U.S. Department
of Transportation
Federal Transit
Administration


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ASSESSMENT OF TRANSIT SUPPORTIVE LAND USE FOR NEW STARTS PROJECTS:

FY 1999 NEW STARTS REPORT

A Supplement to the Fiscal Year 1999 Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments (the FY 1999 New Starts Report)

NOVEMBER 1998

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

Administrator

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

November 1998

Dear Colleague:

The Federal Transit Administration (FTA) has been at the forefront of promoting the linkages between local investment in transportation systems and facilities and the land use environment within which these systems operate. FTA's *Livable Communities Initiative* and joint development activities have demonstrated that planning for public transportation in concert with land use and economic development can contribute to both more effective transit services *and* more livable communities.

Local land use policies and plans are also critical to the success of major transit capital projects pursuing Section 5309 New Starts funds. As directed by Congress, and beginning with the "*FY 1999 Report on Funding Levels and Allocations for Transit Major Capital Investments*," FTA assessed and rated the *Transit Supportive Existing Land Use and Future Patterns* of 30 candidate New Starts projects in preliminary engineering and final design. These assessments examined a number of factors, including existing land use conditions, regional containment of sprawl, and the effectiveness of local policies to foster transit and pedestrian-friendly development.

FTA has prepared this report -- *Assessment of Transit Supportive Land Use for New Starts Projects* -- to share the results and lessons learned from these FY 1999 land use assessments. The report presents an introduction to the assessment process and methodology, a review and synthesis of key findings (including tabulated results) across all projects, and a summary of recommendations for strengthening local agency submissions of the *Transit Supportive Existing Land Use and Future Patterns* New Starts criterion. We believe that the report will benefit both candidate New Starts project sponsors and other transportation professionals and agencies interested in promoting a more coordinated approach to land use and transportation planning.

It is important to note that the overall findings and the individual project assessments presented here reflect conditions as of November 1997, and that each assessment is based entirely upon documentation provided by the project sponsor. Local land use decisions and other significant actions since November 1997 are not reflected in this report, but will be incorporated into subsequent year assessments. Please also note that, in coordination with this guidance, FTA has issued a companion report which summarizes assessments of local financial commitment undertaken for the "*FY 1999 Report on Funding Levels . . . .*"

We look forward to our continued local-Federal partnership for planning and implementing transit capital investments which meet the needs of the communities they serve. Thank you for your commitment to integrating transportation with land use planning, and for your continued interest in FTA's New Starts program.

Sincerely,

Gordon J. Linton

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1.0 Introduction

The Federal Transit Administration (FTA) has prepared this report to summarize and analyze the transit-supportive land use associated with thirty (30) proposed transit projects profiled in the *Fiscal Year 1999 Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments* (referred to as the *FY 1999 New Starts Report*). FTA developed land use assessments for each of these projects based on the criterion for transit-supportive land use which, along with other legally mandated criteria, FTA considers when evaluating proposed New Starts projects. The purposes of this report are to assist local transit agencies in preparing information on transit-supportive land use related to New Starts projects and to aid Federal reviewers in evaluating that information, as well as to promote understanding of the relationship between local land use and transit investment.

This summary analysis report reflects transit-supportive existing land use, plans, and policies for each proposed New Starts project as of November 1997. The land use assessments that FTA developed are based entirely on information provided by local transit agencies. Project land use assessment ratings may change in future years as local land use conditions change and FTA reviews and analyzes revised land use documentation.

1.1 Background

The Secretary of Transportation submits the annual *New Starts Report* to Congress as a collateral document to the annual budget submitted by the President each year. The report documents the Department's recommendations for allocating the funds for transit fixed-guideway projects under Section 5309 of Title 49 of the United States Code, known as the New Starts program. In addition, the report evaluates all projects in Final Design and Preliminary Engineering against a full range of project justification criteria. Section 5309(e) requires that projects be justified against a comprehensive review of mobility improvements, environmental benefits, operating efficiencies, cost effectiveness, transit-supportive land use, local financial commitment, and other factors.

