trip generators, and pedestrian friendly environment in the Central Business District (CBD) and historic district portions of the corridor. However, residential, commercial densities and transit supportive policies are weaker on the outlying corridor areas. The land use along the City Park Spur appears unsupportive of transit. The city is relying on improved transit access and pedestrian friendly environment in the CBD and allows for high density zoning. Transit improvements are viewed as the primary mechanism to promote growth in the CBD. The city has a transit supportive parking policy in place. The City's Comprehensive Zoning Ordinance requires parking caps for new development in the CBD. There are no local or regional growth management policies outside the CBD. Specific corridor and station-area plans have not been developed. There have been discussions about possible joint development opportunities at the Cemeteries Terminal. The PE/EIS project included extensive public involvement.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 20 %

The financial plan includes \$109.1 million (80%) in Section 5309 New Start funds, \$23.5 million (17%) in State funds, and \$3.8 million (3%) in local and other funds.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

RTA provided verification of the State's \$23.5 million contribution included in the State Capital Outlay Budget and backed by General Obligation bonds. The local contribution includes right-of-way donations by the City of New Orleans, material donations by local citizens, and sponsorship of station shelters and landscaping. RTA's twenty year capital plan appears balanced, but does not confirm the stability and availability of state or local fund sources or has a contingency plan to cover unavailable federal funds.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

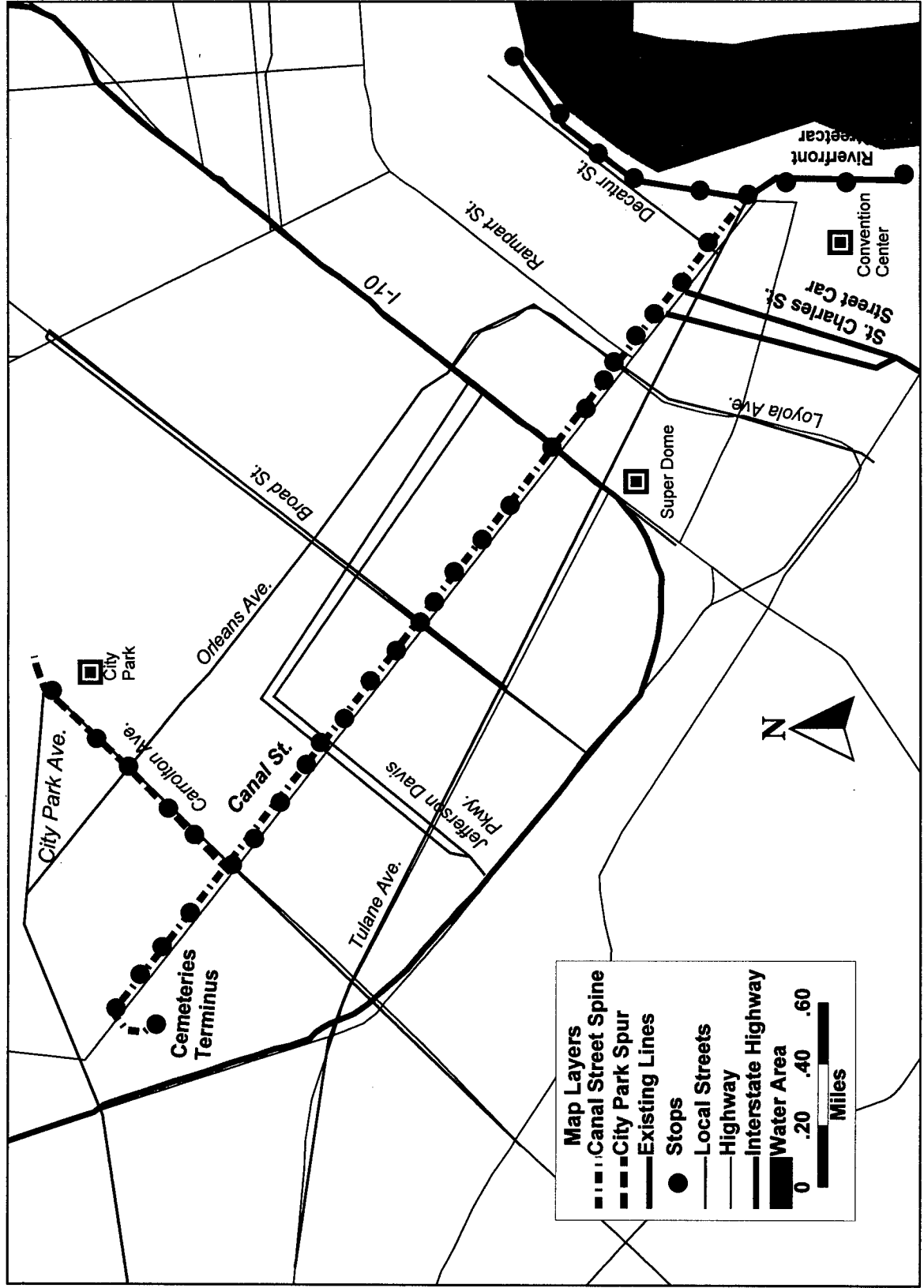
The twenty-year operating cash flow shows a negative operating balance in the first three years of the plan. RTA indicates that it has initiated an aggressive cost reduction program, but results have not been demonstrated. RTA's projections for operating and maintenance costs are approximately 2% lower than their average trend experienced in the period of FY 1991 to FY 1995. However, the annual retail sales tax projection of 2.8% is much lower than the historical trends of 7.1%.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in escalated dollars)
Federal:	
Section 5309 New Start	\$109.10 (\$32.36 million appropriated through FY 1998.)
State:	23.50
Local and Other:	3.80
TOTAL	\$136.40

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Canal Streetcar Spine

New Orleans, LA



LOSSAN Rail Corridor

San Diego County, California
(November 1997)

Description The Los Angeles-San Diego Rail Corridor Agency (LOSSAN), a Joint Powers Authority operating in the three counties, was created to improve the rail system between San Diego and Los Angeles, along a 126 mile corridor with 21 stations (11 joint commuter rail/intercity stations and 10 commuter rail only stations). LOSSAN is implementing a long-range plan to improve the safety, capacity and speed of inter-city rail service between Los Angeles and San Diego.

The proposed rail improvements would include seven projects such as building a multi-level parking structure at the Oceanside Transit Center with joint development opportunities in San Diego County; a mixed use and transit station at Solana Beach in San Diego County; Del Mar Bluff stabilization and erosion project in San Diego County; improvements to the Los Angeles Union Station; Irving parking expansion in Orange County; and Orange County double track improvements. An earlier project, totaling \$19.89 million, completed grade-separation improvements at three sites including Commerce in Los Angeles County, Fullerton in Orange County, and Solana Beach in San Diego County.

Total project costs for the program of improvements in the LOSSAN Rail Corridor equal \$80.3 million (1996 dollars), including the \$19.89 million already obligated for the first, completed project. However, no individual rail project is requesting more than \$15 million.

Summary Description	
Proposed Inter-city Rail improvements	126 miles in length, 21 stations (11 intercity/commuter, and 10 commuter only)
Total Capital Cost: \$ 80.3 million (\$1996)	
Annual Operating Cost: \$18 Million (\$1996)	2015 Ridership Forecasts (Average Weekday) - 11,000 daily on LOSSAN (6,000 intercity and 5,000 commuter)

Status Section 3035 (g) of ISTEA directed FTA to enter into a multi-year grant agreement with the Los Angeles-San Diego Rail Corridor Agency (LOSSAN) for track and safety improvements in the corridor, and authorized \$20.0 million in Section 5309 New Start funds for the project. Section 1010 of ISTEA identified five corridors nationwide to be developed into high-speed rail corridors. One of these corridors is the Los Angeles-San Diego

(LOSSAN) State Passenger High Speed corridor.

Through FY 1997, Congress appropriated \$19.89 million in Section 5309 New Start funds for this program. There was no appropriation for FY 1998.

Construction has been completed on the three grade separation sites for the first LOSSAN project phase. The Fullerton site of the first project received \$6.7 million of the appropriated funds. The Solana Beach site of the first project received \$6.7 million in the 1996 appropriation. The City of Commerce site of the first project received \$3.3 million of the initial appropriation, \$3.2 million of the 1996 appropriation, and \$1.5 million of the 1997 appropriation.

Evaluation

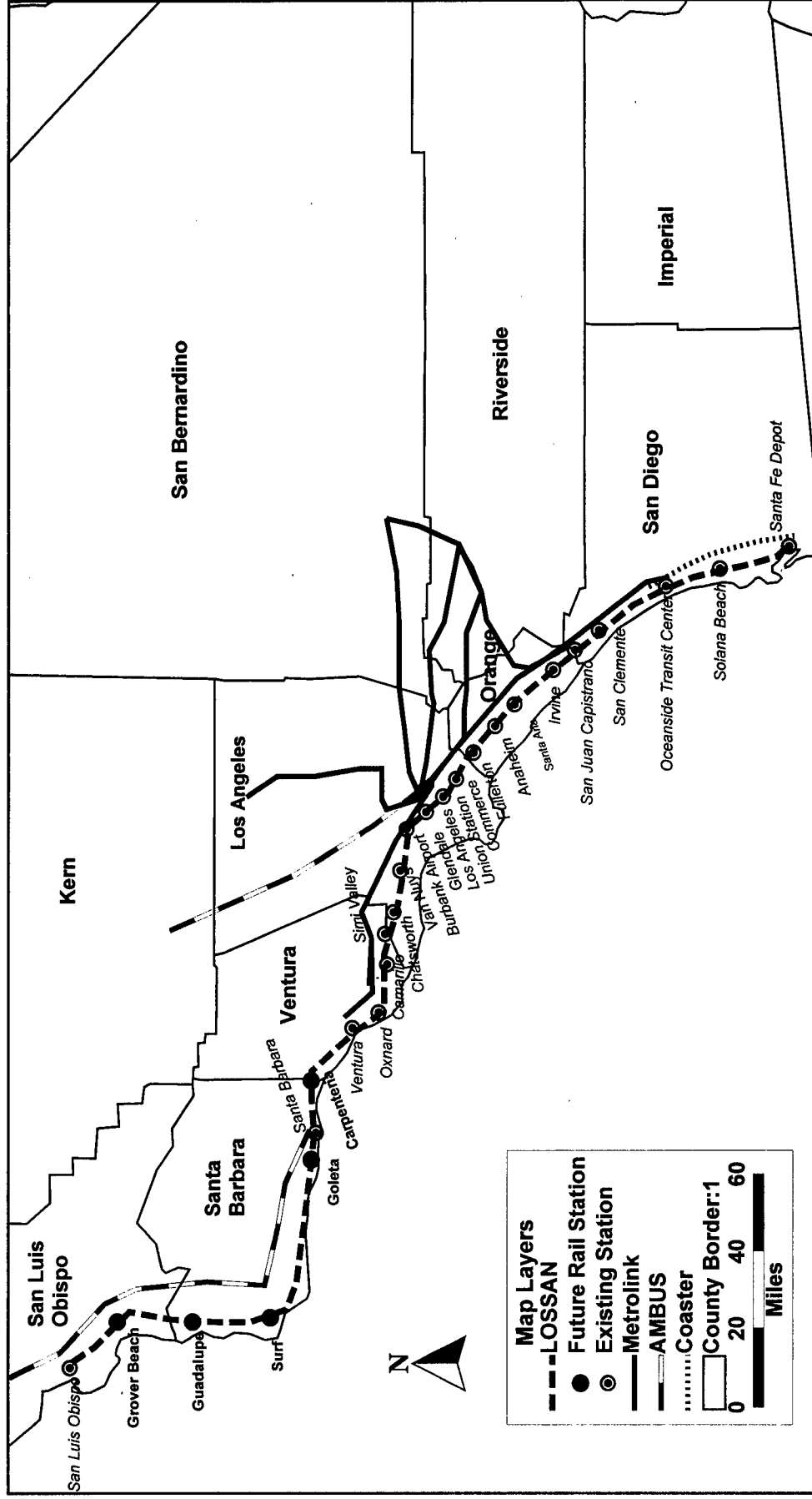
The LOSSAN agency was created to implement rail system improvements in the three-county area of Los Angeles, Orange, and San Diego. This program of rail projects is to be completed over a six year horizon, and each individual project is under \$15 million. FTA has agreed to allow LOSSAN to be exempt from the New Start criteria in this FY 1999 Report since the Section 5309 share per project is less than \$25 million. As a result, criteria are not addressed at this time for mobility improvements, environmental benefits, operating efficiencies, cost effectiveness, assessment of transit supportive land use, and local financial commitment.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1996 dollars)
Federal:	
Section 5309 New Start	\$55.40 (\$19.89 million appropriated through FY 1998, already obligated for three sites of first project.)
State:	20.20
Local:	4.70
TOTAL	\$80.30

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions

LOSSAN Rail Corridor Improvement Project

San Diego County, CA



PROJECTS IN PRELIMINARY ENGINEERING

Northwest/North Central Corridor

Austin, Texas
(November 1997)

Description The Capital Metropolitan Transportation Authority (Capital Metro) has initiated preliminary engineering (PE) in conjunction with the preparation of a Draft and Final Environmental Impact Statement (EIS) for transit improvements in the Northwest/North Central Corridor of Austin, Texas. The locally preferred strategy approved in February 1997 calls for a 30 mile light rail transit line (LRT) from downtown Austin (home to the State Capital complex and the University of Texas) north to the City of Leander. The proposed Red Line alignment will use the existing, publicly owned Giddings-Llano railroad line for about 95% of the route. The projected cost is \$182.3 million (1995 dollars). Capital Metro estimates that 27,000 daily riders will use this system in the year 2020.

Summary Description

Proposed Light Rail	30 miles in length, 20 stations
Total Capital Cost: \$ 182.3 million (\$1995)	2020 Ridership Forecasts (Average Weekday) - 27,000 daily on Red line
Annual Operating Cost: \$ 5.5 million (\$1995)	- 11,760 new riders

Status A Major Investment Study was completed in March 1997 selecting the 30-mile Red line LRT as the locally preferred alternative. This project is included in the Austin Metropolitan Area Transportation Plan and conforming Transportation Improvement Plan. In October 1997, FTA approved the initiation of Preliminary Engineering (PE) and the preparation of the Environmental Impact Statement (EIS) for the Red line LRT. Transit oriented development in the corridors and station areas will be considered during PE. The EIS will address the impacts of proposed operating plans to include joint use of the railroad right-of-way by rail freight and a historic steam train excursion service. Through FY 1998, Congress has appropriated \$1 million in Section 5309 New Start 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 are not available for this specific measure at this time.

Mobility Improvements

Capital Metro estimates the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$2.6 million	\$ 2.6 million
Hours	N/A	N/A

Based on the 1990 census, there are an estimated 3,200 low-income households within a 1/2 mile radius of the proposed 20 stations.

Environmental Benefits

The Austin area is currently in attainment of National Ambient Air Quality Standards (NAAQS). Capital Metro estimates that the Red line will result in the following emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	217	103
Nitrogen Oxide (NOx)	64	49
Volatile Organic Compounds (VOC)	34	17
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	5,471	1,460

Values reflect annual tons of emissions reductions

Capital Metro estimates that the Red line will result in the following savings in regional energy consumption (measured in British Thermal Units - BTU)

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	71,762 million	19,221million

Values reflect annual BTU reductions

Operating Efficiencies

Capital Metro estimates a slight increase in the systemwide operating cost per passenger mile in the year 2020 for the New Start compared to the No-Build.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2020)	\$0.18	\$0.19	\$0.19

Cost Effectiveness

Capital Metro estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$7.30	\$12.90

Values reflect 2020 ridership forecast and 1994 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium-High**

Existing land use is low density single family housing and rural undeveloped areas in the corridor. The alignment goes through the University of Texas and the Robert Mueller Airport redevelopment area. Capital Metro and the City of Austin actively promote high density and mixed use development. A regional Transit Oriented Development subcommittee was created by the Austin Transportation Study (MPO) in March 1997. The 20-year Long Range Plan calls for transportation measures to improve transit and to promote mixed use development, higher density, and pedestrian oriented development around transit stops. The Citizens' Planning Committee appointed by the City Council produced a 1995 report to "produce and sustain a livable city" and includes steps to integrate land and transportation planning and reinvest in the city neighborhoods and downtown. A downtown parking policy is in place. Costs of metered parking near transit facilities is higher and time is restricted. Conceptual station area sketch plans have been prepared for several Red Line LRT stations. Detailed design work will be done during the PE/EIS project development phase. The City of Leander and the City of Cedar Park are creating master plans along the proposed corridor.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 51%

The financial plan includes \$90 million (49%) in Section 5309 New Start funds and \$92.3 million (51%) in local funds.

Stability and Reliability of Capital Financing Plan

Rating: Medium-High

Capital Metro receives one cent of a local sales tax which generates approximately \$88 million annually. Capital Metro applies 3/4 cent of this tax to support the annual operations of the transit agency and plans to use the additional 1/4 cent in years 1999 through 2002 to provide capital funding for the proposed Red Line LRT. Any short term borrowing must be approved by the Board of Directors but is not subject to a bond referendum. Despite the agency's current sound financial capacity, there are concerns regarding recent efforts to rescind the full one cent sales tax. Without the full cent sales tax building the light rail will not be financially possible.

Stability and Reliability of Operating Financing Plan

Rating: Medium-High

The sales tax currently accounts for 89% of operating revenues. Capital Metro received \$12.8 million in 1996 and \$2.8 million in 1995. Capital Metro's service area includes two of the strongest growth areas in the U.S. - the City of Austin and Southern Williamson County. Austin's population has tripled since 1960 and is projected to double by 2020, anticipated to generate a significant increase in sales tax receipts. Capital Metro has \$6 million in reserve for operations.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1995 dollars)</u>
Federal:	
Section 5309 New Start	\$90.00 (\$1 million appropriated through FY 1998.)
Local:	92.30
TOTAL	\$182.30

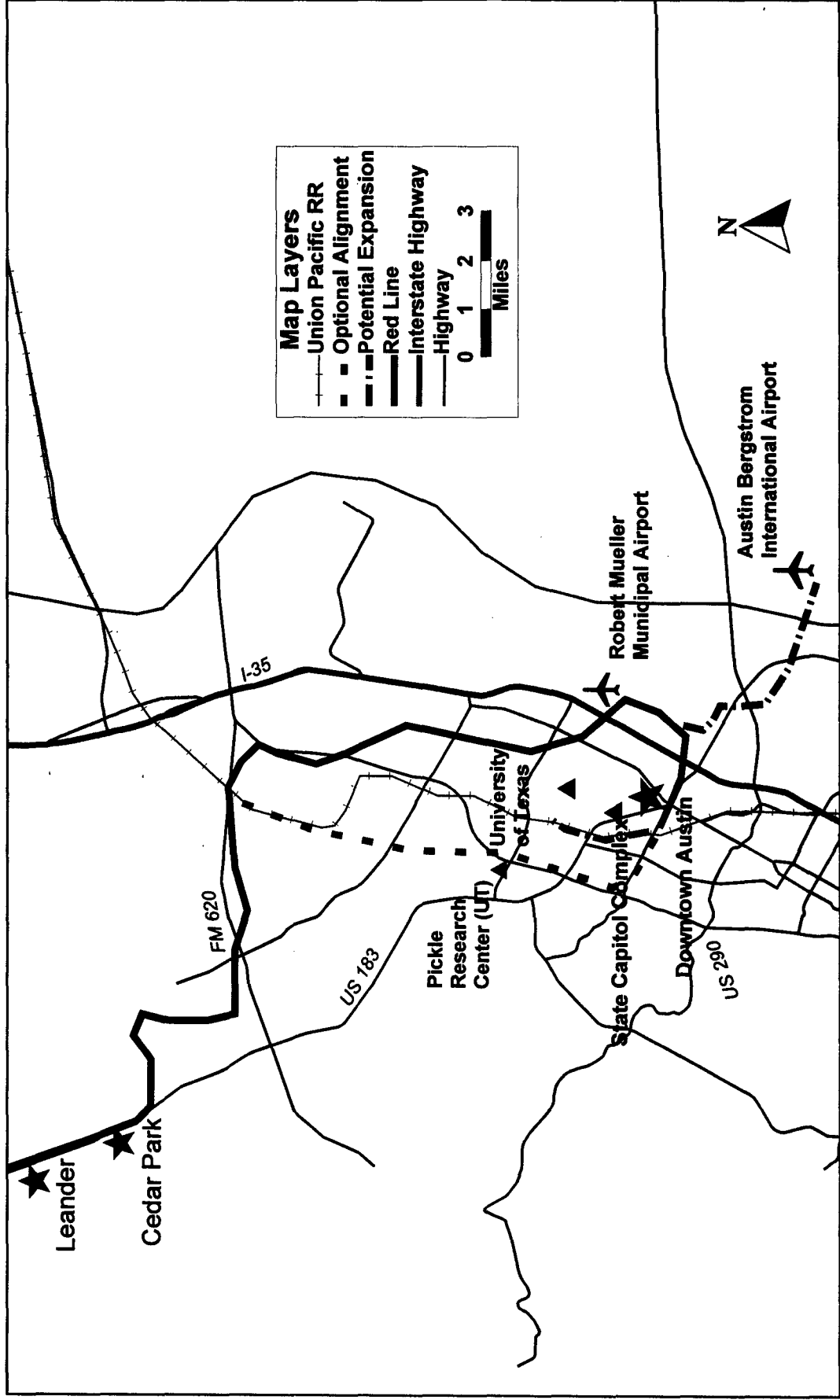
NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

**Other
Factors**

Livable Community Initiative: A \$1 million Section 5309 Livable Community Grant is pending to provide improved infrastructure improvement, the development of an employment/transit center, an employer shuttle service, and a child care center in the historic Capitol Hill neighborhood in East Austin. The project will include improvements to sidewalks, transit amenities, landscaping, and the creation of "gateways" and street artwork with an historic theme. Austin was recently the site for a "Building Livable Communities through Transportation" workshop co-sponsored by Capital Metro, the Austin Neighborhoods Council, and other local groups. Over 200 people participated in this workshop.

Northwest - North Central Corridor

Austin, TX



South Boston Piers Transitway - Phase II

Boston, Massachusetts
(November 1997)

Description The Massachusetts Bay Transportation Authority (MBTA) is building Phase I of an underground Transitway connecting the MBTA's existing transit system with the South Boston Piers area, located adjacent to Boston's central business district. Dual mode trackless trolleys will operate in the Transitway tunnel and on limited surface routes in the eastern end of the Piers area. Phase I will connect South Station--which is the terminus of the MBTA's south side commuter rail operations, the terminus of Amtrak's Northeast Corridor service, a major bus station, and a station on the MBTA's Red Line--to the World Trade Center in the Piers area. Phase II would extend the Transitway from South Station to Chinatown Station on the Orange Line and Boylston Station on the Green Line, a distance of approximately one-half mile. Phase II is estimated to cost \$258 million (1996 dollars).

Summary Description

Proposed Underground Transitway 0.5 miles in length

Total Capital Cost:
\$ 258 million (\$1996)

2010 Ridership Forecasts
(Average Weekday)
- not reported at this time

Annual Operating Cost:
not reported at this time

Status Section 3035(j) of ISTEA directed FTA to enter into a multiyear grant agreement with the MBTA for \$278 million to carry out construction of the Phase I segment from South Station to the World Trade Center segment of the Transitway.

In February 1993, the MBTA completed alternatives analysis and selected a 1.5-mile underground transit tunnel from Boylston Station to the World Trade Center combined with surface bus operations as the locally preferred alternative. This alternative is referred to as the Full Build Transitway, which was proposed to be constructed in two phases. The Final Environmental Impact Statement (FEIS) was completed in December 1993. A Record of Decision (ROD), signed by FTA in May 1994, applies to the Full Build Transitway.

In 1994, FTA signed a Full Funding Grant Agreement (FFGA) for \$330.73 million (which includes a contingent commitment for \$53 million) with the MBTA for Phase I of the Transitway. Congress has not authorized or appropriated funds for Phase II. It is not expected that the State would proceed with Phase II construction until at least the year 2002, when Phase I opens. Phase II is scheduled to open in 2008.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Since Phase II of the project was never analyzed as a stand alone segment, the point of comparison for calculating the New Starts criteria and measures for Phase II is the Phase I portion of the project. The criteria are presented comparing the Phase II New Start to a "No-Build", which actually reflects conditions following implementation of Phase I of the project. In addition, the MBTA analyzed two growth scenarios to address uncertainties regarding the timing and intensity of future development in the Transitway corridor. The criteria presented for the proposed New Start reflect the "lower-growth scenario" (which assumes that development projected for the year 2000 will not occur until 2010). N/A indicates that data are not available for a specific measure.

Mobility Improvements

Phase II will provide direct connections to the MBTA's Orange and Green Lines, improving travel times and reducing surface congestion. The MBTA estimates that the Phase II lower-growth scenario will result in the following annual travel time savings, compared to the No-Build (Phase I).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 5.6 million	N/A
Hours	0.5 million	N/A

Based on 1990 census data, there are an estimated 1,231 low-income households within a 1/2 mile radius of the proposed stations.

Environmental Benefits

Metropolitan Boston is a "serious" nonattainment area for ozone. The MBTA estimates the following reductions in annual emissions, comparing the Phase II lower-growth scenario to the No-Build (Phase I).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	68	N/A
Nitrogen Oxide (NOx)	14	N/A
Hydrocarbons (HC)	8	N/A
Particulate Matter (PM ₁₀)	no change	N/A
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions

The MBTA estimates that the Phase II high-growth scenario will result in the following savings in regional energy consumption (measured in British Thermal Units - BTU), compared to the No-Build (Phase I). Note energy consumption data are not available for the Phase II lower-growth scenario.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	56,569 million	N/A

Values reflect annual BTU reductions

Operating Efficiencies

The MBTA estimates the following operating costs per passenger mile for the Phase II lower-growth scenario and the No-Build (Phase I).

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2010)	N/A	N/A	\$0.58

Cost Effectiveness

The MBTA estimates the following cost effectiveness indices, comparing the Phase II lower-growth scenario to the No-Build (Phase I).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$10.50	N/A

Values reflect 2010 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium-High**

The South Boston Piers Transitway study area is located in downtown Boston which contains approximately 19 percent of the total region's employment, a large population concentration, the city's retail shopping core, a majority of the city's hotels, and a theater district. The South Boston Piers/Fort Point Channel area is less intensely developed but contains renovated office complexes, a planned Federal Courthouse, the World Trade Center, a planned new hotel, high density housing, and further redevelopment opportunities. The proposed transitway project will connect three existing MBTA rail transit lines and the South Station multi-modal terminal serving Amtrak, intercity bus, and commuter rail. Several high trip generators in the corridor include the Boston Marine Industrial Park, a Museum Wharf, and several large government office buildings.

The Transitway corridor is zoned for mixed-use, high-density development. The mix of future development is in the planning stage. Planned land use will focus on manufacturing, research and development, tourism, recreation, retail, food services, visual arts, and maritime industries. There are no growth management policies in place in the corridor. However, the City has economic development initiatives supportive of transit-oriented development. Parking has been drastically reduced for commuters due to a freeze on the number of allowable parking spaces for commercial development within the Central Business District (CBD) and the South Boston Piers area. Designated Economic Development Areas allow greater development density to be located around the proposed Courthouse station.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 20%

The financial plan includes \$206.4 million (80%) in Section 5309 New Starts funds and \$51.5 million (20%) in State and local funds.

Stability and Reliability of Capital Financing Plan

Rating: **Low-Medium**

MBTA does not presently have a financial plan for Phase II of the Transitway Project. The local MPO projects total capital needs for the period 1997-2020 to be \$9.66 billion including \$1.98 billion for new projects (including the Transitway Project) and \$7.68 billion in capital reinvestment needs. Under Massachusetts law, the state covers 90 percent of the debt service charges incurred by MBTA for capital expenditures. MBTA proposes utilization of this mechanism to fund capital expenditures for the Transitway Project but does not indicate the state's willingness or ability to meet these funding

expectations. MBTA will issues bonds to cover the local share. However, there is no outline of how these sources would be applied. The capital plan provides no indication of the presence of contingency factors or other protection against cost overruns.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

MBTA operations are funded through a combination of fare revenues, state assistance, local assessments, and Federal aid. The financial plan does not consider the ability of existing funding sources to cover additional operating expenses related to this project. The State lacks the financial capacity to absorb an increased share of MBTA's operating deficits and has forced MBTA to adopt stringent measures to limit growth in operating costs. In recent years, MBTA has experienced strong positive cash flow balances, increased farebox recovery ratio, moderate increases in service, and a moderate decline in ridership.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1996 dollars)</u>
Federal:	
Section 5309 New Start	\$206.40 (\$0.0 million appropriated through FY 1998.)
State and Local Combined	51.60
TOTAL	\$258.00 (for Phase II)

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

**Other
Factors****Coordination with Major Infrastructure and Development
Plans**

Planning for the MBTA's South Boston Piers Transitway Project has been coordinated with other major infrastructure improvement projects in the region, as well as economic development plans for the South Piers area. As a result of coordination and cooperation between the MBTA and the Massachusetts Highway Department, a portion of the Transitway Project is being jointly constructed with the Central Artery Project, reducing the costs and environmental impacts of both projects. Development proposed and under construction in the South Boston Piers area has anticipated the high volume, high capacity service to be provided by the Transitway.

South Boston Piers Transitway, Phase II

Boston, MA



Euclid Corridor Improvement Project

Cleveland, Ohio
(November 1997)

Description

The Greater Cleveland Regional Transit Authority (GCRTA) in partnership with the City of Cleveland, is proposing to design and construct a 5.6-mile corridor incorporating exclusive bus lanes and related capital improvements on Euclid Avenue from Public Square in downtown Cleveland east to University Circle. The proposed project is known as the Euclid Corridor Improvement Project (ECIP). In addition, five stations along the existing Red Line (heavy rail) will be relocated in order to spur economic development and improve access between the stations, surrounding neighborhoods and employment centers. The total capital cost estimate for the ECIP is \$332.5 million.

The right-of-way on East 17th/East 18th Streets from the Inner Belt to Lakeside Avenue will be reconfigured to facilitate traffic movement and increase accessibility to employment and retail centers in the central business district. The downtown area bounded by Superior Avenue, St. Clair Avenue, West 3rd Street and East 18th Street will be designated a "Transit Zone" to provide expanded and more visible bus operations and allow for convenient transfer between cross-town bus routes. New community-oriented bus services will also be implemented to serve the adjacent Empowerment Zone.

Summary Description

Proposed Exclusive Bus Lanes and related capital improvements	5.6 miles in length, and 5 existing (heavy rail) stations will be relocated.
Total Capital Cost: \$ 332.5 million (\$1996)	2015 Ridership Forecasts (Average Weekday) - 3,800 daily new riders on the ECIP
Annual Operating Cost: not reported at this time	

Status

Section 3035(t) of ISTEA directed FTA to enter into a multiyear grant agreement for development of the Dual Hub Corridor, originally considered as a rail link between downtown and University Circle. In November 1995, the GCRTA Board of Trustees selected the ECIP as the Locally Preferred Alternative (LPA). The LPA is the Transportation Systems Management Alternative (TSM) and focuses on various bus system improvements and selected rail elements. In December 1995, the Northeast Ohio Areawide Coordinating Agency (local MPO) adopted a resolution supporting the ECIP.

In September 1996, FTA approved a grant for \$4.02 million in Section 5309 New Start funds. Of these funds, \$2.82 million will be used to initiate preliminary engineering (PE) on the ECIP. The remaining \$1.20 million will be used for the Berea Rapid Transit Extension Major Investment Study. During PE, design and plans for the operation of the ECIP will be refined, environmental issues will be addressed and the financing plan will be finalized. This work is scheduled to be completed in June 1998. The Final Environmental Impact Statement is scheduled for completion in November 1998. Through FY 1998, Congress has appropriated \$8.74 million. Of this amount, \$4.72 million was rescinded or reprogrammed by Congress.

Evaluation

Because the operational analysis for the Euclid Avenue Improvement Project has not been completed, GCRTA indicates that an evaluation using the New Starts criteria is not available at this time. N/A indicates that data are not available for this specific measure.

Mobility Improvements

The ECIP is estimated to increase transit travel by 3,800 (a 2.5 percent increase) daily trips over the No-Build Alternative. No information on estimated travel time savings is available at this time.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	N/A	N/A
Hours	N/A	N/A

Information on the number of low-income households within a 1/2 mile radius of the proposed stations is not available at this time. The project serves the Cleveland Empowerment Zone.

Environmental Benefits

The ECIP is located within the eight county Cleveland Air Quality Control Region. Because the operational analysis for the ECIP has not been completed, an assessment of the proposed project's emissions reductions is not available at this time.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxide (NO _x)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions

Information on changes in regional energy consumption is not available at this time.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	N/A	N/A

Values reflect annual BTU reductions

Operating Efficiencies

Information on the systemwide operating cost per passenger mile is not available at this time.

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

Cost Effectiveness

Information on cost effectiveness indices is not available at this time.

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

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Low-Medium**

The ECIP runs between the Cleveland central business district (CBD) and University Circle. The CBD has undergone substantial revitalization in the past decade, and the University Circle area is a major activity center characterized by hospitals, educational institutions, and cultural facilities. A

process for input from major stakeholders has been established. In addition, a process for organizational participation in economic development and planning has been established. This process allows persons from both the community and local businesses to participate in group discussions to build consensus on elements of the proposed project, such as alternative system design issues, and streetscape improvements. The City of Cleveland has a transit supportive parking policy which encourages shared parking and prohibits any new surface parking lots in the downtown area.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 20 %

GCRTA proposes a 80% Federal share of \$266.0 million in Section 5309 New Start funds, and \$66.5 million (20%) in local funds.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

The financing plan, identifying state, local, federal, transit agency, as well as private sector participation is scheduled to be completed in June 1998. It is not possible to identify specific sources of local match at this time. Potential sources of non-federal funds for the Euclid Corridor Improvement Project include: State grants, Certificates of Participation (COPs), State Infrastructure Bank loans, local tax increment financing, benefit assessment district, and sales tax proceeds. Also, federal funds (e.g., Surface Transportation Policy) and State gas tax proceeds will be considered. GCRTA's general obligation debt was rated 'A' by Moody Investor Services and Fitch Investor Services, Inc. The agency's bonded debt cost rose from \$13.25 million in 1995 to \$78.5 million in 1996. In 1996, the agency issued \$70 million in General Obligation Capital Improvement Bonds to pay the cost of a number of capital improvements, including the extension to it's light rail system (Waterfront Line), rehabilitation and construction of bridge, track, road, station, and bus stop improvements, etc.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

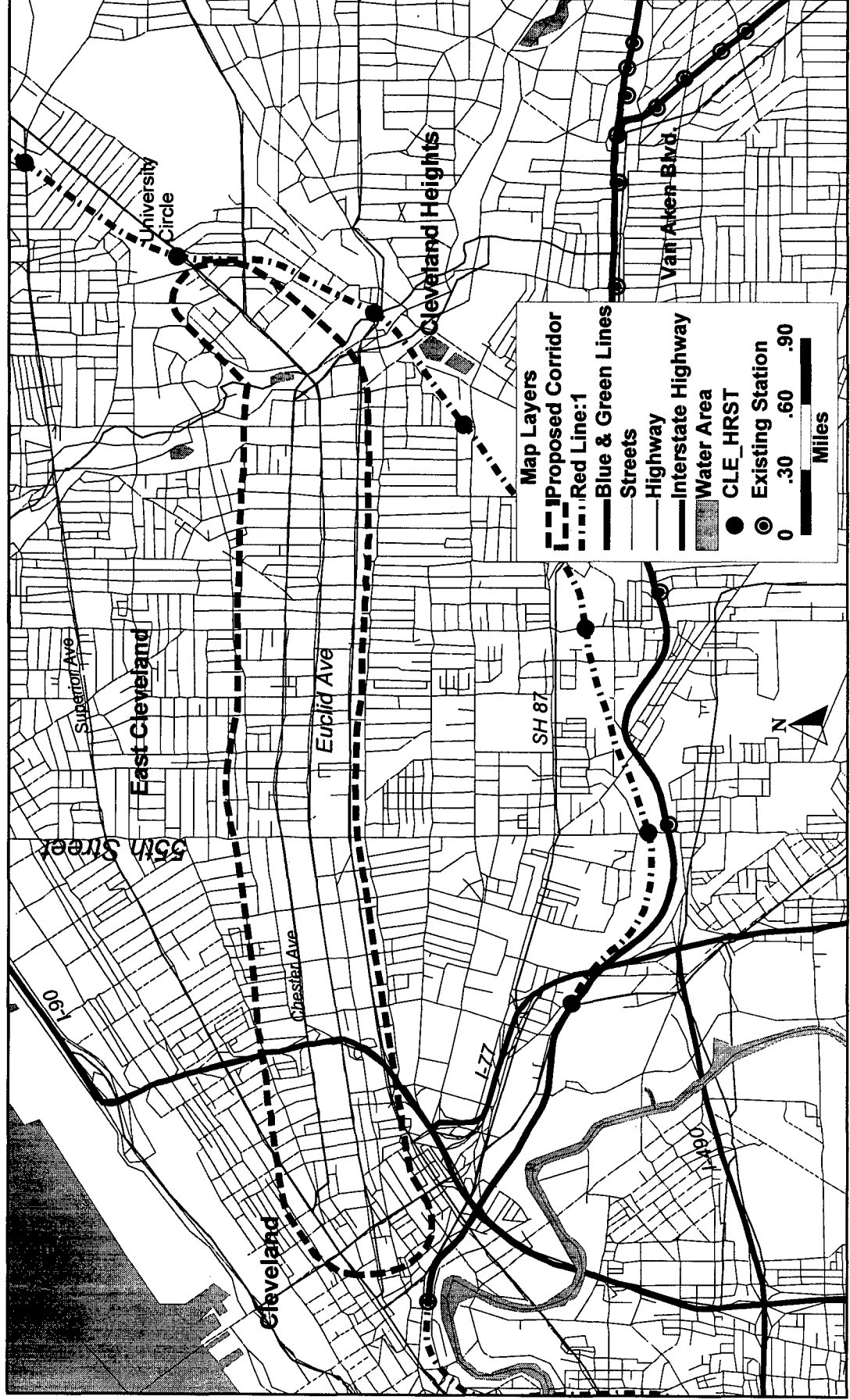
The operating financing plan, identifying state, local, federal, transit agency, as well as private sector participation is scheduled to be completed in June 1998. The agency currently covers the majority of operating deficits from a dedicated sales tax (1 percent). The agency's 1997 budget includes estimates of 4 percent annual growth in sales tax revenue, slightly above inflation. Passenger fare revenue is expected to grow by 2 percent a year, which is higher than the growth over the previous years.

Locally Proposed Financing Plan		
<u>Proposed Source of Funds</u>	<u>Total Funding</u>	<u>(Smillion) (reported in 1996 dollars)</u>
Federal:		
Section 5309 New Start	\$266.00	(\$6.52 million appropriated through FY 1998.)
Local:	66.50	
TOTAL	\$332.50	

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Euclid Corridor

Cleveland, OH



Southeast Corridor

Denver, Colorado
(November 1997)

Description The Southeast Corridor is a proposed 10 station, 19.7 mile light rail transit (LRT) system extending from an existing LRT station at I-25 and Broadway in Denver, along I-25 to Lincoln Avenue in Douglas County, with a spur LRT line along I-225 to Parker Road in Arapahoe County. The double track system will operate over an exclusive, grade separated right-of-way and connect with the existing 5.3 mile Central Corridor LRT line in Downtown Denver. At I-25 and Broadway, the Southeast Corridor will also connect with the Regional Transportation District's (RTD) Southwest Corridor LRT line which is currently under construction.

The capital cost estimate of the fixed guideway element is \$479.7 million (in 1997 dollars), including right-of-way acquisition, final design, construction, and acquisition of rolling stock. Annual operating costs for the year 2020 are estimated at \$22.3 million (1997 dollars). Ridership is estimated at 30,000 daily boardings, 16,000 of which are new riders.

Summary Description

Proposed Light Rail Line	19.7 miles, 10 stations
Total Capital Cost: \$479.7 million (\$1997)	2020 Ridership Forecasts (Average Weekday)
	- 30,000 daily boardings
Annual Operating Cost: \$ 22.3 million (\$1997)	- 16,000 new riders

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 DRCOG Board has recommended that the LRT locally preferred alternative be included in the 2020 Long Range Regional Transportation Plan, which is currently being updated and which will be formally adopted in early 1998. Preliminary engineering and further environmental work are expected to begin by the spring of 1998.

In November 1997, a local referendum to increase the RTD's sales tax revenue base --- which would have provided sufficient funding to construct and operate LRT in a number of corridors --- was defeated by the voters. Subsequently, CDOT has agreed to implement LRT in the *Southeast Corridor*, using State transportation funds as local match. Preliminary

Engineering (PE) will be funded with a combination of FHWA and State funds. CDOT and RTD are negotiating the operation of the proposed project.

Congress has not authorized nor appropriated any 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 are not available for this specific measure.

Mobility Improvements

CDOT estimates the following annual travel time savings:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$26.6 million	\$26.3 million
Hours	2.6 million	2.6 million

Based on the 1990 US Census, there are 1,595 low-income households within one-half mile of the 10 proposed (and one existing) station boarding points, representing 17% of the total households served.

Environmental Benefits

Denver is currently classified as a "transitional" nonattainment area for ozone, a "serious" nonattainment area for carbon monoxide, and a "moderate" nonattainment area for PM-10. Denver is in attainment for NOx. CDOT estimates the following emissions reductions in pollutant emissions:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	1,537	622
Nitrogen Oxide (NOx)	10	54
Hydrocarbon (HC)	160	85
Particulate Matter (PM ₁₀)	3	3
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions

CDOT estimates the following changes in regional energy consumption (measured in British Thermal Units - BTU) will occur. Note a decrease reported in the comparison between the New Start and No-Build, and an

increase reported between the New Start and TSM.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	17,327 million	N/A

Values reflect annual BTU reductions.

Operating Efficiencies

CDOT 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 (2020)	\$0.38	\$0.39	\$0.38

Cost Effectiveness

CDOT estimates the following cost effectiveness indices:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	13.00	\$6.80

Values reflect 2020 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium**

The Southeast Corridor includes several major employment and activity centers, and is linked to the Denver CBD via the existing LRT system. The corridor has been designated in the regional long range plan as an "urban center" which is a high-intensity, pedestrian oriented, mixed use area. Local policies support further intensification of areas around transit stations in the corridor. The City of Denver has minimum and maximum parking requirements for areas that are well served by transit.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 20 %

CDOT proposes that \$383.3 million (80%) in Section 5309 New Start funds and \$95.9 million (20%) in State funds be applied to this project.

Stability and Reliability of Capital Financing Plan

Rating: Medium

The local contribution for the project would come from SB 97-01 funds, a new source which makes available to CDOT 10% of motor vehicle sales and excise taxes over the next five years (generating \$840 million dollars over five years). Of these funds, CDOT may use up to 10% for alternate modes and another 10% for park-and-ride and transportation system management projects. CDOT proposes that all Federal funding would come from Section 5309 funds.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

The annual cost of operating the project in 2020 is \$22.3 million (in 1997 dollars). Assuming that RTD operates and maintains the project, RTD's major source of operating funds is a dedicated sales tax, which currently provides more than 70% of operating revenues. Recent efforts to increase this tax through public referendum have been unsuccessful.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1997 dollars)
Federal:	
Section 5309 New Start	\$383.80
State:	95.90
TOTAL	\$479.70

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

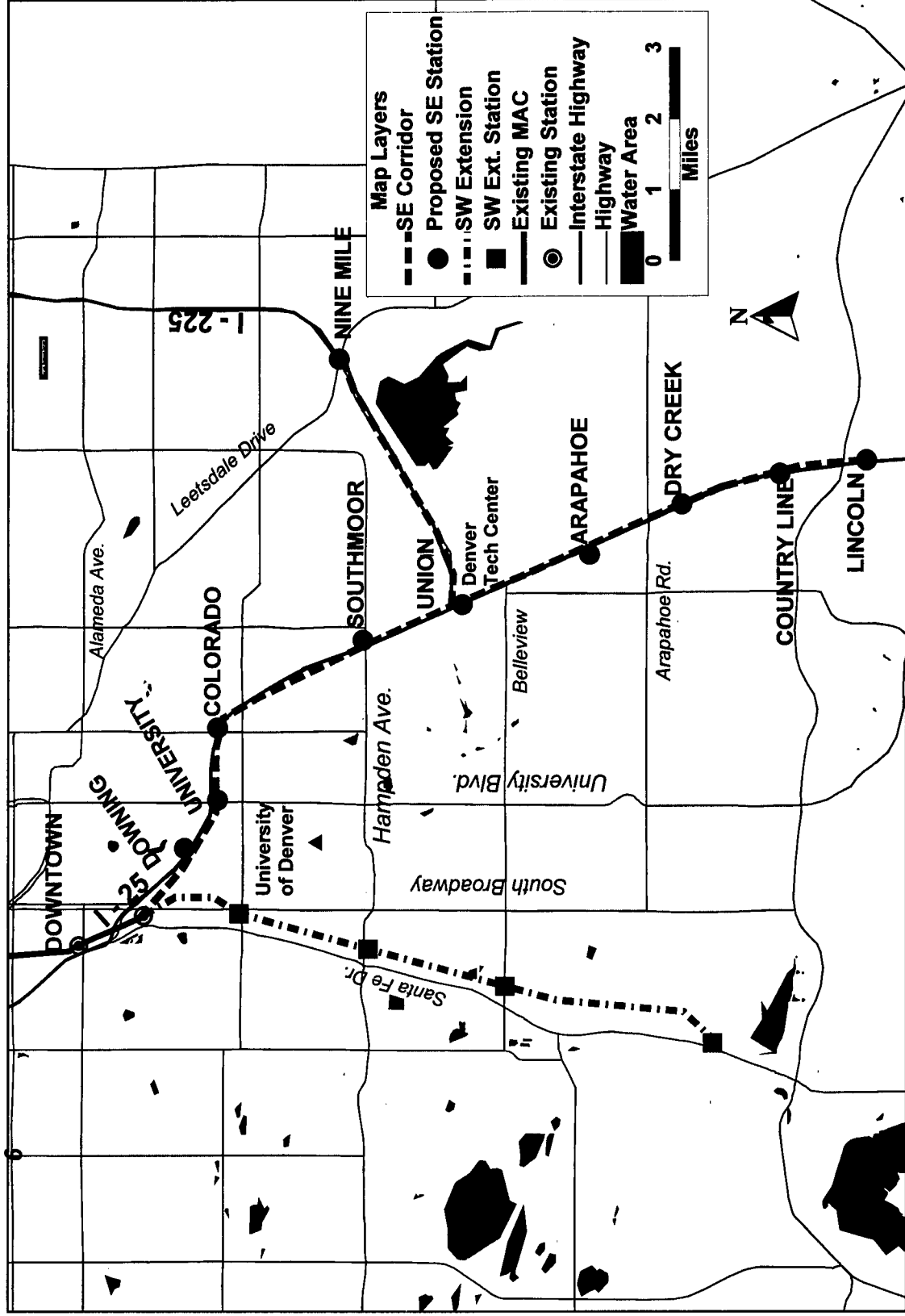
Other Factors

Linking Employment Centers: The *Southeast Corridor* connects the two largest employment centers in the region: the Denver CBD, with over 100,000 employees in 1995, and the South I-25 business area, with approximately 80,000 employees in 1995.

Joint Development Opportunities: Numerous opportunities for joint development exist at proposed stations, particularly at Colorado Center, Broadway, Union, Arapahoe, Dry Creek, County Line, and Lincoln Avenue.