In December 1996, FTA published a *Federal Register* Notice describing revisions to the New Starts criteria used to evaluate candidate projects for discretionary New Starts funding. One of the major changes was the introduction of a new criterion addressing transit-supportive existing land use policies and future patterns, as required in Section 5309(e)(3)(C). The *FY 1999 New Starts Report* is the first time that FTA has assigned ratings to transit projects for transit-supportive land use. While FTA considered land use factors when making funding recommendations in previous years, there had been no specific criterion or rating applied.

Like the Intermodal Surface Transportation Efficiency Act of 1991, the recently enacted Transportation Equity Act for the 21st Century (TEA-21) identifies the consideration of transit-supportive land use as a significant project justification criterion for evaluating potential transit investments. As required in Section 3009(e)(5) of TEA-21, FTA will be issuing regulations which incorporate additional considerations (including land use-related factors) in the New Starts criteria, and which outline the process for FTA assignment of overall project ratings and evaluations and other requirements. In addition, FTA will continue to encourage transit-land use linkages through the Livable Communities Initiative and joint development projects involving both the public and private sectors.

1.2 Organization of This Report

Chapter 2.0 of this report provides an overview of the *New Starts* criteria and project evaluation process in general, background on the transit-supportive land use criterion, and discussion of the methodology applied by FTA to assess transit-supportive land use for 30 projects evaluated and rated in the *FY 1999 New Starts Report.*

Chapter 3.0 presents a summary analysis of the ratings and significant factors considered by FTA in the assessment of the transit-supportive land use criterion as applied to the projects evaluated in the *FY 1999 New Starts Report.*

Chapter 4.0 presents conclusions and lessons learned from the application of the transit-supportive land use criterion in the *FY 1999 New Starts Report,* including guidance for potential New Starts projects in how to address the criterion.

Chapter 5.0 includes a summary assessment of transit-supportive land use for each of the 30 projects evaluated and rated in the *FY 1999 New Starts Report,* including a summary of key findings for each project.

FTA has also prepared a separate *Appendix* to this report. The *Appendix* includes the full transit-supportive land use assessments prepared by FTA for each of the 30 projects evaluated and rated in the *FY 1999 New Starts Report.* (Summaries of these full assessments are included in Chapter 5.0 of this report). Because of its large size, copies of the *Appendix* will be available in hard copy in only limited numbers.

1.3 Distribution of This Report

For copies of this report, *Assessment of Transit-Supportive Land Use for New Starts Projects: FY 1999 New Starts Report,* and its *Appendix,* please contact your local FTA Regional Office or David Vozzolo at the Federal Transit Administration, Office of Planning, TPL-22, 400 7th Street, SW, Washington, DC 20590, (202/366-9612). Copies of both documents are available on the FTA Internet Homepage at http:\www.fta.dot.gov.

2.0 Overview of New Starts Criteria and Transit-Supportive Land Use Assessments

FTA has completed assessments of the transit-supportive land use associated with 30 proposed transit projects profiled in the *FY 1999 New Starts Report*.[1] This chapter provides background on the assessment process and includes: an overview of the Section 5309 New Starts criteria applied by FTA to evaluate proposed transit projects; a discussion of the New Starts criterion addressing transit-supportive existing land use and future patterns; and an outline of the methodology FTA applied to assess the transit-supportive land use for projects in the *FY 1999 New Starts Report*.

2.1 Overview of Section 5309 New Starts Criteria

49 U.S.C. Section 5309(e) requires that New Starts projects be justified, based on a comprehensive review of mobility improvements, environmental benefits, operating efficiencies, cost effectiveness, transit-supportive land use, local financial commitment, and other factors. FTA applies these criteria to potential New Starts projects to evaluate and make recommendations for Federal capital investment funding to each project. FTA also uses these criteria to make a statutorily required determination whether to approve a project's entry into preliminary engineering and project development.

On the basis of FTA's project evaluations, the Secretary of Transportation provides recommendations to Congress for allocation of Federal capital investment funds (under the Section 5309 New Starts Program) to new transit fixed-guideway and extension projects. The Department of Transportation's (DOT) recommendations appear in the *Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments* (the *New Starts Report*), which is submitted to Congress in conjunction with the President's fiscal year budget proposal in February of each year.

[1] Three projects profiled in the *FY 1999 New Starts Report* were not assessed for transit-supportive land use. These are: 1) New York City Long Island Railroad East Side Access (LIRR ESA) for which information on transit-supportive land use was not available prior to publication of the report; 2) Los Angeles-San Diego Rail Corridor (LOSSAN) which is exempt from the New Starts criteria; and 3) Oklahoma City Metropolitan Area Projects (MAPS) Link, which is also exempt from the New Starts criteria.

The *New Starts Reports* traditionally have included quantitative and qualitative measures addressing the justification criteria for each project. The *FY 1999 New Starts Report* is the first time that FTA has completed assessments and assigned ratings based on the transit-supportive land use criterion.

Recent authorizing legislation, the Transportation Equity Act for the 21st Century (TEA-21), reaffirms Congressional support for FTA's evaluation and rating of proposed New Starts projects. TEA-21 particularly supports transit-land use linkages by introducing additional considerations to be included in the assessment of transit-supportive land use. The new legislation also requires that FTA assign individual ratings to each of the project justification criteria, and provide an overall rating for each project as "highly recommended," "recommended," or "not recommended." These and other new requirements in TEA-21 related to the New Starts program, such as introduction of a new Supplemental Report to be completed each August, will be addressed in regulations to be developed by FTA.

2.2 The New Starts Criterion for Transit-Supportive Existing Land Use and Future Patterns

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) modified the Section 5309 criteria which had been in effect since 1984. ISTEA introduced a new requirement for DOT/FTA to consider land use policies and conditions when evaluating transit projects proposed for New Starts capital investment funding. While the benefits of compatible transit and land use were generally recognized, the transit industry and FTA were aware of the complexities of establishing measurement indices for this new criterion. For example, there are inherent inconsistencies in land use in different jurisdictions due to State and local laws, population levels, and economic market factors. Economic considerations may make it difficult for regions and localities to make land use commitments prior to project approvals. Compatible transit-land use planning and performance is not as easily quantified as some of the other New Starts criteria.

To solicit recommendations concerning all of the criteria for evaluating potential New Starts projects, FTA issued a *Policy Paper on Revised Measures for Assessing Major Investments* (Discussion Draft) in September 1994. FTA conferred extensively with State and local governments, Metropolitan Planning Organizations, the transit industry, and the public. During this process, there were several comments on methods for evaluating land use supportive of transit projects, and FTA utilized this input when developing subsequent guidance.

In September 1996, the FTA Office of Planning initiated a pilot land use assessment to survey the transit-supportive land use policies and existing conditions of New Starts projects. The purpose of the pilot was to gain a better understanding of how to apply, evaluate, and report the new land use criterion. Ten projects in the preliminary engineering stage of project development participated in the voluntary pilot – Dallas North Central, Kansas City Southtown, Miami East-West, Miami North 27th Avenue, New Orleans Canal Streetcar, Orlando I-4 Central Florida, Portland South/North, San Diego Mid-Coast, San Francisco Third Street (Bayshore), and Washington Metrorail to Largo. Information from

the pilot study was briefly summarized in the "other factors" section of the project profiles in the *FY 1998 Report on Funding Levels and Allocations of Funds for Transit Major Capital Investments*, submitted to Congress in March 1997.