Southeast LRT

Denver, CO



Southtown Corridor

Kansas City, Missouri

(November 1997)

Description

The Kansas City Area Transportation Authority (KCATA) is proposing a 15.2-mile light rail transit (LRT) project in the Southtown Corridor. This Locally Preferred Alternative (LPA) is estimated to cost \$490 million (1997 dollars) and would carry 16,800 riders per day in 2010. It would extend from the riverfront and downtown Kansas City south to the Country Club Plaza (Plaza) and to 85th Street and Holmes Road. The project would also include an eastern line from the Plaza to Watkins Drive and south to 75th Street. KCATA proposes to build the project in phases. The Starter Project would be 5.6 miles in length and run from the River Market to 51st Street at the southern edge of the Plaza. It is estimated to cost \$220 million (1997 dollars) and would carry 10,800 riders per day in 2010.

Summary Description

Proposed Light Rail Transit	15.2 miles in length
Total Capital Cost: \$ 490 million (\$1997)	2010 Ridership Forecasts (Average Weekday)
	- 16,800 daily
Annual Operating Cost: \$ 8.4 million (\$1997)	- 8,100 new riders (bus and rail)

Status

Section 3035(k) of ISTEA directed FTA to enter into a multiyear grant agreement in the amount of \$5.9 million with KCATA to provide for the completion of alternatives analysis and preliminary engineering. Through FY 1998, Congress has appropriated \$4.48 million in Section 5309 New Start funds for this project (of which \$0.46 million was rescinded in FY 1995).

In 1995, the Alternatives Analysis/Major Investment Study (MIS) was completed and the Southtown Corridor LRT was included in the Mid-America Regional Council of Governments (the MPO) adopted long range transportation plan. In October 1995, FTA approved the initiation of Preliminary Engineering (PE) on the project. Local officials, however, have partially suspended PE order to reassess current alignment plans. Draft and Final Environmental Impact Statements (EIS) will be produced and the financial plan will be refined during PE which is scheduled for completion in 1999.

Evaluation

KCATA indicates that the many of the New Start criteria are not available at this time. All data presented below are for the full 15.2-mile LPA, rather than the Starter Project. (N/A indicates that data are not available for specified measures at this time.)

Mobility Improvements

KCATA estimates that the 15.2-mile route will increase total transit trips (bus and rail) by 8,100 per day. The 5.6 mile starter project will add 4,800 total transportation trips per day. Information is not available on annual travel time savings in terms of hours.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$1.0 million	\$1.0 million
Hours	N/A	N/A

Information is not available on the estimated number of low-income households within a 1/2 mile radius of the project's proposed stations.

Environmental Benefits

Kansas City is a "maintenance" area for ozone and carbon monoxide. The project is expected to have some modest, positive impact on emissions. Information is not available on projected emission reductions that will result from implementation of the Southtown Corridor.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxide (NO _x)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions

Information is not available on savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	N/A	N/A

Values reflect annual BTU reductions

Operating Efficiencies

Information is not available on estimated operating costs per passenger mile.

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

Cost Effectiveness

KCATA provided the following information on cost-effectiveness.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$18.10	\$18.40

Values reflect 2010 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Low-Medium**

The Southtown Corridor includes the highest densities and greatest number of activity centers within the Kansas City metropolitan area, including the Central Business District, the Crown Center and Country Club Plaza. Recent events indicate intensified local interest in encouraging transit-oriented development. KCATA has performed studies of development potential in the corridor, including proposed station sites. The Kansas City, Missouri comprehensive plan, adopted in 1997, recommends light rail as one of several strategies to generate redevelopment and new development in the Southtown Corridor, as well as other portions of the Kansas City area. The comprehensive plan also includes broad policy recommendations aimed at promoting transit-oriented development. At this time, however, the City has not yet created specific and enforceable transit-supportive zoning, incentives or parking.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 20 %

The current financial plan for the full 15.2 mile LPA indicates \$392.00 million (80%) in Section 5309 New Start funds and \$98.00 million (20%) in local funds. KCATA considered several financing scenarios in the Southtown Corridor Major Investment Study, ranging from a 50% to 80% share in Section 5309 New Start funds.

Stability and Reliability of Capital Financing Plan

Rating: **Low-Medium**

The financial feasibility of the Southtown Corridor project depends on the creation of a new non-Federal funding source that will meet capital and operating funding needs. KCATA has been working with the Missouri Legislature and the Missouri Highway and Transportation Department in an attempt to develop a State-supported permanent funding source for transit capital and operating costs.

Stability and Reliability of Operating Financing Plan

Rating: **Low-Medium**

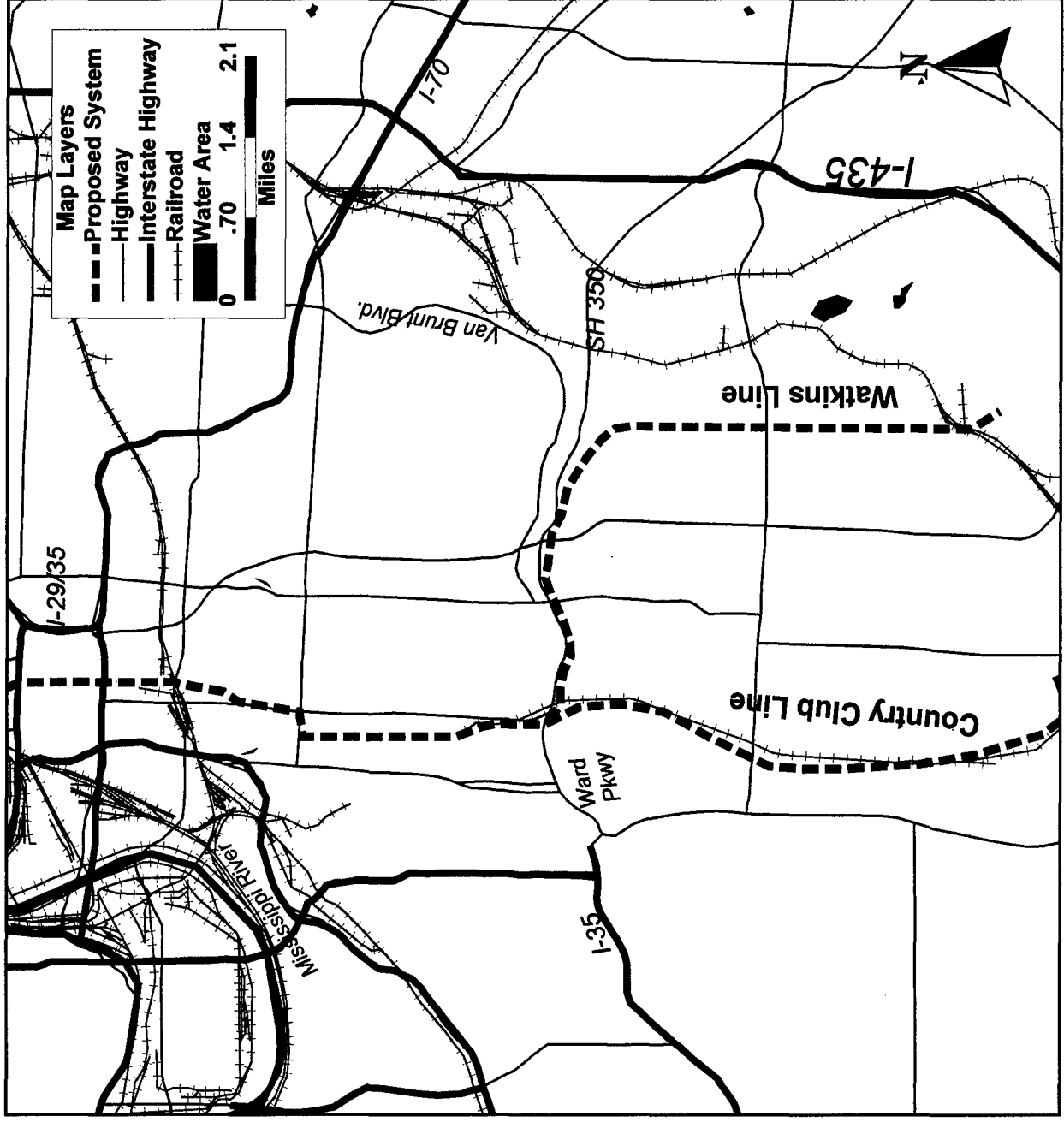
KCATA has experienced a 20 percent farebox recovery ratio and the current operating subsidy is roughly \$31 million per year. One half cent of the general sales tax in the City of Kansas City, Missouri is reserved for transportation and currently represents the largest source of funding assistance to KCATA for the existing bus system. This source generally keeps pace with inflation. Additional operational funding sources not yet identified will be needed.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1997 dollars)
Federal:	
Section 5309 New Start	\$392.00 (\$4.48 million appropriated through FY 1998, but \$0.46 million was rescinded in FY 1995)
State and Local:	\$98.00
TOTAL	\$490.00

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Southtown LRT

Kansas City, MO



Las Vegas Resort Corridor Fixed Guideway

Las Vegas, Nevada
(November 1997)

Description The Regional Transportation Commission (RTC) of Clark County (Las Vegas), Nevada, is the designated Metropolitan Planning Organization (MPO) and regional governmental entity responsible for providing public mass transportation within Clark County. In the Fall 1997, RTC selected a locally preferred alternative (LPA) for the Las Vegas Resort Corridor which includes a combination of fixed guideway transit, significant expansion of the bus fleet, TSM/TDM, and some roadway improvements. The core system includes a dual direction elevated fixed guideway rail system along Las Vegas Boulevard (referred to as The Strip), with a link to downtown Las Vegas, interim maintenance and control facility, and the acquisition of 30 vehicles. The Resort Corridor Project will be completed in two phases, with Phase I consisting of a fixed guideway component known as the Initial Operating Segment (IOS), located in the northernmost portion of the system.

The IOS consists of 5.2 miles of double track, all elevated, automated guideway with 10 stations. A major facility at the northern terminus will include a guideway station, a 28 to 30 bay bus terminal, a 2,000 vehicle park and ride lot, and a maintenance and operating facility. The Phase I/IOS is estimated to cost \$380 million (1996 dollars), and estimated to serve 93,000 daily riders in the year 2015.

The full build-out of the complete project includes up to 18.4 miles of double track, all elevated, automated guideway with 25 stations and two end of the line terminals with park and ride lots, extending to McCarran International Airport, and is estimated to cost between \$2.1 and \$2.3 billion (\$1996).

Summary Description

Proposed Fixed Guideway Rail Transit	Phase 1/Initial Operating Segment (IOS) 5.2 miles in length, 10 stations
Total Capital Cost: Phase 1/IOS \$ 380 million (\$1996)	2015 Ridership Forecasts (Average Weekday) - 93,000 daily on Resort Corridor IOS
Annual Operating Cost: Phase 1/IOS \$ 10.5 million (\$1996)	

Status

RTC completed a Major Investment Study (MIS) for the central employment area of the Las Vegas Valley commonly known as the Resort Corridor. LPA selection. In October 1997, the RTC and the City of Las Vegas formally adopted the locally preferred alternative of the Resort Corridor MIS. In November 1997, the RTC adopted the updated Regional Transportation Plan which includes the Transportation Master Plan elements.

The RTC proposes to begin preliminary engineering and the draft Environmental Impact Statement in January 1998, and to be eligible for a Record of Decision by March 1999. Through FY 1998, Congress has appropriated \$4.98 million in Section 5309 New Start 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 and criteria are presented for the Phase 1/Initial Operating Segment (IOS).

Mobility Improvements

RTC estimates that the Phase 1/IOS would initially carry in excess of 93,000 riders daily, and would result in the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$659.2 million	248.2 million
Hours	73.2 million	27.6 million

Based on 1990 census data, there are an estimated 3,791 low-income households within a 1/2 mile radius of the proposed 10 stations of the IOS.

Environmental Benefits

The Las Vegas Metropolitan Area is an attainment area for ozone and nitrogen oxides; however, it is designated as a "serious" non-attainment area for both carbon monoxide (CO) and particulate matter. RTC estimates that in 2015, the Phase I/IOS would result in the following annual emissions reductions. N/A indicates that data are not available for this measure.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	2,853	754
Nitrogen Oxide (NOx)	380	198
Hydrocarbons (HC)	381	236
Particulate Matter (PM ₁₀)	265	194
Carbon Dioxide (CO ₂)	38,328	87,958

Values reflect annual tons of emissions reductions

RTC estimates that in 2015, Phase I/IOS would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	489,934 million	1,096,406 million

Values reflect annual BTU reductions

Operating Efficiencies

The RTC estimates a decrease in the systemwide operating cost per passenger mile in the year 2015 for the Phase I/IOS compared to the TSM and an increase compared to the No-Build.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.21	\$0.35	\$0.31

Cost Effectiveness

RTC estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$4.60	\$2.40

Values reflect 2015 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium**

The Resort Corridor encompasses the geographic and economic center of the Las Vegas area. The corridor includes the Central Business District (CBD), the "Strip" hotel and resort area, and the McCarran International Airport. Population and employment in the Las Vegas Valley increased by 120 percent between 1980 and 1995, and is projected to double again by the year 2020. The Resort Corridor currently contains 50 percent of the region's employment. High trip generation is produced by the large concentration of resort activities, employment, commercial, and retail uses along the corridor. The areas adjacent to the major resort activities are pedestrian transit friendly. Outside of the integrated resort area, the land use patterns lack zoning regulations and there are no policies specifically to encourage transit-supportive/oriented development. The downtown urban design plan recommends pedestrian-friendly design and mixed, high-intensity use near transit stations. The City of Las Vegas does not have a transit supportive parking policy at this time. RTC will develop station area plans during the preliminary engineering phase of project development.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 55%

The RTC Phase 1/IOS financial plan proposes \$171 million (45%) in Section 5309 New Start funds and \$209 million (55%) in a combination of State, local and private sources.

Stability and Reliability of Capital Financing Plan

Rating: **Medium**

The current financial capacity of the RTC, which operates a 215 bus transit system, appears solid. RTC indicates that a more detailed analysis of specific State, local and private revenue sources will be addressed in the next phase of project development. The Regional Transportation Plan for fiscal years 1998 to 2020 shows a significant surplus at the end of the 20 year planning period. As the MPO for Clark County, the RTC has programming authority regarding the use of these funds. In 1997, the Nevada Legislature passed AB 333, which made the room tax available to support a fixed guideway project. The Resort Corridor Room tax is estimated to generate \$15 million in FY 1998, and is projected to increase substantially. The RTC financial plan references a local 1/4 cent sales tax, which generates over \$44 million for RTC in FY 1998, and is projected to increase substantially. RTC has existing authorization for an additional one-quarter cent sales tax, subject to approval by Clark County voters.

Stability and Reliability of Operating Financing Plan

Rating: **Medium**

The current RTC systemwide farebox recovery ratio is 46 percent (and exceeds 100% on bus routes serving the Strip in the Resort Corridor). Current O&M costs for bus operations are approximately \$52.0 million annually. In recent years, RTC's transit system has experienced significant increases in ridership, increases in productivity, but declining annual cash flow surpluses. The project's financial plan estimates operating and maintenance costs of \$10.5 million for the 5.2 mile Phase 1/IOS, and estimates a 60% farebox recovery ratio (considered reasonable given the high ratios on the current system). RTC proposes that annual operating deficits for the Resort Corridor be funded from one of the existing local revenue sources, including the dedicated sales tax and a hotel room tax. Detailed sources and allocations will be specified in the next phase of project development.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1996 dollars)</u>
Federal:	
Section 5309 New Start	\$171.00 (\$4.98 million appropriated through FY 1998.)
State & Local:	209.00
TOTAL	\$380.00

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

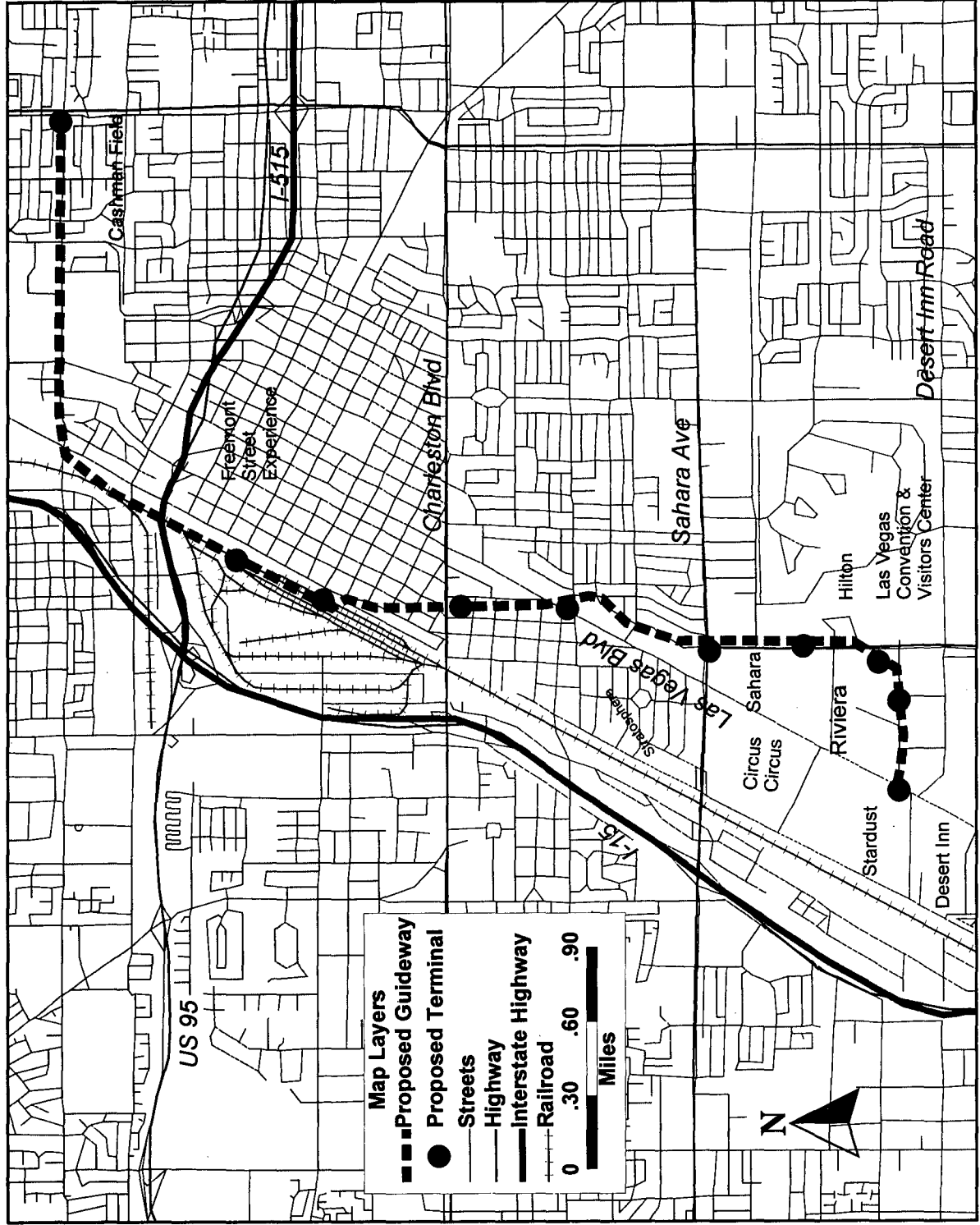
Other Factors

Potential Private Sector Financing: RTC indicates potential private sector financing of a portion of a Resort Corridor system. Several private resorts are proposing to construct and operate "transit grade" segments of a fixed guideway system. An example is an extension of the existing MGM/Bally monorail system to the Las Vegas Hilton Hotel and the Las Vegas Convention Center, where it would connect to the RTC Phase 1/IOS. Recent State Legislation, AB 333, facilitates private entities obtaining franchises from a county or city.

Design-Build-Operate Turnkey: RTC is examining potential design-build-operate turnkey procurement and development for the Resort Corridor. Options are to be addressed in greater detail in the next phase of project development.

Resort Corridor

Las Vegas, NV



Little Rock River Rail Project

Little Rock, Arkansas

(November 1997)

Description

The Central Arkansas Transit Authority (CATA) is the local lead agency for the Little Rock River Rail Project, planned as a downtown circulator system connecting major trip generators. CATA proposes that service be provided by 7 replica streetcars operating on a single track powered by overhead catenary. Phase 1 of the proposed River Rail Project is proposed to include 1.9 miles of streetcar service on one mile of existing freight rail track and on 0.9 miles on existing public street right-of-way. Phase 1, including vehicles and maintenance facility, is estimated to cost \$7.7 million (1997 dollars), and carry 1,000 to 1,200 riders daily. CATA estimates that special events at the Convention Center will add an additional 1,000 to 1,800 riders on event days. Phase 2 could include a proposed 0.4 mile extension along existing right-of-way to the William Jefferson Clinton Presidential Library site. Total project costs, including Phases 1 and 2, are estimated at \$10.5 million (1997 dollars).

CATA estimates that ridership will be generated by downtown employees, local residents visiting the downtown attractions, downtown residents, international and U.S. tourists, and convention traffic. Over \$200 million in new private and public investment is occurring within walking distance of the River Rail Project.

Summary Description

Proposed Vintage Streetcar Service	Phase 1 totals 1.9 miles in length Phase 2 totals 0.4 miles
Total Capital Cost: (Phases 1&2) \$10.5 million (\$1997)	Opening Ridership Forecasts - 1,000 to 1,200 daily riders (Phase 1)
Annual Operating Cost: \$0.5 million (\$1997)	

Status

A feasibility study has been completed. No formal Major Investment Study (MIS) was completed due to the limited scale, the use of existing rail and street right of way, and the low cost. Preliminary Engineering and design is scheduled to begin in March 1998. CATA plans that the first segment be under construction by January 1999, with an operable segment serving the Alltel Arena and the River Market open by the end of 1999.

Through FY 1998, Congress has appropriated \$1.99 million in Section 5309 New Start funds for this project.

Evaluation

The River Rail Project is exempt from the New Start criteria because the Section 5309 share is less than \$25 million. As a result, criteria are not addressed for mobility improvements, environmental benefits, operating efficiencies, and cost effectiveness. Although this project is exempt, CATA has provided information for the assessment of transit supportive land use, local financial commitment, and other factors.

Transit Supportive Existing Land Use and Future Patterns**Overall Rating: Medium**

Existing land uses in the Little Rock and North Little Rock central business districts (CBDs) consist of moderate density commercial, office, retail, and residential. Efforts appear to be in place to redevelop/revitalize these CBDs, through infill and adaptive reuse of older warehouses. To prevent the continuation of population out-migration and decentralization, the long range transportation plan for the area recommends that the metropolitan core be preserved as an economically healthy symbol for the region; that growth be focused where water, sewer, and community facilities are already in place; and that development be encouraged for mixed use neighborhoods that are now or can be served by transit. The City of Little Rock does not have a transit supportive parking policy at this time.

The River Rail project has just completed the planning stages and a preferred alternative only recently selected. Although station area planning has not been initiated, the Little Rock Planning and Development Commission has begun to send development plans to the Transit Authority for review of transit oriented issues. The Commission has been responsive to suggestions for transit friendly improvements.

**Local
Financial
Commitment****Proposed Local Share of Total Project Costs: 20%**

The financing plan for the total River Rail Project, Phases 1 and 2, includes \$8.4 million (80%) of Section 5309 New Start funds and \$2.1 million (20%) in local funds.

Stability and Reliability of Capital Financing Plan**Rating: Medium-High**

The Central Arkansas Transit Authority (CATA) is governed by an Interlocal Agreement, where six local governments (Pulaski County, Little Rock, North Little Rock, Sherwood, Maumelle, and Cammack Village) appoint the governing board and apportion the capital and operating costs among themselves based upon vehicle miles of service. Because the River Rail

Project impacts only three jurisdictions (Little Rock, North Little Rock, and Pulaski County), a three way cost split has been negotiated. The three jurisdictions have all provided letters to the CATA board of directors expressing their commitment, respectively, to provide their share of the capital investment and the operating funds necessary to construct and operate Phase 1 of the River Rail project. However, these letters of commitment speak only to Phase 1 of the River Rail Project and do not address Phase 2.

Stability and Reliability of Operating Financing Plan

Rating: Medium-High

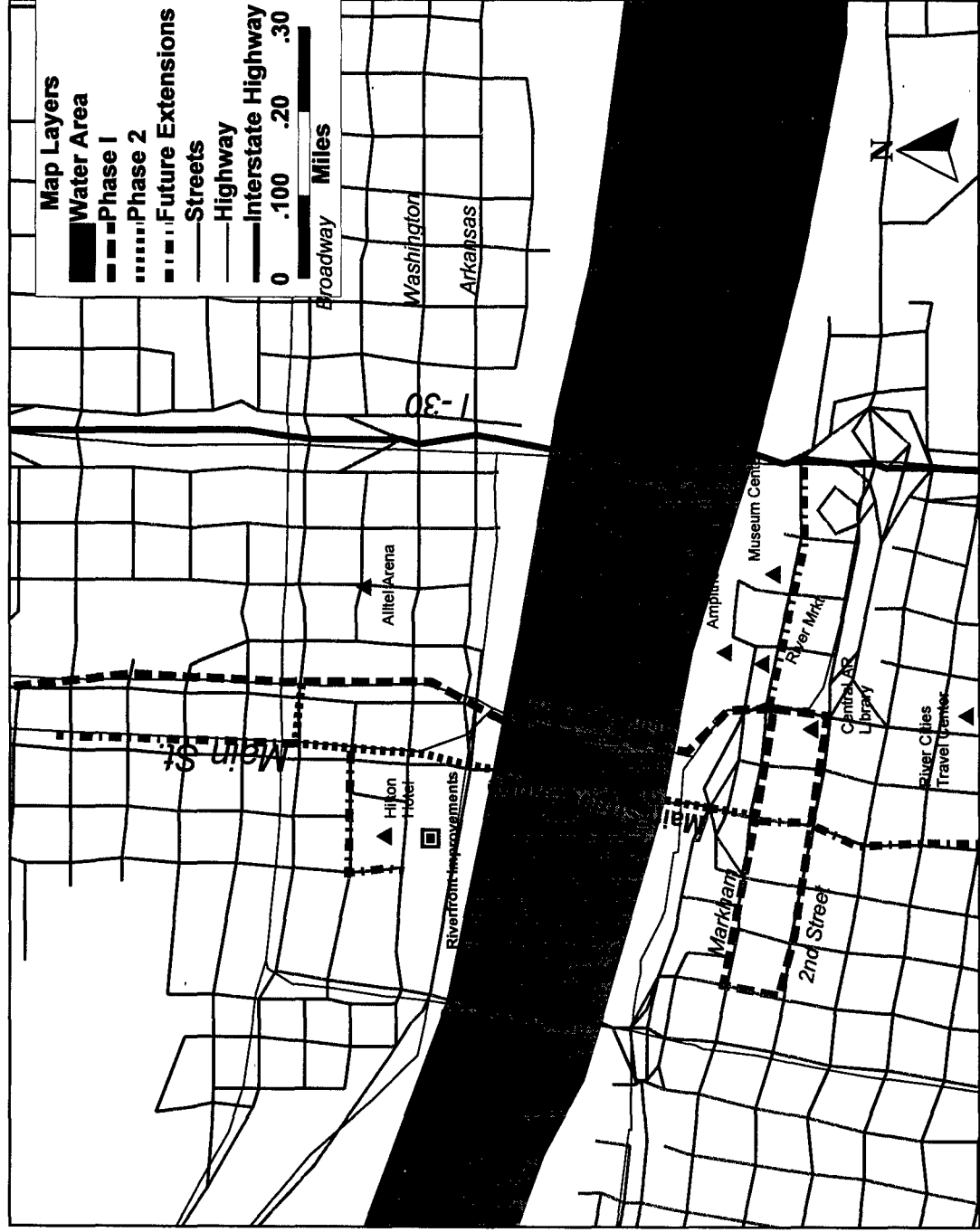
In 1996, total operating expenses for the transit authority equaled \$6.8 million with 65% (\$4.4 million) being funded through local government subsidies. The River Rail Project is estimated to incur annual operating expenses up to \$0.6 million, to be offset by passenger revenues, local operating subsidies, and special event contracts. Each of the three participating jurisdictions (Little Rock, North Little Rock, and Pulaski county) have expressed their written commitment to provide the transit authority with the appropriate share of the local operating subsidy budget. Each commitment is backed by the full faith and credit of three respective jurisdictions.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1997 dollars)
Federal:	
Section 5309 New Start	\$8.40 (\$1.99 million appropriated through FY 1998.)
Local:	2.10
TOTAL	\$10.50 (Phases 1 and 2)

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumption.

River Rail Project

Little Rock, AR



Eastside Corridor Extension

Los Angeles, California
(November 1997)

Description The Los Angeles County Metropolitan Transportation Authority (MTA) is proposing eastern extensions of the Metro Rail Red Line from its current eastern terminus at Union Station. The first 3.7-mile segment, from Union Station to First and Lorena, is covered in the Full Funding Grant Agreement (FFGA) for MOS-3 (see MOS-3 profile). The second segment, from First and Lorena to Atlantic and Whittier Boulevards in East Los Angeles, constitutes the Eastside Corridor Extension covered in this profile. The Eastside Corridor Extension is 3.1 miles in length with three stations, all in subway. The project is estimated to cost \$1,216 million (escalated dollars), as reflected in the Long Range Plan.

Summary Description

Proposed Heavy Rail Extension	3.1 miles in length, 3 stations, all in subway
Total Capital Cost: \$ 1,216.0 million (\$ escalated)	2015 Ridership Forecasts (Average Weekday)
Annual Operating Costs are not reported at this time	- 28,000

Status The preliminary engineering phase of project development was initiated in 1993, and the final Environmental Impact Statement (FEIS) for the entire Eastside project, Union Station to Atlantic and Whittier was completed in September 1994. The project is included in the MPO's financially constrained plan as well as in the FY 93-99 Regional Transportation Improvement Program.

In January 1998, the MTA is scheduled to submit a recovery plan to FTA. On January 14, 1998, the LACMTA Board of Directors voted to suspend for at least six months all work on the Eastside and Mid-City segments.

Congress has not authorized or appropriated any funds for the Eastside Extension beyond the first 3.7 miles, which are included in MOS-3.

Evaluation

The New Starts criteria are not addressed for mobility improvements, environmental benefits, operating efficiencies, and cost effectiveness. However, MTA did provide information, and ratings have been developed, for transit supportive land use and local financial commitment.

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium**

The predominant land use in this part of the Eastside corridor is medium density residential, with scattered areas of high-density and single-family housing. Commercial land use are concentrated along the major arterials. The East LA Community Plan defines the major goals of this area to be the preservation of existing densities, concentration of higher density uses near "transportation", and the provision of low and medium-density housing. Approximately 9000 additional dwelling units could be built throughout East LA under the provisions of this current plan. Station Area Concept Plans were prepared in 1995 for the three stations in this corridor. Identified goals include compatibility with the land uses and context of adjacent neighborhoods and to help create community activity centers. MTA produced these plans to provide direction to the preliminary engineering designs on portal location and orientation and location of station auxiliary facilities, suggest future land uses, development and urban design strategies to optimize integration of transportation and urban/community elements, and recommend steps to reinforce community revitalization opportunities and enhance community identity. However, the local communities do not favor the development of higher-density residential projects in the corridor. The city does not have a transit supportive parking policy in place.

**Local
Financial
Commitment****Proposed Local Share of Total Project Costs: 72%**

LACMTA proposes a 28% Federal share including \$254 million in Section 5309 New Start funds and \$90 million in CMAQ funds. The financial plan includes nearly \$12 million in State funds and over \$860 million in local funds.

Stability and Reliability of Capital Financing Plan**No Rating**

The MTA's overall financial plan and construction program is uncertain pending an acceptable submittal of a recovery plan to FTA. While sales tax revenues provide a large and growing source of transit capital funding, growth projections have been overly optimistic. MTA sales tax projections are to be reduced to 4% and gradually rise to 5% in future years in the next

recovery plan submitted to FTA. This reduction in projected sales tax revenue growth rates has a significant impact on MTA's capacity to fund future rail expansion plans. MTA estimates that the Eastside project will be delayed at least another 3 to 5 years and the projected start date is now 2014. Since this delay will result in the project not being in the next Transportation Reauthorization cycle and given the uncertainty in MTA's overall financial plan, the project was not rated.

Stability and Reliability of Operating Financing Plan

No Rating

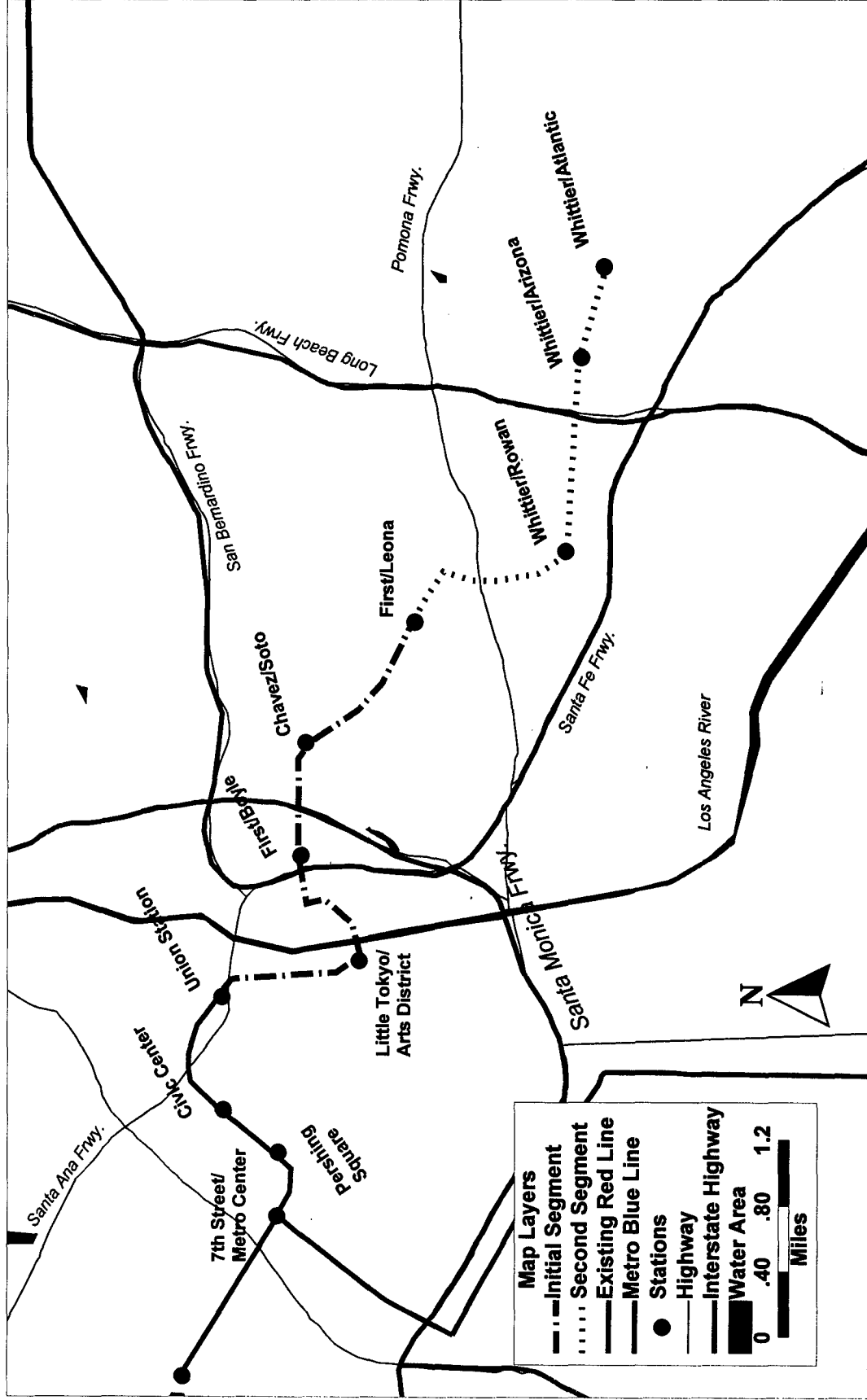
Since this project is temporarily on hold until MTA can reassess its financial capacity and overall planning/construction program, no rating has been assigned at this time.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in escalated dollars)
Federal:	
Section 5309 New Start	\$254.00 (\$0 million appropriated through FY 1998.)
CMAQ Funds	90.00
State:	11.70
Local:	
Sales Tax (A & C)	799.50
LA City Funds	60.80
TOTAL	1,216

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Eastside Corridor Extension

Los Angeles, CA



Medical Center Rail Extension

Memphis, Tennessee
(November 1997)

Description

The Memphis Area Transportation Authority (MATA), in cooperation with the City of Memphis, is proposing to build a 2.5-mile light rail transit extension from its current termini on the western portion of Main Street Mall in the central business district to Cleveland Street on the east (Medical Center). The proposed project would operate on-street in mixed traffic and would connect with the Main Street Trolley. At the eastern terminus, near Cleveland and Claybrook Streets, a transit terminal would be constructed to accommodate riders transferring to and from buses and cars. Ten stops 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 proposed project is viewed 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 project is estimated at \$30.4 million (1995 dollars). MATA estimates that the daily ridership of the proposed project would be 2,100 in the opening year (2001) and would increase to 4,200 by the forecast year 2020.

Summary Description

Proposed LRT Extension	2.5 miles in length, 10 stations
Total Capital Cost: \$ 30.4 million (\$1995)	2020 Ridership Forecasts (Average Weekday)
Annual Operating Cost: \$1.2 million (\$1996)	- 4,200 on Medical Center Extension

Status

The proposed project is included in the City of Memphis' Capital Improvement Program, the Memphis MPO Transportation Improvement Program, and the State Transportation Improvement Program.

A Major Investment Study/Environmental Assessment was completed in May 1997 for the Medical Center Rail Extension. MATA is anticipating receiving a Finding of No Significant Impact on the Environmental Assessment from FTA in early 1998.

Through FY 1998, Congress has appropriated \$5.75 million in Section 5309 funds for the Memphis Regional Rail Plan.

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. It is understood, however, that since the federal share for the proposed project is below \$25 million, the proposed project is exempt from the New Starts Justification criteria. N/A indicates that data were not available and not reported for this measure.

Mobility Improvements

No information on travel time savings is available at this time.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	N/A	N/A
Hours	N/A	N/A

Based on 1990 data, there are an estimated 3,488 low-income households within a 1/2 mile radius of the proposed 10 stations, representing 50% of total households within 1/2 mile of boarding points of the proposed project.

Environmental Benefits

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_x, and VOC.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	15	N/A
Nitrogen Oxide (NO _x)	2	N/A
Volatile Organic Compounds (VOC)	2	N/A
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	N/A	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>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	10,300 million	N/A

Values reflect annual BTU reductions

Operating Efficiencies

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>
System Operating Cost per Passenger Mile (2020)	N/A	N/A	\$1.06

Cost Effectiveness

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

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$2.90	N/A

Values reflect 2020 ridership forecast and 1995 dollars.

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Low-Medium**

Existing development in the corridor is generally centered around the two ends of the proposed project. Downtown, at the western end, contains a mix of densely developed commercial, office, and government land uses, and a new baseball stadium. The eastern end of the corridor contains a high concentration of medical facilities that includes seven hospitals and two colleges and universities. These two clusters of development provide strong activity centers at both the western and eastern portions of the proposed project. However, development towards the center of the proposed corridor is made up primarily of vacant and underutilized commercial and industrial structures. There are not current plans to reduce the parking supply in these development areas. Employment in the downtown area is expected to grow from 71,380 in 1995 to 87,919 in 2020 (a 23% increase). Overall, population within the proposed corridor is expected to grow 76% during the same

period. The proposed corridor has a large employment base of medical, government, office and other related uses of relatively high density. While the Medical Center is a major employment center, growth in medical center employment is expected to be low. The Memphis Regional Transit Plan identified the stations in three regional corridors that have market potential for new development. The identified stations, however, do not lie along the Medical Center Rail Extension.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 20 %

MATA proposes a 80% Federal share of \$24.3 million in Section 5309 New Start funds. The financial plan includes \$3.0 million in State funds (10%) and \$3.0 million in local funds (10%).

Stability and Reliability of Capital Financing Plan

Rating: Medium-High

The capital costs for the proposed project, at the local level, are funded through General Obligation bonds supported by the City of Memphis. The proposed non-federal capital funding sources are the Tennessee Department of Transportation and the City of Memphis. Both are considered stable and reliable. The Medical Center Rail Extension is included in the City Capital Improvement Program, the MPO Transportation Improvement Program, and the State Transportation Improvement Program.

Stability and Reliability of Operating Financing Plan

Rating: Medium

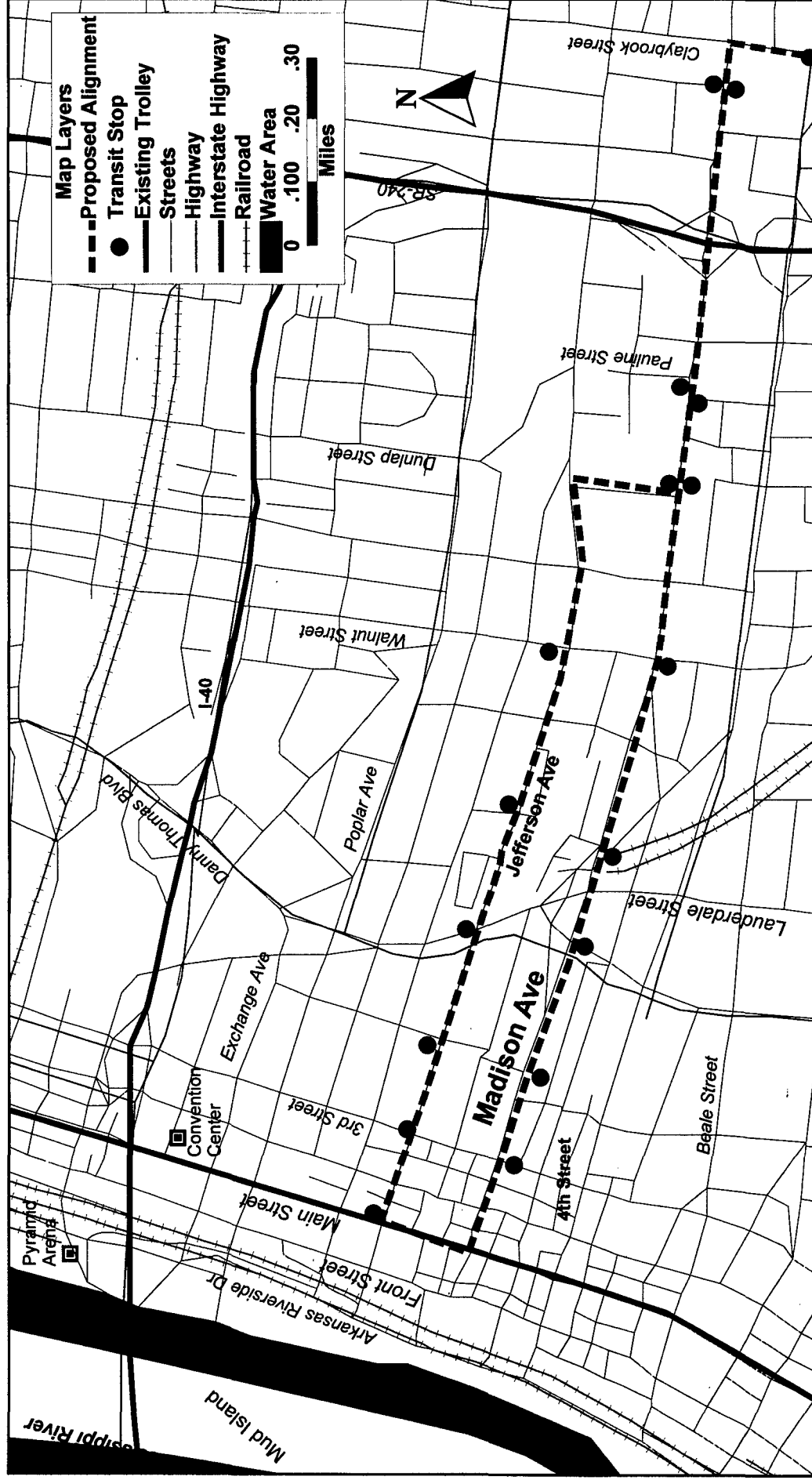
Operating costs for the proposed project will be covered through passenger fares, local, state and federal sources. MATA projects that there will not be any new funding sources to cover increased operating costs for the proposed project due to an anticipated savings in bus miles as a result of a reduction in bus service. These savings are expected to offset the cost of operating the Medical Center Rail Extension.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1995 dollars)</u>
Federal:	
Section 5309 New Start	\$24.30 (\$5.75 million appropriated to Memphis Regional Rail Plan through FY 1998.)
State:	3.04
Local:	3.04
TOTAL	\$30.38

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Medical Center Rail Extension

Memphis, TN



East-West Corridor

Miami, Florida
(November 1997)

Description

The Florida Department of Transportation (FDOT) is proposing a locally preferred alternative (LPA) in the State Route (SR 836) East-West corridor that includes a set of multimodal improvements that will link the suburban area southwest of Florida International University (FIU), to Miami International Airport (MIA), downtown Miami, and the Port of Miami seaport. The LPA includes an 11.2-mile minimum-operable-segment of a heavy rail transit alignment that runs from the Palmetto Expressway (SR 836) to the Port of Miami. There is an additional 0.7-mile branch from MIA to the Miami Intermodal Center (MIC). The heavy rail line includes 8.2 miles of aerial guideway and 3.6 miles of bored tunnel with ten stations (six aerial and four underground). The LPA includes two buffer-separated HOV lanes, one in each direction, in the median of SR 836 from NW 107th Avenue to the SR 836/SR112 Interconnector/(MIC).

Capital costs estimates for the LPA (transit and roadway improvements) total \$1.58 billion (1995 dollars). The rail portion of the project is estimated to cost \$1.48 billion (1995 dollars) and \$2.02 billion in escalated dollars. The new rail line is expected to carry 27,300 daily passengers on opening day and 31,400 average weekday boardings by the year 2020. With the airport-seaport projected ridership, 74,800 passengers per weekend will be carried in addition to the average weekday boardings. This will add 4.3 million annual riders without the Airport-Seaport and 5.8 million annual riders to the system with Airport-Seaport service.

Summary Description

Proposed: Heavy Rail Line	11.9 miles in length, 10 stations
Total Capital Cost: (Rail portion) \$ 2.02 billion (\$ escalated)	2020 Ridership Forecasts (Average Weekday) - 31,400 on East-West line
Annual Operating Cost: 25.8 Million (\$1995)	- 13,300 new riders

Status

Preliminary Engineering (PE) and the Final Environmental Impact Statement (FEIS) are being completed with FHWA participating as the lead Federal Agency. FTA, the Federal Aviation Administration, the Federal Railroad Administration, the Maritime Administration, and the Coast Guard are cooperating agencies pursuant to a 1993 Memorandum of Understanding. In October 1996, FDOT initiated PE and the FEIS. The FEIS is currently being finalized for submission for sign-off by the Federal agencies.

Through FY 1998, Congress has appropriated \$6.47 million in Section 5309 New Start funds for this project.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. FDOT did not report information for the TSM alternative as it is the same as the No-Build alternative. N/A indicates that data are not available for this measure.

Mobility Improvements

FDOT estimates that the East-West corridor project will result in an increase of 13,000 daily transit trips. FDOT estimates the following annual travel time savings for the forecast year 2020.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 98.0 million	N/A
Hours	10.1 million	N/A

Based on 1990 census data, there are an estimated 849 low-income households within a 1/2 mile radius of the proposed 10 stations. (This estimate does not include the two Port of Miami stations and the MIA Intermediate Station).

Environmental Benefits

The southeast Florida area is an attainment area for carbon monoxide and a maintenance area for ozone. FDOT estimates that in the year 2020, the LRT component of the LPA would result in emissions reductions for CO and HC, and increases for NOx and PM10.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	18,231	N/A
Nitrogen Oxide (NOx)	(141)	N/A
Hydrocarbons	1,067	N/A
Particulate Matter (PM ₁₀)	(63)	N/A
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions. Values in () parenthesis reflect increases in emissions.

Information on regional energy consumption (measured in British Thermal Units -BTU) is not available at this time.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	N/A	N/A

Values reflect annual BTU reductions

Operating Efficiencies

FDOT estimates a slight increase in the system-wide operating cost per passenger mile in the year 2020 for the LRT component compared to the No-Build alternative.

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

Cost Effectiveness

FDOT estimates a cost effectiveness index of nearly \$20 for the New Start compared to the No-Build. (An index of \$18 is projected when including the Airport-Seaport service)

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$20.25	N/A

Values reflect 2020 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium/High**

The project corridor has potential high trip generators and has the potential to provide a connection between the MIA and the Tri-County Commuter Rail service, with the existing Metrorail and Metromover service, and with the cruise ship terminals at the Port of Miami. State, regional and local policies call for increased densities and land use mix and include an Urban Development Boundary (UDB). Corridor densities are expected to increase through infill development at existing zoned densities. The Station Area Aesthetics, Design and Development (SAAD&D) Program includes a community-oriented planning process to develop area plans and design guidelines. Local ordinances provide for incentives for joint development for all land owned and controlled by the rapid transit system in the Rapid Transit

Zone. Dade County has jurisdiction over land development within the Rapid Transit Zone even where land falls within the boundary of a municipality. The county has endorsed the development of a parking policy to address parking management, pricing, and coordination between jurisdictions.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 60 %

FDOT's financial plan assumes \$808 million (40%) of Section 5309 New Start funds. Local funding sources total \$1,214 million (60%), including revenue bonds supported by dedicated tolls, funding from the Port, and funds from transit joint development efforts.

Stability and Reliability of Capital Financing Plan

Rating: Low

The Metro-Dade Long Range Transportation Plan (LRTP) includes \$788.7 million (39%) "set-aside" for the East-West project from local, state and non-discretionary Federal funds "historically available to Dade County". The LRTP does not specify the amounts expected from each source. \$249 million (12%) of local funds, including those from toll revenues, the Port of Miami, joint development, and cross-border leasing remain unrealized, uncommitted, or have yet to achieve political support. An additional \$177 million (8%) in local funding sources have yet to be identified. The capital plan does not indicate funds for contingency costs.

Stability and Reliability of Operating Financing Plan

Rating: Low

FDOT/MDTA propose funding operations for the base service through a \$20 round-trip service between MIA and the Port of Miami. The operating plan assumes 54% of cruise ship passengers will utilize the East-West rail connection, generating a farebox recovery ratio of 214% for this Airport/Seaport service. The base East-West service recovery ratio is assumed to be 40%. Surpluses from this premium MIA to Port service are anticipated to fully cover operating deficits on the base East-West line. No other funding sources were identified to cover possible shortfalls.

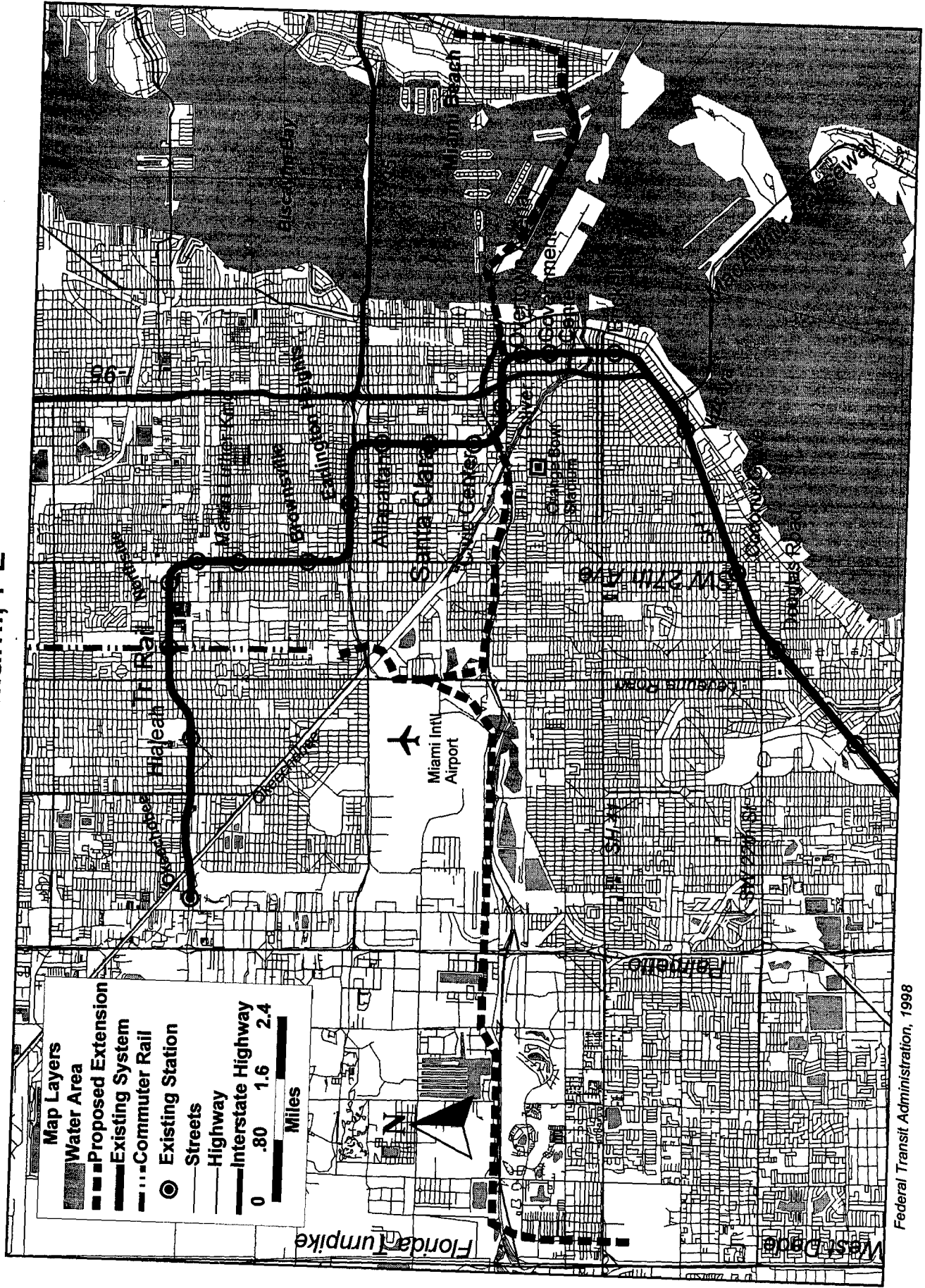
Locally Proposed Financing Plan		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	(reported in escalated dollars)
Federal:		
Section 5309 New Start	\$808.00	(\$6.47 million appropriated through FY 1998.)
State, Local and Other	1,214.00	
TOTAL	\$2,022.00	

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Other Factors

Station Area Planning: Florida DOT is proceeding with a program of Station Area Aesthetics Design and Development (SAADD) for the proposed rail stations for the East-West line.

East - West Corridor Miami, FL



North 27th Avenue Corridor

Miami, Florida
(November 1997)

Description The Metro-Dade Transit Agency (MDTA) is proposing a locally-preferred set of transit options that will link major urban communities of Broward County and the neighborhoods of northwest Dade County to Miami's existing Metrorail facility. The MPO selected a locally-preferred alternative, identifying a priority transit investment along a 9.5-mile section of NW 27th Avenue between an existing Dr. Martin Luther King Jr. Metrorail station and the Broward County line. Park-n-ride lots would be provided to intercept commuters in the corridor. The proposed New Start along the Northwest 27th Avenue corridor would provide the connection into the Miami CBD as well as provide service to Miami Dade Community College - North Campus and Pro Player Stadium.

Transit alternatives under consideration along the NW 27th Avenue corridor include:

- a one-lane reversible busway in the median of the road;
- a two-lane busway on the west side of the road; and,
- an elevated Metrorail Extension.

Preliminary capital cost estimates for three various options range from a low of \$58 million (1997 dollars) for the one-lane busway to a high of \$473 million (1997 dollars) for the Metrorail Extension. MDTA estimates an additional two million annual transit trips generated by the Metrorail Extension compared to either of the busway options.

Summary Description

**Proposed: Options ranging from
Busway to Metrorail Extension
(Heavy Rail)**

**Total Capital Cost: (Heavy Rail)
\$473 million (\$1997)**

**Annual Operating Cost:
(Heavy Rail)
\$ 7.8 million (\$1997)**

**Metrorail Extension totals 9.5 miles,
including 7 stations (Heavy Rail)**

**2015 Ridership Forecasts
(Average Weekday)**
- 11,250 daily linked transit trips
- 14,350 total daily boardings (heavy rail)

Status

The Metro-Dade Transit Agency completed a Major Investment Study (MIS) for the North Corridor in October 1995. The MPO Board selected the NW 27th Avenue alignment as the locally preferred alternative (LPA) in November 1995 and added the project to its Cost Feasible Year 2015 Long Range Transportation Plan. An Option 1 Alternative Analysis and the Draft Environmental Impact Statement (DEIS), including consideration of two busway alternatives and one heavy rail alternative, have been completed with FTA participating as the lead Federal Agency. The Final Environmental Impact Statement (FEIS) phase is currently scheduled to begin in May 1998.

Through FY 1998, Congress has appropriated \$8.94 million in Section 5309 New Start funds 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 reported for the Metrorail extension alternative, representing the highest cost scenario.

Mobility Improvements

MDTA estimates the following increases in daily transit trips for the following alternatives: TSM (4,600); Median Busway (4,200); West Side Busway (5,300); Metrorail Extension (11,200). MDTA estimates the following annual travel time savings for the Metrorail Extension alternative compared to the No-Build and TSM alternatives.

	<u>New Start vs. No-Build</u> (Metrorail Extension)	<u>New Start vs. TSM</u> (Metrorail Extension)
Annual Travel Time Savings		
Dollars	\$9.2 million	\$6.2 million
Hours	0.8 million	0.8 million

Based on 1990 census data, there are an estimated 1,383 low-income households within a 1/2 mile radius of the proposed seven stations for the Metrorail Extension.

Environmental Benefits

The southeast Florida area is an attainment area for carbon monoxide and a maintenance area for ozone.

MDTA estimates that in 2015, the Metrorail Extension alternative will result in the following impacts on emissions.

	<u>New Start vs. No-Build</u> Metrorail extension	<u>New Start vs. TSM</u> Metrorail extension
Carbon Monoxide (CO)	689	861
Nitrogen Oxide (NOx)	61	82
Hydrocarbons	46	59
Particulate Matter (PM ₁₀)	78	97
Carbon Dioxide (CO ₂)	17,450	24,227

Values reflect annual tons of emissions reductions

MDTA estimates that in the year 2015, the Metrorail Extension alternative will result in the following impacts on regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	98,975 million	98,875 millions

Values reflect annual BTU reductions

Operating Efficiencies

MDTA estimates a decrease in the systemwide operating cost per passenger mile in the year 2015 for the Metrorail Extension alternative, compared to the No-Build and TSM.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u> Metrorail Extension
System Operating Cost per Passenger Mile (2015)	\$0.41	\$0.41	\$0.39

Cost Effectiveness

MDTA estimates the following cost effectiveness indices for the Metrorail Extension alternative compared to the No-Build and the TSM alternatives.

	<u>New Start vs. No-Build</u> Metrorail Extension	<u>New Start vs. TSM</u> Metrorail Extension
Incremental Cost per Incremental Passenger	\$13.30	\$17.90

Values reflect 2015 ridership forecasts, 1995 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Low/Medium**

Land use along the project corridor consists mainly of strip commercial areas and low/medium residential uses with some potential high-trip generators. The Metro-Dade County Comprehensive Plan (CDMP) calls for greater land use mix and density and managed growth. An Urban Development Boundary (UDB) constrains extension of urban services and facilities. The CDMP includes two metropolitan-level activity centers within the project corridor. Development within one-half mile of a transit station is required to have concentrated, mixed land use. State and regional policies promote infill development with implementation dependent on local jurisdictions. A 1978 Transit Development Ordinance established the Rapid Transit Zone which applies incentives for joint development for all land owned and controlled by the rapid transit system and determines development policy for land close to the transit system and other fixed guideway transit improvements. Currently, there is no county-wide parking policy for Dade County. However, a recent study proposes a schedule for development of a coordinated parking policy. In addition, station area plans for the NW 27th Avenue Corridor have been developed. Although countywide policies are generally well developed, local area planning within the corridor appears limited.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 30%

The financial plan is presented for the Metrorail Extension alternative, reflecting the highest cost scenario. MDTA proposed funding for the Metrorail Extension alternative includes \$331 million in Section 5309 New Start funds, \$71 million (15%) from State sources, and \$71 million (15%) from local sources.

Stability and Reliability of Capital Financing Plan

Rating: **Low**

MDTA estimates the local share of the capital cost for the TSM and Median Busway Alternatives could be funded from existing sources (total project costs up to \$58 million in 1997 dollars). MDTA has yet to secure firm funding commitments for either the State or local funding for the North Corridor project, particularly the Metrorail Extension alternative. Possible non-federal funding sources include a Local Options Gas Tax (LOGT), estimated to potentially provide \$15 million (on a pay-as-you-go basis) and \$30 million (via revenue bonds). A potential State funding source identified has been through Supplemental Appropriations provisions of Florida's Public Transit Block Grant Program. MDTA currently receives its full allocation from this source, and intends to seek legislative action to raise the Block

Grant spending cap and seek funding for the North Corridor from this source. A financial assessment indicates that the MDTA has not secured funding commitments from the state's Public Transit Block Grant Program. MDTA is also proposing that the County fund a portion of the local share through general obligation bonds supported by existing County revenues.

Stability and Reliability of Operating Financing Plan

Rating: **Low**

MDTA has not identified specific funding sources to cover the expected \$4.6 million annual operating deficit for the North Corridor. MDTA suggests that Dade County has historically provided sufficient operating funds as required to operate new transit investments.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1997 dollars)</u>
Federal:	
Section 5309 New Start	\$331.00 (\$8.94 million appropriated through FY 1998)
State:	71.00
Local:	71.00
TOTAL	\$473.00 (Metrorail Extension alternative)

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions

Map Layers

- Proposed Extension
- Existing System
- Commuter Rail
- Existing Station
- Streets
- Highway
- Interstate Highway
- Water Area

Miles

0 .70 1.4 2.1

Map Labels:

- North 27th Ave
- Palmetto Expressway
- Opa - Locka Airport
- Gratigny Pkwy
- NW 57th Ave
- NW 75th Street
- Gladesville
- Hialeah
- Metrorail Station
- Northside
- Martin Luther King
- Biscayne Bay
- I-95
- I-595
- I-195

Federal Transit Administration, 1998

Long Island Rail Road Access to Manhattan's East Side

New York, New York

(November 1997)

Description The Long Island Rail Road East Side Access (ESA) "build alternative" is proposed to enable the commuter rail lines of the Long Island Rail Road (LIRR) - the nation's largest commuter railroad - to travel between suburban Long Island and Queens and a new passenger terminal within Grand Central Terminal in east Midtown Manhattan. The Metropolitan Transportation Authority (MTA) is the lead agency for this project.

The East Side Access connection will be achieved by constructing a 4,600-foot tunnel from the LIRR Main Line in Sunnyside, Queens to the existing tunnel under the East River at 63rd Street. LIRR trains will use the lower level of this bi-level structure. A second 5,000-foot tunnel will carry LIRR trains from the 63rd Street Tunnel under Park Avenue and into a separate and distinct LIRR terminal in the western portion of the lower level of Grand Central Terminal. A new passenger station in Sunnyside Yard, Queens will also be constructed to provide access to the growing Long Island City business district.

Overall, more than 117,000 daily customers, generating over 234,000 daily trips, will benefit directly from the LIRR ESA project by the year 2020. These daily trips include up to 171,800 trips by passengers who will use the new LIRR Grand Central Terminal on a daily basis; 5,900 daily trips to the proposed Sunnyside Yard Station; and 56,200 trips by Penn Station-bound LIRR passengers who will no longer have to travel in overcrowded train conditions during the morning and evening peak hours.

Total capital costs are projected to be approximately \$3.4 billion (1997 dollars). This sum includes \$2.6 billion for construction and right-of-way and \$0.8 billion for rolling stock. Federal and local funding shares have not been determined. Construction is scheduled to begin in 2000 and to be completed in 2010.

Summary Description

**Proposed Commuter Rail extension
from Queens to east Manhattan**

**Total Capital Cost:
\$ 3.4 billion (\$1997)**

Status A Major Investment Study (MIS) is scheduled for completion in the first quarter of 1998. Subsequent preliminary engineering and preparation of the Draft Environmental Impact Statement (DEIS) is anticipated to take 12 to 18 months to complete. MTA has designated \$42 million for the LIRR ESA preliminary engineering and DEIS.

Through FY 1998, Congress has appropriated \$19.94 million in Section 5309 New Start 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 information is not available for specified measures.

Mobility Improvements

MTA provided the following information on annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$69.6 million	\$54.1 million
Hours	5.3 million	4.0 million

Based on 1990 census data, there are an estimated 3,700 low-income households within a 1/2 mile radius of Grand Central Terminal. (MTA estimates that there are 70,000 low-income households within a 1/2 mile radius of the existing LIRR stations.)

Environmental Benefits

MTA provided the following information on emissions reductions savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	720	563
Nitrogen Oxide (NOx)	124	97
Volatile Organic Compounds (VOC)	76	59
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions

MTA estimates that the LIRR ESA would result in the following savings in regional energy consumption (measured in British Thermal Units (BTU)).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	152,403 million	48,062 million

Values reflect annual BTU reductions

Operating Efficiencies

MTA estimates the following systemwide operating costs per passenger mile.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2020)	\$0.238	\$0.239	\$0.257

Cost Effectiveness

MTA provided the following information on cost effectiveness. Also see note below.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$47.10	\$44.80

Values reflect 2020 ridership forecast and 1997 dollars

NOTE: In addition to the cost effectiveness indices for incremental cost per incremental passenger listed above, MTA provided an alternative cost effectiveness measure of incremental cost per *benefitting* passenger, reporting \$5.20 for the New Start vs. No-Build, and \$4.50 for the New Start vs. TSM. MTA states that, unlike traditional new start projects, which primarily serve new transit customer bases, the East Side Access project is intended to benefit a large base of existing transit customers, as well as to attract new transit riders.

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: No rating is assigned to the project.

Information related to the assessment of transit-supportive land use was not available in time for inclusion in this profile. As a result, no rating has been assigned by FTA.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: Not reported for project. No financing plan identifying specific funding sources for the LIRR ESA has been reported in the DEIS nor submitted to FTA. A review of the MTA \$12 billion 1995-1999 Capital Program Plan, which includes the LIRR ESA project, reveals that the MTA plans on self-funding 72% of the plan: 43% through bond sales; 14% through pay-as-you-go capital, asset sales and investment income; 12% through local and state funds; and 3% from other sources. MTA proposes that Federal funds provide 28% of the 1995-1999 Capital Plan.

Stability and Reliability of Capital Financing Plan

Rating: No rating is assigned to the project.

No financing plan identifying specific funding sources for the LIRR ESA has been reported in the DEIS nor submitted to FTA. As a result, no rating has been assigned to the project by FTA. MTA's current 1995-1999 capital program totals \$12 billion, an average annual investment of \$2.4 billion. On an annual basis, the capital cost of the LIRR ESA project represents 10% of this rate of expenditure. The MTA possesses ability to self-fund 72% of its 1995-1999 Capital Plan. While the MTA currently is able to meet its capital needs through bonding, the MTA has not identified a plan to cover construction in the case of a significant decrease in its bonding authority.

Stability and Reliability of Operating Financing Plan

Rating: Medium-High

The overall operating financial condition of the MTA appears to be strong. Fares and other revenues cover 53% of MTA's operating expenses and tolls cover an additional 15%. The LIRR's passenger fares cover 44% of expenses. The LIRR ESA is estimated to increase annual operating and maintenance costs by \$98.5 million (\$1997). MTA did not submit information on contingency plans to cover unanticipated cost overruns, ridership decreases, or unavailability of proposed funding sources.

Potential operating funding sources appear to be stable and reliable. The MTA identified potential sources of local funds to include: bonding; LIRR fare revenue; MTA bridge and tunnel tolls; investment income; Metropolitan Mass Transportation Operating Assistance (sales tax, petroleum business tax); other taxes and state grants. The MTA has stated that local funding decisions will be a collaborative effort among the MTA board, New York State, New York City and the suburban counties.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1997 dollars)</u>
Federal:	N/A
State:	N/A
Local:	N/A
TOTAL \$3,400.0	

NOTE: Table includes Not Available (N/A) for proposed source of funds since the exact mix of Federal and State funds is to be determined as the financial plan is finalized.

Other Factors

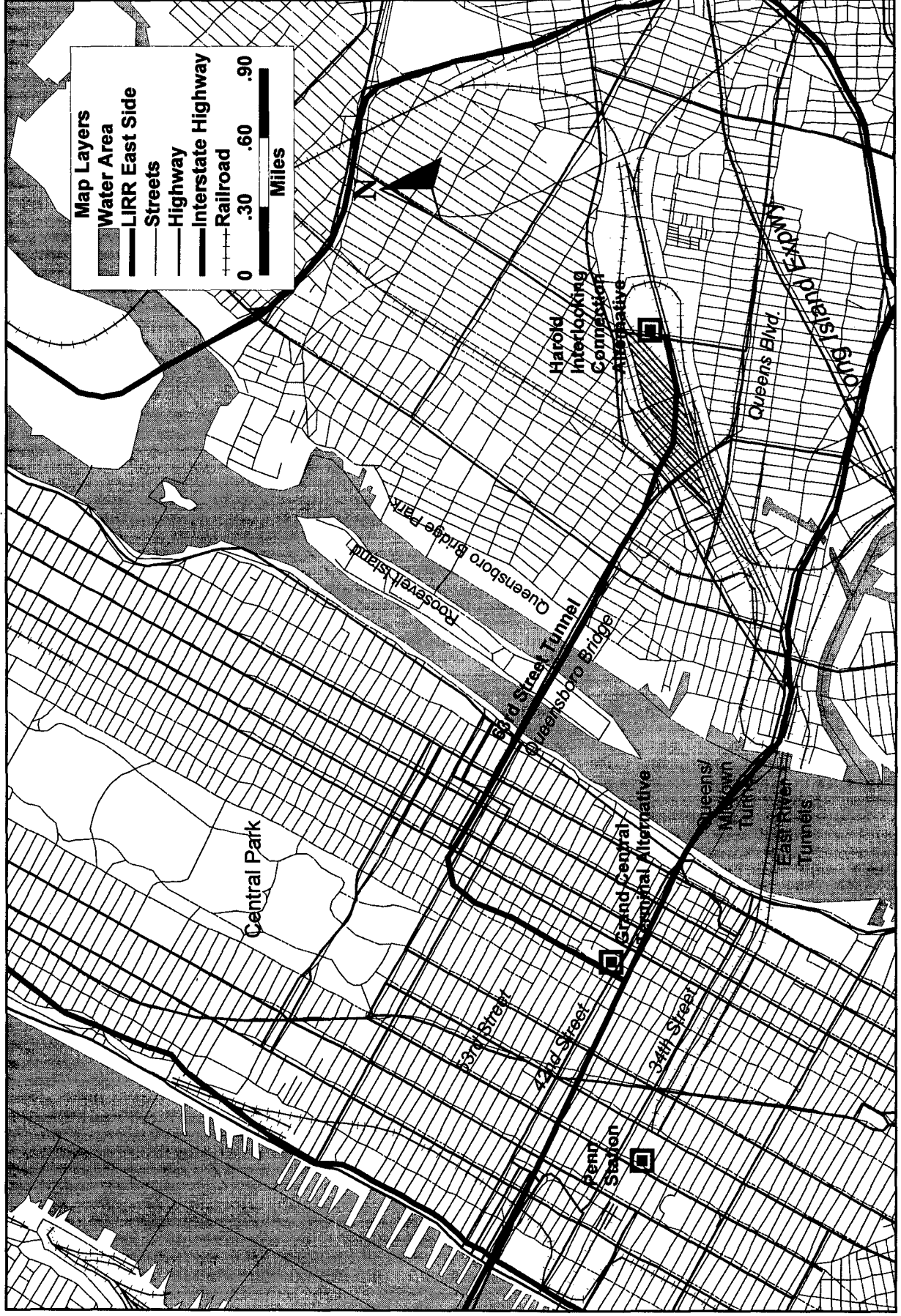
LIRR ESA and Other Projects: The LIRR ESA project is directly linked to the following projects already under development or planned for implementation before or during the ESA implementation: John F. Kennedy International Airport Access; Restoration of Grand Central Terminal; and Conversion of the Farley Post Office to Amtrak Station. In addition, the LIRR ESA will be the second of two major transportation initiatives to use the Federally-funded 63rd Street Tunnel under the East River. Construction is already underway on the other initiative, additional subway service between Queens and Manhattan which will utilize the upper level of the 63rd Street tunnel by the year 2001.

Improved LIRR Service to Penn Station: Currently the LIRR carries 77% of the passengers (on 36 trains per hour) utilizing Penn Station, while it is allotted only 42% of the track and platform slots. With the implementation of LIRR's PENN 42 Project, the LIRR will be able to increase service to a maximum of 42 trains per hour, although even this increase will be inadequate to meet projected future demands at that location.

Convenience and Comfort Goals: Today 47,000 or 53% of existing LIRR a.m. peak period customers, must "back-track" from Penn Station to their final destinations in east Manhattan. The ESA will allow these LIRR customers to arrive within walking distance of their final destination, without need to transfer to a bus or subway. Over 17,000 a.m. and p.m. peak hour "standees" will be eliminated daily on service west of Jamaica by 2020.

LIRR East Side Access

New York, NY



Norfolk-Virginia Beach Corridor

Norfolk, Virginia
(November 1997)

Description The Tidewater Transportation District Commission (TTDC) is planning an 18.25-mile Light Rail Transit (LRT) line from the Oceanfront area in Virginia Beach to Downtown Norfolk. The proposed LRT alignment generally follows the Norfolk-Southern right-of-way. TTDC estimates that the LRT will cost \$376.5 million (1996 dollars) to construct, and will carry 33,000 to 39,000 daily riders in the year 2010. The Norfolk-Virginia Beach Corridor has been and continues to be an area of significant growth in the Hampton Roads region. One hundred thousand people commute into the City of Norfolk and 30,000 into Virginia Beach every day from outside those communities. Currently, Virginia Beach Boulevard and Route 44/I-264 are at, or over capacity, at many locations. Traffic is forecasted to grow by another 87% on Route 44 by the year 2015. Both of these roadways have been expanded to the limits of the existing, available right-of-way. In addition to capacity concerns, there are other important issues within the corridor, such as potential economic development opportunities and increased mobility for the residents of Hampton Roads.

Summary Description

Proposed Light Rail	18.25 miles in length
Total Capital Cost: \$ 376.5 million (\$1996)	2015 Ridership Forecasts (Average Weekday) - 32,800-39,000 daily
Annual Operating Cost: \$ 11.5 million (\$1996)	

Status The Tidewater Transportation District Commission (TTDC) completed a Major Investment Study (MIS) to evaluate transit/transportation improvements in the 30-mile corridor extending from Virginia Beach to downtown Norfolk and the Norfolk Naval Base. TTDC selected the Light Rail Transit Alternative for the 18.25 mile segment from Virginia to Downtown Norfolk as the locally preferred alternative (LPA) which was endorsed by the Metropolitan Planning Organization on January 15, 1997. Development of the segment connecting to the Norfolk Naval Base will be considered in a later phase.

Approval from the Federal Transit Administration to enter Preliminary Engineering/Environmental Impact Statement (PE/EIS) was received in April 1997. TTDC anticipates the PE/EIS will be completed in March 1998.

Through FY 1998, Congress has appropriated \$1.99 million in Section 5309 New Start funds to 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 are not available for this specific measure.

Mobility Improvements

TTDC estimates the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$1.8 million	\$0.9 million
Hours	0.1 million	0.1 million

Based on the proposed station locations for the project, there are an estimated 1,871 low-income households within a 1/2 mile radius of the proposed stations.

Environmental Benefits

Hampton Roads has been redesignated as an attainment area and as a result, is currently in the maintenance period for both VOC and NO_x. Information on annual emissions reductions is not available.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxide (NO _x)	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions

Energy Consumption

Information on regional energy consumption is not available.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	N/A	N/A

Values reflect annual BTU reductions

Operating Efficiencies

TTDC estimates a decrease in the systemwide operating costs per passenger mile in the year 2015 compared to the No-Build and TSM.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.52	\$0.48	\$0.38

Cost Effectiveness

Information on the cost effectiveness index is not available.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	NA	NA

Values reflect 2015 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Low

The proposed alignment passes through a diversity of land uses, including high density central business districts in Norfolk and Virginia Beach, low-density strip mall development, and low-density suburban residential. Both Norfolk and Virginia Beach are taking action to bring about opportunities for more compact, transit-friendly development in the immediate vicinity of proposed LRT stations. In downtown Norfolk, two significant redevelopment projects are already under construction directly adjacent to proposed LRT stations. One is a major downtown retail center and the other is a new community college campus.

The City of Virginia Beach actively promotes the redevelopment of developed areas while also protecting agricultural land. The city has established a "Green Line" or growth boundary and has started a 30-year, \$87 million program to purchase development rights outside the boundary. By focusing development in the northern half of the city, officials hope to significantly

reduce the cost of roads, sewer, water and other services. The program will also encourage more compact development, leading to higher transit ridership.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 58%

The financing plan includes \$131.8 million (35%) in Section 5309 New Start funds, \$26.5 million (7%) in Federal flexible funds, \$109.1 million (29%) in State funds, and \$109.1 million (29%) in local funds.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

TTDC's preliminary capital financing plan indicates 29% (\$109 million) in State funds to be provided through transit capital assistance funds, Transportation Trust Funds, or a potential bonding strategy. An additional 29% (\$109 million) in local funds would be provided from a proposed local tax revenue source consisting of either a motor fuels tax of \$2.40 cents per gallon for 20 years, or a general retail tax of 0.40% for four years, or a combination of the two local tax options.

A detailed cash-flow analysis of the sources and uses of agency (or project) capital and operating funds, or a listing of other significant capital projects, was not provided. TTDC's present capital position appears to be healthy. Capital cost estimates are realistic given the project's size and design. However, the financial plan does not include inflation assumptions.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

TTDC requires \$10 to \$11 million in additional funds to cover operation of the LRT system. The agency proposes funding this additional operational expense using proceeds from either the motor fuels tax or retail sales tax. Insufficient information is provided to determine the effectiveness of these proposed sources in covering potential cost overruns. However, little detailed information is available on the cash flows or underlying assumptions used to develop the financial plan, or cover cost overruns.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1996 Dollars)</u>
Federal:	
Section 5309 New Start	\$131.80 (\$1.99 million appropriated through FY 1998.)
STP	\$16.60
CMAQ	\$9.90
State:	\$109.10
Local:	\$109.10
TOTAL	\$376.50

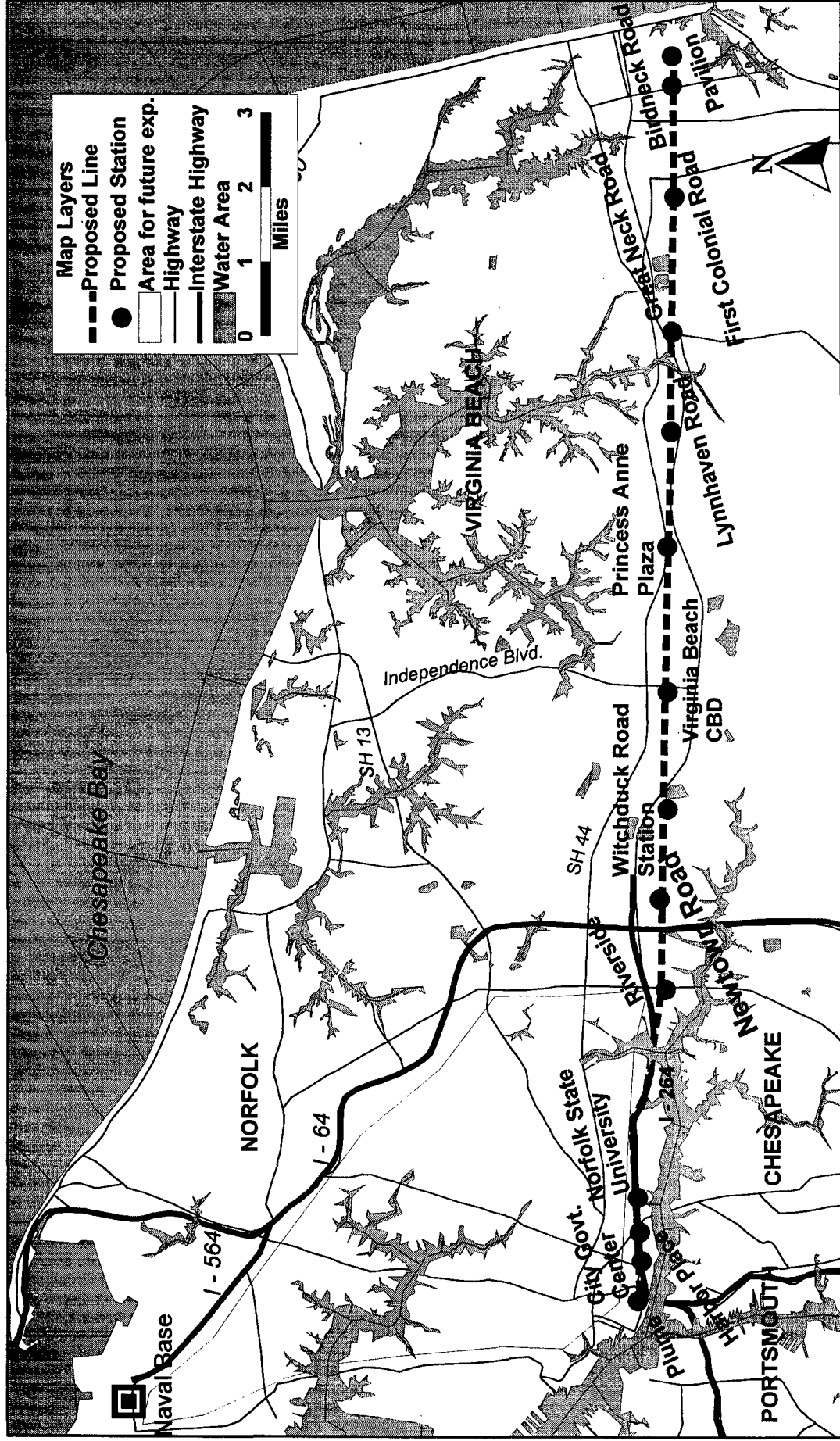
NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions

Other Factors

Economic Development The MIS estimated the economic impacts (through the year 2015) of implementing the LRT alternative including: a net new employment payroll of \$88.2 million (1995 dollars) from jobs in LRT development; an increase of \$56.4 million in retail sales; an increase in property values of \$245.7 million; an increase in gross receipts of \$303.4 million; an increase in convention expenditures of \$5.9 million; and a net growth (by 2015) of 3,900 new jobs.

Norfolk - Virginia Beach Corridor

Norfolk, VA



Newark-Elizabeth Rail Link

Northern New Jersey
(November 1997)

Description

The New Jersey Transit Corporation (NJ Transit) is proposing a one-mile initial operating segment (IOS) of an 8.8-mile, 15 station light rail transit (LRT) linking Newark and Elizabeth. Although the IOS is discussed as a New Start project, it will function as an extension of the existing 4.3 mile Newark City Subway light rail line. The IOS would run from Broad Street Station in Newark to Newark Penn Station and is estimated to cost \$141 million (1995 dollars), including associated stations and vehicles. The IOS is predicted to carry 13,300 riders per day in 2015. The capital cost of the entire 8.8-mile project is estimated to be \$694 million (1995 dollars). NJ Transit predicts that the entire line will carry 24,900 riders per day in 2015.

Summary Description

Proposed Light Rail Line	Initial Operable Segment (IOS) totals one mile in length, four stations
Total Capital Cost (IOS): \$ 141 million (\$1995)	2015 Ridership Forecasts (IOS) (Average Weekday)
Annual Operating Cost (IOS): \$ 2.3 million (\$1996)	- 13,000 daily - 6,500 new riders

Status

Section 3031 of ISTEA directed FTA to negotiate and enter into a Full Funding Grant Agreement (FFGA) providing no less than \$634.4 million for elements of the New Jersey Urban Core Project which could be fully funded in FY 1992 through FY 1997. The Newark -Elizabeth project is one of eight elements eligible for funding. Through FY 1998, Congress has appropriated \$609.34 million for Urban Core Projects. Congress has appropriated \$11.98 million in Section 5309 funds specifically for the Newark-Elizabeth Rail Link.

The project is being advanced in three stages: the Initial Operable Segment (IOS), a one mile connection between the Broad Street Station and Newark Penn Station; the second segment, a one mile line from Newark Penn Station to Camp Street in downtown Newark; and the third segment, a seven mile LRT line from downtown Newark to Elizabeth, including a station serving Newark International Airport. The Draft Environmental Impact Statement (DEIS) for the full build alternative was completed in January 1997. The Final Environmental Impact Statement (FEIS), which will address construction of only the IOS, is scheduled for completion in early 1998. Environmental work on the other segments awaits completion of additional planning study.

Evaluation

Under Section 3031(c) of ISTEA, the Newark-Elizabeth Rail Link, as an element of the New Jersey Urban Core Project, is exempt from the New Start criteria. Therefore, NJ Transit provided data on the IOS for the New Start vs. No Build for information purposes only. Data were not provided for New Start vs. TSM. NJ Transit considers the IOS No-Build and TSM alternatives to be roughly equivalent because the No-Build includes the effects of improvements in progress such as the Secaucus Transfer project and the Airport Monorail/Northeast Corridor connection .

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. N/A indicates that information is not available for specific criteria at this time.

Mobility Improvements

NJ Transit estimates the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 3.1 million	N/A
Hours	0.3 million	N/A

Based on 1990 census data, there are an estimated 3,645 low-income households within a 1/2 mile radius of the proposed four stations.

Environmental Benefits

Northern New Jersey is a "severe" nonattainment area for ozone and a "moderate" nonattainment area for carbon monoxide. NJ Transit estimates that in 2015, implementation of the IOS would result in the following emission reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	101	N/A
Nitrogen Oxide (NOx)	7	N/A
Volatile Organic Compounds (VOC)	24	N/A
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	2,740	N/A

Values reflect annual tons of emissions reductions

NJ Transit estimates that implementation of the IOS would result in the following annual savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	22,090 million	N/A

Values reflect annual BTU reductions

Operating Efficiencies

NJ Transit projects a slight decrease in systemwide operating cost per passenger mile for the IOS compared to the No-Build alternative.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.47	N/A	\$0.46

Cost Effectiveness

NJ Transit projects the following cost effectiveness index for the IOS.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$5.70	N/A

Values reflect 2015 ridership forecast and 1995 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium-High**

The area surrounding the IOS alignment is an older, mostly built-up Central Business District (CBD) with overall moderate to high densities and a variety of commercial, civic, and institutional land uses. Penn Station is a major intermodal rail and bus hub. Although the commercial and residential markets in Newark have been dormant for the past several years, there is evidence that these markets are now ready to support new high-density development and redevelopment.

The City appears to have policies in place which are strongly transit-supportive, including promotion of high-density and mixed use development, pedestrian design improvements and amenities, and strict limitation on parking at new developments. A consortium of downtown businesses and property owners are working with the city to develop a Special

Improvement District, which would collect a fee to be used for public safety, beautification and image improvement projects.

The Performing Arts Center station may be designed to allow air-rights construction above the station and integration into the Center complex. The Center Street Station may have a commercial mixed-use high rise building above the station.. The City and Essex County are pursuing plans for a minor league baseball and multi-purpose 6,000 seat stadium near the Washington Park Stop. To date, the only commitments for station development have been from institutions, and commercial interest in the area remains to be demonstrated.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: Not reported for project. NJ Transit has not yet submitted to FTA a financing plan identifying specific funding sources for this project. The 1991 ISTEA legislation provides that Turnpike Toll Credits can be used as the local share for Urban Core projects, which include the Newark-Elizabeth Rail Link.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

NJ Transit is currently developing a financing plan for the IOS. The Low-Medium ranking reflects that at this time the Newark-Elizabeth Rail Link lacks a financing plan and a specifically identified source for the local share of capital costs. State Transportation Trust Funds (TTF) presently provide 47 percent of the agency's 1997-2001 5-year capital program, so an assumption of a 20 percent state/local share for the IOS may be conservative.

Although the TTF provides a stable permanent source of revenue for NJ Transit projects, a deficit of \$120.4 million currently is projected for the 5-year capital program due to intentional overprogramming. NJ Transit anticipates that the ability to cut costs or raise fares or other revenues will eliminate the projected deficit. Expenditures on the Newark-Elizabeth Rail Link are anticipated to account for only 2.4 percent of the capital budget through 2001. The full cost of the IOS, from Broad Street Station to Newark Penn Station, accounts for 4 percent of the current 5-year capital plan.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

On a systemwide basis, NJ Transit has enjoyed steady ridership growth and passenger revenues have grown by 2.9 percent annually since 1991, while a conservative rate of 1.6 percent annual growth in passenger revenues is projected for the next several years. On a systemwide basis, NJ Transit recovers approximately 50 percent of its operating costs through passenger

fares, which is a source of financial strength and stability. A high fare recovery ratio (91 percent) is expected for the IOS.

The low-medium rating reflects the lack of a financing plan for the IOS and a projected deficit for NJ Transit. NJ Transit has reported annual cash flow surpluses in recent years, but a \$79.1 million deficit is projected through the year 2000, largely due to anticipated reductions in Federal and State operating assistance. However, by State law, NJ Transit must operate under an annual balanced budget with "0" deficit. A low rate of increase in operating costs is projected (1.4 percent), which is substantially lower than rates experienced over the previous 5 years, but estimates of annual operating revenue growth also are conservative (0.6 percent).

Locally Proposed Financing Plan		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1995 dollars)	
Federal:		
Section 5309 New Start	N/A	(\$11.98 million appropriated through FY 1998.)
Section 5309 Bus	N/A	
Flexible Funds	N/A	
State:	N/A	
Local:	N/A	
TOTAL	\$141.0	(for IOS)

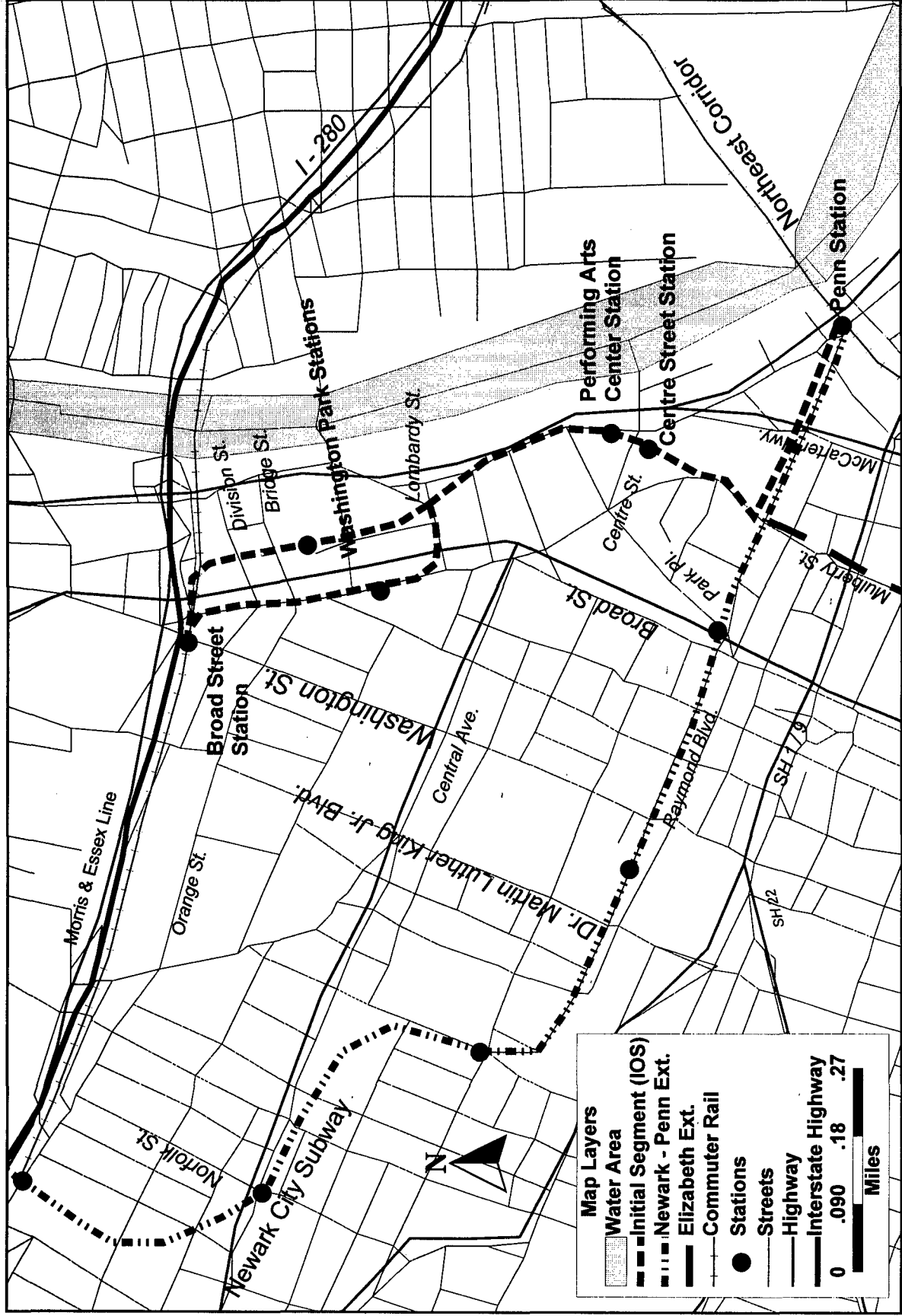
NOTE: The table includes Not Available (N/A) for proposed source of funds since the exact mix of Federal and State funds is to be determined as the financial plan is finalized.

Other Factors

Mobility Impacts: The IOS is expected to improve transfers between commuter rail lines, access to existing and new development sites, serve the recently opened NJ Performing Arts Center, and provide internal circulation in downtown Newark.

Newark - Elizabeth Rail Link

Northern New Jersey



Metropolitan Area Projects (MAPS) Link

Oklahoma City, Oklahoma

(November 1997)

Description

The Central Oklahoma Transportation and Parking Authority (COPTA) is implementing a multimodal transportation system linking new facilities being built or improved by the Metropolitan Area Projects (MAPS) special sales tax. The first segment to be implemented will link western portions of the city to facilities and attractions downtown. A second segment will provide circulation among parking, offices, and attractions in the downtown area. The total project costs for these two segments equal \$21.0 million.

Summary Description

Proposed bus system for the West Segment and a rubber tired trolley bus system is being proposed as an interim solution in Downtown corridor.

15 miles in length

**Opening Ridership Forecasts
- 2,700 daily riders**

**Total Capital Cost:
\$ 21.0 million (\$1996)**

**Annual Operating Cost:
\$1.1 million**

Status

COPTA completed a Major Investment Study (MIS) for a 15 mile corridor that connects the hotel district along Meridian Avenue in southwest Oklahoma City with the downtown and the area around Remington Park Racetrack in the northeast. The preferred alternatives were selected in September 1995. The MIS identified the following preferred alternatives: the West Segment will be a rubber tired bus system that would provide special shuttle services to events and conventions both downtown and at the state fairgrounds in addition to daily scheduled services along the route. The Downtown Segment is proposed as a vintage light rail system, although short term plans call for implementing a rubber tired trolley bus system as an interim solution.

FTA has granted authority to proceed with preliminary engineering and environmental assessment for the rail portion using Section 5309 formula funds. Through FY 1998, Congress has appropriated \$3.58 million in Section 5309 New Starts funds.

Evaluation

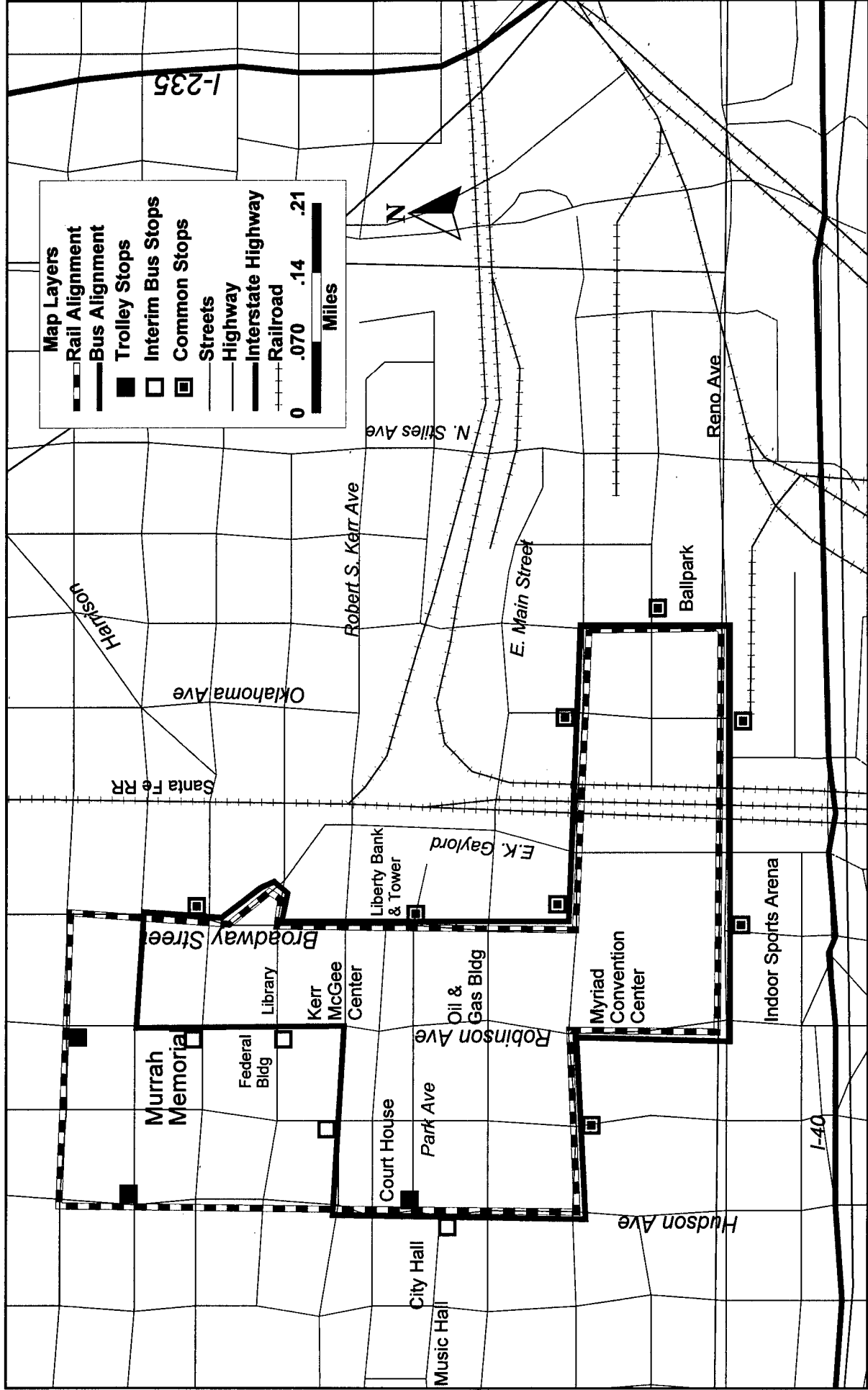
The project is exempt from the New Start criteria because the Section 5309 share is less than \$25 million. As a result, criteria are not addressed for mobility improvements, environmental benefits, operating efficiencies, cost effectiveness, transit supportive land use, and local financial commitment.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1996 dollars)</u>
Federal:	
Section 5309 New Start	\$13.00 (\$3.58 appropriated through FY 1998.)
Local:	\$8.00
TOTAL	\$21.00

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

MAPS Link

Oklahoma City, OK



Orange County Transitway (Irvine - Fullerton Corridor)

Orange County, California

(November 1997)

Description The Orange County Transportation Authority (OCTA) is developing a 28-mile Transitway Corridor in central Orange County between Fullerton and Irvine. The proposed Transitway will connect major activity centers within the Corridor, including Disneyland, downtown Santa Ana and the county government center, John Wayne Airport, Anaheim Stadium, El Toro Marine Base (which is being converted to civilian use), and several regional shopping centers and hospitals.

OCTA has selected investment in a new rail transit system and significant expansion of bus service in the corridor. However, a preferred rail technology has not yet been specified. Assuming an elevated rail system, the project is estimated to cost \$1.6 billion and to carry 63,000 riders per day. Lower cost alternatives, including at-grade operations and fewer freeway crossings, will be investigated in the next phase of project development.

Summary Description

Proposed Transitway	28 miles, 26 stations
Total Capital Cost: \$1.6 billion (1996 dollars)	2020 Ridership Forecasts (Average Weekday) - 63,000 daily boardings
Annual Operating Cost: \$ 22.4 million (1996 dollars)	

Status OCTA completed a Major Investment Study (MIS) for the Corridor in June 1997. The MIS led to the selection of a rail/bus project consisting of a 28-mile transitway along with a 49% increase in bus service along the Corridor. In October 1997, the OCTA Board voted to seek FTA approval to advance into Preliminary Engineering (PE). FTA approval to initiate PE is pending. The first phase of PE will lead to the preparation of a Draft Environmental Impact Statement (DEIS) and the selection of the rail technology and alignment.

The Irvine to Fullerton Corridor Transitway project is included in the metropolitan planning organization's (MPO) financially constrained and conforming Regional Transportation Plan and Transportation Improvement Program.

Through FY 1998, Congress has appropriated \$1.99 million in Section 5309 New Starts funding for the project.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*.

Mobility Improvements

OCTA estimates the following travel time savings for the New Start compared with the No-Build and TSM alternatives.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$211.5 million	\$49.8 million
Hours	23.0 million	5.4 million

Based on the 1990 US Census, OCTA estimates that there are 18,141 low-income households within one-half mile of the 26 proposed stations.

Environmental Benefits

Orange County lies within the South Coast Air Basin and is currently classified as an "extreme" nonattainment area for ozone, a "serious" nonattainment area for carbon monoxide, a "serious" nonattainment area for PM-10, and a nonattainment area for NO_x.

OCTA estimates the following changes in annual regional emissions. Note that OCTA reports reduced emissions when comparing the New Start with the No-Build, and an increase in emissions when comparing the New Starts and TSM alternative.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	187	(27)
Nitrogen Oxide (NO _x)	211	(8)
Volatile Organic Compounds (VOC)	52	(3)
Particulate Matter (PM ₁₀)	no change	no change
Carbon Dioxide	NA	NA

Values reflect annual tons of emissions reductions. Values in () parenthesis indicate a projected increase in emissions.

OCTA estimates the following changes in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	NA	NA

Values reflect annual BTU reductions

Operating Efficiencies

OCTA estimates a decrease in the systemwide operating cost per passenger mile, compared to the No-Build, and a slight increase for the New Start compared to the TSM.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile	\$0.37	\$0.25	\$0.28

Cost Effectiveness

OCTA estimates the following cost effectiveness indices:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$6.80	\$19.30

Values reflect 2015 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Low-Medium

The corridor serves a dense but primarily single family residential neighborhood which includes office parks, shopping malls and industrial areas, as well as Disneyland and Anaheim Stadium. The corridor contains over one-half of the county's employment, but more growth is forecast outside of the corridor than inside.

Each of the seven corridor communities have vastly different land use plans and policies; while the plans generally voice support for transit oriented development, there is little detail in most. Most of the communities have not yet created conditions for transit-supportive development. However, OCTA plans on working with the communities during PE to consider transit supportive land use at station areas. There is not a transit supportive parking policy in place.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 41%

The OCTA financial plan includes \$800 million (50%) in Section 5309 New Start funds and an additional Federal contribution of \$150 million (9%) in Flexible funds. The plan includes \$425 million (27%) in State funding and \$225 million (14%) in local funds.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

OCTA has yet to identify a specific alignment type or rail technology, so the reliability of capital cost estimates cannot yet be determined. The proposed local funding source includes Orange County's Measure M sales tax, which currently generates \$148 million per year for transit and highways.

Approximately \$340 million (1988 dollars) of Measure M revenues are set aside for rail transit improvements; \$225 million of this amount is proposed to implement the Transitway.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

Estimated annual operating and maintenance costs total \$22.4 million.

Specific operating funding sources have not been identified. However, OCTA is establishing an urban rail operations endowment using \$200 million of Measure M funding. Revised operating cost estimates and a more detailed financing plan will be prepared during the Preliminary Engineering (PE) project development phase.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1996 dollars)</u>
Federal:	
Section 5309 New Start	\$800.00 (\$1.99 million appropriated through FY 1998)
Flexible Funds	150.00
State:	425.00
Local: (Measure M)	225.00
TOTAL	\$1,600.00

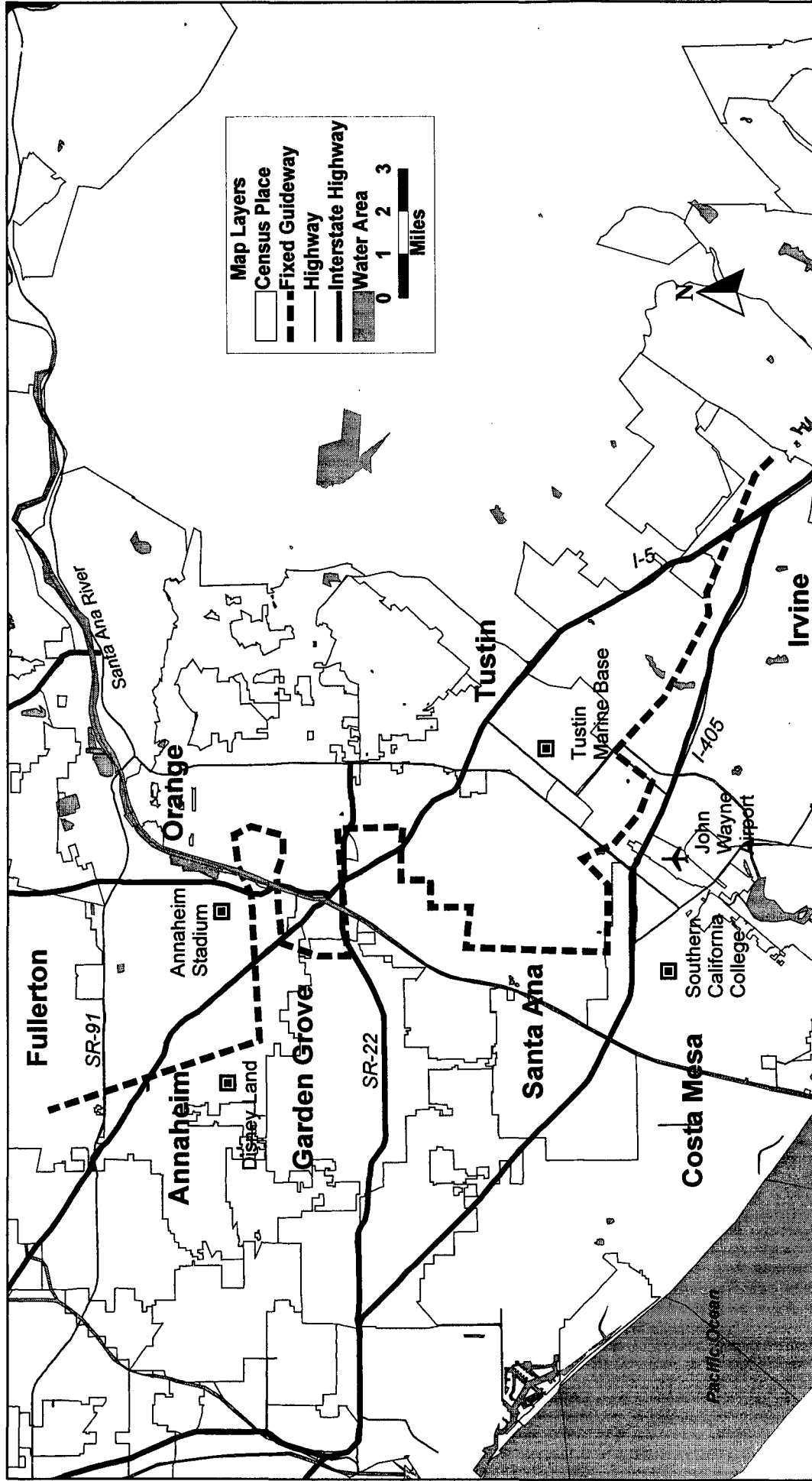
NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Other Factors

Potential for Design-Build Approach: Upon completion of detailed engineering study, OCTA is considering implementation of a design-build turnkey procurement for final design, engineering, and construction.

Orange County Transitway (Irvine - Fullerton Corridor)

Orange County, CA



Central Florida Light Rail System

Orlando, Florida
(November 1997)

Description

The Central Florida Regional Transportation Authority (LYNX), in cooperation with the Florida Department of Transportation (FDOT), is completing a Preliminary Engineering/Draft Environmental Impact Statement (PE/DEIS) on the Central Florida Light Rail Transit (LRT) project. The proposed LRT project is a component of a series of multimodal (highway and transit) improvements along Interstate 4 in the Orlando area.

LYNX is planning development of a light rail transit (LRT) system along the North/South corridor, which generally parallels I-4 and the CSX right-of-way. In addition to the LRT, LYNX proposes expanded local bus and feeder bus services in the corridor. Estimated capital costs for the proposed 26.8 mile LRT system total \$878.8 million (1997 dollars), with estimated daily ridership totaling 113,400.

The 14.7 mile southern segment of the LRT corridor, considered the Minimum Operable Segment (MOS-1) or Starter Line, extends from downtown Orlando south to an interim terminus and station located southeast of the interchange of I-4 and the Central Florida Parkway. The preferred LRT alignment for MOS-1 is being addressed in the PE/DEIS. The 12.1 mile northern segment of the LRT corridor extends from downtown Orlando north to an interim terminus and station at SR 434. A future extension of the south corridor would extend from the Central Florida Parkway to southeast of I-4 and SR 417 in Celebration. A future extension of the north corridor alignment would extend from SR 434 to Sanford, generally along the existing CSXT railroad right-of-way.

Summary Description

Proposed: Light Rail Transit	26.8 miles in length, 27 stations
Total Capital Cost: \$ 878.8 million (\$1997)	2020 Ridership Forecasts (Average Weekday)
	- 113,400 daily riders on LRT
Annual Operating Cost: \$ 34.7 million (\$1997)	- 39,000 new riders

Status

FDOT and LYNX completed the I-4 Multimodal Master Plan Major Investment Study (MIS) in Fall 1995. In December 1995, the Orlando and Volusia County MPOs adopted the I-4 MIS design concept and scope improvements as part of the Year 2020 Long Range Transportation Plans. The recommended design concept and scope has been incorporated into the adopted Orlando Urban Area Transportation Study (OUATS) 2020 Transportation Plan.

The highway and transit components of the preferred alternative are being analyzed in separate Preliminary Engineering (PE) and Environmental Impact Statement (EIS) efforts. FTA is designated as the lead Federal agency on the light rail PE/EIS, while the Federal Highway Administration (FHWA) is the lead agency on the highway PE/EIS. LYNX, in cooperation with FDOT, is preparing the PE/DEIS for the North/South LRT project.

Through FY 1998, Congress has appropriated \$33.69 million in Section 5309 New Start 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 is presented for the entire proposed 26.8 mile North/South LRT project.

Mobility Improvements

LYNX estimates that the New Start project would attract 38,988 riders by 2020 and result in the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$26.9 million	\$ 12.9 million
Hours	2.4 million	1.0 million

Based on 1990 census data, there are an estimated 2,168 low-income households within a 1/2 mile radius of the proposed 27 stations.

Environmental Benefits

The Orlando area is currently classified as an attainment area for both ozone and carbon monoxide. LYNX estimates that in the year 2020, the project would result in the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	818	685
Nitrogen Oxide (NOx)	59	66
Hydrocarbons	51	47
Particulate Matter (PM ₁₀)	101	87
Carbon Dioxide (CO ₂)	6,840	11,091

Values reflect annual tons of emissions reductions

LYNX estimates that in the year 2020, the project would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	65,791 million	118,471 million

Values reflect annual BTU reductions

Operating Efficiencies

LYNX estimates a decrease in the systemwide operating cost per passenger mile in the year 2020 for the project.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2020)	\$0.46	\$0.46	\$0.44

Cost Effectiveness

LYNX estimates the following cost-effectiveness indices for the project compared to the No-Build and TSM alternatives.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$8.90	\$9.80

Values reflect 2020 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium-High**

The project corridor contains a wide range of land uses and densities. The southern portion of the corridor includes several potential trip generators, including major tourist sites and the Orlando central business district. The northern portion contains mostly residential development. The corridor includes several industrial-type uses, usually low trip-generators for transit. State and local policies are in place to control sprawl and encourage infill and redevelopment and encourage pedestrian-oriented development. Several new large developments are planned for the corridor. While jurisdictions along the corridor have varying degrees of parking policy, there does not seem to be a corridor-wide parking policy. While existing local policies support transit-oriented, mixed-use development along the corridor, no policies or zoning specific to project stations have yet been proposed or adopted. LYNX has developed the Central Florida Rail Manual. In addition, participation by the public and local jurisdictions has been extensive in the project development process. LYNX is working with the private sector and public agencies to pursue joint development opportunities.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 50 %

LYNX proposes a 50% Federal share, \$439.4 million in Section 5309 New Start funds, of total project capital costs. The financial plan includes \$219.7 million (25%) in State funds and \$219.7 million (25%) in local funds.

Stability and Reliability of Capital Financing Plan

Rating: **Low-Medium**

Project sponsors did not provide independent confirmation of funds expected to be available from FDOT (25% of the project costs), private and quasi-public, and other local funding sources. The status of funding sources to cover gaps in state funding and other contingencies was not discussed in the project's current financial plan or remain unclear.

Stability and Reliability of Operating Financing Plan

Rating: **Low-Medium**

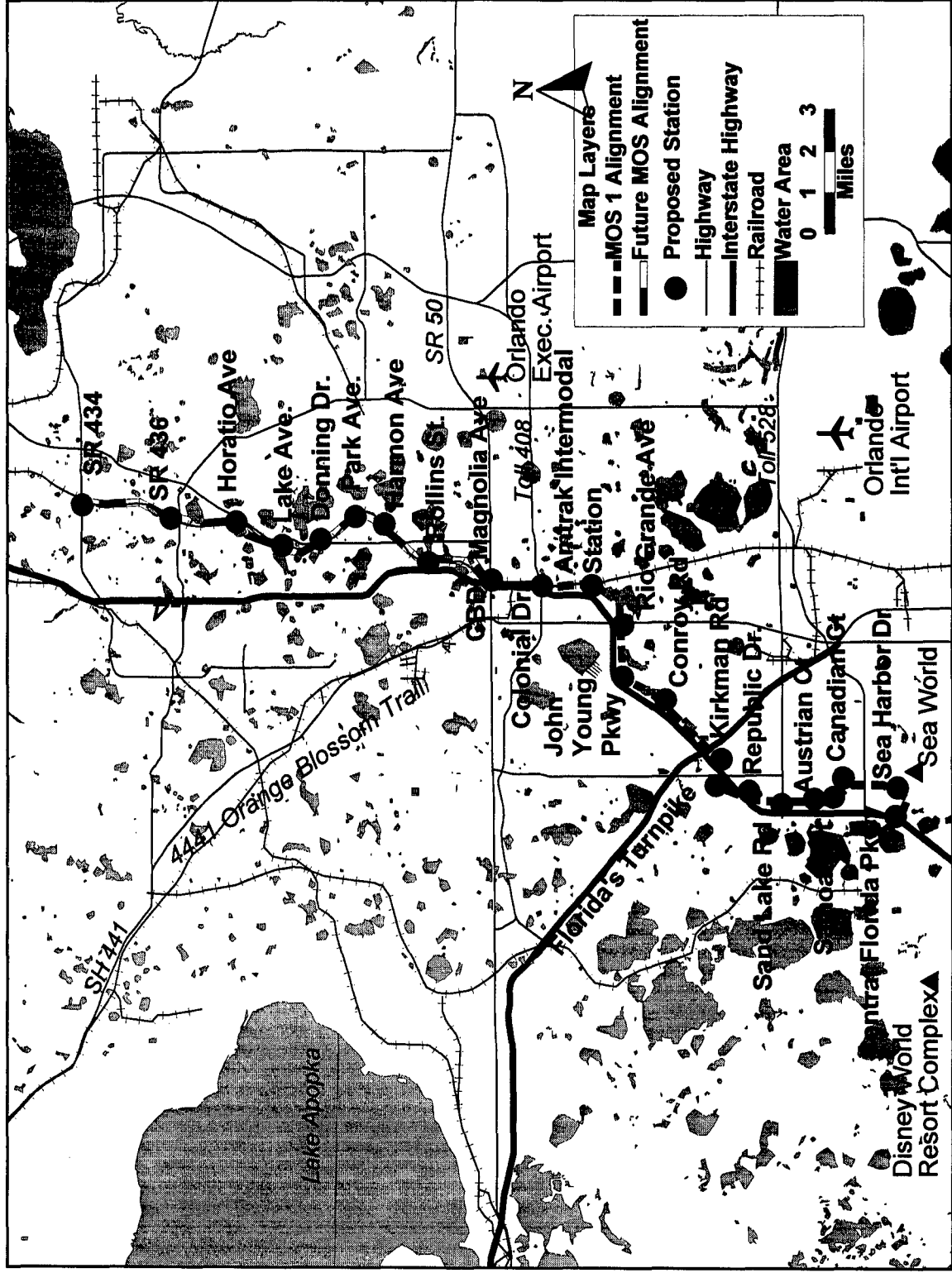
Project annual operating and maintenance costs, including the expanded bus service, are expected to increase at an annual average of 7.2%, much lower than the 22.6 % historical increase from 1991 - 1995. LYNX expects to receive 40% of all ongoing capital and operating revenue from dedicated sources primarily derived from the proposed Charter County Sales Tax to be implemented in 2004, but which has not yet been approved. LYNX contingency funding plans do not specifically address consequences if the Charter County Sales Tax is not passed.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding</u> <u>(Smillion)</u> (reported in 1997 dollars)
Federal:	
Section 5309 New Start	\$439.40 (\$33.69 million appropriated through FY 1998.)
State:	219.70
Local:	219.70
TOTAL	\$878.80

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Central Florida Light Rail System

Orlando, FL



Martin Luther King, Jr. East Busway Extension
Pittsburgh, Pennsylvania
(November 1997)

Description The Port Authority of Allegheny County (PAT) is the lead local agency for the proposed extension of the Martin Luther King Jr. East Busway. The first 6.8 miles of the Martin Luther King, Jr. East Busway was completed in 1983. It carries nearly 30,000 riders each weekday from downtown Pittsburgh to Wilkinsburg, serving a corridor with the highest transit ridership in Allegheny County. Phase I of the proposed extension of the East Busway is a 2.3 mile segment serving the adjacent communities of Edgewood, Swissvale, and Rankin. The extended busway will include park-and-ride lots, a feature which does not exist on the existing East Busway. PAT estimates the capital costs of the project to total \$62.8 million (1996 dollars).

Summary Description	
Proposed Busway Extension	2.3 miles in length
Total Capital Cost: \$ 62.8 million (\$1996)	2005 Ridership Forecasts (Average Weekday) - 3,800 new riders
Annual Operating Cost: \$ 1.6 million (\$1996)	

Status PAT has prepared an Environmental Assessment for the East Busway extension. A Finding of No Significant Impact was issued in early 1996. Early stages of Preliminary Engineering (PE) are currently underway. PAT anticipates completing PE in 1998 and to also begin Final Design in 1998.

Section 1108 (b) of ISTEA authorized \$21.7 million in Title I funds for this project. Through FY 1998, Congress has not appropriated any funds for this project.

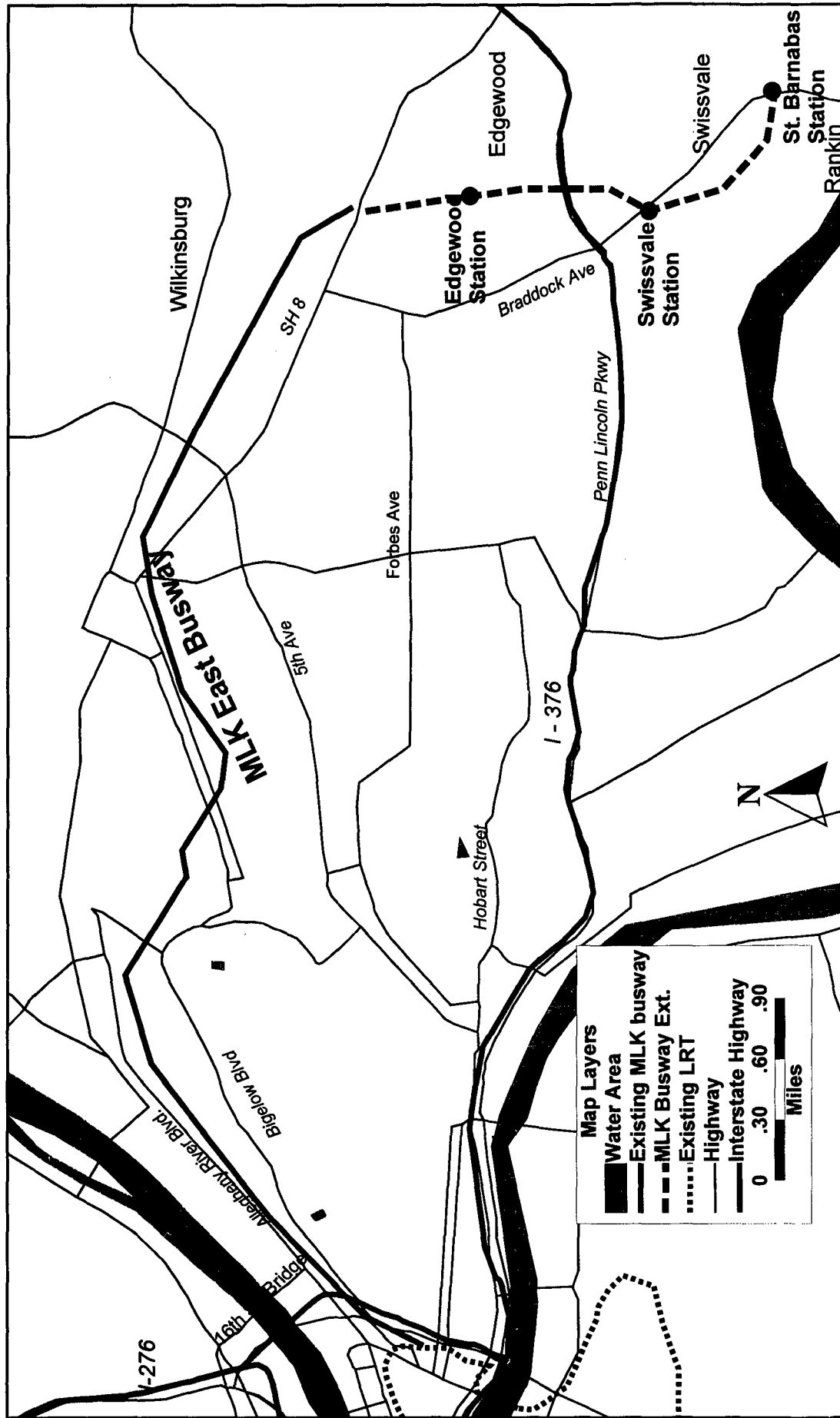
Evaluation The project is exempt from the New Start criteria because the Section 5309 share is less than \$25 million. As a result, criteria are not addressed for mobility improvements, environmental benefits, operating efficiencies, cost effectiveness, transit supportive land use, or local financial commitment.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1996 Dollars)
Federal:	
Section 5309 New Start	\$9.70 (\$0 million appropriated through FY 1998.)
Section 1108 Hwy Demo Flexible Funds	21.70
State:	31.40
TOTAL	\$62.80

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Martin Luther King, Jr. East Busway Extension

Pittsburgh, PA



Stage II Light Rail Transit Reconstruction Project

Pittsburgh, Pennsylvania

(November 1997)

Description During the 1980's, 13 miles of the 25-mile rail system in Pittsburgh were reconstructed to light rail standards under the Stage I Light Rail Transit (LRT) project. The Stage II LRT reconstruction would complete this effort for the Overbrook, Library, and Drake trolley lines, which comprise the remaining 12 miles.

The Stage II project would reconstruct these three lines to LRT standards, double-track the single-track segments, reopen the closed Overbrook Line, replace antiquated trolleys with new light rail vehicles, and add approximately 2,500 park and ride spaces and 27 new light rail vehicles.

The estimated capital cost of this project is \$492.8 million (escalated dollars), or \$410.7 million in 1997 dollars. In 2005, the estimated daily ridership for Stage II is expected to be 25,000 with over 49,000 riders for the entire light rail system.

Summary Description

Proposed new Light Rail Line on 12 miles in length
former rail (trolley) lines

Total Capital Cost (Stage II):	2005 Ridership Forecasts (Stage II)
\$492.8 million (escalated dollars)	(Average Weekday)
	- 25,000 daily
	- 9,000 new riders

Annual Operating Cost (Stage II):
\$25.6 million (1996 dollars)

Status

Section 3035(ss) of ISTEA directed FTA to sign a multiyear grant agreement with the Port Authority of Allegheny County (PAT) for \$5.0 million to complete preliminary engineering for the Stage II project. FTA issued a Finding of No Significant Impact (FONSI) for the project in February 1996. In October 1996 PAT submitted to the National Park Service the final documents necessary to fulfill historic recordation requirements. The Port Authority began Preliminary Engineering in November 1996. The project is included in a financially constrained long range plan that was adopted by the Southwest Pennsylvania Regional Planning Commission, the Pittsburgh area's Metropolitan Planning Organization (MPO).

PAT's financial plan assumes that the project cost will be funded by a program that is expected to include 80 percent Federal funding from Section 5309 New Start funds, Section 5309 Fixed Guideway Modernization funds and ISTEA Flexible funds (including CMAQ funds), matched by Commonwealth of Pennsylvania and Allegheny County funding.

Through FY 1998, no Section 5309 New Start funds have been appropriated, while \$80.0 million of Section 5309 Fixed Guideway Modernization 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*. N/A indicates that data are not available for specified measures at this time.

Mobility Improvements

LRT construction would increase operating speeds on all three lines. The greatest increase would occur between Castle Shannon and South Hills Junction because of the reopened Overbrook Line. Many trains which currently use the Beechview Line would be expected to switch to the faster Overbrook Line, decreasing travel time. PAT estimates the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 24.2 million	\$ 11.3 million
Hours	2.7 million	1.3 million

Based on 1990 census data, there are an estimated 650 low income households within a 1/2 mile radius of the boarding points of the Stage II Light Rail Reconstruction project.

Environmental Benefits

The Pittsburgh area is classified as a "moderate" nonattainment area for ozone and has not been classified for carbon monoxide.

Implementation of the Stage II LRT is expected to result in the following annual emissions reductions. (Because the number and location of stations is not yet determined, these data do not reflect any emissions associated with park and ride lots at stations.)

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	82	55
Nitrogen Oxide (NOx)	10	6
Hydrocarbons (HC)	11	7
Particulate Matter (PM ₁₀)	1	no change
Carbon Dioxide (CO ₂)	921	1,096

Values reflect annual tons of emissions reductions

The Stage II LRT is expected to result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	9,395 million	13,662 million

Values reflect annual BTU reductions

Operating Efficiencies

Information is not available on the systemwide operating cost per passenger mile.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile	N/A	N/A	N/A

Cost Effectiveness

PAT estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$10.50	\$7.00

Values reflect 2005 ridership forecast and current year dollars.

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Low - Medium**

The land use along the Stage II LRT alignment consists of older, small communities with low to medium residential density (generally 0-5 units per acre). There are also undeveloped areas of mostly forest, pasture and

agricultural lands. The major trip generators are the Pittsburgh Downtown Central Business District (CBD), South Hills Village Mall, a small retail district in Castle Shannon (a potential joint development site), and some high density residential along the Overbrook line and at the end of the Stage II line. Castle Shannon has developed plans involving mixed use development with parking, retail, offices and apartments.

Local jurisdictions along the Stage II LRT line support the project, but are more focused on bringing needed economic development to the area, than on containing sprawl. The vast majority of promotion of mixed Land Use and pedestrian friendly development is focused on the Pittsburgh CBD. The City of Pittsburgh has a parking policy that reduces the number of off-street parking requirements near a transit facility.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 20 %

The financial plan includes 80% Federal funding including \$162.6 million in Section 5309 New Starts funds, \$111.7 million in Section 5309 Fixed Guideway Modernization funds, and \$120.0 million in flexible funds. The plan also includes \$82.1 million (17%) in State funds and \$16.4 million (3%) in local Allegheny County funds.

Stability and Reliability of Capital Financing Plan

Rating: **Low-Medium**

PAT appears to be a financially strong, financially conservatively-run transit property. Traditionally, 16.7 percent State and 3.3 percent County matching funds have been contributed to Federally-funded transit capital programs at PAT. While the Commonwealth of Pennsylvania's financial condition is strong and improving, the financial status of Allegheny County is less solid. The immediate and long-term impact of the County's actions on funds for transit is not yet fully known.

PAT has "banked" its 5309 Fixed Guideway formula funds for the last several years (a total of \$56 million), intending to use these funds for the Stage II LRT project. PAT is projecting to use Section 5309 Fixed Guideway formula money for this project for 1998 through 2001. PAT anticipates that 24.5 percent of the project's capital funding will come from ISTEA flexible funds, which can occur only with approval from the MPO.

The Low-Medium rating for the Stage II LRT reflects PAT's internal financial stability and the reliability of State and County funding sources in the past, tempered by some uncertainty about future funding sources for the project.

Stability and Reliability of Operating Financing Plan

Rating: **Low-Medium**

State assistance covering 32 percent of operating expenses must be directly appropriated from the State budget. For most of this funding, Allegheny County must match every three State dollars with one of its own. Allegheny County currently covers ten percent of PAT's total operating expenses. PAT's fifteen year budget projection shows an increasing deficit, which reaches \$60 million in FY 2012 without Stage II Light Rail and \$73 million with it. The project is estimated to have a minimal impact on system operating costs (1.2 percent).

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in escalated dollars)
Federal:	
Section 5309 New Start	\$162.60 (\$0 million appropriated through FY 1998.)
Section 5309 Fixed Guideway Modernization	121.70 (\$80 million appropriated through FY 1998)
Flexible Funds	110.00
State:	82.10
Local:	16.40
TOTAL	\$492.80

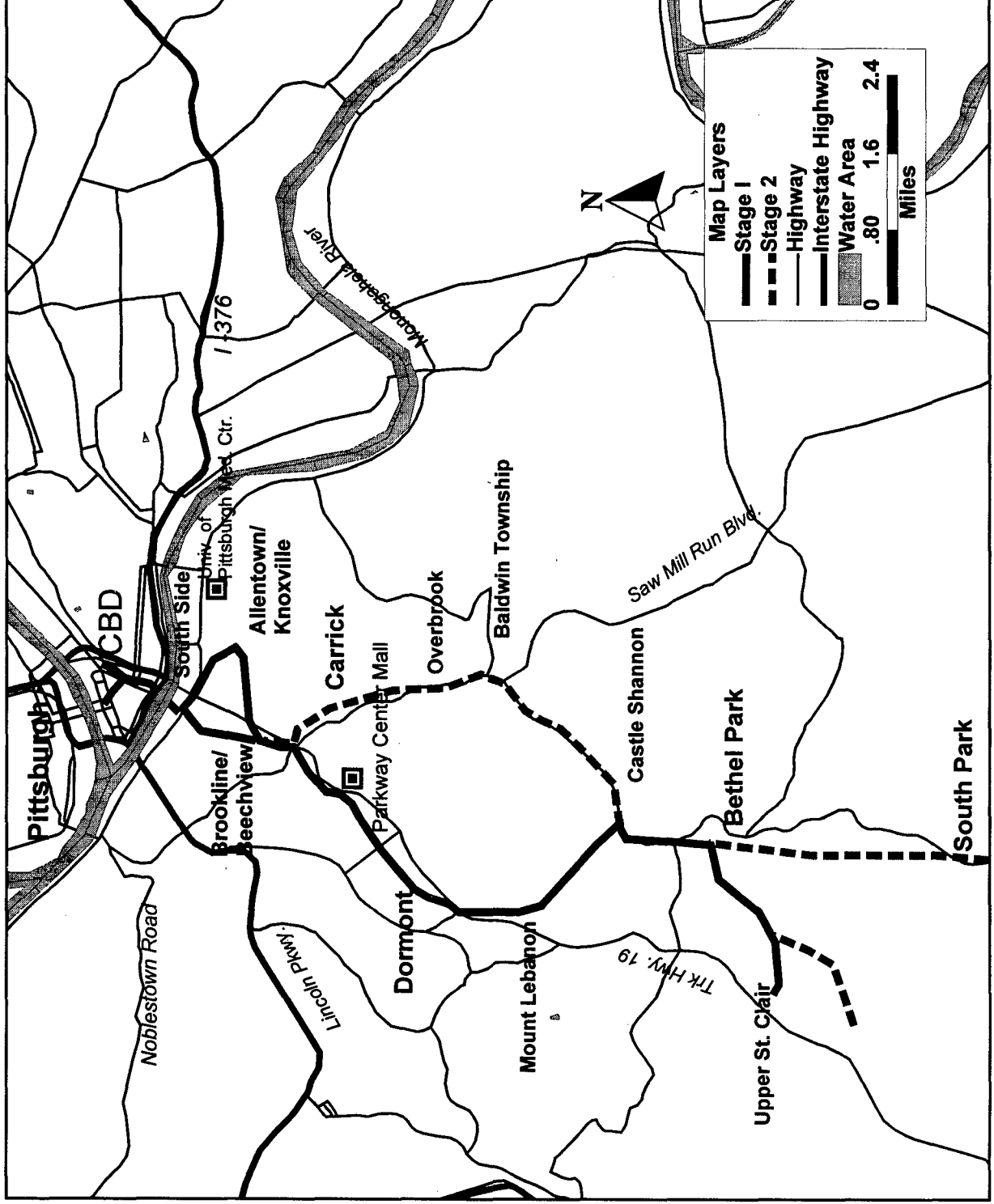
NOTE: Funding proposed reflects assumptions made by project sponsor, and are not DOT or FTA assumptions.

Other Factors

Restoration and Preservation of Transit Lines: The Overbrook Line was closed in 1993 because of the deteriorated condition of old bridges. Reconstruction would bring this line back into service. The Drake and Library lines also would eventually need to be closed permanently if the Stage II project is not implemented.

Stage II LRT

Pittsburgh, PA



South/North Corridor

Portland, Oregon - Vancouver, Washington
(November 1997)

Description The South/North Corridor is a bi-state light rail line between the Clackamas Regional Center, Oregon and Vancouver, Washington. The 20-mile LRT line would connect the Clackamas Regional Center, Milwaukie and the Portland central business district in the southern portion of the corridor, and would serve Vancouver, WA in the northern portion of the corridor.

Capital costs for the complete South/North LRT project are estimated to be \$1.36 billion in 1996 dollars (\$2.19 billion in escalated dollars). The project is proposed to be constructed in three segments over the next two authorization periods. The first 12 miles, referred to as the Interim Operable Segment - Phase 1 (IOS-1), connecting the Clackamas Regional Center to the Rose Quarter is estimated to cost \$713 million (1996 dollars) and \$1,002 million (escalated dollars). The second segment (IOS-2) to North Portland is estimated to cost \$173 million (1996 dollars). Metro, Portland's MPO, estimates the full LRT line would carry approximately 68,000 daily riders in the year 2015.

Summary Description

Proposed Light Rail Line	20 miles in length, 29 stations. IOS-1 totals 12 miles.
Total Capital Cost: (IOS-1) \$1,002 million (\$ escalated)	2015 Ridership Forecasts (Average Weekday)
Annual Operating Cost: \$ 22 million (\$1996)	- 68,000 daily on South/North LRT - 39,100 new riders

Status Congress has amended, in Section 336 of Public Law 104-205, ISTEA's definition of interrelated projects to include the South/North project and has appropriated \$6.0 million of Section 5309 New Start funds through FY 1998. The project is included in the Metropolitan Transportation Plan for both Portland and Vancouver. FTA approved the initiation of preliminary engineering in April 1996, and Metro is scheduled to complete the Draft Environmental Impact Statement (DEIS) in January 1998, and the Final EIS in October 1998.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Most of the criteria are presented for the proposed 20-mile South/North LRT. The assessment of local financial commitment focuses on the 12-mile IOS-1 segment.

Mobility Improvements

The South/North LRT would serve the congested I-5 corridor and McLoughlin Boulevard travel markets and major concentrations of transportation disadvantaged persons. Metro estimates that South/North LRT would attract 39,100 new riders daily by 2015, and would result in the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$107.6 million	\$46.9 million
Hours	8.6 million	4.5 million

Based on 1990 census data, there are an estimated 6,077 low-income households within a 1/2 mile radius of the proposed 29 stations.

Environmental Benefits

The Portland/Vancouver Metropolitan region is currently in attainment for both ozone and carbon monoxide. South/North LRT and related land use densities are a major component of the region's air quality maintenance plan. Metro estimates that in 2015, the first segment of the South/North LRT would result in the following annual emissions reductions. N/A indicates that data are not available for this measure.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	1,368	802
Nitrogen Oxide (NOx)	244	146
Volatile Organic Compounds (VOC)	172	109
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	11,923	20,760

Values reflect annual tons of emissions reductions

Metro estimates that in 2015, the first segment of the South/North LRT would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU)

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	158,049 million	260,122 million

Values reflect annual BTU reductions

Operating Efficiencies

Metro estimates a decrease in the systemwide operating cost per passenger mile in the year 2015 for the South/North LRT.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.404	\$0.426	\$0.390

Cost Effectiveness

Metro estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$7.30	\$9.50

Values reflect 2015 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: High

The South/North corridor serves many different high density trip generators, including the Portland CBD and other commercial and residential centers. The 2040 Growth Concept and the Regional Framework Plan establish high density and mixed use Regional Centers, supporting development of additional high trip generating nodes in the corridor.

The Oregon Transportation Planning Rule requires local jurisdiction to change subdivision and development ordinances to promote transit and walking, and requires a 10% reduction in parking and a 10% reduction in driving per capita over twenty years. Transit supportive land use controls including growth boundaries to constrain sprawl, are in place in both the Oregon and Washington portions of the corridor. There are transit supportive plans and station area planning activities in all jurisdictions along the corridor, and parking controls in Portland.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs (IOS-1): 48%

The financial plan for the IOS-1 includes \$487 million (49%) in Section 5309 New Start funds, and \$515 (51%) in State and local funds for this project.

Stability and Reliability of Capital Financing Plan

Rating: High

In November 1994, Portland region voters approved a \$475 million General Obligation (GO) bond measure for the project. In February 1996, the Oregon Legislature approved \$375 million for the project, but the State funding package was referred to the voters and rejected in a November 1996 Statewide election. However, capital financing is in place for IOS-1. The GO bond debt financing strategy for \$475 million appears sound and able to support annual requirements of the capital financing plan. Tax increment funds are formally supported by the Clackamas County Board of Supervisors. Flexible funds (STP) are committed to the project according to a January 1997 Metro resolution. The Interim Borrowing Plan (\$119 million for IOS-1) to fund gaps in Federal funds is reasonable.

Stability and Reliability of Operating Financing Plan

Rating: Medium-High

The projected operating cash flow analysis indicates an ability to maintain service with the expansion of the transit system. While higher operating growth rates could result in negative cash flow balances, this presents minimal risks as Tri-Met would have enough working capital reserves. The future growth rate of 7.2% for employer payroll tax proceeds, the source of 66% of operating revenue, appears logical and conservative given historical trends and regional economic outlook. Projected farebox recovery ratios for the project are higher than recent trends (projected 50% compared to 45% actual for existing LRT service). Overall agency farebox recovery ratios (including bus) have declined in recent years. Passenger revenue projections could be impacted if the farebox recovery ratio is not as high as expected.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in escalated dollars)</u>
Federal:	
Section 5309 New Start	\$487.00 (\$5.96 million appropriated through FY 1998.)
State and Local:	515.00 * Includes funds for final design of second construction segment
TOTAL \$1,002.00 (for IOS-1)	

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Other Factors

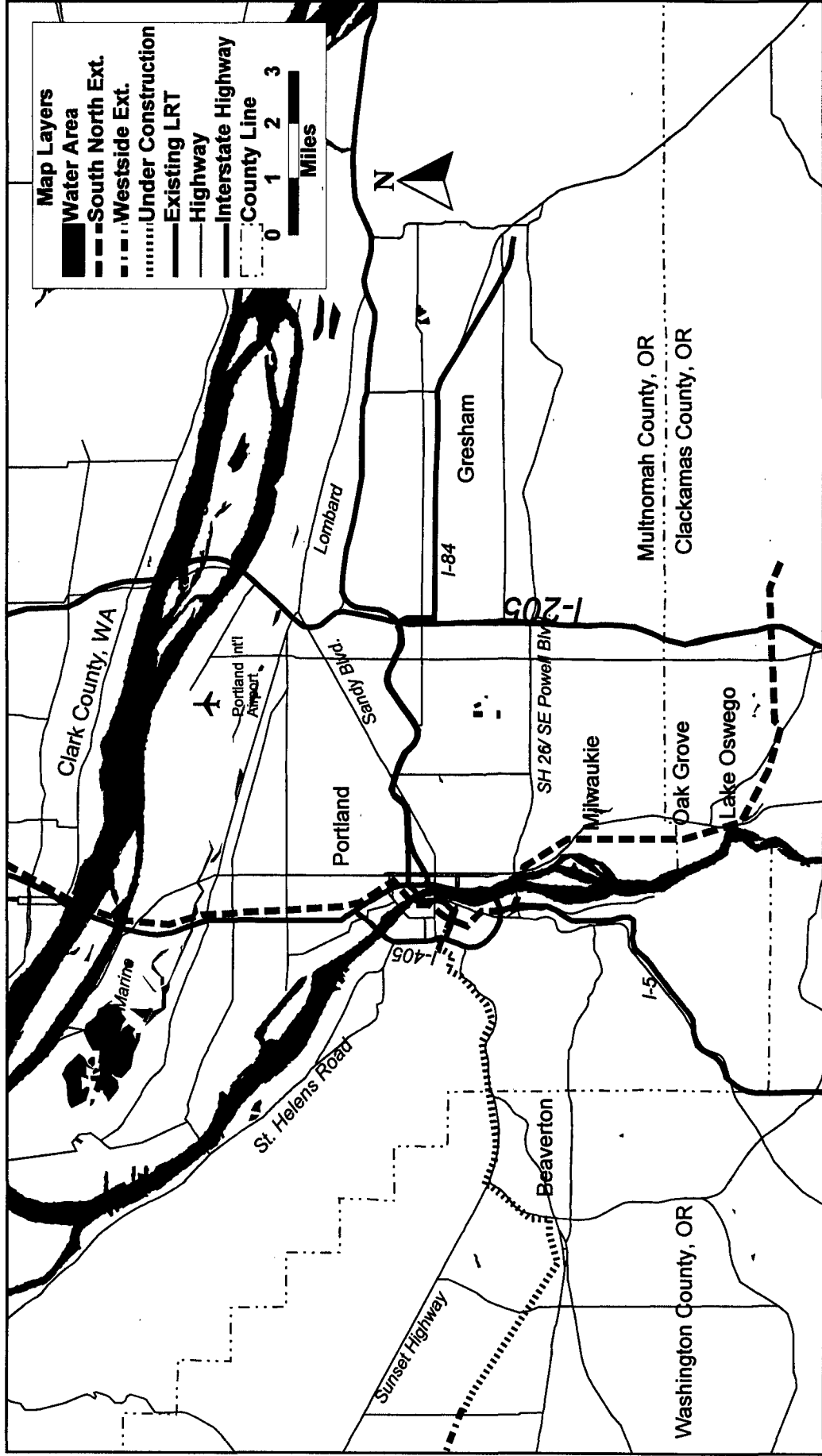
Regional Multitmodal Policy and Planning: The Region 2040 Growth Concept establishes the framework for regional land use plans and the State required Urban Growth Boundary. Multimodal policy is established through the Regional Transportation Plan, the Regional Framework Plan, and the Urban Growth Management Functional Plan.

Livable Communities Initiative (LCI): In May 1995, FTA awarded Tri-Met a \$1.6 million LCI grant for the Sunnyside Village Project, located approximately two miles from the proposed Clackamas Regional Center terminus of the South/North project. A "neo-traditional" neighborhood totaling nearly 2,000 dwelling units is planned. In general, Metro has implemented numerous policies and programs to encourage transit oriented development (TOD) and to allocate regional transportation flexible funds to TOD related projects.

South/North Expert Review Panel: Since 1992, the project has benefited from an expert panel of professionals from around the nation representing the disciplines of travel demand forecasting, design, capital and operating costing, project evaluation, project management, and environmental assessment.

South - North Corridor

Portland, OR



Regional Transit Plan
Phase I Regional Rail -- Durham to North Raleigh
Raleigh, North Carolina
(November 1997)

Description The Phase I Regional Rail project is the proposed initial segment of a three-phased project that will link the three counties -- Wake, Durham, and Orange -- in the Triangle Region of North Carolina in a 35-mile regional commuter rail system. In Phase I, the Triangle Transit Authority (TTA) intends to initiate regional rail service from Durham to downtown Raleigh and from downtown Raleigh to North Raleigh. TTA proposes to use diesel multiple unit (dmu) rail vehicles to serve the 16 anticipated Phase I stations.

The Regional Rail Project will use the existing North Carolina Railroad and CSX rail corridors to connect Duke University, downtown Durham, Research Triangle Park, RDU Airport, Morrisville, Cary, North Carolina State University, downtown and North Raleigh. Phase I is estimated to carry an estimated 14,000 riders a day by the year 2020. The capital cost estimate for Phase I totals \$250 million (1996 dollars). The cost estimate includes final design, acquisition of right-of-way and rail vehicles, station construction, park and ride lots, and construction of storage and maintenance facilities.

Summary Description

Proposed Regional Commuter Rail System (Diesel Multiple Units) **35 miles in length, 16 stations (Phase I)**

Total Capital Cost:
\$250 million (\$1996)

2020 Ridership Forecasts
(Average Weekday)
- 14,000 daily new riders on Phase I

Annual Operating Cost: (Phase I)
\$ 9.4 million (\$1996)

Status

In 1995, TTA completed the *Triangle Fixed Guideway Study*, which was funded with \$750,000 from FTA's Section 5313 planning program. The Authority's Board of Trustees has adopted the study's recommendations to put into place a regional rail system, and resolutions of support have been received from all major units of local government, chambers of commerce, universities, and major employers in the Triangle.

The two metropolitan planning organizations within whose jurisdiction the rail service will operate have incorporated the study recommendations into their fiscally constrained long-range plans. Phase I of the regional rail project is included in the two local 1998-2004 TIPs and the STIP. TTA will initiate Preliminary Engineering and the Environmental Documentation process in

early 1998.

Through FY 1998, Congress has appropriated \$13.95 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 TTA comparing the New Start to the No-Build. N/A indicates that data are not available for this measure.

Mobility Improvements

The 35-mile regional rail system is proposed to link the region's major employment centers and provide a time-competitive in congested corridors. TTA estimates the following annual travel time savings under the Phase I Regional Rail Plan Alternative compared to the TSM Alternative.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	N/A	\$11.5 million
Hours	N/A	1.3 million

Based on 1990 Census data, there are an estimated 1,325 low-income households within a 1/2 mile radius of the proposed 16 Phase I stations (representing 12.5 percent of total households within 1/2 mile radius of stations).

Environmental Benefits

The Raleigh-Durham Metropolitan Area is designated a Moderate Maintenance area for ozone and a Maintenance Area for carbon monoxide.

TTA estimates that in 2020, Phase I of the Regional Rail Plan would result in the following emissions reductions for CO and VOC. However, TTA projects an increase in NOx emissions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	N/A	1,168
Nitrogen Oxide (NO _x)	N/A	(95)
Volatile Organic Compounds (VOC)	N/A	69
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions. Values in () parentheses reflect an increase in emissions.

Regional energy consumption information is not available at this time.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	N/A	N/A

Values reflect annual BTU reductions

Operating Efficiencies

TTA projects a decrease in the systemwide operating cost per passenger mile in the year 2020 for the Phase I Regional Rail Plan compared to the TSM.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2020)	N/A	\$0.58	\$0.44

Cost Effectiveness

TTA estimates the following cost-effectiveness index for the Regional Rail alternative compared to the TSM alternative.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	N/A	\$11.60

Values reflect 2020 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Low-Medium

The proposed Phase 1 Regional Rail Plan includes potential high trip generators such as Duke University; North Carolina Central University (accessed by feeder bus); North Carolina State University, including two stations at Research Triangle Park (major employment center - low density). The proposed Regional Rail Project serves additional major activity centers in the proposed corridor by walk, park and ride lots, or feeder bus. However, the proposed alignment is on an existing right-of-way and is not necessarily situated optimally in terms of walk-access to existing densities. This applies to the share of jobs in the central business district and employment centers as well as the employment density in the outlying areas of the proposed corridor. Currently, low-medium density land use predominates around proposed station areas. At this time there is not a transit supportive parking policy. However, a solid process for development of corridor and station area plans is in place. Each municipality within the proposed corridor has included development of station area plans in its work programs. Guidelines have been developed to provide a framework for development of station areas. In addition, developer participation has been actively sought through developer forums and TTA has sponsored many citizen outreach activities.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 60%

The TTA financial plan includes \$100 million (40%) in Section 5309 New Start funds, \$50 million (20%) in State funding, \$50 million (20%) in local TTA funds, and \$50 million (20%) in local railcar bond financing.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

TTA's current capital position is healthy and in balance. However, the agency's planned investments over the next 5 to 7 years total \$340 million, greatly exceeding the replacement value of TTA's existing asset base. The current financial plan identifies the sources of state and local capital funds. The North Carolina Assembly has authorized transit authorities to implement a 5% tax on rental vehicles, estimated to contribute up to \$7 million toward the proposed project. The Governor's Transit 2001 Commission of 1995 recommended a 25% State match to Federal funds for New Start projects. The North Carolina Department of Transportation is also pursuing an increase of \$34 million in state funding for transit. The project's capital plan includes an additional \$22 million (9%) for contingencies over and above a 17% contingency in the project's total capital cost estimate.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

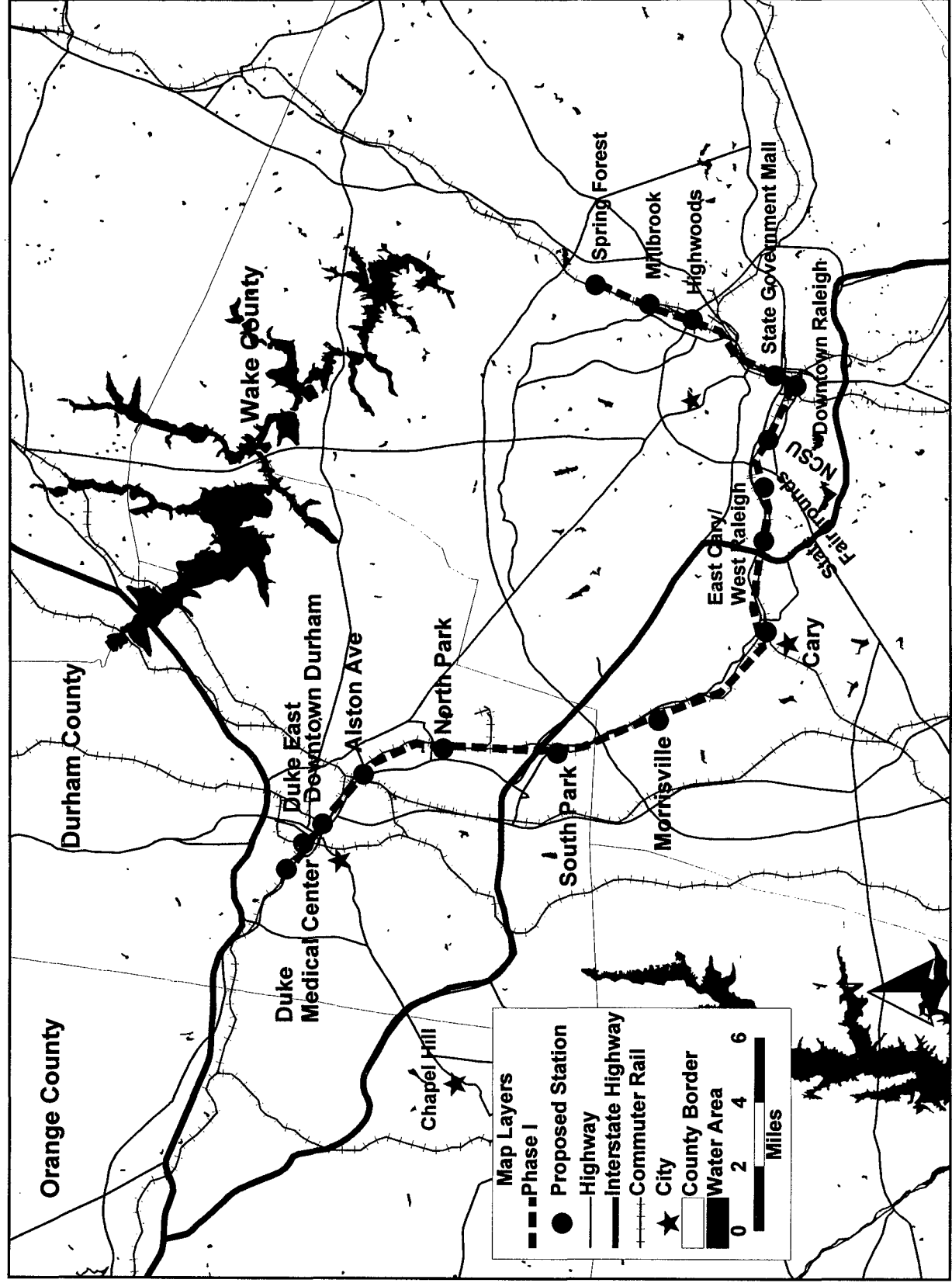
Annual O&M costs for Phase I total \$9.4 million. These estimates appear realistic given the proposed project's size. TTA's operating plan assumes increases in ridership and service with planned bus expansions in 1999, 2000 and 2004. For fiscal years 1996 and 1997, TTA experienced an increase in ridership of approximately 33%. In addition, for FY 1996 and FY 1997, TTA's farebox recovery ratio increased from 9% to 11%, respectively. TTA has proposed to use a 5% tax on rental car usage, authorized by the North Carolina Assembly for transit authorities, as part of the proposed project's operating costs. Fare revenues from rail operations of the proposed project are assumed to cover 20% of operating costs as well.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1996 dollars)</u>
Federal:	
Section 5309 New Start	\$100.00 (\$13.95 million appropriated through FY 1998.)
State:	\$50.00
Local:	\$100.00
TOTAL	\$250.00

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Regional Transit Plan

Raleigh, NC



Airport to University (West - East) Light Rail Line

Salt Lake City, Utah

(November 1997)

Description

The Utah Transit Authority (UTA) has proposed the implementation and operation of light rail transit (LRT) along a ten mile corridor extending from the Salt Lake International Airport (SLIA) east through downtown Salt Lake City and terminating at the University of Utah. The project will also connect with the North-South LRT line in the downtown area. Light rail vehicles will operate at-grade on tracks laid in existing city streets and on property owned by the Airport and by the University.

The proposed West-East LRT line includes 17 stations. Two stations will serve SLIA; one of these stations will serve an Intermodal Transfer Building which will be connected to the main airport terminal. The second airport station will be adjacent to a planned hotel and long-term parking lots. The other 15 LRT stations will be served by appropriate feeder-bus, park-and-ride, kiss-and-ride, and pedestrian access facilities.

The total capital cost estimate of the West-East LRT line equals \$374 million (1996 dollars), with annual operating costs projected at \$7.5 million (1996 dollars). Ridership is estimated at 13,000 riders per day in 2015.

Summary Description

Proposed Light Rail Line	10 miles, 17 stations
Total Capital Cost: \$374.0 million (\$1996)	2015 Ridership Forecasts (Average Weekday) - 13,000 daily boardings
Annual Operating Cost: \$ 7.5 million (\$1996)	

Status

The Wasatch Front Regional Council (WFRC) completed a Major Investment Study and Draft Environmental Impact Statement (MIS/DEIS) in July 1997. A request to enter into Preliminary Engineering (PE) was made to FTA in November, 1997. The project is included in the Regional Long Range Plan, and \$3 million has been programmed in the regional Transportation Improvement Program to begin the Final Environmental Impact Statement (FEIS) in anticipation of moving into PE.

Through FY 1998, Congress has not appropriated any 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*.

Mobility Improvements

WFRC estimates the following annual travel time savings for the New Start compared to the No-Build. N/A indicates that data are not available at this time.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$70.2 million	N/A
Hours	6.3 million	N/A

Based on the 1990 US Census, there are 4,732 low-income households within one-half mile of the 17 proposed stations.

Environmental Benefits

Salt Lake City is designated as nonattainment for carbon monoxide and PM-10, and Salt Lake and Davis Counties are designated as maintenance areas for ozone. WFRC estimates the following annual emissions reductions between the New Start and the TSM and No-Build alternatives.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	67	71
Nitrogen Oxide (NOx)	48	50
Hydrocarbon (HC)	398	405
Particulate Matter (PM ₁₀)	50	51
Carbon Dioxide (CO ₂)	16,719	18,688

Values reflect annual tons of emissions reductions

WFRC estimates the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	167,655 million	192,648 million

Values reflect annual BTU reductions

Operating Efficiencies

WFRC 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 (2015)	\$0.22	\$0.21	\$0.23

Cost Effectiveness

WFRC estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$6.80	\$37.60

Values reflect 2015 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Low-Medium

The West - East Corridor connects three major employment centers (SLIA, CBD, and the University). However, the CBD is relatively small, containing 50,000 jobs, or 13% of total employment for the Salt Lake Area.

Neighborhoods east of the CBD are relatively pedestrian-friendly, mixed-use areas of moderate density, while areas to the west are generally not transit-oriented. The City of Salt Lake has established policies in its master plan of promoting higher density and transit-oriented development, but the vast majority of regional employment and residential growth is expected to occur outside of Salt Lake City, where there is little evidence of interest in growth management policies. The City of Salt Lake adopted a parking policy in 1995 reducing the parking requirements and encouraging shared parking in the CBD.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 0%

UTA is proposing a 100% Federal share for construction of the West - East Extension. The 100% Federal funding is intended to credit local overmatch for several Olympics-related highway projects.

Stability and Reliability of Capital Financing Plan

Rating: Low

The capital cost estimates for the LRT appear reasonable. UTA is proposing a 100% Federal share for construction of the West - East line. No local financial forecasts have been prepared and there are no provisions to meet cost overruns nor the unavailability of proposed Federal funding sources. UTA has identified several "potential" local funding sources. However, none of these potential sources have expressed a commitment to financially support the project. Meanwhile, the most potentially robust funding sources (e.g., local option fuel tax, increasing UTA's current 0.25% sales tax rate) have been dismissed in the past, although they may be revisited.

Stability and Reliability of Operating Financing Plan

Rating: Low

Operating costs for the West-East LRT are estimated by UTA at \$7.5 million annually (1996 dollars). UTA is proposing a 100% Federal share of the operating deficit for the West - East LRT Line through FY 2003. UTA has committed funds through the year 2003 to construct and operate the North South LRT and maintain existing bus transit operations. Operating costs for the North-South LRT are estimated by UTA at \$7.4 million annually (1996 dollars). Operating funds for the West-East LRT may be available after 2003, but only assuming that existing sources be used for operations and maintenance and new sources are committed for capital.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1996 dollars)
Federal:	
Section 5309 New Start	\$374.00 (\$0 million appropriated through FY 1998.)
State and Local:	\$0.00
Total	\$374.00

NOTE: Funding proposal reflects assumptions made by project sponsors, and not DOT or FTA assumptions.

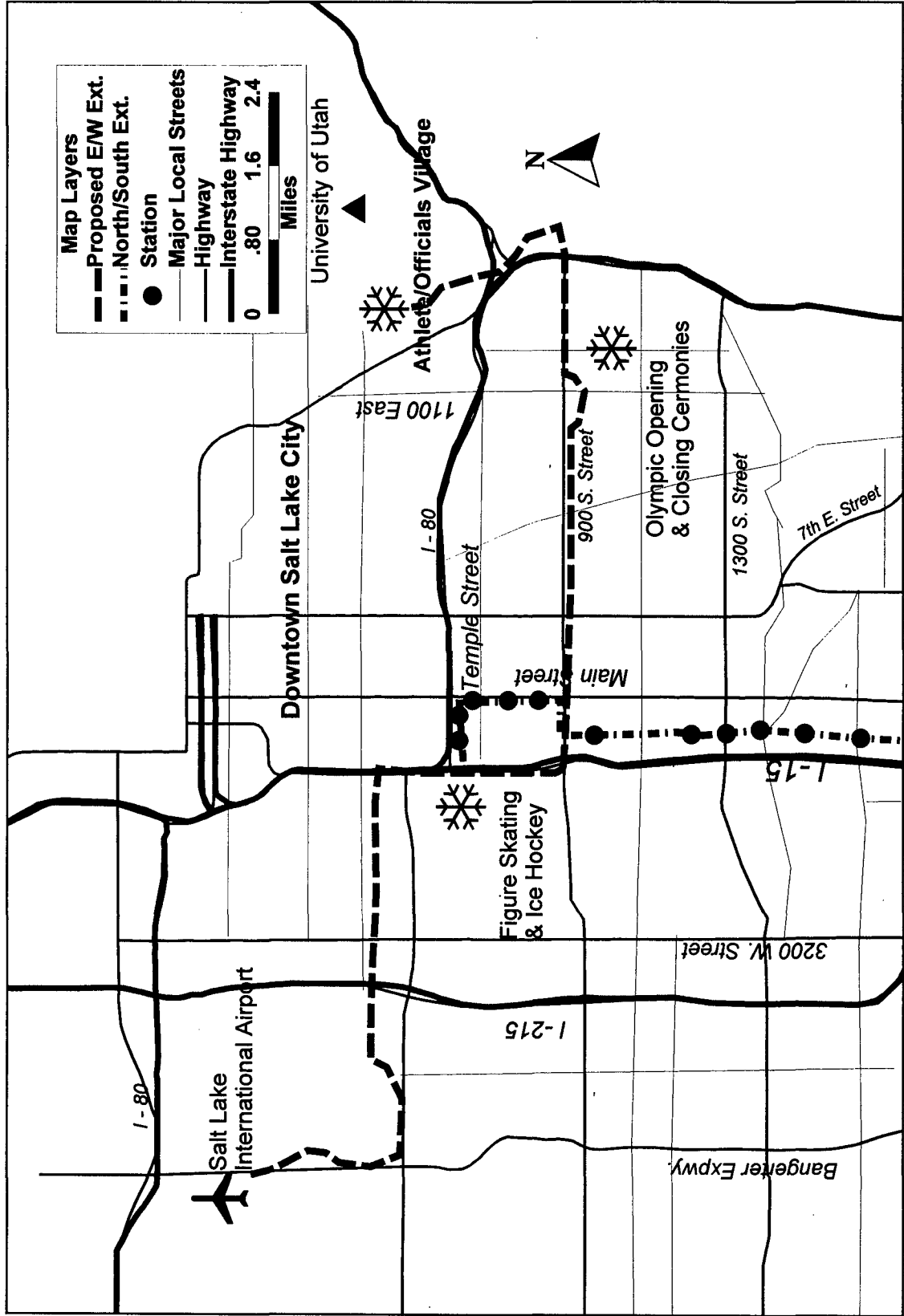
Other Factors

2002 Winter Olympic Games: The West-East LRT Corridor is proposed to be completed prior to the 2002 Olympic Games and to play a major role in transporting spectators to several Olympic events. The plan for the Olympics is that all ticket holders will travel to venues and events by transit. The West-East Corridor links SLIA with athlete housing and the Olympic Stadium at the University of Utah, as well as with Olympic venues for figure skating, medal round ice hockey, the International Broadcast Center and Olympic Plaza.

Design-Build Turnkey Procurement: It is anticipated that a design-build turnkey procurement may be used for project construction, which should reduce the time required for design/build compared with the conventional approach.

Airport to University (East - West) Light Rail Line

Salt Lake City, UT



Mid Coast Corridor
San Diego County, California
(November 1997)

Description

The Metropolitan Transit Development Board (MTDB), the California Department of Transportation (Caltrans), and the San Diego Association of Governments (SANDAG) are proposing commuter rail improvements, a light rail line, and high occupancy vehicle (HOV) lanes in the Mid-Coast Corridor. The corridor extends approximately 12 miles along I-5, from I-8 near Old Town, north to the vicinity of the University of California, San Diego, University Towne Centre shopping mall, and Carmel Valley.

The commuter rail improvements to the Coaster stations consist of the construction of a new station and additional parking to an existing station on the Coaster commuter rail line. The project is estimated to cost \$7.4 million (1997 dollars).

The 10.4-mile Mid-Coast LRT project would extend from Old Town to North University City, and would include nine stations. The line would connect with the Mission Valley and South LRT lines, now referred to as the Blue Line, and the Coaster line at the Old Town Transit Center. The Balboa segment is a 3.4 mile initial LRT phase proposed from Old Town to Balboa Avenue at a cost of \$90.8 million (1997 dollars). Total costs for the Mid Coast Balboa segment LRT and the Coaster Stations equal \$98.4 million (1997 dollars). The 10.4 mile full build LRT line and supporting bus services are estimated to cost \$374.9 million (1997 dollars). The line is projected to attract 15,600 riders per day.

The proposed 11.6 mile HOV project, not addressed in this profile, would be built by Caltrans in the median of Interstate 5 between Carmel Mountain Road and Interstate 8.

Summary Description

**Proposed Light Rail Line,
Commuter Rail improvements,
and HOV lanes**

**Total Capital Cost: (Initial Phase)
\$ 98.4 million (\$1997)**

**Annual Operating Cost:
(Initial Phase)
\$ 4.4 million (\$1995)**

**Full LRT line totals
10.4 miles in length, 9 stations
Initial phase totals 3.4 miles**

**2015 Ridership Forecasts
(Average Weekday)**
- 15,600 daily on MidCoast Extension
- 5,600 new riders

Status

Section 3035(u) of ISTEA directed FTA to sign a multiyear grant agreement with MTDB providing \$27 million for the completion of alternatives analysis and the final Environmental Impact Statement (ESI) and to purchase right-of-way. Through FY 1998, Congress has appropriated \$7.06 million in Section 5309 New Start funds to the project.

The Mid Coast Locally Preferred Alternative was selected in October 1995. FTA approved the request to enter Preliminary Engineering (PE) for the 3.4-mile initial phase of the LRT extension in September 1996, and PE for the Coaster commuter rail station improvements in May 1997. The Coaster stations and the Phase I Balboa Light Rail Transit Extension are being combined into one initial project, and are proceeding through PE and the Final Environmental Impact Statement together (FEIS), scheduled to be completed in June 1998.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Information reflects both the 3.4 mile initial phase of the Mid Coast LRT and the Coaster commuter rail station improvement projects.

Mobility Improvements

MTDB estimates that the Mid Coast light rail extension and the Coaster station rail improvements will attract 5,600 new riders daily by 2015 and would result in the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 17.5 million	\$ 5.0 million
Hours	1.4 million	0.5 million

Based on 1990 Census data, there are an estimated 402 low-income households within a 1/2 mile radius of the proposed 5 stations.

Environmental Benefits

The San Diego region is a "serious" non-attainment area for ozone, and a moderate non-attainment area for carbon monoxide. MTDB estimates the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	350	117
Nitrogen Oxide (NOx)	41	14
Volatile Organic Compounds (VOC)	25	8
Particulate Matter (PM ₁₀)	4	1
Carbon Dioxide (CO ₂)	24,724	7,503

Values reflect annual tons of emissions reductions

MTDB estimates that in 2010, the LRT extension and the Coaster station rail improvements will result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	320,749 million	95,824 million

Values reflect annual BTU reductions

Operating Efficiencies

MTDB estimates the following costs per passenger mile for the LRT extension and the Coaster station rail improvements.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.265	\$0.263	\$0.264

Cost Effectiveness

MTDB estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$9.00	\$10.50

Values reflect 2015 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Medium

The corridor contains two distinct land use patterns. Interstate 5 and the recreational facilities of Mission Bay encompass most of the area to the west of the proposed rail alignment. The eastern portion of the corridor contains residential, commercial, and industrial development. Residential development is planned to accommodate more multiple family housing around the proposed light rail stations. The City of San Diego adopted *Transit-Oriented Development Design Guidelines* to provide a framework for redevelopment strategies, street and circulation system design, and transit facility design. The MTDB has established joint development policies for all of its properties. An extensive community planning process forms the basis for land use planning in San Diego. Transit oriented development has been incorporated into several planning initiatives within the corridor.

The City of San Diego has made steps to reduce the supply of parking around transit. City policy allows developers to reduce parking supply for multi-family dwellings and commercial areas near transit by 15% and for mixed use developments based on shared parking ratios. The city has also applied parking maximum ratios for all developments citywide. The community of Pacific Beach west of the proposed Balboa Avenue station identifies a "Transit Oriented Development Opportunity Area" to be served with feeder buses that connect to the station. The City of San Diego's Office of Small Business provides support for business improvement districts and facade improvement programs that indirectly support transit oriented development.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 37 %

The financial plan for the 3.4 mile initial phase of Mid Coast LRT and the Coaster Stations includes \$61.6 million (63%) in Section 5309 New Start funds, \$7.0 million (7%) in State funds, and \$29.7 million (30%) in local funds.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

The proposed local share of \$29.7 million, representing 30% of project cost, is expected from the 1/2 cent Transnet sales tax. The Midcoast Corridor LRT has been identified as the next highest priority in the San Diego area following the Mission Valley East LRT project. State funding sources are estimated to contribute approximately 7% of project capital costs. These funds have been programmed in the 1996 State Transportation Improvement Program (STIP). MTDB notes that the federal contribution to the total San Diego Light Rail

system since the line first opened in 1981 and including both proposed Mission Valley East and the Mid Coast corridor projects will total 32%.

Stability and Reliability of Operating Financing Plan

Rating: Medium

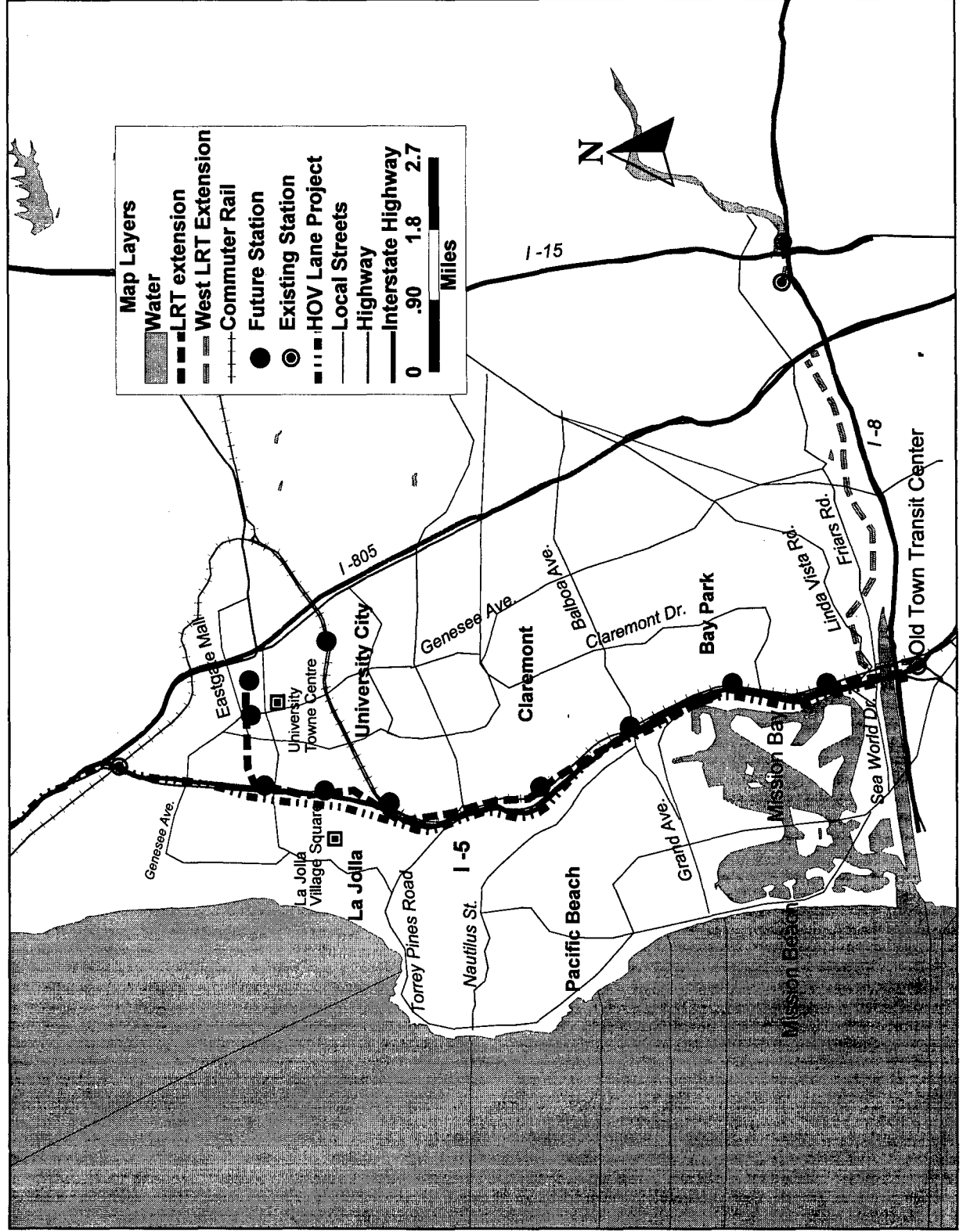
The overall operating financial condition of MTDB appears strong. However, the cash flow projections predict operating deficits for several years during the period between FY 1992 to 2011. These deficits appear in latter years of the cash flow, when all new capital projects enter revenue operations.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (Reported in \$1997 dollars)</u>
Federal:	
Section 5309 New Start	\$61.60 (\$7.06 million appropriated through FY 1998.)
State:	
Transportation Planning & Development Account	1.20
Other	5.80
Local:	
Transnet Sales Tax	29.70
TOTAL	\$98.40 (Initial Phase LRT and Coaster Stations)

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Mid Coast Corridor

San Diego, CA



Mission Valley East Light Rail Transit Project

San Diego County, California

(November 1997)

Description

The Metropolitan Transit Development Board (MTDB) is planning to build a 5.9 mile Mission Valley East Light Rail Transit (LRT) extension from east of Interstate 15 to the City of La Mesa where it would connect to the existing East LRT Line, now referred as the Orange Line, near Baltimore Drive. The line would serve four new stations at Grantville, San Diego State University (SDSU), Alvarado Medical Center, and 70th Street, and would include elevated, at-grade, and tunnel portions. The project will provide two park and ride lots and a new access road between Warning Road and Grantville Station. The total project capital costs equal \$332 million (1996 dollars). The project is expected to serve approximately 10,800 daily riders in the corridor by 2015, and 2.5 million new systemwide annual transit trips.

Summary Description

Proposed Light Rail Extension	5.9 miles in length, 4 stations
Total Capital Cost: \$ 332 million (\$1997)	2015 Ridership Forecasts (Average Weekday)
	- 10,800 daily
Annual Operating Cost: \$ 4.5 million (\$1994)	- 7,400 new riders

Status

The Major Investment Study/Draft Environmental Impact Study was completed in May 1997. The Locally Preferred Alternative was selected by the Metropolitan Transit Development Board in October 1997 with concurrence from the San Diego Association of Governments (SANDAG). The FTA approval to enter the Preliminary Engineering (PE) phase of project development is pending. It is anticipated that PE should be completed by September 1998. This abbreviated schedule for PE is possible due to the extensive public involvement, and detailed analyses undertaken during the planning stages, eliminating much of the work that would traditionally be undertaken in PE/FEIS phase. It is anticipated that the project's Final EIS can be certified and the design and engineering phase initiated in 1998.

The Mission Valley East Extension project is in the financially constrained Regional Transit Plan (RTP) of the San Diego Association of Governments (SANDAG) and the draft Regional Transportation Improvement Program (RTIP).

This project was not authorized in ISTEA. Through FY 1998, Congress has appropriated \$1 Million in Section 5309 New Starts funds to this project.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*.

Mobility Improvements

The LRT extension is estimated to produce 3,800 more daily transit trips than the TSM alternative and would attract 7,400 new riders by 2015. MTDB estimates the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 14.2 million	\$ 8.1 million
Hours	1.1 million	0.6 million

Based on 1990 census data, there are an estimated 1,152 low-income households within a 1/2 mile radius of the proposed four stations.

Environmental Benefits

The San Diego region is a serious non-attainment area for ozone, and a moderate non-attainment area for carbon monoxide. This corridor runs parallel to Interstate 8, which is the most congested freeway in the San Diego region. MTDB projects the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	18	18
Nitrogen Oxide (NOx)	3	3
Volatile Organic Compounds (VOC)	3	3
Particulate Matter (PM ₁₀)	3	3
Carbon Dioxide (CO ₂)	6,213	4,354

Values reflect annual tons of emissions reductions

MTDB estimates that in 2015, the LRT would result in the following savings in regional energy consumption (measured in British Thermal Units -BTU) .

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	81,521 millions	48,434 millions

Values reflect annual BTU reductions

Operating Efficiencies

MTDB estimates a slight decrease in the systemwide operating cost per passenger mile in the year 2015 for the Mission Valley East extension compared to the No-Build and the TSM.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.176	\$0.178	\$0.175

Cost Effectiveness

MTDB estimates the following cost effectiveness indices:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$10.30	\$14.20

Values reflect 2015 ridership forecast and 1994 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium-High**

Land use along the proposed Mission Valley East Corridor contains a mix of industrial, commercial, and residential use including the Jack Murphy Stadium, San Diego State University (SDSU), and the Alvarado Medical Center. San Diego has initiated efforts to limit developmental sprawl by designating areas as Urbanized, Planned Urbanized, and Future Urbanizing in order to allocate infrastructure and urban services such that growth is absorbed in an incremental manner. The *San Diego Progress Guide and General Plan* incorporates policies that encourage infill development and redevelopment. SANDAG has supported growth management by encouraging more intense residential and commercial development around stations. The City of San Diego adopted *Transit-Oriented Development Design Guidelines* to provide a framework for redevelopment strategies, street and circulation system design, and transit facility design with a pedestrian friendly environment. The MTDB has established joint

development policies for all of its properties and published a manual to guide developers and designers to orient land development around transit. The City of San Diego and the San Diego State University Foundation have undertaken a 58.6 acre mixed-use, pedestrian-oriented urban village redevelopment project adjacent to the SDSU campus. SDSU plans to intergrate the LRT station into the heart of the redevelopment project. The City of La Mesa is planning a joint development high density office, retail, and housing complex project within the corridor. San Diego has made positive steps in managing parking supply to support compact and transit oriented development. The City has placed maximum limits on parking provisions throughout the entire city.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 20 %

The financial plan includes \$261.4 million (79%) in Section 5309 New Start funds, \$3.2 million (1%) in CMAQ funds, \$58.3 million (17.5%) in State funds, and \$9.1 million (3%) in local funds.

Stability and Reliability of Capital Financing Plan

Rating: Medium

In 1987, San Diego voters approved a 1/2 cent local sales tax (TransNet) dedicated to transportation. One-third of the revenues, or \$750 million over 20 years, is earmarked for capital improvements to public transit, and a major share of this is for the LRT extensions. The State is contributing approximately 17% of the project cost through the AB973 fund. These funds were expected to originate from three statewide bond measures. However, two of the three funds have been rejected by the California voters, leaving the state to make up the difference from other funding sources not specified in the financial plan. The MTDB is considering additional traditional funding sources to cover any contingencies or gaps in the capital financing plan. Preliminary capital cost estimates are reasonable, with inflation assumptions in-line with trends in the region.

Stability and Reliability of Operating Financing Plan

Rating: Medium

The operating plan cash flow projections predict a deficit early in the operating years. The MTDB Board of Directors has made a commitment to increase the farebox recovery ratio to cover these gaps.

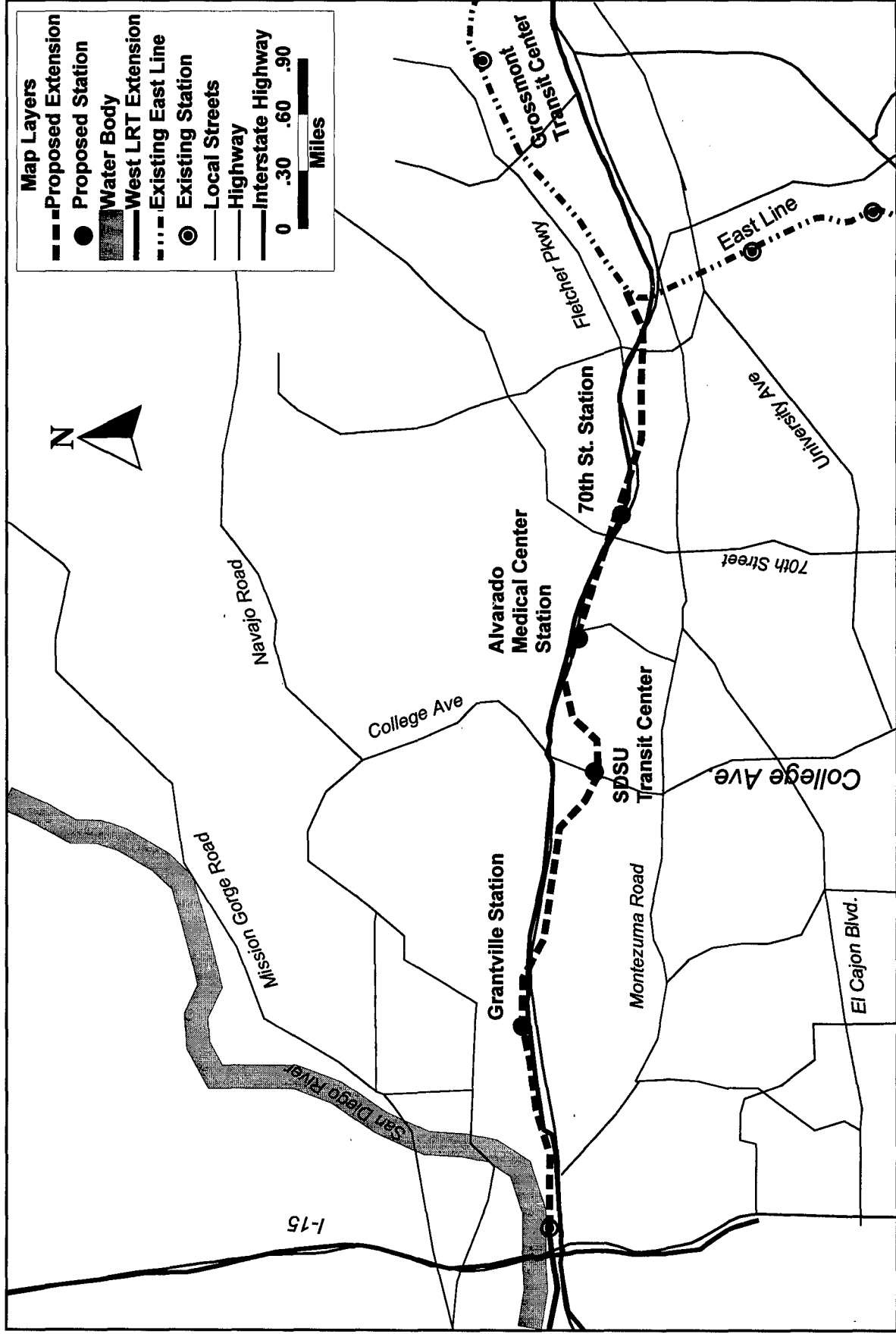
Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in 1997 dollars)</u>
Federal:	
Section 5309 New Start	\$261.40 (\$1 million appropriated through FY 1998.)
Flexible Funds (CMAQ)	3.20
State:	
AB973	57.90
Transportation System Management (TSM)	0.40
Local:	
TransNet Sales Tax	8.10
San Diego State University Contribution	1.00
TOTAL	\$332.00

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Other Factors **Public Involvement Process:** MTDB undertook an extensive public involvement including the formation of a formal Project Review Committee(PRC), managed by a professional independent facilitator, which provided a mechanism for more extensive comment by interested parties. A series of workshops were conducted by PRC to review the various proposed transit alternatives. MTDB also conducted 90 community coordination activities including general public meetings, workshops, presentations to planning and community groups, public open houses, informational kiosks at shopping centers, bus tours for the general public, individual informational and status meetings, and continuous distribution of a newsletter to over 20,000 residents in the corridor.

Mission Valley East LRT Corridor

San Diego, CA



Oceanside-Escondido Passenger Rail Project

North San Diego County, California

(November 1997)

Description

The North County Transit District (NCTD) is the lead agency planning the conversion of an existing 22-mile freight rail corridor into a light rail transit system running 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. A proposed alignment will serve the California State University San Marcos (CSUSM), including an additional 1.7 miles of new rail right-of-way. The proposed rail system would serve fifteen stations, four of these stations would be located at existing transit centers. Average weekday ridership in the year 2015 is projected to total 19,768. The total project cost is approximately \$194 million (1995 dollars). The Oceanside-Escondido Rail Project was approved by voters in San Diego County in 1987 through Proposition A, a local sales tax initiative.

Summary Description

Proposed Commuter Rail	22 miles in length, 15 stations
Total Capital Cost: \$ 193.7 million (\$1995)	2015 Ridership Forecasts (Average Weekday) - 19,768 daily
Annual Operating Cost: \$ 3.2 million (\$1997)	- 15,100 new riders

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. The Oceanside-Escondido Rail Project was designated as a 'pipeline project'. A Major Investment Study was not required based on concurrence from FTA, FHWA, San Diego Association of Governments (SANDAG), Caltrans, 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 Board certified the SEIR in March 1997. FTA issued a Finding of No Significant Impact on October 16, 1997.

Through FY 1998 Congress has appropriated \$2.99 million in Section 5309 New Start funds and for this project.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*.

Mobility Improvements

NCTD estimates the project will result in the following annual travel time savings.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 16.9 million	\$ 7.5 million
Hours	1.4 million	0.7 million

Based on 1990 Census data, there are an estimated 1,903 low-income households within a 1/2 mile radius of the proposed 15 stations.

Environmental Benefits

The San Diego region is a "serious" non-attainment area for ozone, and a moderate non-attainment area for carbon monoxide. This project will help to eliminate the heavy congestion of northern San Diego County along the State Route 78 corridor. NCTD estimates that the project would result in the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	96	43
Nitrogen Oxide (NO _x)	0	12
Volatile Organic Compounds (VOC)	5	4
Particulate Matter (PM ₁₀)	0	0
Carbon Dioxide (CO ₂)	4,070	2,113

Values reflect annual tons of emissions reductions

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

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	53,932 millions	28,814 millions

Values reflect annual BTU reductions

Operating Efficiencies

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

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.17	\$0.17	\$0.17

Cost Effectiveness

NCTD estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	3.70	\$5.30

Values reflect 2015 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium**

The Oceanside-Escondido Corridor contains a dispersed mix of commercial, industrial, single, and multiple residential developments. Major activity centers include the central business districts in each of the incorporated cities in the corridor, Oceanside, Vista, San Marcos, and Escondido, several industrial complexes, several hospitals, community colleges, and the California State University at San Marcos (CSUSM). SANDAG's Land Use Distribution Element of the Regional Growth Management Strategy, addresses the location, intensity, and design of urban communities, and the relationship of these communities to the planned transportation system. This element was approved by the SANDAG as guidance for local jurisdictions in updating their general and community plans. Most of the cities in the corridor are taking action to implement these guidelines. The Oceanside Transit Corridor Study is identifying opportunities for pedestrian-oriented, mixed use development around the proposed stations within the city. Several large scale mixed use developments have been proposed at the Oceanside Transit Center. The Oceanside downtown redevelopment district contains a Transit District Overlay Zone encouraging mixed use development and reduced parking requirements. The Escondido general plan includes infill development to improve existing neighborhoods. Redevelopment plans in the Cities of Vista and San Marcos provide pedestrian design guidelines and propose major intensification of land use at the rail station. The NCTD has already made

several joint development agreements with owners of property adjacent to several station sites for station access, off-site improvements, and parking.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 45%

The financial plan includes \$107 million (55%) in Section 5309 New Start funds, \$34.4 million (18%) in State funds, and \$52.3 million in local funds.

Stability and Reliability of Capital Financing Plan

Rating: Medium

The Oceanside-Escondido Rail project was approved by voters in San Diego County as part of Proposition A, a 1/2 cent local sales tax referred to as Transnet. The local sales tax raises approximately \$52.3 million representing 27% of the project. The funds from this source are not sufficient to fund construction of this project on a pay-as-you-go basis so a contingency plan to bond against these local sales tax revenues is planned. The debt service coverage ratio for the transit program does not fall below the minimum level and projections indicate that there will be sufficient revenues over the life of the program. The railroad right-of-way and land acquisition was acquired with state and local funds in 1992. The local funds include 18% of the State Proposition 108 funds, and the project is included in the State Transportation Improvement Program. The North County Transit District (NCTD) implemented the Coaster Rail project solely with state and local funds, a \$150 million capital project in 1995.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

NCTD obtains operating funds from both the Transnet source and the Transit Development Act (TDA), a dedicated local sales tax created in 1971 to fund transit operations and the State Transit Assistance Fund (STAF). These state and local funds represent approximately 60% of their operating expenses. Much of the operating funding for the rail systems is derived from the users of the right-of-way. Through shared use agreements, NCTD receives approximately \$5 million per year from Burlington Northern Santa Fe and Amtrak. Other lease revenue is derived from the right-of-way and leases at the transit centers and administration building. Funds received from farebox revenues, advertising revenues, and other sources account for 25% of the operating budget. Insufficient material was presented to show whether these sources of funds can fund the new projects planned by NCTD.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	Total Funding (<u>\$million</u>) (reported in 1995 dollars)
Federal:	
Section 5309 New Start	\$107.00 (\$2.99 million appropriated through FY 1998.)
State:	
State 108	34.40
Local:	
Proposition A	52.30
TOTAL	\$193.70

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

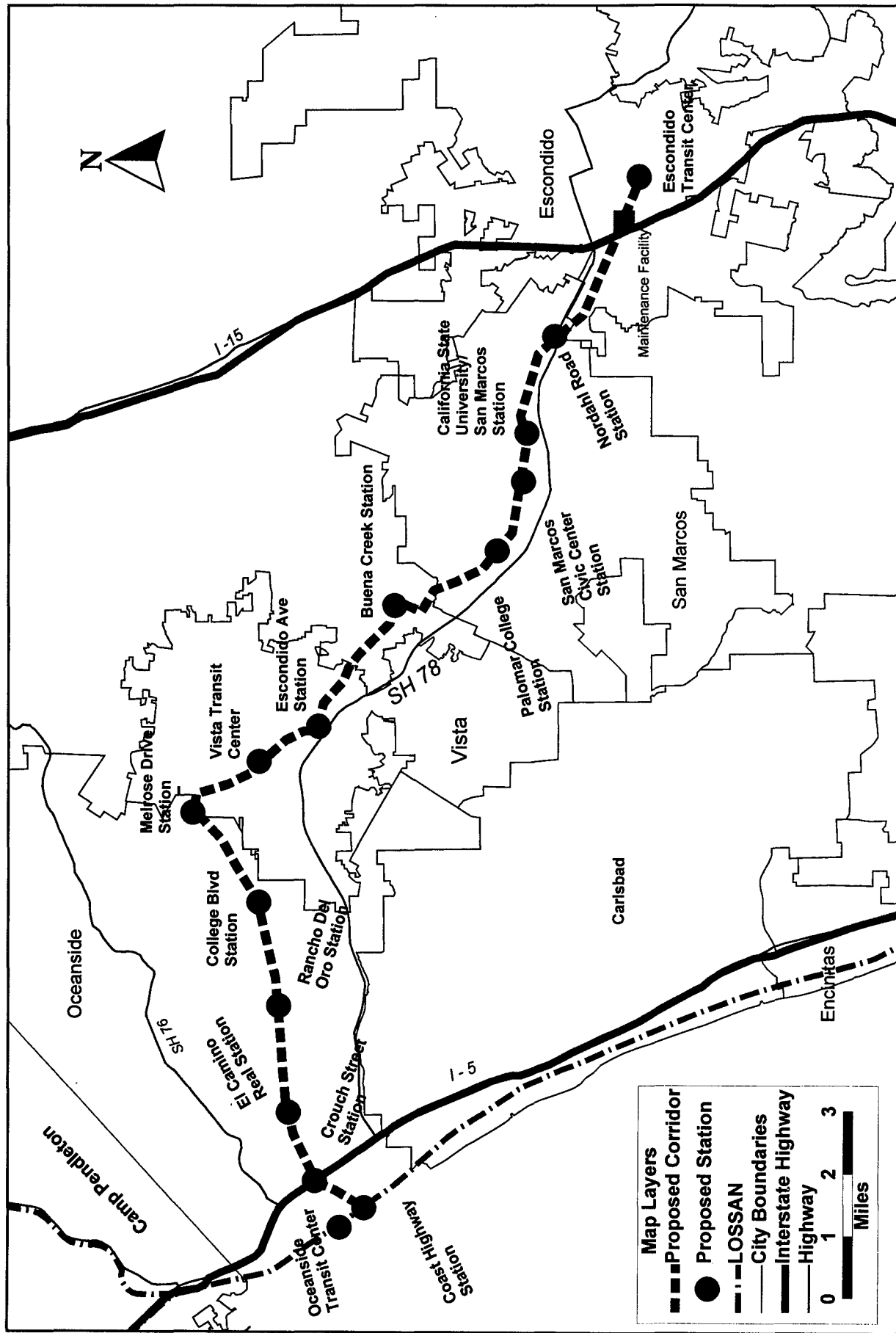
Other Factors

Multimodal Emphases: This project was initially conceived as part of a multimodal corridor study of the State Route 78 corridor. This three-phase study evaluated a range of transportation alternatives in the 20 mile corridor including freeway, arterial, and transit improvements.

Environmental Justice: According to the 1990 Census date, 62% of the households within the project corridor are minority and low income residents.

Oceanside - Escondido Corridor

San Diego, CA



Third Street Light Rail Project

San Francisco, California

(November 1997)

Description

The San Francisco Municipal Railway (MUNI) proposes the Third Street Light Rail Project which includes construction of a new light rail line located in the southeast sector of San Francisco and additional transportation improvements in the corridor. Formerly referred to as the Bayshore Corridor, the 7 mile LRT line would operate on the surface from the Bayshore Station at 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 \$907.6 million in 1997 dollars, to be constructed in two phases. Phase 1, the Initial Operating Segment (IOS), would operate as a surface extension of the J-Church MUNI Metro line between the Market Street Subway and the Bayshore CalTrain Station, with an estimated construction cost of \$401.7 million (1997 dollars), \$445.7 million in escalated dollars. Phase 2, the new Central Subway, would extend the line underground to a terminal in Chinatown, and is estimated to cost \$505.9 million (1997 dollars) to construct. The San Francisco Transportation Authority has programmed at least \$347 million (1997 dollars) in local sales tax funds for the construction of Phase 1. MUNI is currently developing a financial plan to fully fund the Initial Operating Segment.

Summary Description

Proposed Light Rail Line (Phase 1) **7 miles in length, 24 stations**
and potential Phase 2 Subway

Total Capital Cost: Phase I IOS
\$ 445.7 million (\$ escalated)

2015 Ridership Forecasts
(Average Weekday)

Annual Operating Cost: Phase 1
\$ 10.3 million (escalated)

- 79,965 daily on Third Street LRT
- 2,351 new riders

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). In November 1997, MUNI began Preliminary Engineering for Phase 1 of the light rail alignment as well as the Metro East Maintenance Facility; a decision on a Preferred Investment Strategy and resolution of remaining design options is anticipated by Summer 1998. A Record of Decision is anticipated by Fall 1998, and Phase I Preliminary Engineering is expected to be complete by December 1998.

The Third Street Light Rail project is included in the current regional long-range plan, with the caveat that the first phase will be 100 percent locally funded. Maintaining eligibility for future Federal participation is a high priority for the City. The project (Phases 1 and 2) would leverage approximately \$500-650 million in federal funds with an equal amount of local funds (in escalated dollars). From that amount of local funds, approximately \$404 million in local sales tax proceeds (in escalated dollars) is available and would be programmed for the first phase of this project. Negotiations continue with the Metropolitan Transportation Commission to revise the project's status for the 1997 update of the Regional Transportation Plan. To date, no Federal 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 for only one of the design/phase options under consideration, referred to as Phase 1/IOS. 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, New Start criteria are reported for the comparison of the New Start (IOS) to 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.

Mobility Improvements

The Third Street LRT Project would serve the transit dependent Third Street Corridor, improving service levels to existing transit patrons, and provide mobility benefits to major economically disadvantaged communities. Muni estimates that the Phase 1/IOS would result in the following annual travel time savings. (Muni estimates that the Central Subway results in even greater travel time savings due to LRT extension into Chinatown which further shortens travel times from the southern end to the northern end of the Corridor.)

	<u>New Start vs. No-Build</u> (Phase 1/IOS)	<u>New Start vs. TSM</u> (Phase 1/IOS)
Annual Travel Time Savings		
Dollars	N/A	\$ 12.2 million
Hours	N/A	1.6 million

Based on 1990 census data, there are an estimated 5,988 low-income households within a 1/2 mile radius of the proposed 24 stations.

Environmental Benefits

The San Francisco Bay Area is currently in nonattainment for carbon monoxide and was redesignated to an attainment status, maintenance area for ozone in June 1995. EPA proposed reclassifying the Bay Area from attainment to nonattainment status in 1997, based on previous ozone violations within the Bay Area air basin. MUNI estimates that in 2015, Phase 1/IOS would result in the following emissions reductions.

	<u>New Start vs. No-Build</u> (Phase 1/IOS)	<u>New Start vs. TSM</u> (Phase 1/IOS)
Carbon Monoxide (CO)	N/A	9
Nitrogen Oxide (NO _x)	N/A	19
Volatile Organic Compounds (VOC)	N/A	1
Particulate Matter (PM ₁₀)	N/A	no change
Carbon Dioxide (CO ₂)	N/A	N/A

Values reflect annual tons of emissions reductions

MUNI estimates that in 2015, Phase 1/IOS would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u> (Phase 1/IOS)	<u>New Start vs. TSM</u> (Phase 1/IOS)
BTUs per year	N/A	N/A

Values reflect annual BTU reductions

Operating Efficiencies

MUNI estimates that systemwide operating costs per passenger mile remain constant comparing Phase 1/IOS to the No-Build.

	<u>No-Build</u>	<u>TSM</u>	<u>Phase 1/IOS</u>
System Operating Cost per Passenger Mile (2015)	\$0.55	\$0.55	\$0.55

Cost Effectiveness

MUNI estimates the following cost effectiveness index.

	<u>New Start vs. No-Build</u> (Phase 1/IOS)	<u>New Start vs. TSM</u> (Phase 1/IOS)
Incremental Cost per Incremental Passenger	N/A	\$30.60

Values reflect 2015 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **High**

The City of San Francisco is a highly urbanized area. The entire Third Street LRT Corridor is densely populated and links central San Francisco with several transit dependent communities. Planned future development includes commercial and mixed use revitalization, housing, retail, recreation facilities, and the addition of the University of California at San Francisco (UCSF) research campus. MUNI and the City of San Francisco continue to encourage high-density development that is transit oriented and pedestrian friendly and that restricts parking. Detailed planning processes for new development along the corridor will develop specific design guidelines for both public improvements and private development to maximize the City's transit infrastructure.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 97 %

The current financial plan for Phase 1/IOS does not include Federal Section 5309 New Starts funds in this project. The financial plan includes \$7.5 million (2%) of Federal STP/CMAQ funds flexed at the State level, representing a small amount of California's apportionment under ISTEA.

Stability and Reliability of Capital Financing Plan

Rating: **Medium**

The primary source of funding for the Third Street LRT project is the

Proposition B one half cent sales tax program in place in San Francisco. Sales tax revenues are estimated at \$902 million over the 20 year period ending in 2010 when the tax will sunset. Sixty percent of these revenues are dedicated to MUNI projects over the 20 year period. MUNI shows capital and operating expenditures from the sales tax to be \$651.4 million, which would oversubscribe the MUNI allocation by \$110.2 million. MUNI, in coordination with the San Francisco County Transportation Authority, is aggressively pursuing state and regional funds to address this issue. State funds of \$25 million are earmarked for the project and tax increment financing of \$8.5 million is anticipated dependent on the real estate market. There is a contingency fund ranging from 25-30%, depending upon cost category, and an 8% project reserve built into the first phase of the financial plan. The \$404 million in local sales tax funds is a stable revenue source. Should more funds be needed, the Proposition B sales tax funds can be used for debt financing. MUNI will request future FTA funds for later project phases to begin in FY 2009.

Stability and Reliability of Operating Financing Plan

Rating: Medium-High

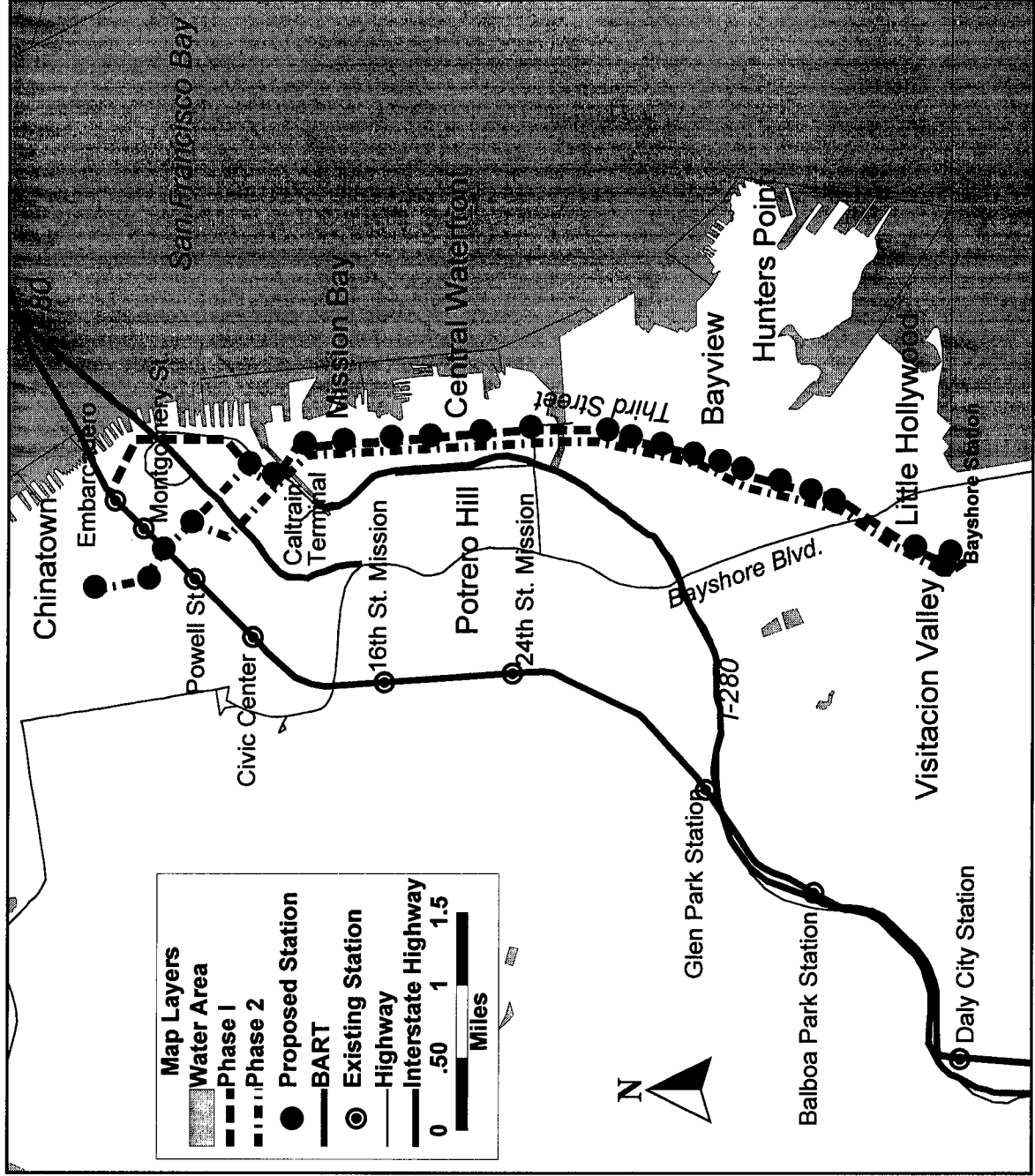
The operation of the Third Street LRT project requires additional funds to be derived from a fare increase, additional general fund appropriations, and an increase transfer of parking revenues. Any further shortfall will be met by a financial contribution by the City of San Francisco. Other potential sources of funding could include transit impact development fees and a percentage of City's allocation of a potential regional gasoline tax. The projections of operations and maintenance expenses assume a flat Federal subsidy of \$2.9 million per year.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in escalated dollars)</u>
Federal:	
Section 5309 New Start	0.00 (No federal funds have been appropriated for this project.)
Flexible Funds	7.50
State:	25.00
Local:	
Proposition B Sales Tax	404.60
Tax Increment Financing	<u>8.50</u>
TOTAL	\$445.70 (for Phase 1/IOS)

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions. Any errors are due to rounding.

Third Street LRT

San Francisco, CA



Minillas Extension to Tren Urbano

San Juan, Puerto Rico

(November 1997)

Description

The Puerto Rico Department of Transportation and Public Works (PRDTPW), through its Highway and Transportation Authority (PRHTA), is proposing an extension of its heavy rail rapid transit system, known as Tren Urbano Phase I, which is currently under construction. The extension of Tren Urbano Phase I from its current terminus at Sagrado Corazón to the Minillas area of Santurce is approximately one mile in length and contains two stations. Two alignments are currently the subject of a Draft Supplemental Environmental Impact Statement (DSEIS). One alternative, which parallels Puerto Rico highway routes 1 and 22, is primarily elevated with one aerial station and one underground station. The second alternative, under Ponce de León Avenue, is in subway along with its two stations.

Initial estimates of capital cost for the two alternative alignments of the Minillas Extension range from \$325 to \$432 million (escalated dollars). Ridership estimates for the Minillas Extension alternatives forecast an increase in Tren Urbano ridership ranging from 9,300 to 14,400 riders per day in 2010.

Summary Description

Proposed Extension of Tren Urbano Heavy Rail Transit System (under construction)	1 mile extension, 2 stations
Total Capital Cost: \$432 million (\$ escalated)	2015 Ridership Forecasts (Average Weekday) - 9,300 to 14,400 new riders
Annual Operating Cost: \$3.7 million (\$ escalated)	

Status

In 1993, the Federal Transit Administration (FTA) selected Tren Urbano as one of the Turnkey Demonstration Projects under the Intermodal Surface Transportation Efficiency Act (ISTEA). A Full Funding Grant Agreement (FFGA) was signed in March 1996 for the Phase I 10.7-mile (17.2-kilometer) section of Tren Urbano. Phase I is currently under construction.

The Minillas Extension has been included in previous planning studies as part of the rail system planned for metropolitan San Juan and has been included in the Regional Land Use and Transportation Plan since 1982. Minillas, located in the Santurce area of San Juan, is home to government offices of the Commonwealth, the Fine Arts Center, two major hospitals, as well as one of

the main commercial and residential districts on the Island.

In May of 1997, a Memorandum of Understanding (MOU) was signed by the Federal Transit Administration (FTA) and HTA stating that the planning process undertaken for the Minillas Extension satisfied the requirements of a Major Investment Study. Further, PRHTA was authorized to proceed with development of a Draft Supplemental Environmental Impact Statement (DSEIS) for the extension of Tren Urbano Phase I to Minillas. In August 1997, a Notice of Intent to develop an DSEIS was published in the Federal Register.

Through FY 1998, Congress has not appropriated any funds for the Minillas Extension.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Data are presented for the comparison of the New Start to the TSM alternative (since the No-Build analyzed in the EIS closely resembles a TSM alternative). N/A indicates that data are not available for this measure. Most of the following evaluation criteria, unless noted, reflect conditions which include the Tren Urbano Phase 1 project and the Minillas Extension - Ponce de Leon alternative. Land use and financial assessments and ratings are based on consideration of only the Minillas Extension.

Mobility Improvements

PRHTA estimates the following annual travel time savings for the complete Tren Urbano Phase 1 and Minillas Extension. (An estimated \$8.5 million in annual savings is attributed to the Minillas Extension.)

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	N/A	\$ 321 million
Hours	N/A	34 million

Based on 1990 US census data, there are an estimated 24,008 low-income households within a 1/2 mile radius of the proposed 18 stations of the Tren Urbano Phase 1 and Minillas Extension. (4,350 low-income households estimated for the two Minillas Extension stations.)

Environmental Benefits

The San Juan area is currently in compliance with all National Ambient Air Quality Standards (NAAQS). PHRTA estimates the following annual emissions reductions for the Tren Urbano Phase 1 and Minillas Extension.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	N/A	13,802
Nitrogen Oxide (NO _x)	N/A	699
Hydrocarbons (HC)	N/A	1,515
Particulate Matter (PM ₁₀)	N/A	11
Carbon Dioxide (CO ₂)	N/A	48,564

Values reflect annual tons of emissions reductions

PHRTA estimates that Tren Urbano Phase 1 and Minillas Extension would result in the following savings in annual regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	N/A	488,977 million

Values reflect annual BTU reductions

Operating Efficiencies

PHRTA estimates an increase in systemwide operating cost per passenger mile (New Start including the Tren Urbano Phase 1 and Minillas Extension).

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.17	\$0.17	\$0.23

Cost Effectiveness

PHRTA estimates the following cost effectiveness indices (New Start including the Tren Urbano Phase 1 and Minillas Extension).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	N/A	\$6.90

Values reflect 2010 ridership forecast and 1997 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: **Medium-High**

The proposed extension traverses the district of Santurce, which is the traditional center of government and commerce densely arranged in a fine-grained street system. The Puerto Rico Planning Board's Land Use Plan Objectives and Public Policies promote mixed use developments and support the intensification of uses particularly with the provision of medium and high density housing. The plan also discourages urban sprawl through increasing density and the limitation of development where public facilities do not already exist. Development of specific plans and policies for stations along the proposed Minillas Extension awaits the selection of the line alignment and the determination of station locations. Pedestrian amenities are addressed in the Special Zoning Regulation for Santurce as well as the Governor's Guide for the Regulation of Public Space Infrastructure. The Transportation Plan of Puerto Rico proposes parking management and regulation to adjust parking prices and supply to encourage transit use.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 93%

The financing plan for the Minillas Extension is interrelated with funding for Tren Urbano Phase 1 and the highway program for the Commonwealth. PRHTA now estimates that total project costs for Phase 1 have increased to \$1,550 billion (escalated dollars), and proposes a \$110 million increase in Federal funding. PRHTA has indicated a total of \$32 million in Federal funding for the Minillas Extension, clearly indicating that this FTA support applies to preliminary engineering and design of the Extension.

Stability and Reliability of Capital Financing Plan

Rating: **Medium**

PRHTA has access to significant revenues from user fees, taxes, and Federal grants used for highway and transit purposes, and demonstrates substantial capacity to issue revenue bonds. PHRTA has bonding capacity of at least \$3.9 billion and a current outstanding long-term debt of \$2.4 billion. Despite this demonstrated short-term capacity, there are long term concerns.

Aggressive transit and highway programs programmed through FY 2002 require substantial reduction of the highway program from FY 2003 outward. Alternative financing sources for the long-term highway program are not clearly specified.

Stability and Reliability of Operating Financing Plan

Rating: Medium-High

PHRTA has included the operating deficits for Tren Urbano Phase 1 and the Minillas Extension along with capital assistance to bus and publico projects. Operating deficits are shown as flat, with no escalation. Annual forecasts of proposed local funds pledged to PHRTA appear reasonable in the context of historical growth. Cashflow analyses show positive ending balances which increase significantly beginning in FY 2002, which is the final year of construction for Tren Urbano Phase 1 and the Minillas Extension. Similar concerns about the long term financial commitments and projected shortfalls for the highway program apply in the rating of the operating financing plan.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million) (reported in escalated dollars)</u>
Federal:	
Section 5309 New Start	\$32.00 (\$0 million appropriated through FY 1998 for the Minillas Extension.)
State:	
Various Sources	400.37
TOTAL	\$432.37 (for Minillas Extension)

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

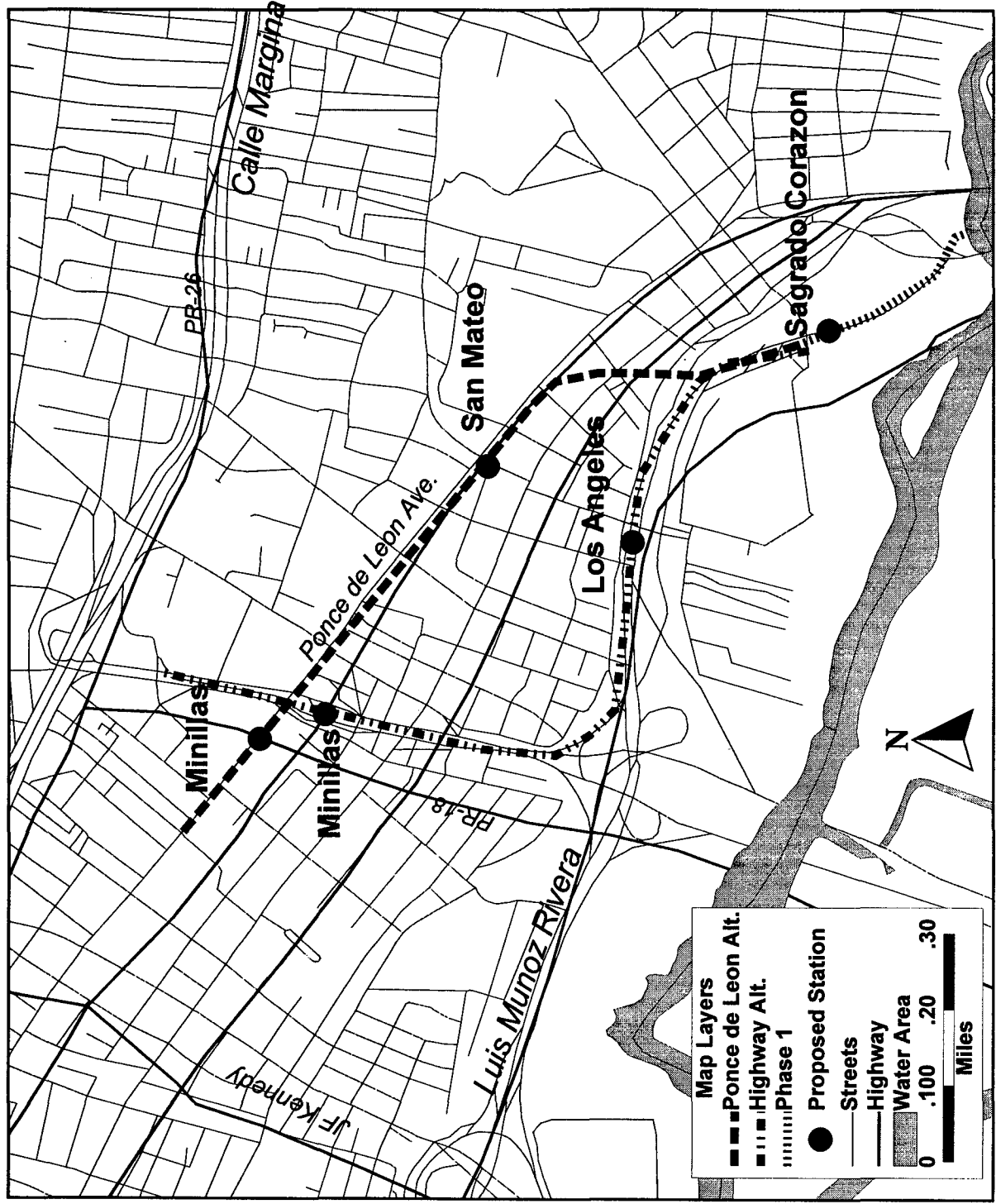
Other Factors

Multimodal Planning: Tren Urbano Phase 1 and the proposed Minillas Extension are being integrated with bus and publico improvements. The Commonwealth is implementing a phased restructuring of AMA and Metrobus routes as a feeder system for Tren Urbano as well as transit centers and intermodal transfer stations.

Turnkey Construction: Tren Urbano Phase 1 is one of the FTA designated Turnkey Demonstration Projects. Phase 1 is being constructed and will be operated under a turnkey procurement which has expedited the implementation of the project. While no final decisions have been made, it is anticipated that the Minillas Extension would also apply turnkey procurement.

Minillas Extension

San Juan, Puerto Rico



Sound Move Regional Transit System Plan

Seattle, Washington
(November 1997)

Description The Central Puget Sound Regional Transit Authority (RTA) is implementing a comprehensive, integrated regional system of high capacity transit services, known as Sound Move.

Sound Move includes the following transit elements: a 23-mile Central Light Rail Transit (LRT) project running north to south from Northgate, through downtown Seattle, Southeast Seattle and the cities of Tukwila and SeaTac plus a 2-mile LRT line from downtown Tacoma to the AMTRAK/Sounder rail station and the Tacoma Dome; an 81-mile commuter rail system using existing railroad tracks between Everett, Seattle, Tacoma and Lakewood; and twenty new regional express bus routes to be combined with fourteen new direct access ramps and a number of new park-and-ride lots and transit centers, integrated with 100 miles of existing Washington State Department of Transportation (WSDOT) HOV lanes.

Estimated capital costs for the entire Sound Move project total \$3,068 million (1995 dollars). The Central LRT and commuter rail are estimated to cost \$1,696 million and \$539 million respectively (both in 1995 dollars). A major investment required for the Central LRT Project -- the downtown Seattle transit tunnel with five stations -- is already in place.

Summary Description

Proposed Sound Move Projects	Includes 25 miles of light rail, 81 miles of commuter rail, 20 new express bus routes, and HOV facilities
Total Capital Cost (total project): \$ 3,068 million (\$1995)	
Annual Operating Cost: \$ 101 million (\$1995)	2010 Ridership Forecasts (Average Weekday) - 178,000 daily riders on Sound Move - 131,000 new transit riders

Status Section 3035 (bbb) and 3035 (ccc) of ISTEA directed FTA to enter into a multiyear agreement with the Municipality of Metropolitan Seattle (predecessor to Metropolitan King County) in the amount of \$300 million for the light rail project and \$25 million for the commuter rail project. The three-county Central Puget Sound Regional Transit Authority (RTA) was formed in 1993, and assumed rapid transit responsibilities from Metro, per State law. The RTA Board adopted its ten-year regional transit plan -- Sound Move -- in May 1996. In a November 1996 public referendum, voters approved local funding to implement the plan.

Sound Move is included in the Puget Sound Regional Council's (the MPO) adopted long range transportation plan. A Major Investment Study (MIS) was completed in March 1997. FTA approved the initiation of Preliminary Engineering for the Central LRT project in August 1997. The Draft Environmental Impact Statement (DEIS) is scheduled to be completed in Fall 1998.

In 1993, the RTA received a \$1.9 million grant for an Environmental Assessment on the Seattle-Tacoma commuter rail line. Subsequently in 1995, the RTA received a \$1.0 million grant for a demonstration of commuter rail service between Seattle, Tacoma and Everett. In September 1997, FTA approved a \$1.3 million grant for the Environmental Assessment on the Seattle-Everett and Tacoma-Lakewood segments of the commuter rail line. A request to enter Preliminary Engineering on commuter rail is pending with FTA. The RTA has initiated express bus services.

Through FY 1998, Congress has appropriated \$20.92 million for the Sound Move light rail and commuter rail projects.

Evaluation

The RTA's Sound Move projects are being combined into a single system for this FY 1999 New Starts Report. In subsequent annual reports, the light rail and commuter rail projects, both of which are seeking Section 5309 New Starts funds, will be reported separately. 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 measure.

Mobility Improvements

Total daily ridership on Sound Move is estimated to total 178,000 in the year 2010 (107,000 daily riders on LRT and the remainder on commuter rail and new express bus and HOV). The RTA's Sound Move projects are projected to attract 131,000 new riders daily in 2010. RTA estimates the following annual travel time savings for the Sound Move projects.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$ 138.5 million	\$ 109.9 million
Hours	13.0 million	10.3 million

Based on the 1990 census, there are an estimated 15,145 low-income households within a 1/2 mile radius of the proposed 23 stations serving the proposed Central Light Rail line from Northgate to Tukwila.

Environmental Benefits

The Central Puget Sound region is classified as an attainment area for carbon monoxide and ozone. There are spot areas in the region that are non-attainment for particulate matter. RTA estimates that the combined total of all Sound Move Projects (including light rail, commuter rail, express bus, and HOV lanes) will result in the following emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	12,920	6,980
Nitrogen Oxide (NOx)	1,440	740
Volatile Organic Compounds (VOC)	2,920	3,010
Particulate Matter (PM ₁₀)	N/A	N/A
Carbon Dioxide (CO ₂)	99,270	94,500

Values reflect annual tons of emissions reductions for the combined total of all Sound Move Projects.

RTA estimates that the combined total of all Sound Move Projects (including light rail, commuter rail, express bus, and HOV lanes) will result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	3,030,000 millions	2,830,000 millions

Values reflect annual BTU reductions for the combined total of all Sound Move Projects.

Operating Efficiencies

RTA estimates the following operating costs per passenger mile for the Sound Move projects.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	N/A	N/A	\$0.27

Cost Effectiveness

RTA estimates the following cost effectiveness index for the Sound Move projects, compared to the No-Build.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$9.30	N/A

Values reflect 2010 ridership forecast and 1995 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Medium-High (only the Central LRT has been rated)

The Central LRT corridor traverses the Seattle CBD and surrounding neighborhoods, characterized by high density mixed uses (commercial, retail, residential) in a pedestrian friendly environment. The proposed alignment serves several high trip generators. Current bus transit ridership along the corridor totals 140,000 daily riders. Strong growth management policies are in place supported by the State's Growth Management Act, the Puget Sound Regional Council's Vision 2020, and locally adopted comprehensive plans which concentrate growth into urban centers served by high capacity transit. Currently Seattle is considering adopting a more transit supportive parking policy. Transit supportive development is promoted in a wide range of regional and local plans. However, since LRT preliminary engineering has just been initiated, the station area planning process in the corridor is only beginning. The RTA Board has formed a Task Force to address transit-oriented and joint development opportunities. The Seattle Strategic Transportation Plan is beginning to reexamine parking policies and management.

Local Financial Commitment

Proposed Local Share of Total Project Costs: 76 %

The financial plan proposes \$550 million (18%) in Section 5309 New Start funds, and \$177 million (6%) in other Federal funds (estimates in 1995 dollars). Approximately \$2.3 billion (76%) of the Sound Move capital program is proposed to be funded from local sources. Slightly over half of this amount is to be funded from voter approved taxes (a 0.4% sales and use tax, and a 0.3% motor vehicle excise tax (MVET)), and the remaining amount is to be funded through bonds secured by local tax revenues. The RTA plan proposes a 50% Federal participation in the 23-mile Light Rail line from Northgate to SeaTac and a 25% Federal participation in the 81-mile Commuter Rail line from Everett to Lakewood.

Stability and Reliability of Capital Financing Plan

Rating: Medium-High

The RTA overall capital program appears strong given the agency's access to dedicated local tax sources. Capital cost estimates and contingencies appear reasonable given the size and proposed design of the project. Revenues from the 0.4% sales and use tax are dedicated exclusively to RTA uses.

Conservative forecasts of local economic growth and inflation have been applied in the projections of funding from this source. The 0.3% MVET levied on vehicles registered in the Central Puget Sound Region is a strong, non-cyclical revenue source. Bond proceeds are proposed to fund one-third of the capital program, and appear well within the RTA's statutory debt limit.

Stability and Reliability of Operating Financing Plan

Rating: Medium-High

Annual operating costs for Sound Move are projected to stabilize at \$101 million once the program is fully implemented. Cost estimates appear reasonable. Sound Move operating financing is distinct and separate from any local funding sources needed to support existing bus transit operations in the Puget Sound region. The financial plan utilizes the same local tax revenue sources to fund operations as proposed to fund Sound Move capital expenditures. As total capital needs and annual expenditures decline following proposed introduction of LRT revenue service in 2007, total revenues from these tax sources exceed the needs of the operating plan (in the absence of any new capital programs).

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1995 dollars)
Federal:	
Section 5309 New Start	\$550.00 (\$20.92 million appropriated through FY 1998.)
Other FTA and FHWA	177.00
Local:	
Sales and Use Tax	1,001.00
Motor Vehicle Excise Tax	288.00
Bonds	1,052.00
TOTAL	\$3,068.00 (Complete Sound Move System)

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Other Factors

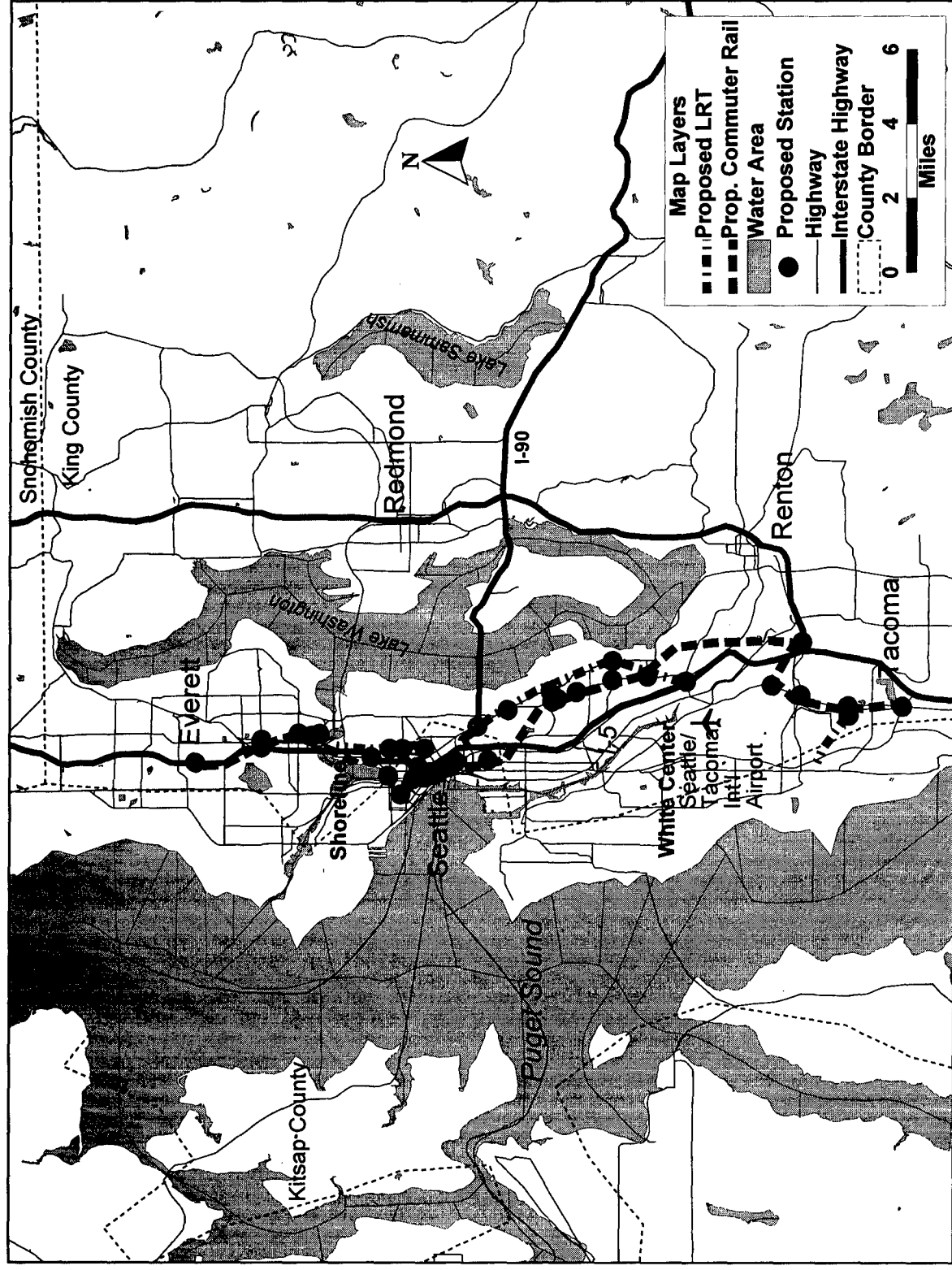
Multimodal Emphasis with Regional Integration: Sound Move is a multimodal program of which the New Start projects are but one part; 40% of the projected system riders will be on modes other than light rail. Sound Move will be closely integrated with existing bus operators, the State ferry system, and the operations of the State's HOV system. By 1999, RTA projects that the region's public transit riders will be able to ride regionwide on a single fare/pass.

Environmental Justice: The Central Light Rail corridor serves areas of the region with the highest per capita numbers of people living in poverty and people of color. This investment will provide greatly improved transit connections from these neighborhoods to employment sites throughout the region.

Expert Review Panel: The cost and ridership projections for the Sound Move project were reviewed by an independent Expert Review Panel, which concluded that the estimates are reasonable and prudent "though taken as a whole they may present a picture that understates the long-term regional ridership potential of the proposed investments".

Sound Move Regional Transit System

Seattle, WA



Largo Corridor Metrorail Extension

Washington, D.C. Metropolitan Area

(November 1997)

Description The Maryland Mass Transit Administration (MTA) is the lead local agency planning a 3.1 mile extension of the Washington Metrorail Blue Line from Addison Road to Largo Town Center. This addition will add two stations--one at Summerfield Boulevard and the other at Largo Town Center. The two stations will have a combined parking capacity of 2,700. The proposed extension is beyond the 103 mile Metrorail system authorized by the National Capital Transportation Act of 1969, as amended.

Capital cost estimates for this project total approximately \$346 million (1997 dollars) and \$397 million in escalated dollars. Total daily transit ridership is estimated at 28,500. The Jack Kent Cooke Stadium, which opened in September 1997 is currently served by shuttle buses from the Addison Road Station on the Blue Line and the Cheverly and Landover Stations on the Orange Line. With the Metrorail Extension to Largo Town Center, transit's share of Stadium related trips will increase from 10% to 13% - reducing the number of autos going to and from the stadium. In addition, the Metrorail Extension will directly serve the USAirways Arena, which seats 20,000, and is estimated to attract nearly 12% of the trips to events.

Summary Description

Proposed Heavy Rail Extension to Metrorail Blue Line	3.1 miles in length, 2 stations
Total Capital Cost: \$ 397.1 million (\$ escalated)	2015 Ridership Forecasts (Average Weekday) - 28,500 daily
Annual Operating Cost: \$11.0 million (\$1996)	

Status Section 3035 (nn)(3) of ISTEA directed FTA to enter into a Full Funding Grant Agreement with the State of Maryland, or its designee, for not less than \$5 million to carry out an alternatives analysis and preliminary engineering (PE). Through FY 1998, Congress has not appropriated any funds for this study. System planning requirements have been fulfilled. FTA approved the initiation of PE in February 1996. MTA is anticipating PE to be completed by June 1998. The Draft Environmental Impact Statement (DEIS) was completed in February 1997. The Final Environmental Impact Statement (FEIS) is anticipated to be completed by January 1998.

The proposed Metrorail Blue Line extension was approved as an addition to the 103-mile Metrorail Adopted Regional System in February 1997, contingent on completion of the FEIS and a Record of Decision by FTA and approval of a financial plan. The Addison Road to Largo Metrorail extension is included in the National Capital Region's Constrained Long-Range Plan and is also programmed in the State of Maryland's Statewide Transportation Improvement Program.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*.

Mobility Improvements

MTA estimates the following annual travel time savings:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Annual Travel Time Savings		
Dollars	\$32.5 million	\$22.7 million
Hours	1.7 million	1.1 million

Based on 1990 Census data, there are an estimated 45 low-income households within a 1/2 mile radius of the proposed 2 stations.

Environmental Benefits

The Washington, DC Metropolitan area is classified as a serious ozone non-attainment area and a moderate carbon monoxide non-attainment area. The project is in conformance with and is consistent with Maryland's State Implementation Plans provision for Transportation Control Measures.

MTA estimates the following annual emissions reductions.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	94	74
Nitrogen Oxide (NO _x)	726	564
Volatile Organic Compounds (VOC)	41	41
Particulate Matter (PM ₁₀)	no change	1
Carbon Dioxide (CO ₂)	2,737	1,796

Values reflect annual tons of emissions reductions

Energy Consumption

MTA estimates the following reductions in regional energy consumption (measured in British Thermal Units - BTU).

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTUs per year	19,498 million	6,418 million

Values reflect annual BTU reductions

Operating Efficiencies

MTA estimates the following systemwide operating costs per passenger mile.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (2015)	\$0.358	\$0.359	\$0.362

Cost Effectiveness

MTA estimates the following cost effectiveness indices.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Incremental Cost per Incremental Passenger	\$8.40	\$10.40

Values reflect 2015 ridership forecast and 1996 dollars

Transit Supportive Existing Land Use and Future Patterns

Overall Rating: Medium

The proposed heavy rail extension primarily encompasses Landover and Largo-Lottsford, two unincorporated areas of Central Prince George's County, MD. The corridor consists primarily of residential uses and some commercial, industrial and office developments. There is a significant amount of undeveloped land in the corridor. The area also includes two major sports facilities: The 80,000 seat Jack Kent Cooke football stadium, and the 20,000 seat USAirways Arena.

A countywide growth policy was recently developed by Prince George's County. Area plans call for high, mixed use density around transit stations. This area is available to be designated a Transit District Overlay Zone (TDOZ). TDOZ's are intended to facilitate plans around existing Metrorail stations. The TDOZ can be activated for the proposed Summerfield and Largo Town Center stations creating denser development than currently planned in close proximity to stations. Joint development and air rights

development policies are in place, and transit overlay zoning to focus denser development around stations has been approved. The Washington Metropolitan Area Transit Authority (WMATA), and MTA are cooperating in promoting transit/pedestrian friendly design, parking management, and mixed high density land uses.

**Local
Financial
Commitment**

Proposed Local Share of Total Project Costs: 20%

The financing plan includes \$316.1 million (80%) in Section 5309 New Start funds and \$81.0 million (20%) in State and local funds.

Stability and Reliability of Capital Financing Plan

Rating: Low

The Draft Environmental Impact Statement for the Largo Metrorail Extension identifies three possible sources of local capital funds: Maryland Department of Transportation Funds (MDOT), Prince George's County Funding, and private sector funding. MDOT funding would appear to offer the greatest potential with annual Transportation Trust Fund revenues of approximately \$1.3 billion. The MDOT draft FY 1998-2003 Consolidated Transportation Program includes \$5.87 million in State funds for FY 1999 to begin final design of the Largo Metrorail Extension.

Capital cost estimates have been updated based on the continuing development of PE. There are no provisions identified for cost overruns or unavailability of proposed funding sources. With the exception of annual capital expenditure, MTA has yet to develop a detailed cashflow analysis for the Largo extension, including both sources and uses of capital and operating funds for the project.

Stability and Reliability of Operating Financing Plan

Rating: Low-Medium

The current financial plan for the year 2020 estimates the incremental annual operating and maintenance costs from operation of the Largo extension at roughly \$11.0 million annually (1996 dollars) while incremental fare revenues are estimated at \$7.8 million. This results in a farebox recovery ratio of 71%, which is in line with the current WMATA Metrorail system average of 70%. The remaining shortfall of \$3.2 million must be subsidized through a mix of state and local sources which are not identified in the financial plan. At present, the financial plan assumes that the project's net O&M costs will be allocated among jurisdictions, using the same formula as currently used for the existing Metrorail operations. This funding scenario implicitly assumes that the Largo extension would be treated as an element in the WMATA Compact, which governs funding allocations for Metrorail.

Locally Proposed Financing Plan	
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u> (reported in 1997 dollars)
Federal:	
Section 5309 New Start	\$316.10 (\$0 million appropriated through FY 1998.)
State and Local	81.00
TOTAL	\$397.10

NOTE: The funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions.

Other Factors

Metrorail Parking Demand

The demand for parking at the Addison Road terminus of the Metrorail Blue Line exceeds capacity. Parking at other nearby Metrorail stations on the Blue and Orange Lines, where provided, is also reaching capacity. This proposed project would provide 2,700 additional parking spaces - 500 at the Summerfield Station and 2,200 at the Largo Town Center Station.

Welfare to Work

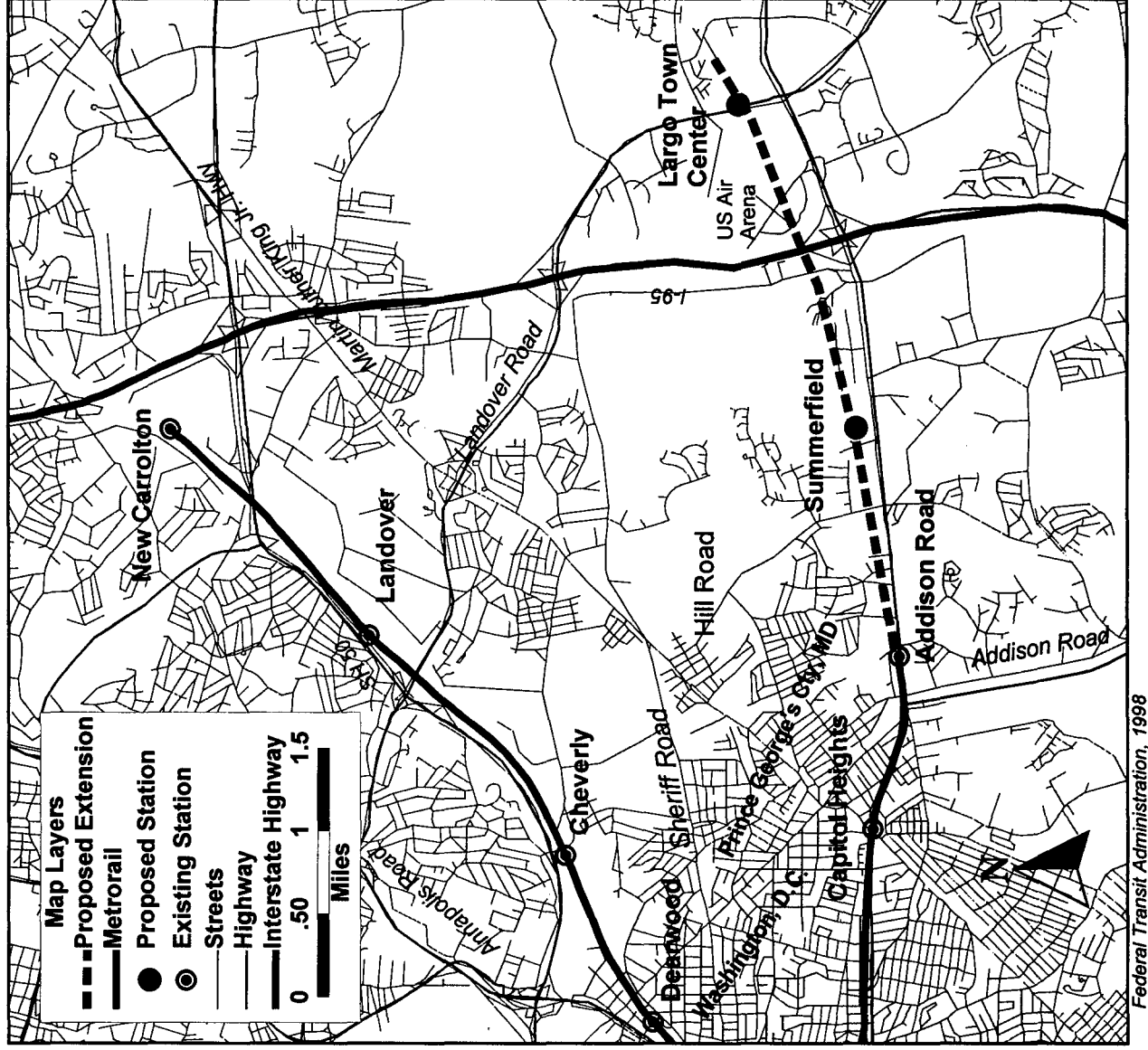
This project provides opportunities for "Welfare to Work" by opening up suburban job opportunities to urban residents. This area of Prince George's County is estimating a 126% increase in employment between 1995 and 2020, increasing the potential for reverse commutation from the low income, transit dependent and minority communities in the District and Metrorail service area. The Metrorail extension to Largo Town Center is estimated to carry 5,190 daily reverse commute (or outbound) trips to the study area. Of these trips, 4,060 would be new transit trips.

Smart Growth

The Metrorail Extension supports Maryland's "Smart Growth" initiatives. The 1997 Maryland Neighborhood conservation and Smart Growth legislation designated Priority Funding Areas as existing communities where industrial and other economic development is desired. The Metrorail Extension to Largo Town Center will have a positive impact on such in-fill and economic development, and will reinforce the Smart Growth trends already underway in the Addison Road to Largo Town Center area.

Metrorail to Largo Town Center

Washington, D.C.



APPENDIX B

MAJOR INVESTMENT STUDIES AND OTHER PLANNING ANALYSES

As of November 1997

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

Appendix B Major Investment Studies and Other Planning Analyses

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Background

This Appendix includes a listing and brief description of the Major Investment Studies (MIS) and other planning analyses currently being tracked by the Federal Transit Administration (FTA) Office of Planning. Generally, each of these MISs and planning studies include consideration of a fixed-guideway (rail or bus) transit alternative. Depending upon the locally preferred alternative selected by local officials, it is anticipated that many of the lead local agencies responsible for these studies may eventually seek Section 5309 New Start funds.

The brief description of each MIS or other planning study presented in this Appendix is intended to provide an overview of the study corridor, the alternatives under consideration, and the status of the planning effort.

No attempt has been made to evaluate these activities against the project justification criteria contained in Section 5309(e). The purpose of an MIS is to define a needed transportation improvement at the local level that will be proposed for Federal funding; in effect, to identify the transportation problem and evaluate a range of possible solutions. Until the solution - the alternative that best addresses local transportation needs - has been identified, there is no "project" to evaluate. Thus, it would be premature to attempt to evaluate a "project" that has typically not yet been defined as a transit or highway investment.

Major Investment Studies (MIS) and Other Planning Analyses

Albuquerque Regional MIS

Albuquerque, New Mexico

The City of Albuquerque Transit Department, the New Mexico State Highway & Transportation Department, the County of Bernalillo, the Middle Rio Grande Council of Governments, the Santa Fe Metropolitan Planning Organization (MPO), is initiating a Regional Major Investment Study (MIS). The MIS will be a two-phase transportation study to identify and establish a near and long-term multimodal transportation system for the Albuquerque/Santa Fe urban areas of New Mexico. The end product will be the identification of mode specific improvement plans for the major travel corridors within the study area. Alternatives to be studied include roadway improvements, enhanced bus transit, high capacity transit, and/or travel demand systems. The MIS is anticipated to be completed in the year 2000.

Aspen - Glenwood Springs Corridor

Roaring Fork Valley /Pitkin County, Colorado

In 1995, Colorado Department of Transportation (CDOT) completed a feasibility study of rail transit in the 40-mile Aspen to Glenwood Springs Corridor, which is in the Roaring Fork Valley, about 160 miles west of Denver. That study estimated that a valley-wide rail system would cost \$129 million. As a result, the Roaring Fork Valley transit agency is proceeding with a locally-funded Light Rail Transit (LRT) line in a four-mile segment of the corridor connecting Pitkin County Airport with downtown Aspen. CDOT, meanwhile, is conducting an MIS and preparing a DEIS to analyze transportation alternatives, alignments, and costs in the remainder of the valley, the 35-mile corridor from Aspen airport to Glenwood Springs. The 1995 feasibility study suggests that commuter rail will be selected, and if it is, FTA funding will be sought. The MIS/DEIS is scheduled to be completed in June 1998.

Atlanta (South DeKalb - Lindbergh Corridor)

Atlanta, Georgia

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is conducting a Major Investment Study (MIS) to examine transportation options in a proposed 15-mile corridor extending from DeKalb College - South Campus, north to the Emory University area including the Center for Disease Control Medical Center, and continuing on to the Lindbergh Station on MARTA's North Line. Phase I of the MIS is projected for completion in May 1998 when the Locally Preferred Alternative (LPA) will be selected. Through FY 1998, Congress has appropriated \$1.65 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Interstate 35 Corridor Study

Austin, Texas

The Texas Department of Transportation (TxDOT) in 1987 began studying alternatives to the heavy congestion on Interstate 35 (IH-35) from Martin Luther King Boulevard to Ben White Boulevard. This higher travel demand was caused by the rapid population growth due to expanding local, state, and national economies. In 1992, TxDOT formed the IH-35 Interagency Team to add local and federal viewpoints to the study. The Major Investment Study (MIS) started in July 1996 and the alternatives being considered include no-build, light rail, and travel demand management options to existing IH-35, convert existing travel lanes on IH-35 to HOV lanes, construct HOV lanes on IH-35, and rebuild IH-35 considering a variety of design alternatives. A review of these alternatives is currently underway.

Austin - San Antonio Corridor

Austin, Texas

The Austin - San Antonio Corridor Council began working in 1995 on efforts to develop a passenger rail system along Interstate IH-35 as one alternative to relieve congestion. The Austin and San Antonio Metropolitan Planning Organizations, Capital Metro, VIA Metropolitan Transit, the cities of Austin and San Antonio, and the Texas Department of Transportation (TxDOT) are active partners in this study. The proposed 80-mile commuter rail line would run on the existing Union Pacific Rail line that parallels Interstate 35 and connects San Antonio and Round Rock with proposed stops in Austin, San Marcos, and New Braunfels.

Southeast Corridor

Austin, Texas

The Capital Metropolitan Transportation Authority (Capital Metro) in cooperation with the Texas Department of Transportation (TxDOT) completed a Major Investment Study (MIS) in March 1997 to identify transportation related problems in the Austin metropolitan area along the North, South, and Southeast corridors. Phase One of the Red Line Light Rail Transit (LRT) project is currently in the preliminary engineering project development phase. The Southeast nine (9) mile corridor was the second highest priority corridor to emerge from the MIS due to existing travel markets connecting the University of Texas, the new Airport, the Central Business District (CBD), and the State Capitol office complex. The Southeast corridor has a high percentage of low median household incomes, a low auto ownership rate, and a high minority population. Estimated capital costs for this extension are \$195 million (1995 dollars).

Major Investment Studies (MIS) and Other Planning Analyses

Baltimore - Glen Burnie Corridor

Baltimore, Maryland

The Mass Transit Administration (MTA) is examining the community, engineering, and environmental feasibility of extending its light rail service from the existing southern terminus at the Cromwell Station Stop to the Marley Station Mall in Glen Burnie, Maryland, a range of 2.9 to 4.0 miles in length. An earlier study evaluated the no-build and two build alternative alignments, both terminating at the Glen Burnie Town Center. Capital cost for these alignments range from \$85 million to \$130 million (excluding the right of way acquisition cost from the Town Center to Marley Station mall). A Notice of Intent to prepare a Draft Environmental Impact Statement (DEIS) was granted in January 1994. The DEIS was published in November 1996 for public comment. Based on the results of the DEIS process, an additional extension to Marley Station Mall is being considered. A supplemental DEIS is being prepared to address the issues stemming from the Marley Station Mall extension. This supplemental DEIS will be available in 1999. An extension of light rail from the Cromwell Station stop was adopted by the Transportation Steering Committee of the Baltimore Metropolitan Council, the MPO for the Baltimore Region. The Anne Arundel County General Development Plan, updated during the summer of 1996, also includes the extensions of the Central Light Rail Line south of the Cromwell Station Stop.

Boston (Airport Circulator)

Boston, Massachusetts

The Massachusetts Port Authority (Massport), in coordination with the Massachusetts Bay Transportation Authority (MBTA), conducted a Major Investment Study (MIS) to examine transportation improvements including a proposed People Mover project, to ease airport roadway, curb congestion, and enhance the intermodal connection between Logan International Airport and the Boston regional transit system. During the MIS process, it was determined that improvements to the bus system at Logan Airport and the addition of bus service to South Station by connecting to the South Boston Transitway would provide a cost-effective alternative to the \$400 million People Mover project. Massport suspended work on the MIS/Environmental Impact Statement People Mover project and has developed an Airport Intermodal Transit Connector (AITC) alternative. The estimated cost to design and implement the AITC is approximately \$40 million. The proposed corridor is located three miles from downtown Boston. Currently, the AITC is considering using intelligent transportation system technologies and dual mode buses running on existing airport roadways to the South Boston Transitway through the new Ted Williams Tunnel (Central Artery) and using alternative fueled buses to connect the MBTA's Blue Line to airport terminals.

North Station - South Station Corridor

Boston, Massachusetts

The Massachusetts Bay Transportation Authority (MBTA) is conducting a Major Investment Study (MIS) to examine transit options in the corridor between North Station and South Station

Major Investment Studies (MIS) and Other Planning Analyses

in downtown Boston. The alternatives under consideration include various configurations of a rail tunnel which would permit through commuter rail trains to serve both downtown stations. Currently, MBTA commuter rail service is split into two completely separate services, one serving the North Station and one serving the South Station. A feasibility study on the proposed corridor was completed in 1995. Currently, the MIS is considering tunnel alternatives under the Boston Central Artery. Through FY 1998, Congress has appropriated \$0.25 million for this effort.

Boston (Urban Ring)

Boston, Massachusetts

The Massachusetts Bay Transportation Authority (MBTA) is conducting a Major Investment Study (MIS) to examine transportation alternatives to improve circumferential access in a corridor surrounding the Boston central core. The proposed corridor, known as the Urban Ring, includes regional trip generators beginning at the University of Massachusetts Boston Campus at the southeast end and terminating at Logan Airport at the northeast end. The corridor also includes many major public, private, and institutional activity centers located in Boston, Cambridge, Chelsea, Everett, Somerville, and Brookline. Currently, the alternatives under consideration include circumferential rail service, various combinations of rail and bus service to new station stops on the existing radial system and enhanced bus service. These alternatives are expected to connect with existing commuter rail and transit lines and would generally follow a previously proposed inner belt highway alignment. Through FY 1998, Congress has appropriated \$1.09 million for this effort.

Branson/Springfield Corridor

Branson, Missouri

The Missouri Department of Transportation (MoDOT) initiated a feasibility study to consider the possibility of a commuter work link between Branson and Springfield, a 40-mile corridor. Through FY 1998, Congress has appropriated \$0.5 million for this effort.

Burlington - Essex Commuter Rail

Burlington, Vermont

The Vermont Agency of Transportation (VAOT) is conducting a feasibility study to examine the option of reconstructing eight miles of existing right-of-way between Burlington and Essex, Vermont. This is Phase II of the VAOT Burlington Commuter Rail efforts. It will extend the Burlington to Charlotte Commuter Rail service from the recently renovated Union Station in Burlington to connect with Amtrak and major employment centers in Essex Junction. The commuter rail improvements in the corridor would include track, tunnel, signal, at grade crossing and drainage improvements. Two intermediate stations are also being considered along this route. Through FY 1998, Congress has appropriated \$4.98 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Canton - Akron - Cleveland (CAC) Commuter Rail

Canton, Akron, Cleveland, Ohio

The Northeast Ohio Areawide Coordinating Agency, the local Metropolitan Planning Organization (MPO), is conducting a Major Investment Study (MIS) to examine the feasibility of establishing commuter rail service to link the areas within the Northeast Corridor of the Canton - Akron - Cleveland (CAC) areas. In anticipation of future transportation needs in the CAC corridor, Akron Metro Regional Transit Authority has acquired several parcels of abandoned rail right of way in the region. The study will consider the existing and proposed land use patterns and impacts, preliminary ridership estimates, preliminary cost estimates, assessment of economic and environmental implications, and analysis of several commuter rail alternatives. Through FY 1998, Congress has appropriated \$2.8 million for this effort.

Charleston - Monobeam Rail Corridor

Charleston, South Carolina

The Charleston Area Regional Transportation Authority, in cooperation with the City of Charleston and the City of North Charleston, is examining the feasibility of implementing a proposed light rail or monobeam transit system from the Airport to the downtown Convention Center. Through FY 1998, Congress has appropriated \$1.5 million for this effort.

Charlotte (South Corridor Transitway)

Charlotte, North Carolina

The City of Charlotte, in cooperation with the North Carolina Department of Transportation, is conducting a Major Investment Study (MIS) to explore the feasibility of constructing a "bus-only" rapid transit system (transitway) within the Charlotte-Mecklenburg County area. The South Corridor Transitway extends 13.5 miles from the Uptown Charlotte Transportation Center to Interstate 485 near Pineville, North Carolina. The total estimated cost for the transitway is \$250 million. The corridor is included in the Mecklenburg-Union Metropolitan Planning Organization 2015 Long Range Plan. Through FY 1998, Congress has appropriated \$0.99 million for this effort.

Chicago (North Central Corridor)

Chicago, Illinois

The Commuter Rail Division of the Regional Transportation Authority (Metra) is conducting a Major Investment Study (MIS) in the North Central Corridor located within the Lake and Cook counties area to downtown Chicago. The proposed corridor covers an area defined by the Wisconsin Central Railroad Line, between Antioch and Franklin Park in Lake and Cook counties. Currently limited rail service is provided by Metra within the corridor. The transportation need

Major Investment Studies (MIS) and Other Planning Analyses

arises from the growing population along the proposed corridor and increasing volumes in level of service where the existing roadway service cannot accommodate current demand. The Chicago Area Transportation Study (CATS) adopted the North Central Corridor in the Long Range Plan in November 1997. Through FY 1998, Congress has appropriated \$2.9 million for this effort.

Chicago (Southwest Corridor)

Chicago, Illinois

The City of Chicago, in cooperation with Wisconsin Central Commuter Rail Agency (Metra), is conducting a Major Investment Study (MIS) to examine alternatives for improving transportation mobility from the Southwest Corridor in Will and Cook Counties to downtown Chicago. The corridor covers the Norfolk Southern Railroad service area between Chicago's Southwest Side and Orland Park in Cook County. The corridor also includes the central and southwest portions of Will County, including the former Joilet Arsenal. The study is considering transit options to enhance access to and from existing elevated and subway rapid transit stations and to provide more efficient management of peak passenger flows. Through FY 1998, Congress has appropriated \$3 million for this effort.

Cincinnati Northeast Corridor

Cincinnati, Ohio

The Ohio-Kentucky-Indiana Regional Council of Governments (OKI), local Metropolitan Planning Organization (MPO), is conducting a Major Investment Study (MIS) to examine transportation options for a 33-mile corridor paralleling Interstate 71. The corridor, which generally runs in a northeasterly direction, extends from the Cincinnati/Northern Kentucky International Airport/Florence area north through downtown Covington, Kentucky and downtown Cincinnati, Ohio to the Mason, Ohio Paramount's Kings Island Amusement Park in Warren County, Ohio. Alternatives under consideration include: Transportation Systems Management (TSM), High Occupancy Vehicle (HOV) lanes, busway technology and Light Rail Transit (LRT). Preliminary capital cost estimates for an LRT alternative for the entire corridor are \$1.2 billion. Through FY 1998, Congress has appropriated \$7 million for this effort.

Cleveland (Berea Extension)

Cleveland, Ohio

The Northeast Ohio Areawide Coordinating Agency (NOACA) is conducting a Major Investment Study (MIS) to determine transportation options to provide a direct link between downtown Cleveland, Hopkins International Airport, the International Exposition Center, and Baldwin Wallace College. The proposed Berea Rapid Transit Extension, approximately three miles from the Greater Cleveland Regional Transit Authority's Airport station, is directly aligned with the local transit operator's Red Line rapid rail system. The MIS is also considering adequate walk-up access and park-n-ride facilities to encourage more usage of the Red Line Light Rail Transit

Major Investment Studies (MIS) and Other Planning Analyses

System (LRT). The Berea Rapid Transit Extension MIS was programmed in the NOACA FY 1997 Unified Work Program. Through FY 1998, Congress has appropriated \$1.9 million for this effort.

Highland Hills Corridor

Cleveland, Ohio

The Greater Cleveland Regional Transit Authority (GCRTA) is conducting a Major Investment Study (MIS) to examine transportation options in a corridor extending from the terminus of GCRTA's Blue Line at the intersection of Van Aken Boulevard and Warrensville Road in Shaker Heights to Highland Hills. One of the alternatives to be considered is a potential extension of the Blue Line. Through FY 1998, Congress has appropriated \$0.8 million for this effort.

North - South (Waterfront Line Corridor)

Cleveland, Ohio

The Greater Cleveland Regional Transit Authority (GCRTA) is conducting a Major Investment Study (MIS) to examine transportation options to provide Light Rail Transit (LRT) service to the North-South transportation corridor in the eastern portion of the Central Business District (CBD) of Cleveland, Ohio. One of the alternatives under consideration includes a potential extension of the Waterfront Line Light Rail Transit system South from the existing North Coast terminus through the eastern portion of the CBD. One possible alternative is Phase II of the Waterfront Line LRT. Through FY 1998, Congress has appropriated \$1 million for this effort.

Pleasant Grove Corridor

Dallas, Texas

Dallas Area Rapid Transit (DART) is initiating a Major Investment Study (MIS) for the Pleasant Grove Corridor, which extends to the southeast from the eastern end of the Dallas Central Business District (CBD) Light Rail Transit Transitway Mall. DART's Transit System Plan has identified intermediate capacity light rail for this corridor, however, the exact technology and alignment will be decided during this effort.

Northwest Corridor

Dallas, Texas

Dallas Area Rapid Transit (DART) is initiating a Major Investment Study (MIS) for the Northwest Corridor, which extends to the northwest from the Dallas Central Business District (CBD). DART's Transit System Plan has identified commuter rail as one alternative for this corridor but the exact technology and alignment will be decided during this study.

Major Investment Studies (MIS) and Other Planning Analyses

Trinity Parkway Corridor

Dallas, Texas

The Trinity Parkway Corridor Major Investment Study (MIS) began in January 1996, with the Texas Department of Transportation (TxDOT) serving as the lead agency, and developed in collaboration with public agencies and citizens in the Dallas area. The goal of the MIS was to develop a locally preferred plan of action to solve transportation problems and to integrate with community plans and goals along the Trinity River Corridor in Dallas. The recommended plan of action includes: enhanced work-trip reduction measures; bicycle and pedestrian facilities; enhanced transportation facility management; improvements to the Interstate 30 (IH-30) Canyon; IH-30/IH-35E Mixmaster; extension of Woodall Rodgers Freeway; a continuous High Occupancy Vehicle (HOV) system throughout the Canyon, Mixmaster and lower Stemmons Corridors; and an eight lane Trinity Parkway along the Trinity River. Major issues to be addressed include: toll road funding, park access, prohibition of heavy trucks on the proposed Trinity Parkway, the HOV configuration along State Highway 183, and connection to the Dallas Area Rapid Transit (DART) Carrollton Rail line. The Trinity Parkway Recommended Plan of Action was approved by the Policy Coordination Work Group in July, 1997. The Recommended Plan of Action was also approved by the City and County of Dallas in September 1997 and by the DART Board of Directors in October 1997.

East Corridor

Denver, Colorado

The Denver Regional Council of Governments (DRCOG), in cooperation with the Colorado Department of Transportation (CDOT) and the Regional Transit District (RTD), has completed the technical work for a Major Investment Study (MIS) to evaluate transportation improvements in its East Corridor, which links downtown Denver via Interstate 70 with Denver International Airport (DIA). The East Corridor MIS was coordinated with concurrent Major Investment Studies of the region's West and Southeast Corridors. The East Corridor MIS has recommended a multimodal package of improvements in the corridor including a 23-mile single-track commuter rail line between Denver Union Station and DIA and a one mile light rail extension from downtown to connect with the commuter rail line at East 40th Avenue and 40th Street. With the commuter and light rail improvements, DRCOG estimates an increase of 8,800 daily linked transit trips in the corridor by the year 2020. The capital cost estimate of the commuter and light rail improvements is \$330 million, with annual operating costs estimated at \$31.2 million. It is anticipated that DRCOG will officially adopt this locally preferred alternative when it completes the update of its long range transportation plan in early 1998.

Major Investment Studies (MIS) and Other Planning Analyses

Denver International Airport (DIA) to Glenwood Springs Corridor - Interstate 70 Denver, Colorado

A Major Investment Study (MIS) for the Mountain Corridor was initiated by the Colorado Department of Transportation (DOT) in September 1997. The Corridor extends 165 miles from Denver International Airport (DIA) west to Glenwood Springs, following Interstate 70. The study will identify a strategic package of investments to meet transportation needs in the Corridor over a fifty year planning horizon. The study is scheduled to be completed in mid-1998.

North Front Range Corridor Study Denver, Colorado

A Major Investment Study (MIS) for the North Front Range Corridor was initiated in July of 1997. This study, which is managed by the Colorado Department of Transportation (CDOT) with the cooperation of local stakeholder agencies, will examine transportation options for the entire North Front Range, which extends 90 miles from the northern suburbs of Denver to the Wyoming border and includes the urbanized areas of Denver, Boulder, Longmont, Greeley, and Fort Collins. Commuter rail is among the alternatives being considered in the study. The North Front Range area demonstrated the highest ridership potential in a statewide commuter rail feasibility study completed in 1996. The feasibility study estimated ridership at 721,500 per year for an 85-mile Denver-Greeley-Fort Collins line and 416,200 per year for a 74 miles Denver- Boulder - Longmont - Loveland - Fort Collins line; both of these segments (as well as shorter lines using the same alignments) are under consideration in the current study. The study is scheduled to be completed in mid-1998.

West Corridor Denver, Colorado

The Regional Transit District (RTD), in cooperation with the Colorado Department of Transportation (CDOT) and the Denver Regional Council of Governments (DRCOG), has completed the technical work of a Major Investment Study (MIS) to evaluate improvements in the West Corridor, linking downtown Denver with the city of Golden at the intersection of US Routes 6 and 40, along West Colfax and Sixth Avenues. The West Corridor MIS was coordinated with concurrent MISs of the region's East and Southeast Corridors. Included in the recommendations for the West Corridor is approximately 12.5 miles of light rail from Union Station to the Cold Spring Park-n-Ride, as well as some enhanced bus service. The capital cost of the recommended alternative is estimated at \$251 million, with annual operating costs of \$11 million. It is anticipated that DRCOG will officially adopt this Locally Preferred Alternative (LPA) when it completes the update of its long range transportation plan in early 1998.

Major Investment Studies (MIS) and Other Planning Analyses

Woodward Corridor

Detroit, Michigan

The City of Detroit is conducting a Major Investment Study (MIS) to examine the feasibility of utilizing busway technology as one of the preferred alternatives for a 14-mile corridor extending northwest from the Detroit central business district. Portions of the corridor are within the Federally designated Empowerment Zone. In a previous Alternatives Analysis/Preliminary Engineering effort, the area was advanced as a possible Light Rail Transit (LRT) corridor with the potential of a busway as an interim alternative. Preliminary construction cost estimates for an LRT alternative for the corridor were \$1.4 billion. The project became inactive in 1985 due to a lack of funding. In June 1995, the metropolitan Detroit Tri-Counties of Wayne, Oakland and Macomb passed the first county-wide dedicated funding initiative to support suburban transit services. Additional analysis of capital and operating costs will be conducted as part of the current MIS. The Southeast Michigan Council of Governments (local MPO) has adopted the Woodward Corridor as part of the region's Long Range Plan. Through FY 1998, Congress has appropriated \$10 million for this effort.

U.S. 15-501 Corridor

Durham, North Carolina

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee is conducting a Major Investment Study (MIS) to examine transportation options (roadway, bus transit, rail, bicycle, and pedestrian improvements) to improve transportation mobility within a proposed 13.4-mile (potential fixed guideway transit alternative) or 7.9-mile (potential highway improvements) corridor. The results of two previous studies (US 15-501 Corridor Study; Triangle Fixed Guideway Study) prompted the need for additional analysis through the current MIS. The study is a multi-jurisdictional effort by the North Carolina Department of Transportation, the City of Durham, the Town of Chapel Hill, and the Triangle Transit Authority.

Eugene - Springfield Corridor

Eugene, Oregon

The Lane Transit District (LTD), in cooperation with other local, state, and Federal agencies, is conducting a Major Investment Study (MIS) which includes an alternative examining the feasibility of connecting Springfield and Eugene, utilizing a bus rapid transit system. The system will combine capital and operating improvements, including express bus service, frequent headways, prepaid fares, passenger boarding improvements, transit signal prioritization and exclusive rights-of-way. LTD has initiated planning and preliminary environmental analyses. LTD will develop the system over a number of years, beginning with an 11-mile pilot corridor. The total project cost for the pilot corridor, linking Springfield and Eugene, is estimated at \$9.8 million. Through FY 1998, Congress has appropriated \$0.99 million of Section 5309 Bus

Major Investment Studies (MIS) and Other Planning Analyses

Allocation funds for the environmental analysis, preliminary engineering, and final design processes.

Ft. Lauderdale Airport-Seaport Multi-Modal Connector Study

Ft. Lauderdale, Florida

The Florida Department of Transportation (FDOT) is conducting a Major Investment Study (MIS) to examine transportation improvements in a proposed 2.5-mile corridor between the Ft. Lauderdale-Hollywood International Airport and Midport cruise terminals in Port Everglades. Approximately 2.3 million passengers per year take cruises out of Port Everglades destined for the Caribbean basin. Many of these passengers arrive and/or depart the seaport via the airport resulting in extreme congestion at both the airport and the seaport terminals and access roadways during the peak tourist season. The MIS will consider alternatives consisting of potential aerial busways within the airport and cruise terminal area of the seaport as well as possible roadway improvements between the two facilities.

Interstate 95/Interstate 595 Multi-Modal Transportation Corridor Master Plan

Ft. Lauderdale-West Palm Beach, Florida

The Florida Department of Transportation, in coordination with local and state agencies, is conducting a Major Investment Study to examine transportation improvements in an area covering I-95, I-595, and the South Florida Rail Corridors (Tri-Rail) through the year 2020. The proposed corridor(s) include 70 miles of interstate and 63 miles of commuter railroad in the Miami-Ft. Lauderdale-West Palm Beach metropolitan area. Alternatives under consideration include improvements to the Tri-County Commuter Rail (Tri-Rail) system, reversible high occupancy vehicle/busway in the median of I-595, various combinations of freeway improvements, Intelligent Transportation System options, and arterial improvements.

Galveston Rail Trolley Extension

Galveston, Texas

The City of Galveston is studying options to extend the existing Galveston Island rail trolley system by 3.2 miles to connect the University of Texas Medical Branch, the largest employer of Galveston (8,500 employees and 2,000 students) to downtown Galveston. The Galveston Island rail trolley has been in continuous operation since 1987 with a current daily ridership of 363 patrons. The system was expanded in 1995 to provide service to the new waterfront development including hotels, restaurants, museums, cruise ship terminal, parking, and other facilities. The proposed project also includes the purchase of one additional diesel-electric vintage rail trolley replica vehicle, necessary switches, and station development. The total project cost is \$10 million. Approximately 988 new riders per day are projected. Galveston is located in the Houston-Galveston nonattainment area. Through FY 1998, Congress has appropriated \$2 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Hartford (Griffin Line Corridor)

Hartford, Connecticut

The Greater Hartford Transit District (GHTD) has conducted a Major Investment Study (MIS) to examine transit options within a proposed 16-mile corridor extending from downtown Hartford and several city neighborhoods to suburban towns to the north, and on to Bradley International Airport. The MIS resulted in a Light Rail Transit (LRT) option as the Locally Preferred Alternative (LPA) being adopted in July 1995 by the Capitol Region Council of Governments (CRCOG), the local Metropolitan Planning Organization (MPO). GHTD has proposed to initiate Phase I of the LPA, including 12 miles of LRT in a rail right-of-way owned by the State of Connecticut (9.2 miles) and a portion owned by Amtrak as well as a segment at grade on city streets in downtown Hartford. Economic development, and community revitalization plans, as well as clustered mixed land use plans have been prepared around each of the proposed stations. The State, CRCOG, GHTD and local officials continue discussions on funding sources and local financial constraint. Through FY 1998, Congress has appropriated \$0.99 million for this effort.

Hartford West Corridor (Interstate 84)

Hartford, Connecticut

The Connecticut Department of Transportation is preparing a Major Investment Study (MIS) for the Hartford West Corridor. The proposed corridor extends from downtown Hartford to the Fienemann Road interchange in Farmington. The study will consider transportation options to improve modal choice for movement of people and goods, vehicular congestion reduction, traffic safety and air quality, economic development and community livability/quality of life. The alternatives being examined include: no build; transportation systems management, travel demand management and transit operations; freeway reconstruction and operations; transit fixed guideway (light rail, commuter rail and busway); freeway high occupancy vehicle lane and an additional freeway general purpose lane. A draft MIS report is expected in February 1998. The study is included in the long range plans of both the Capitol Region Council of Governments and the Central Connecticut Regional Planning Agency. This corridor is the subject of a second MIS covering the Waterbury to Southington area, west of the "Hartford West" study area.

Primary Corridor Transportation Study

Honolulu, Hawaii

The City and County of Honolulu intends to study the development of major traffic and transit infrastructure options to address the mobility needs within its primary urban corridor. This study would revisit the corridor identified for the Honolulu Rapid Transit Project (H RTP) several years ago. The H RTP received environmental clearance and completed preliminary engineering when the funding mechanism for the local share for construction was not approved by the Honolulu

Major Investment Studies (MIS) and Other Planning Analyses

City Council. The City Council failed by a 5 to 4 vote to pass a five cent excise tax needed to provide the local share of the project. Public sentiment is to review this corridor again and analyze several major transportation infrastructure alternatives. The study will focus on major infrastructure developments and activity growth areas within Honolulu's primary urban center. The future transportation system is intended to support the development and enhancement of the livable community concept. This major investment study effort was included in House Committee Report No. 105-313 which accompanied H.R. 2169. The Primary Corridor Transportation Study will commence once funds have been identified.

Advanced Regional Transit Program (formerly Advanced Bus Program)

Houston, Texas

The Metropolitan Transit Authority of Harris County (Houston METRO) will initiate Major Investment Studies (MIS) on two elements of the Advanced Transit Program (ATP), previously the Advanced Regional Bus Plan. This program has been incorporated in the region's Metropolitan Transportation Plan. The first study is the West Loop Major Investment Study. METRO is scheduled to begin this MIS of the West Loop Corridor during FY 1998. The Interstate IH-610 Corridor examined in the MIS will be from the Interstate (IH-10) Interchange on the north (with connections to the Katy High Occupancy Vehicle Lane and Northwest Transit Center) to the vicinity of Westpark Drive to the south. Interagency consultation was held during FY 1997. It is anticipated that this MIS will take from six to nine months to complete. METRO will be working closely with the Texas Department of Transportation (TxDOT) to ensure that any recommendation from the West Loop MIS will be compatible with their Transportation Systems Management (TSM) improvements for the West Loop. METRO is scheduled to begin a MIS of the Westpark Corridor in the latter part of FY 1998. The corridor examined in this MIS will be from the Hillcroft Transit Center to the vicinity of Shepherd. Through FY 1998, Congress has appropriated \$1 million for the Advanced Transit Program.

Interstate Highway IH-10 Katy Freeway Corridor

Houston, Texas

The Houston District of the Texas Department of Transportation (TxDOT) has completed a Major Investment Study (MIS) of the 40-mile Interstate 10 (IH-10) West Katy Freeway corridor from downtown Houston to the Brazos River. The purpose was to evaluate the transportation needs of the corridor and to provide an opportunity to identify the most reasonable, effective, and efficient transportation option for addressing those needs. Alternatives studied included: no build; transportation systems management (TSM)/travel demand management (TDM); moderate emphasis on transit and single occupancy vehicle (SOV); moderate transit improvement and high SOV; major emphasis on transit; high transit and high SOV. High Transit/High Occupancy Vehicle (HOV)-Special Use Lanes/Moderate SOV is recommended as the Locally Preferred Alternative (LPA). It provides two special use lanes in both directions between Interstate IH-610 and State Highway 6 and the addition of one SOV general purpose lane in each direction between

Major Investment Studies (MIS) and Other Planning Analyses

IH-610 and Katy with auxiliary lanes to provide lane balance at major interchanges. Estimated cost of the LPA is \$1.094 billion (1995 dollars).

Indianapolis (Northeastern Corridor)

Indianapolis, Indiana

The City of Indianapolis, in cooperation with the Indianapolis Metropolitan Planning Organization, is conducting a Major Investment Study (MIS) to examine the feasibility of major transit investments within the northeast portion of Marion County and the southeast portion of Hamilton County between U.S. Route 31 and Interstate 70. The study corridor also encompasses parts of Interstate 69/State Route 37 and Interstate 465. In previous years, I-69/SR 37, as well as U.S. 31, were identified for major highway investments. Traffic congestion, along with rapid commercial and industrial development, have also been increasing within the study corridor. However, as a result of including improved transit service as a potential alternative, the Hoosier Heritage Port Authority purchased the Norfolk Southern rail line extending from 10th Street in Indianapolis to Tipton, Indiana. Through FY 1998, Congress has appropriated \$1.25 million for this effort.

Jackson Intermodal Corridor

Jackson, Mississippi

The City of Jackson, Mississippi is studying the feasibility of developing an intermodal complex and transportation connectors linking the proposed multimodal center and bus transfer facility, the Central Business District (CBD), Jackson State University (an historically black college and university), Jackson International Airport, and Interstate Highways I-55, I-20, and I-220. The state has allocated \$20 million for the design and construction of a proposed Metro Parkway located within the corridor. These improvements also include right-of-way acquisition and reconstruction of existing rail viaducts spanning the proposed parkway and street and signalization improvements. In addition, this corridor is designated as a Federal Enterprise Community and is expected to improve transportation services for the physically disabled and elderly. Through FY 1998, Congress has appropriated \$8.49 million for this effort.

Johnson County, Kansas Interstate 35 Study

Johnson County, Kansas

Johnson County, Kansas is currently in the public involvement phase of a Major Investment Study (MIS) to review the short-term (5-year) transportation alternatives along a 23-mile length of the I-35 corridor connecting south Johnson County, Kansas with the Kansas City, Missouri central business district (CBD). Commuter rail, utilizing an existing freight rail line, is one of the alternatives being studied to alleviate peak hour traffic congestion and assist with the movement

Major Investment Studies (MIS) and Other Planning Analyses

of central city core residents to jobs in suburban Johnson County. The Kansas Department of Transportation (KDOT) is conducting a long-term MIS along the same corridor. Through two studies, shared data will result in cooperative congestion mitigation findings. The Johnson County study is expected to be completed during 1998.

Northland Corridor Kansas City, Missouri

The Kansas City Area Transportation Authority (KCATA) and Missouri Department of Transportation (MoDOT) initiated a Major Investment Study (MIS) in 1998 to study transportation problems in a 20-mile corridor that begins at the River Market area of downtown Kansas City, includes a portion of the Interstate 29 highway corridor, and continues north to the Kansas City International Airport. The corridor includes a Missouri River crossing and several major highway interfaces. The study is expected to be completed by December, 1999.

Los Angeles, California **San Fernando Valley East - West Transportation Corridor** San Fernando Valley, California

The Los Angeles County Metropolitan Transportation Authority (MTA) is studying alternatives in the San Fernando Valley East-West Transportation Corridor which extends from the current terminus of the Los Angeles Metro Rail Red Line at North Hollywood to the West San Fernando Valley. This represents a 17-mile corridor from the San Diego Freeway (I-405) to the Warner Center in the West San Fernando Valley. The level of service on the freeways has reached the severe congestion and unstable flow level. A Major Investment Study/Environmental Impact Statement/Supplemental Environmental Impact Report (MIS/EIS/SEIR) was initiated in May 1995 to study transit alternatives such as the extension of the Red Line with a cost estimate of \$1.2 billion.

Santa Monica Boulevard Transit Parkway Los Angeles, California

The Los Angeles County Metropolitan Transportation Authority (MTA) is studying a section of Santa Monica Boulevard (SR-2) between the San Diego Freeway (I-405) and Moreno Drive, the boundary line between the cities of Los Angeles and Beverly Hills. The purpose of the study is to develop a multi-modal corridor, including improved operational efficiency of the roadway, priority treatments to improve bus transit flow, improved aesthetics, a bikeway and parkway, increased safety, and the preservation of the right-of-way for future rail improvements in the Santa Monica Boulevard corridor. In April 1994, the MTA analyzed conceptual alternatives for transportation improvements in the larger Santa Monica Boulevard Corridor, between the 405 and 101 freeways. The Corridor Study recommended the Santa Monica Boulevard Transit Parkway as a near-term

Major Investment Studies (MIS) and Other Planning Analyses

improvement. A Major Investment Study (MIS) was initiated in January 1996 to study six alternatives and a "Classic Boulevard" one-way couplet featuring three through lanes and a bicycle lane in each direction, frontage roads, an exclusive bus lane in the eastern project segment, bus priority treatments throughout the corridor, carpool lanes and other improvements to the Route 405 Freeway interchange ramps and extensive streetscape, and landscape enhancements as the Locally Preferred Alternative (LPA). Estimated project cost of the Locally Preferred Alternative (LPA) is \$68.2 million.

Western Extension Corridor

Los Angeles, California

The Los Angeles County Metropolitan Transportation Authority (MTA) is studying alternatives in the Westwood Corridor. One option is to consider a 7-mile subway extension from the proposed Pico/San Vicente station on the Metro Rail Red line to Westwood near the University of California at Los Angeles campus. An estimated project cost of this alternative is \$2.8 billion. This Major Investment Study (MIS) will explore the Metro Rail extension alternative with other transportation alternatives in the corridor.

Louisville (South Central Corridor)

Louisville, Kentucky

The Transit Authority of River City (TARC) is conducting a Major Investment Study (MIS) to determine solutions to transportation problems in the corridor extending from downtown Louisville south to the Louisville International Airport and beyond. The corridor traverses the existing Federal Empowerment Zone/Enterprise Community and connects to the Medical Center, the University of Louisville, Churchill Downs (Kentucky Derby), the Kentucky Fair and Exposition Center, and two major employers (Ford Motor, Inc., and United Parcel Service). The study corridor extends across the Ohio River to Southern Indiana. As a result of TARC's public involvement program, a wide range of alternatives are being considered. These include: enhanced transit service, transportation systems management, high occupancy vehicle lanes, busway technology, roadway improvements, and light rail. The study is scheduled to be completed in mid-1998.

Miami (Kendall Corridor)

Miami, Florida

The Florida Department of Transportation (FDOT) and the Metro-Dade Transit Agency are conducting a Major Investment Study (MIS) to determine the feasibility of alternative modes of transportation to improve the traffic congestion in an approximately 17.5 mile proposed corridor. The study will cover the area from southwest 147th Avenue east to the Dadeland Metrorail area, and north to the vicinity of the proposed Miami Intermodal Center. The MIS will be State funded

Major Investment Studies (MIS) and Other Planning Analyses

through a multi-year Joint Participation Agreement (JPA) between the FDOT and the Metro-Dade Transit Agency.

Milwaukee (East-West Corridor)

Milwaukee, Wisconsin

The Wisconsin Department of Transportation (WisDOT) has conducted a Major Investment Study (MIS) to examine transportation alternatives in an approximately 9-mile corridor extending from Glendale and the University of Wisconsin-Milwaukee, southwest through the Central Business District and the northside of Milwaukee, to the western suburbs of the city of Waukesha. The study considered a range of alternatives, including: transportation systems management, exclusive high occupancy vehicle (HOV) lanes for buses and/or carpools, Interstate highway modernization, and light rail. Several combination alternatives using different technologies in different parts of the corridor were also considered. In 1991, WisDOT conducted an alternatives analysis study. In 1994, this study was converted to an MIS, which included both highway and transit elements. WisDOT has selected a locally preferred alternative (LPA) which includes improved bus transit with park and ride lots, light rail transit (LRT) for Milwaukee County, the reconstruction of Interstate 94 with HOV lanes and the reconstruction of Marquette Interchange in downtown Milwaukee. The total project cost is estimated at \$1.8 billion with the LRT alignment estimated to be \$500 million. The Southeastern Wisconsin Regional Planning Commission (local Metropolitan Planning Organization) has included the East-West Corridor in its Long Range Plan. The Milwaukee County and Waukesha County Boards have passed resolutions supporting the LPA. However, the resolution passed by the Waukesha Board states that the LRT component will not be built in Waukesha County or funded by Waukesha County residents. Local and State officials continue to examine implementation and funding options, and to address the financial constraint issues.

Minneapolis - St. Paul (Hiawatha Avenue Transitway)

Minneapolis-St. Paul, Minnesota

The Twin Cities of Minneapolis-St. Paul in cooperation with the Metropolitan Council, local Metropolitan Planning Organization (MPO), the Hennepin County Railroad Authority and the Minnesota Department of Transportation, are planning to conduct a Major Investment Study (MIS) to examine transportation options in a corridor extending from downtown Minneapolis south along the Mississippi River portion of Hiawatha Avenue to the Minneapolis-St. Paul Airport and on to the Mall of America in Bloomington. Alternatives under consideration include the construction of a tunnel under the airport runways with connections to the airport terminals. An Environmental Impact Statement (EIS) was completed for the proposed corridor in 1985. The EIS recommended Light Rail Transit (LRT) as the Locally Preferred Alternative (LPA). The analysis of the EIS will be incorporated into the MIS. A major issue of the proposed corridor is whether the potential tunnel construction under the airport runways would be approved by the Federal Aviation Administration. Through FY 1998, Congress has appropriated \$11.9 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Nashville (Tennessee Commuter Rail)

Nashville, Tennessee

The Nashville Metropolitan Transit Authority (MTA), the Regional Transportation Authority (RTA) and the Metropolitan Planning Organization (MPO), are examining the feasibility of implementing commuter rail service connecting the downtown Nashville area with other areas in the Southeast region. The proposed commuter rail system would incorporate approximately five existing rail lines (each about 25 - 35 miles in length) and would be phased in over a 20-year period, with connections to surrounding counties, and a mutual terminus in downtown Nashville. The proposed commuter rail system has been adopted in the MTA, RTA and MPO's Long Range Transportation Plan.

Nassau Hub

Nassau County, New York

In the center of Nassau County, Long Island, NY, Mitchell Field (a former Air Force base), has become an extensive mixed use development. It already has major activity centers, including retail, office, recreation, college, museums and an arena. A Major Investment Study (MIS) is proposed to examine transportation improvements within this 1.5 by 2 mile area. The study will consider a range of alternatives, including light rail transit, a fixed guideway loop, and trolley shuttle buses, that would connect existing facilities and new infill development into a pedestrian/transit friendly environment. Potential circulator transit service would also connect with the Carle Place Long Island Rail Road (LIRR) commuter station. This study is sponsored by the Nassau County Planning Commission, in cooperation with the New York Metropolitan Transportation Commission (local Metropolitan Planning Organization), the Long Island Regional Planning Board, the LIRR and local bus system, along with the local business and development community. Through FY 1998, Congress has appropriated \$0.5 million in Section 5309 New Start funds for this effort.

Desire Study

New Orleans, Louisiana

The Regional Transit Authority (RTA) will begin a Major Investment Study (MIS) to consider transportation alternatives in a half mile area in Downtown New Orleans from North Rampart Street/St. Claude Avenue on the north and the Mississippi River on the south. The corridor contains densely developed residential areas, the F. Edward Hebert Defense Complex which is home to the U.S. Navy Support Activity Center, the French Quarter (Vieux Carre), and two other historic neighborhoods (Faubourg Marigny and Bywater). The alternatives that are being studied include a streetcar (build) alternative, a Transportation Systems Management (TSM) alternative, and a no build alternative in terms of providing improved transit service to the corridor. Through FY 1998, Congress has appropriated \$2.0 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

East Jefferson Corridor

New Orleans, Louisiana

The Regional Planning Commission, local Metropolitan Planning Organization (MPO), has initiated a Major Investment Study (MIS) to identify feasible alternatives to relieve present and future traffic congestion to the year 2020 within the East Jefferson corridor between Interstate 310 in St. Charles Parish in the west and the New Orleans Union Passenger Terminal in Orleans and Jefferson Parishes. The study is expected to be completed during FY 1998.

Access to the Region's Core Study (ARC)

New York/New Jersey Metropolitan Area

The Port Authority of New York and New Jersey along with the Metropolitan Transportation Authority and New Jersey Transit are conducting a Major Investment Study (MIS) to examine the need to create major new transportation links across the economic center of the New York - Northern New Jersey metropolitan area. A major focus of the study is the public transit and freight facilities linking mid-Manhattan with northeastern New Jersey, western Queens-Long Island, the Bronx and Westchester. The MIS has concentrated on a projected capacity problem at Penn Station New York for the West-of-Hudson market that is expected to emerge upon completion of the Urban Core projects (Kearney Connection, Montclair Connection, Secaucus Transfer). The capital solutions that have received the most focus involve a new commuter rail tunnel under the Hudson River to an expanded Penn Station with a possible tunnel extension to Grand Central Terminal. A freight connection to Manhattan's West Side is also possible. The need for a Supplemental MIS is under discussion. It would examine short-term improvements to assure fullest utilization of the Northeast Corridor and Penn Station in the near-term as well as cost-efficient long term expansions of capacity, starting with the need for a new Trans-Hudson commuter rail tunnel.

East River Crossing Study (ERX)

New York, New York

The Metropolitan Transportation Authority (MTA) and New York City Transit (NYCT) have completed an Option 1 Major Investment Study (MIS) to examine the preliminary operating and engineering options for improving the capacity and flexibility of subway services crossing the East River. The distribution among the subway lines crossing the East River is uneven and some lines are congested while others have unused capacity. One of the major goals of the study is to provide alternatives to current NYCT subway service over the aging Williamsburg and Manhattan bridges. Through the MIS, a strategy plan recommending a variety of options was developed. These options included a tunnel connection between the line carrying the B, D and Q services over the Manhattan bridge and the line carrying the F service through the Rutgers Street Tunnel. This option has a capital cost of approximately \$600 million, and an annual operating and

Major Investment Studies (MIS) and Other Planning Analyses

maintenance cost of \$400,000. This option would add approximately 12 passenger trains per hour. Another option involves the construction of a passenger passageway to allow free transfers between the B, D, F and Q services and the uptown #6 service at Broadway/Lafayette and Bleecker Stations. This option has a capital cost of approximately \$30 million and an estimated annual operating and maintenance cost of \$300,000. A final option under the recommended strategy plan involves the construction of a passenger passageway between Lawrence Street/Metrotech and Jay Street Stations. This option has a capital cost of approximately \$18 million, and an annual operating and maintenance cost of \$50,000. Before capital construction, the MTA Metrocard will allow a free transfer at these stations beginning in July 1998.

Manhattan East Side Alternatives Study (MESA)

New York, New York

The Metropolitan Transportation Authority (MTA) and New York City Transit (NYCT) have completed an Option 2 Major Investment Study/Draft Environmental Impact Statement (MIS/DEIS) to examine options to improve the mobility in the north-south corridor of Manhattan's East Side from South Ferry to approximately 125th Street with potential connections in the Bronx. The East Side of Manhattan has only one rapid transit line (Lexington Avenue) and it is severely overcrowded. In 1995, approximately 288,000 inbound daily passenger trips crossed East 60th Street on the Lexington Avenue Line. Also, there is limited additional street capacity to expand bus service. The study is considering several build alternatives including: transportation systems management (TSM), new subway construction under 2nd Avenue from 125th Street to 63rd Street, a Lower East Side light rail line, and exclusive busways.

Northern Indiana (South Shore Commuter Rail)

Munster - Hammond, Indiana

The Northern Indiana Commuter Transportation District (NICTD) is conducting a Major Investment Study (MIS) for the West Lake Corridor to examine the southern extension of the South Shore Line commuter rail service. The corridor includes approximately 4.5 miles of unused former right-of-way purchased under ISTEA and jointly owned by the two towns of Munster and Hammond and NICTD. The right-of-way begins at Airline Junction in Munster, Indiana, and ends at Dan Rabin Transit Plaza in downtown Hammond. NICTD has completed a sketch engineering study that would connect this corridor and the South Shore Line at Burnham Yards in Illinois. This alignment would provide direct access via Metra (Wisconsin Central Commuter Rail) Electric to Randolph Street Station in Chicago. The MIS will primarily build upon an extensive study done prior to ISTEA. The first scoping meeting is scheduled for early 1998. Through FY 1998, Congress has appropriated \$4.5 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Hawthorne - Warwick Corridor

Northern New Jersey

The New Jersey Transit Corporation (NJ Transit) has completed a Major Investment Study (MIS) resulting in a proposal to restore commuter rail service on the New York, Susquehanna & Western (NYS&W) rail line as far as Sparta, New Jersey. The service would connect to the New Jersey Transit Main Line at Hawthorne, New Jersey, where trains would serve the Secaucus Transfer Station and Hoboken. The proposed project would include track and signal improvements, new stations, and parking facilities, as well as equipment acquisition and rehabilitation of the Paterson, New Jersey Station on the NJ Transit Main Line. In addition, as part of the NYS&W rail line MIS, conceptual design, an environmental assessment, capital cost estimates, as well as preliminary design and engineering of the Paterson Station upgrade have been completed. In August of 1996, a final Environmental Assessment Study was completed. Subsequently, in September of 1996, FTA issued a Finding of No Significant Impact (FONSI). Through FY 1998, Congress has appropriated \$29.73 million for this effort.

Monmouth/Ocean/Middlesex Corridor

Northern New Jersey

The New Jersey Transit Corporation (NJ Transit) is conducting a Major Investment Study (MIS) to consider improvement options between Lakewood and Newark, New Jersey. Several alignment possibilities have been examined and the options have been narrowed to diesel powered commuter rail and/or highway alignments and an enhanced bus system. A draft MIS recommended advancement of an Enhanced Bus System. This recommendation was subsequently endorsed by NJ Transit's Board of Directors. However, in response to suggestions from one of the affected counties, analysis continues on potential rail options that would connect with Amtrak's Northeast Corridor. Information on the local financial commitment, mobility improvements, cost effectiveness, environmental benefits and operating efficiencies is being developed in the MIS. Through FY 1998, Congress has appropriated \$7.8 million for this effort.

West Shore Region

Northern New Jersey

The New Jersey Transit Corporation is conducting a Major Investment Study (MIS) to examine the feasibility of reinstituting rail service in the New Jersey West Shore Region. These options include commuter rail, light rail, highway improvements, and transportation systems management alternatives. In addition, the MIS is considering the option of extending the Hudson-Bergen light rail transit line from its northern terminus in Bergen County. The study area consists of the Conrail River Line (formerly West Shore Rail Line); the area between Nyack, New York, the Secaucus Transfer and Hoboken, New Jersey; Conrail Northern Branch between West Nyack, New York and Secaucus Transfer/Hoboken, New Jersey; and New York Susquehanna Western corridor between Saddlebrook, NJ and Edgewater, NJ. Through FY 1998, Congress has appropriated \$4 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Route 2/2A/32 Corridor (Southeastern Connecticut)

Norwich, Connecticut

The Connecticut Department of Transportation has completed a Major Investment Study (MIS) to examine transportation improvements in the Route 2/2A/32 corridor in southeastern Connecticut. The corridor includes marine related activity centers, the U.S. Coast Guard, U.S. Navy Submarine Base, Mystic Marine Life Aquarium and Mystic Seaport and local entertainment attractions such as Foxwood Resorts and Casino, and Mohegan Sun Casino. Six preferred alternatives identified through the MIS will be evaluated as part of an Environmental Impact Statement (EIS) process. The alternatives include no build and various combinations of road widenings, road by-passes, new bridges, light rail, monorail, heavy rail, and a transitway.

Orlando (Airport Corridor)

Orlando, Florida

The Central Florida Regional Transportation Authority (LYNX) has conducted a Major Investment Study to evaluate potential transportation improvements within a 13-mile corridor extending from the Orlando International Airport (OIA) to Interstate 4 (Airport Corridor). In addition, potential improvements focused on other corridors along the Bee Line Expressway (SR 528), Sand Lake (SR 482), Florida's Turnpike and the CSX corridor. In January 1997, LYNX adopted a proposed Light Rail Transit (LRT) line as the Locally Preferred Alternative (LPA). The LPA was later adopted by Metroplan Orlando, local Metropolitan Planning Organization, in July 1997. The proposed LRT will run from OIA to both the Orlando Central Business District and the International Drive resort district, in the vicinity of the Orange County Convention Center. The proposed downtown connection would be made generally along the CSX corridor, while the International Drive connection would be made along the Bee Line Expressway.

Philadelphia Cross County Metro Corridor

Philadelphia, Pennsylvania

The Southeastern Pennsylvania Transportation Authority (SEPTA) initiated a Major Investment Study/Draft Environmental Impact Statement (MIS/DEIS) for the Cross County Metro Corridor. The core study corridor extends approximately 48 miles from Glenloch, Chester County, to Morrisville, Bucks County, along CONRAIL's existing "Trenton Cutoff" freight rail line. Possible extensions to Trenton, New Jersey and Parkesburg, Chester County, comprise the secondary study corridor. Of the \$2.4 million multi-year grant agreement with SEPTA, Congress has appropriated \$1.2 million for preliminary engineering and design. In 1994, SEPTA completed a \$250,000 federally-funded feasibility study which examined potential ridership, alternative modes, preliminary station locations and capital and operating costs for a potential Cross County Metro service. The 48-mile light rail alternative proved to be the most cost-effective, with more than 9,100 new transit trips, 18 stations and an estimated cost of \$250 million (escalated dollars).

Major Investment Studies (MIS) and Other Planning Analyses

A key issue in the MIS/DEIS, scheduled for completion in June 1998, will be intermodalism, since access to proposed stations, development of park and ride lots and operation of shuttle bus service to nearby industrial, office and retail concentrations will be essential to attract the ridership. Related issues include increasing traffic congestion in the study corridor; municipal land use and zoning policies, and community attitudes concerning the introduction of new transit service in an auto-oriented suburban environment.

Roosevelt Boulevard Corridor

Philadelphia, Pennsylvania

The City of Philadelphia and Southeastern Pennsylvania Transportation Authority (SEPTA) are considering new fixed route transit services for the Northeast section of Philadelphia to parallel Interstate 95 and Route 1 (Roosevelt Boulevard). At the same time, the Pennsylvania Department of Transportation is advancing a major reconstruction and intermodal project for Interstate 95 and has been working with the City of Philadelphia, SEPTA, and Bucks County. In February 1997, the transportation plan for the Philadelphia Metropolitan Area was amended to include a Major Investment Study (MIS) for the Roosevelt Boulevard (Route 1) Corridor. The City of Philadelphia and SEPTA will be the lead agencies for the study.

Phoenix (East/Central - Tempe Corridor)

Phoenix, Arizona

In February 1997, the Maricopa Association of Governments Regional Council adopted an 18-mile fixed guideway corridor into the region's 1997 Long Range Transportation Plan. This corridor links the high employment cores along Central Avenue in Phoenix, and the downtowns of Phoenix, Tempe and Mesa. This corridor also serves Sky Harbor International Airport, Arizona State University (ASU), three major sports facilities, Tempe's Rio Salado development and residential concentrations surrounding each end of the corridor. The Regional Public Transportation Authority (RPTA) in October 1996 initiated two Major Investment Studies (MIS) to study transportation alternatives in this corridor. The first study, the Central Phoenix/East Valley MIS, addressed alternative investment strategies within the entire corridor. The second study, the Downtown Tempe MIS, focused on a sub-area within the corridor, linking downtown Tempe with Arizona State University, the Rio Salado development, and surrounding commercial and residential concentrations. After considerable analysis, it was concluded that the preliminary technology and alignment for both studies were mutually compatible. As a result, recommendations from the Downtown Tempe MIS and Central Phoenix/East Valley MIS were combined for the final phase of analysis. Alternatives under consideration include a Light Rail Transit (LRT) alignment linking Phoenix, Tempe and Mesa; bus service improvements; and commuter rail along the existing Union Pacific railroad. The LPA for the Tempe sub-area was approved by the Tempe City Council in December 1997, and includes a three to four mile LRT alignment. The LPA for the remainder of the Central Phoenix/East Valley corridor will be completed in February 1998. Through FY 1998, Congress has appropriated \$4 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Pittsburgh North Shore Corridor

Pittsburgh, Pennsylvania

The North Shore/Central Business District Transportation Corridor Major Investment Study (MIS) is a continuation, in part, of the Port Authority of Allegheny County's Spine Line MIS/DEIS (Draft Environmental Impact Statement). The purpose of the study is to assess potential improvements in North Shore's access and link with the Central Business District (CBD) and to enhance and support the private and public development currently underway along the Allegheny River corridor. One alternative is the feasibility of extending its light rail transit system from the CBD across the Allegheny River to Pittsburgh's North Shore. Other improvements being considered include roads, park-and-ride improvements, enhanced transit service or Transportation Systems Management (TSM), pedestrian/bikeway facilities, shuttle buses, reserved bus lanes, busways, Light Rail Transit (LRT), and people movers. The City of Pittsburgh and the Southwestern Pennsylvania Regional Planning Commission are co-leading the study in cooperation with the stakeholders in the corridor, including the Port Authority of Allegheny County, the Pittsburgh Pirates, the Pittsburgh Steelers, the Allegheny Conference on Community Development, and Cultural Trust.

South Sacramento Phase 2 Corridor

Sacramento, California

The Sacramento Regional Transit District (RT) is developing an 11.3 mile light rail project on the Union Pacific right-of-way in the South Sacramento Corridor. Phase I, known as the Interim Operable Segment (IOS), consists of a 6.3-mile segment. Phase II represents the remaining five miles in the corridor. Alternatives analysis was completed in 1992 for both Phase I and Phase II, the entire 11.3-mile south corridor. However, the project was broken down in phases and Phase I received Federal funds. An one cent state gas tax is to be voted on in 1998 to provide the local funding.

Ogden - Salt Lake City - Provo/Orem Corridor

Salt Lake City, Utah

A Major Investment Study (MIS) along the 80-mile Interstate 15 Corridor from Ogden to Provo/Orem is expected to begin in 1998. Travel demand between the Ogden, Salt Lake City, and Provo/Orem urbanized areas has increased greatly in the past ten years, and significant peak hour congestion occurs on Interstate 15, the major north-south artery of the region, especially in Salt Lake County and southern Davis County. The Ogden - Provo/Orem MIS follows a commuter rail feasibility study previously undertaken by the Wasatch Front Regional Council, which concluded that implementation of commuter rail along the Ogden - Provo/Orem corridor is

Major Investment Studies (MIS) and Other Planning Analyses

feasible. A minimum operable segment commuter rail line, identified in the feasibility study, is estimated to serve 3,800 daily new riders at inception.

West Valley Corridor

Salt Lake City, Utah

In early 1997, the Wasatch Front Regional Council, in cooperation with the Utah Transit Authority and the City of West Valley, initiated a Major Investment Study/Draft Environmental Impact Statement (MIS/DEIS) for the five mile West Valley Corridor and Intermodal Transportation Center, near Interstate 215 in West Valley City. The study is considering several modal alternatives and alignments to link the Intermodal Transportation Center with the North/South light rail line currently under construction. Completion of the MIS is anticipated in late 1998.

San Diego Interstate 15 Corridor

San Diego, California

The San Diego Metropolitan Transit Development Board (MTDB) initiated a Major Investment Study (MIS) in 1994 to evaluate short and long term transportation needs for the Interstate 15 Corridor. Transportation alternatives being studied include: no-build, Transportation Systems Management (TSM), highway, conventional rail, high performance rail, express bus/High Occupancy Vehicle (HOV), and hybrid rail/bus. Early estimates project a range of cost from \$750 Million for the Bus/HOV alternative to \$1.2 billion for the Hybrid rail and bus alternative. The study is currently organized in three phases: Phase I is the initial set of alternatives and was completed in February of 1997; Phase II is the final definition of alternatives and was completed Fall/Winter 1997; and Phase III will be the selection of the Locally Preferred Alternative (LPA) which is scheduled for Spring 1998.

Santa Cruz-Watsonville Corridor

Santa Cruz, California

The Santa Cruz County Transportation Commission has initiated a Major Investment Study (MIS) to improve travel conditions and relieve congestion along a 20-mile corridor between the cities of Santa Cruz and Watsonville. The study is evaluating eight alternatives, which include no build, highway widening, three bus alternatives, and three rail alternatives. The study is also evaluating the possibility of providing service to the University of California Santa Cruz campus. One of the rail alternatives being considered is a Diesel Multiple Unit (DMU) on the existing rail right-of-way. Currently this right of way is being utilized three times a week for freight service. The projected range of cost is \$100 to \$200 million. The Locally Preferred Alternative (LPA) should be approved by early 1998.

Major Investment Studies (MIS) and Other Planning Analyses

Seattle (SeaTac People Mover)

Seattle-SeaTac, Washington

The City of SeaTac, Washington in cooperation with other local agencies, has conducted a Major Investment Study (MIS) to examine the options to improve the mobility in the City's commercial core which includes the activity centers located around the International Boulevard area and the City of SeaTac International Airport. The MIS, completed in July 1997 awaiting Metropolitan Planning Organization (MPO) action, resulted in a Locally Preferred Transportation Investment Strategy recommending a Personal Rapid Transit (PRT) system. The total estimated project costs for Phase I of the PRT system is \$307.5 million (1996 dollars). Phase I of the proposed project includes the acquisition of 210 PRT vehicles, operating along 12.1 miles of "one-way" guideway and serving a forecast ridership of 24,000 patrons, utilizing 21 PRT stations. The City of SeaTac has incorporated the proposed PRT system into its Municipal Comprehensive and Transportation Plans. The City is also proposing that the project be included in the Regional Plan for Seattle. Since the primary beneficiaries of the proposed PRT system are local businesses, a "Partnership Franchise" between the public and private entities is recommended as part of the implementation approach. The proposed project is included in the Puget Sound Regional Council's long range plan. Through FY 1998, Congress has appropriated \$0.6 million for the MIS.

Trans-Puget Sound Corridor

Seattle - Tacoma - Everett - Bremerton, WA Metropolitan Area

The Washington State Department of Transportation (WSDOT) - Marine Division, in conjunction with the Puget Sound Regional Council, local cities and counties, port districts and associated surface transit operators is conducting a Major Investment Study (MIS) to examine alternate ways of accommodating expansion of passenger and vehicle capacity in four trans-sound corridors serving the Puget Sound metropolitan area and rural areas in the State of Washington. A major focus of the study is the accommodation of much of the growth in travel as additional transit passengers rather than substantially increasing the auto vehicle carrying capacity of the system. The WSDOT Marine Division is currently one of the largest transportation providers in the Pacific Northwest and its routes serving downtown Seattle represent the highest transit mode split in the region. The Marine Division anticipates that its planned services will increase this transit percentage, including the introduction of new passenger-only ferry services. The study is expected to be completed during FY 1998.

Major Investment Studies (MIS) and Other Planning Analyses

Spokane South Valley Corridor

Spokane, Washington

The Spokane Regional Transportation Council has conducted a Major Investment Study (MIS) to examine the impacts of high capacity transportation on a proposed 16-mile corridor between the central business district of Spokane, Washington and Liberty Lake. The proposed corridor would connect major residential and employment centers within the Spokane Valley. Spokane has been identified as a "serious" nonattainment area for carbon monoxide. Trips along the corridor nearly double based on the population and employment forecasts between the years 1990 and 2020. The MIS considered three alternatives including: High Occupancy Vehicle (HOV) lanes, express busways, and light rail. Based on the results of a draft MIS, light rail was selected as the preferred alternative with strong public support for light rail. The MIS was included in the region's Long Range Plan (LRP) in November 1994. It is anticipated that the project sponsor(s) will request to initiate Preliminary Engineering (PE) and the Environmental Impact Statement (EIS) process in early 1998. The total estimated cost for the corridor, including local, state and federal funding, ranges between \$200 - \$300 million.

Cross County Corridor

St. Louis, Missouri

The East-West Gateway Coordinating Council (EWGCC), the local Metropolitan Planning Organization (MPO), and the Missouri Highway and Transportation Department (MoDOT) have completed a Major Investment Study (MIS) in the Cross-County Corridor including St. Louis City and County. The east-west corridor connection is through Clayton, MO to the existing Metrolink system. The study evaluated transportation alternatives such as light rail, busway, highway, Transportation Systems Management (TSM), and a No Build alternative. Phase I of the MIS was completed in March, 1997. A Locally Preferred Alternative (LPA), which includes highway and transit improvements, was selected in September, 1997. The transit LPA is a 28.8-mile Light Rail Transit (LRT) line that extends MetroLink west in the City of St. Louis through downtown Clayton in St. Louis County, and then south from Clayton to beyond the I-55/I-270 interchange in southeast St. Louis County and north from Clayton to beyond the I-170/I-270 interchange in North St. Louis County. The proposed cost is \$1 - \$1.2 billion.

Northside, West County, and Southside Corridors

St. Louis, Missouri

The East-West Gateway Coordinating Council (EWGCC), the local Metropolitan Planning Organization (MPO), and Bi-State Development Agency are initiating Major Investment Studies (MIS) in three corridors, Northside, West County, and the Southside Corridors in the St. Louis area that will have a multimodal emphasis. The corridors were identified as the second tier of priority corridors for light rail expansion in the St. Louis Systems plan completed in 1991. Major Investment Studies (MIS) have been completed on the first tier corridors (St. Charles County, St. Clair County and Cross County).

Major Investment Studies (MIS) and Other Planning Analyses

Gandy Corridor Major Investment Study

Tampa-St. Petersburg, Florida

The Florida Department of Transportation (FDOT) is conducting a Major Investment Study (MIS) to evaluate transportation options near the Gandy Bridge across Tampa Bay from South Pinellas County to Hillsborough County and the Tampa Central Business District. The study will also examine the need for improved evacuation transportation service, particularly for the South Pinellas area. The proposed 12-mile corridor runs from Dale Mabry Highway in Hillsborough County, west across Tampa Bay to U.S. 19 in Pinellas County. One of the alternatives under consideration includes the construction of high-occupancy vehicle lanes. The Gandy Corridor MIS is being coordinated with MIS activities in Hillsborough and Pinellas County and is anticipated to be completed by early 1998.

Pinellas County Mobility Major Investment Study

Tampa-St. Petersburg, Florida

The Pinellas County Metropolitan Planning Organization is conducting a Major Investment Study (MIS) to identify transportation solutions to mobility issues in multiple corridors. The study will consider alternatives to address congestion occurring along north-south roadways in the north and central portions of the county, east-west corridors in the mid-portions of the county, north-south and east-west corridors near downtown St. Petersburg, and on corridors between Pinellas County and Hillsborough County to the east. The study is expected to be completed in the year 2000.

Tampa - Hillsborough - Lakeland - Polk Alternatives for Mobility Enhancement Major Investment Study

Tampa-St. Petersburg, Florida

The Hillsborough County Metropolitan Planning Organization, in cooperation with the Hillsborough Area Regional Transit Agency, is conducting a Major Investment Study (MIS) to examine transportation improvements in a proposed 60-mile corridor extending from the City of Lakeland in Polk County west to the City of Oldsmar in Pinellas County. Early consideration of land use and transportation connections and a broad participatory public involvement process has been implemented into the MIS. Alternatives under consideration include potential combinations of roadway, bus, busway, high occupancy vehicle lanes and fixed guideway transportation improvements. The MIS is being coordinated with both the Gandy Corridor MIS and the Pinellas County MIS. Through FY 1998, Congress has appropriated \$1 million for this effort.

Major Investment Studies (MIS) and Other Planning Analyses

Toledo (Downtown Circulator Corridor)

Toledo, Ohio

The Toledo Metropolitan Area Council of Governments (TMACOG) is planning to conduct a Major Investment Study (MIS) to examine transportation options in an approximately four (4) mile proposed corridor in Toledo. The study will examine the potential of a fixed guideway circulator in downtown Toledo to connect major activity centers including the Toledo convention center, science museum and Amtrak rail station. The study will also examine the potential of fixed guideway transit in radial corridors leading from downtown Toledo to the Toledo Zoo and Toledo art museum which would connect with the downtown circulator. Through FY 1998, Congress has appropriated \$0.99 million for this effort.

Washington DC - Maryland (Beltway Corridor)

Washington, D.C. Metropolitan Area

The Maryland State Highway Administration (SHA) began studies in 1993 to evaluate the feasibility of High Occupancy Vehicle (HOV) lanes on the Beltway. This study was reinitiated in late 1994. Informational Public Workshops were held in October 1995 and Alternatives Public Workshops were held in December 1996. This Major Investment Study (MIS) is looking at the 42 miles of the Maryland section of the Capital Beltway (Interstate 495/95), and is considering a combination of Transportation System Management/Transportation Demand Management (TSM/TDM) alternatives such as High Occupancy Vehicle (HOV) lanes, concurrent flow, a Single Occupancy Vehicle (SOV) toll, circumferential rail, express bus and in-line bus service. Public workshops on the alternatives will begin in early 1998 with location/design and public hearings to be held in late 1998.

Washington DC - Maryland (Silver Spring-Bethesda Corridor)

Washington, D.C. Metropolitan Area

The Maryland Mass Transit Administration (MTA) completed a Major Investment Study (MIS), also known as the Georgetown Branch Transitway, in June 1996. The study evaluated transportation improvements in the 4.5-mile corridor linking the Central Business Districts (CBDs) of Silver Spring and Bethesda, Maryland, and the two arms of the Metrorail Red Line in Bethesda and Silver Spring. It will also make a connection to the Maryland Area Commuter Rail (MARC) Brunswick Line in Silver Spring. The transitway would use the former CSX Georgetown Branch right-of-way and would parallel a portion of the Brunswick MARC Line between Silver Spring and Bethesda. The Maryland National Capital Park and Planning Commission is currently evaluating the comments along with the study results to reach a consensus on a Locally Preferred Alternative (LPA).

Major Investment Studies (MIS) and Other Planning Analyses

Washington DC - Virginia (Beltway Corridor)

Washington, D.C.

The Virginia Department of Transportation (VDOT), in cooperation with other agencies in the Northern Virginia area has completed a Major Investment Study (MIS) of a 22-mile Capital Beltway Corridor (Interstate 95/495) within the Commonwealth of Virginia. The purpose of this MIS was to identify the most appropriate types of transportation improvements to be made through the year 2020. The MIS was Phase I of the Capital Beltway Study. Phase II begins implementation of the MIS recommendations and will include the Preliminary Engineering (PE) project development phase and a Draft Environmental Impact Statement (DEIS).

Washington DC - Virginia (Dulles Corridor)

Washington, D.C. Metropolitan Area

The Virginia Department of Rail and Public Transportation (VDRPT) has completed a Major Investment Study (MIS) which evaluated several transportation options in the Dulles Corridor. The corridor extends from the West Falls Church Metrorail Station to Dulles International Airport and continues into Loudoun County. There is a significant level of existing local and express bus service in the corridor. The MIS for the Dulles Corridor was completed in June 1997 and the Locally Preferred Alternative (LPA) recommended a 23-mile, \$1.45 billion Heavy Rail system be constructed to Dulles International Airport from West Falls Church to alleviate congestion and facilitate future growth in the corridor. Local officials are considering interim bus services in the corridor and examining funding options in relationship to local financial constraints.

Washington DC - Virginia (Interstate 66 Corridor)

Washington, D.C. Metropolitan Area

The Virginia Department of Rail and Public Transportation (VDRPT) is examining several transportation options in the Interstate 66 corridor. The Interstate 66 Major Investment Study (MIS) is being conducted to develop a regional consensus on a comprehensive transportation investment strategy appropriate to address problems in the corridor over the next 20-25 years. The I-66 corridor stretches 24 miles from Interstate 495 along Interstate 66 to State Route 15 near Haymarket. Currently, the area is served by three Virginia Railway Express (VRE) stations (Rte 234, Manassas, and Manassas Park) and one Metrorail Station (Vienna). Fifteen options are being considered in this corridor to alleviate congestion in the corridor. These options include: High Occupancy Vehicle (HOV) lanes, Light Rail Transit (LRT), Metrorail extension, Virginia Rail Express (VRE) extension, express/local roadway configuration, and enhanced bus service.

Major Investment Studies (MIS) and Other Planning Analyses

Virginia Railway Express (Fredericksburg-to-Washington, DC Commuter Rail) Washington, DC Metropolitan Area

The Virginia Railway Express (VRE) currently operates commuter rail service between Washington, D.C. and Fredericksburg, Virginia. Due to increased congestion throughout the region, VRE would like to expand commuter rail service to include the entire Washington, D.C. to Richmond, Virginia, corridor. The Virginia Department of Rail and Public Transportation (VDRPT) initiated the Washington, D.C. to Richmond Rail Corridor Study to identify specific improvements required to increase the maximum speed of passenger trains and reduce the running time between Washington, D.C. and Richmond, thus making it feasible for commuter rail service. The Corridor Study, completed in April 1996, recommended a six-phase rail improvement program along the existing CSX right-of-way. The improvements include, but are not limited to, straightening certain track curves, adding new signals, rail-crossing safety measures, constructing new trackage in several areas, and incrementally adding a third track. The Commonwealth has not yet developed a funding plan for the phased program. Through FY 1998, Congress has appropriated \$4.97 million in Section 5309 New Start funds towards this program.

Williamsburg - Newport News/Hampton (CSX Corridor) Williamsburg-Newport News-Hampton, Virginia

The cities of Newport News, Williamsburg and Hampton, Virginia, are conducting a Major Investment Study (MIS) to examine transportation options within a proposed corridor in an existing CSX railroad right-of-way corridor. Alternatives under consideration include Transportation Systems Management (TSM), enhanced bus services, High Occupancy Vehicle(HOV)/busway, light rail, and an automated fixed guideway.

Yosemite Area Regional Transportation Strategy Yosemite Park, California

The Yosemite Area Regional Transportation Strategy group (YARTS) was formed in 1992 by Mariposa County officials as a vehicle for local governments in Mariposa, Madera, Merced, Mono, and Tuolumne Counties to join efforts with the National Park Service to address transportation issues in and around Yosemite National Park. The goal of YARTS is to propose a transportation system for the region that will enable travel throughout the area, including Yosemite, without jeopardizing the wealth of natural resources the area has to offer and still provide visitors with a comfortable, meaningful experience. Transportation has been a critical issue in the region for several years. In 1980, Yosemite's annual visitation was 2.5 million. By 1994, that number nearly doubled to 4.1 million. Merced County is serving as the lead agency with this Major Investment Study (MIS). The alternatives under consideration include: (1) a traffic management plan to provide transit service to the Valley floor from staging areas within the Park or in near proximity to the Park; (2) a phased implementation of bus transit service from gateway communities that accommodates future growth and a programmed reduction in the valley floor; and (3) a transit system that focuses on providing bus service from lodging areas in

Major Investment Studies (MIS) and Other Planning Analyses

Yosemite's gateway communities to Yosemite Valley. The YARTS project has received a FY 1998 Section 5309 Bus earmark of \$0.28 million.

APPENDIX C

SECTION 5309 FTA NEW STARTS CRITERIA FEDERAL REGISTER NOTICE

As Issued on December 19, 1996
and Amended on November 12, 1997

Statement of Federal Transit Administration Policy - Criteria for Discretionary New Starts Funding

Section 5309(e)(2)-(7) of Title 49, United States Code, requires the Secretary to make certain findings before new transit fixed guideway and extension projects are eligible for assistance under 49 U.S.C. Section 5309. Specifically, a project must be "1) based on the results of an alternatives analysis and preliminary engineering, 2) justified based on a comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, and operating efficiencies, and 3) supported by an acceptable degree of local financial commitment, including evidence of stable and dependable funding sources to construct, maintain, and operate the system or extension."¹

In addition, Section 5309(m)(3) requires that the Secretary annually prepare a report to Congress outlining "a proposal of the allocation of the funds to be made available to finance grants and loans for construction of new fixed guideway systems and extensions to fixed guideway systems among applicants for such assistance." This annual Report on Funding Levels and Allocations of Funds (the "Section 3(j) Report") is submitted annually as a collateral document to the President's budget.

This Statement of Federal Transit Administration (FTA) Policy describes the criteria FTA will use to make the statutory determination required under Section 5309(e)(2)-(7) and to determine the recommendations included in the annual report to Congress required by Section 5309(m)(3). These criteria apply only to projects seeking Federal discretionary funds for new transit fixed guideway and extension projects ("new starts") under Section 5309.

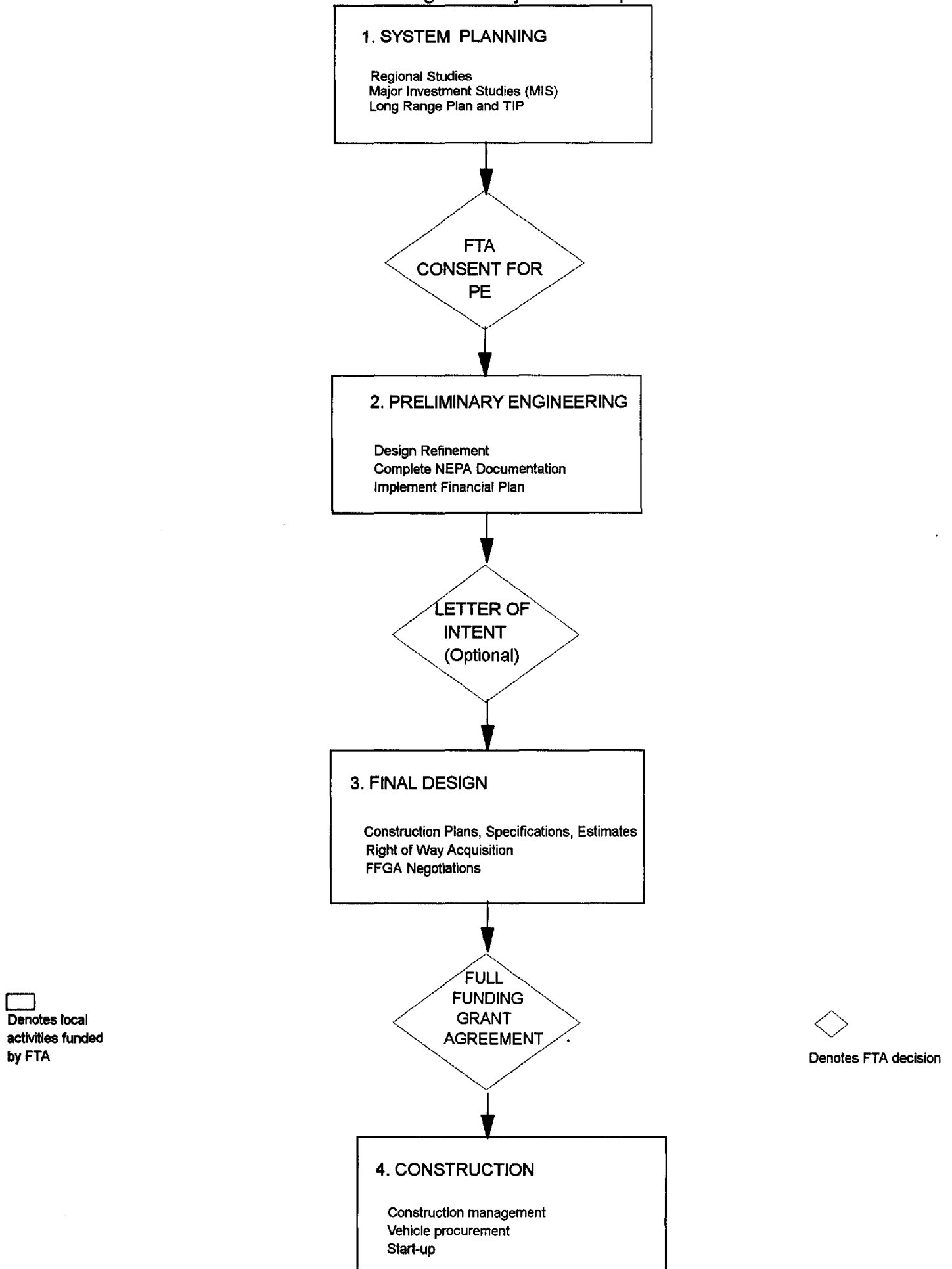
Title III of ISTEA exempted a number of specific projects from the New Starts criteria described in Section 5309(e)(2)-(7). Additionally, Section 5309(e)(6)(A) exempts projects if: 1) they are located in an extreme or severe nonattainment area and are a transportation control measure (as defined by the Clean Air Act) required to carry out an approved State Implementation Plan; or 2) the total amount of funding to be provided under Section 5309 (formerly Section 3) is less than \$25,000,000, or less than one-third of the total cost of the project or program of projects as defined by the Secretary. However, FTA may still rate such projects for informational purposes only, to the extent relevant information is available.

I. Planning and Project Development Procedures

New start projects, like all transportation investments in metropolitan areas, must emerge from the transportation planning process in order to be eligible for Federal funding. In addition, Section 5309(e)(2) specifies that discretionary grants or loans for new starts may only be approved if a proposed project is based on the results of alternatives analysis and preliminary engineering, and that certain project justification and financial criteria have been met. This section outlines the procedural requirements for planning and project development that apply to new starts. Figure C-1 depicts the FTA new start planning and development process.

1. In making this determination, Section 5309(e)(3) requires the Secretary to consider a variety of factors, including congestion relief, improved mobility, air pollution, noise pollution, congestion, and energy consumption; mass transportation-supportive existing land use policies and future patterns; and the degree to which the project increases the mobility of the mass transportation-dependent population.

Figure C-1
FTA New Start Planning and Project Development Process



Planning: Sections 1024, 1025 and 3012 of ISTEA implemented a continuing, cooperative, and comprehensive transportation planning process which is to be conducted in each metropolitan area in the United States. This planning process leads to the adoption, by the designated metropolitan planning organization, of a metropolitan transportation plan ("plan") and a transportation improvement program (TIP). The plan and TIP provide for the development and operation of an integrated transportation system that facilitates the efficient movement of people and goods. Projects proposed for FTA assistance must be consistent with the adopted plan and TIP. FTA and FHWA regulations on the metropolitan transportation planning process are found in 23 CFR Part 450.

The planning process includes the development of a financial strategy for the construction and operation of planned facilities and services. The cost of the plan is constrained to the revenues reasonably expected to be available.

The metropolitan planning regulations provide for a Major Investment Study (MIS) where the planning process identifies transportation problems that lend themselves to a high cost, high impact solution. An MIS is a corridor level analysis which evaluates all reasonable alternatives for addressing a transportation problem. (Each major corridor is considered separately to determine the facilities and services that will best meet its projected requirements.) The MIS develops information on the benefits, costs, and impacts of alternative strategies, leading to the selection of a locally preferred alternative or strategy. The selected strategy is then included in the metropolitan transportation plan and transportation improvement program. It is expected that most new start proposals will result from an MIS. All projects proposed for Section 5309 funding assistance must emerge from the metropolitan planning process, including an MIS where applicable (an MIS is only required in cases where Federal funds are potentially involved in the financing of the selected alternative).

The FTA/FHWA planning regulations found in 23 CFR Part 450 merged the alternatives analysis requirement into the metropolitan planning process. Thus, the completion of an MIS in accordance with 23 CFR Part 450 satisfies the statutory requirement for an alternatives analysis. The alternatives analysis requirement does not apply to certain new start projects that, by statute, are exempted from the new start criteria. Under 49 U.S.C. Section 5309(e)(6)(A), projects are exempt from these requirements if: (a) the project is located within an extreme or severe nonattainment area and is a transportation control measure, as defined by the Clean Air Act, that is required to carry out an approved State Implementation Plan; (b) the amount of Section 5309 assistance being sought for the project is less than \$25 million; c) the amount of Section 5309 assistance being sought is less than 1/3 of the total cost of the project; or d) the amount of Section 5309 assistance being sought is less than 1/3 of the total cost of a program of projects as determined by the Secretary.

An MIS may be appropriate even though an alternatives analysis is not required by statute. Since FTA intends that an MIS be performed before local decisions are reached on the strategy for solving a corridor's transportation problems, it is likely that most exempt projects would emerge as a preferred solution only after an MIS is completed. In addition, the cost estimates and funding

arrangements that are needed to determine if a project is exempt may not be available until an MIS has been completed. Even where it is clear that a new start alternative is exempt from the alternatives analysis requirement, an MIS may be an appropriate means to evaluate that alternative in the context of other strategies being considered for the corridor.

Situations may also arise where the MIS requirements do not apply but an alternatives analysis is still required by statute. This could occur, for example, where the total cost of the project is not significant in regional planning terms but the Section 5309 share exceeds \$25 million and 2/3 of the project cost. In such cases, FTA will work with the local participating agencies to determine the appropriate scope for an alternatives analysis.

Federal financial support for the planning process is derived from a number of sources, including the FTA Planning and Research Program under 49 U.S.C. Section 5314, and planning programs administered by the Federal Highway Administration. FTA Urbanized Area Formula funds under Section 5307 and flexible funds under the Surface Transportation (STP) Program and the Congestion Mitigation and Air Quality (CMAQ) Program may also be used to support planning. Given the significant demands placed on the Section 5309 new start program, FTA does not support the use of new start funds for planning.

Preliminary Engineering: The preliminary engineering stage of project development follows the completion of the planning process, as evidenced by the adoption of a locally preferred alternative in the metropolitan area's adopted transportation plan and TIP. Under 49 U.S.C. 5309(e)(5), a proposed new start project may advance from alternatives analysis into preliminary engineering only if the Secretary makes certain findings with regard to the completion of alternatives analysis, project justification, and the degree of local financial commitment. The Secretarial finding is not required for exempt projects as defined above.

When the sponsoring agency for a new start project desires to initiate the preliminary engineering phase of project development, it should submit a request to the FTA regional office identifying the project. The request should provide information on the planning process that led to the selection of the project, including the inclusion of the project in the metropolitan transportation plan and TIP. The request should also address the project justification and local financial commitment criteria outlined below. (This information would normally be developed as part of the MIS process that led to the selection of the project.) Where the sponsoring agency believes that a proposed project is exempt from the new start criteria, the agency need not provide project justification and financial commitment information, but would request FTA concurrence that the project is exempt from the criteria. FTA approval to initiate preliminary engineering is not a commitment to fund 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 PE process results in estimates of project costs and impacts in which there is a high degree of confidence. In addition, environmental requirements are completed (for new starts, this will normally entail the completion of an environmental impact statement), project management concepts are finalized, and any required

funding sources are put in place. Information on project justification and the degree of local financial commitment will be continually updated as appropriate.

Localities are encouraged to incorporate into their preliminary engineering activities, and to implement, a program of supportive policies and actions designed to enhance the benefits of the project and its financial feasibility. Such policies and actions might include:

- policies and development incentives to stimulate high density and mixed use development around transit stations.
- use plans that support or reinforce the development impact and shaping influence of the transit system.
- bus and/or paratransit feeder services.
- regulatory, or traffic control measures aimed at managing peak period auto use and increasing the speed of transit vehicles (e.g., higher parking fees and tolls, traffic metering, priority treatment and signal preemption for transit).
- mechanisms which make use of taxes and/or fees paid by developers and property owners benefiting from the transit system.
- Preliminary engineering is typically financed with Section 5307 funds, local revenues, and flexible funds under the Surface Transportation (STP) Program and the Congestion Mitigation and Air Quality (CMAQ) Program. Given the significant demands placed on the Section 5309 new start program, FTA does not support the use of new start funds for preliminary engineering except in the case of unusually large and costly projects.

Final Design: This is the last phase of project development and includes 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). Final design is typically financed with Section 5309 new start funds.

FTA Ratings and Funding Commitments: Each year, FTA will rate the projects which are performing or have completed the preliminary engineering phase². Pursuant to 49 U.S.C. Section 5309(m)(3), FTA will then recommend an allocation of new start funds among projects for the succeeding fiscal year. The rating will be assigned based on the project justification and financial commitment criteria contained in this statement. Funding commitments will be given ultimately to those projects which are most highly rated and which are ready to utilize the funds consistent with available program authorization.

During preliminary engineering or final design, FTA may issue a Letter of Intent to signal its intention to participate in the cost of a new start project. The Letter of Intent is a formal pledge but is not a Federal obligation or administrative commitment.

2. 49 U.S.C. §5309(e)(2)(A) requires projects to be “based on the results of an alternatives analysis and preliminary engineering.”

When FTA has decided to participate in a project with new start funds, FTA and the grantee will negotiate, during final design, a full funding grant agreement (FFGA). The FFGA will specify a fixed ceiling on the Federal contribution. The grantee will be required to complete construction of the project, as defined, to the point of initiation of revenue operations, and to absorb any additional costs incurred, except under certain specified extraordinary circumstances. The FFGA will include a mutually agreeable schedule for anticipating Federal contributions during the final design and construction period. Specific annual contributions under the FFGA will be subject to the availability of budget authority and the ability of the grantee to use the funds effectively. The total amount of Federal obligations under full funding grant agreements and potential obligations under Letters of Intent will not exceed the amount authorized for Section 5309 new starts. FTA may also make "contingent commitments," which are contingent upon future congressional authorizations, beyond the amount authorized for section 5309 new starts.

II. Criteria for Grants and Loans for Fixed Guideway Systems

In order to approve a grant or loan under Section 5309, the Secretary of Transportation must find that the proposed project is justified as described in Section 5309(e)(2)(B) and supported by an acceptable degree of local financial commitment, as described in Section 5309(e)(2)(C).

a. Project Justification Criteria

To make the statutory approval required for a project to enter preliminary engineering, as required by Section 5309(e)(2)-(7), FTA will evaluate information developed in Major Investment Studies. The method used to make this determination will be a Multiple Measure approach in which the merits of candidate projects will be evaluated against a set of measures. These measures will also be used to determine which projects to recommend for funding in the report required by Section 5309(m)(3). The ratings for each measure will be updated throughout the preliminary engineering and final design processes, as costs, benefits and impacts are more precisely defined. As a candidate project proceeds through the stages of the development process, a greater degree of certainty is expected with respect to these measures. The measures are as follows:

1. For "mobility improvements" - 1) The projected value of aggregate travel time savings per year (forecast year) anticipated from the new investment, compared to both the no-build and TSM alternatives. This aggregate includes the travel time savings of people using competitive modes, along with those on the trips made by transit (both new and existing transit riders). Travel time savings for those switching from highways to transit will be calculated using a consumer surplus approach, taking one-half of the total travel time savings for existing riders. The net figure will be expressed in terms of the dollar value of the projected travel time savings for the study area. Travel time savings will be valued according to trip purpose, using standardized values established by the Department of Transportation, based on average national wage rates as reported in the decennial Census. For transit riders, travel time will be valued at 50 percent of the wage rate for non-work travel (including commuting) and 100 percent of the wage rate for work-related travel. The total value of travel time for transit riders will be calculated using a weighted average by trip purpose. For highway users, the weighted average will also include travel by truck drivers, based on vehicle mix. In addition, time spent waiting for,

- accessing, and boarding transit vehicles will be valued at 100 percent of the wage rate.
- 2) The absolute number of low income households (households below the poverty level) located within ½ mile of boarding points associated with the proposed system increment.
2. For "environmental benefits" - 1) the annual forecast change in criteria pollutant emissions and in greenhouse gas emissions, ascribable to the proposed new investment, calculated in terms of tons for each criteria pollutant or gas; 2) the forecast net change per year (forecast year) in the regional consumption of energy, ascribable to the proposed new investment, expressed in British Thermal Units (BTU); and 3) current Environmental Protection Agency designations for the region's compliance with National Ambient Air Quality Standards. The new start alternative will be compared to both the no-build and TSM alternatives.
 3. For "operating efficiencies" - the forecast change in operating cost per passenger-mile (forecast year), for the entire transit system. The new start will be compared to both the TSM and no-build alternatives.
 4. For "cost-effectiveness" - the incremental change in total capital and operating cost per incremental passenger, based on the forecast change in annual transit ridership (forecast year) and the annualized total (Federal and local) capital investment and operating cost, compared to the no-build and TSM alternatives.
 5. For "transit supportive existing land use policies and future patterns" - the degree to which local land use policies are likely to foster transit supportive land use, measured in terms of the kinds of policies in place, and the commitment to these policies. A combined rating consisting of both "high," "medium," and "low" ratings and corresponding descriptive indicators will be used to assess each of the following six factors: 1) existing land use; 2) containment of sprawl; 3) transit-supportive corridor policies; 4) supportive zoning regulations near transit stations; 5) tools to implement land use policies; and 6) the performance of land use policies. The ratings for each factor will then be combined into a single ordinal rating for transit supportive land use.
 6. For "other factors" - 1) the degree to which the institutions (local transportation planning, programming and parking policies, etc.) are in place as assumed in the forecasts, 2) project management capability, and 3) additional factors relevant to local and national priorities and relevant to the success of the project. Ratings will be expressed as appropriate in ordinal ratings and descriptive statements.

b. Local Financial Commitment

The local financial commitment to a proposed project will continue to be evaluated according to the following measures:

1. The proposed local share of project costs, defined as the percentage of capital costs to be met using funds from sources other than Section 5309, including both the local match required by Federal law and any additional capital funding ("overmatch"). Consideration will be given to the use of 1) innovative financing techniques, as described in the May 9, 1995, Federal Register notice on *FTA's Innovative Financing Initiative*; and 2) "flexible funds" as provided under the Congestion Mitigation and Air Quality Improvement Program (CMAQ) and the Surface Transportation Program (STP) under ISTEA.

2. The strength of the proposed capital financing plan, according to 1) the stability and reliability of each proposed source of local match, including inter-governmental grants, tax sources, and debt obligations, with an emphasis on availability within the project timetable; 2) whether adequate provisions have been made to cover unanticipated cost overruns. The strength of the capital finance plan will be rated high, medium, or low.
3. The ability of the local transit agency to fund operation of the system as planned once the guideway project is built, according to 1) an evaluation of the operating revenue base and 2) its ability to expand to meet the incremental operating costs associated with a new fixed guideway investment and any other new services and facilities. Ratings of high, medium, and low will be used to describe stability and reliability of operating revenue.