On the basis of FTA's activities and experiences described above, as well as other public and private studies on transit-land use coordination, FTA developed a methodology to measure the transit-supportive land use affecting transit projects. In the December 19, 1996 *Federal Register*, FTA issued a notice revising the New Starts justification criteria and describing the approach the agency would use to evaluate candidate projects. This notice also announced that in the *FY 1999 New Starts Report*, DOT, for the first time, would be evaluating and rating the transit-supportive land use and future development patterns of applicant transit projects. The *Federal Register* notice defined six New Starts transit-supportive land use measurement 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. Performance of land use policies.

In September 1997, FTA issued *Technical Guidance on Section 5309 New Starts Criteria*, which provided applicant grantees with direction on providing information on each of the New Starts criteria. During the remainder of the year, FTA conducted four workshops on the New Starts Criteria at different locations throughout the country.

The *Guidance* addressed the transit-supportive land use criterion and the six measurement factors in detail. It explained that FTA would assign ratings for each factor and then produce a summary ordinal rating for the proposed project's transit-supportive land use criterion, taking into consideration the phase of project development and the local history regarding fixed guideway transit and transit-supportive development. The *Guidance* noted that three measurement factors (existing land use, containment of sprawl, and corridor policies) are planning- and policy-oriented. These factors are relevant in evaluating projects in all stages of project development from completion of systems planning through Final Design. The remaining three factors (supportive zoning regulations, implementation tools, and performance of land use policies) are implementation-oriented and more applicable in evaluating advanced projects in Final Design, although they also have relevance to projects in Preliminary Engineering. The *Guidance* also explained the rating scale FTA would apply to the transit-supportive land use at proposed projects and included directions to applicant grantees on providing information and documentation for each of the land use assessment measurement factors.

2.3 Methodology Applied in Assessment of Transit-Supportive Land Use in *FY 1999 New Starts Report*

2.3.1 Gathering and Reporting the New Starts Land Use Data

The *Technical Guidance* requested applicant grantees to provide written summaries and supporting documentation on the six measurement factors, taking into account the subfactors that would be used to assess each factor. Applicant grantees provided these materials to contracting firms that FTA employed to assist in information gathering. Local agencies were not expected to generate additional analyses and documents addressing land use issues to meet the reporting requirement. Instead, they submitted analyses and documentation that they had already prepared or which had been completed by municipalities, regional planning and governmental agencies, neighborhood organizations, and the private sector. In many instances, these materials were available from Major Investment Studies and feasibility studies done as part of transportation planning or from ongoing environmental analyses. Recommended supporting documentation included:

- Maps of the region, corridor, and station areas;
- Regional and local comprehensive land use and development plans;
- Regional and local economic development plans;
- Documentation of existing land use, employment, and transportation factors;
- Local zoning, development regulations, and policies;
- Public-private agreements, resolutions, statements;
- Station area development plans;
- Technical feasibility studies, manuals, and guidelines;
- Major Investment Studies materials and related documentation; and
- Long-Range Transportation Plans.

These documents were used as information sources for each of the six measurement factors, as applicable.

2.3.2 Evaluating Transit-Supportiveness: The Subfactors of the Six Measurement Factors

FTA gauges each of the six measurement factors for the transit-supportive land use criterion, which are listed above, by several subfactors. These subfactors illustrate various aspects of existing and planned transit-supportive land use, such as mixed use development, employment and population density, pedestrian and bicycle compatibility, directed growth mechanisms, parking policies, and public and private involvement. Table 2.1 identifies the specific subfactors which FTA considered in assessing each measurement factor.

2.3.3 Rating the Measurement Factors

On the basis of the subfactors, FTA assigns a "High," "Medium," or "Low" rating to each of the six land use measurement factors which had been listed in the December 19, 1996 *Federal Register* notice: existing land use; containment of sprawl; transit-supportive corridor policies; supportive zoning regulations near transit stations; tools to implement land use policies; and performance of land use policies. As discussed above, FTA took into consideration the stage of development of a proposed project when applying the measurement factors. The planning- and policy-oriented factors (existing land use, containment of sprawl, and corridor policies) are relevant in evaluating projects in all stages of project development. The implementation-oriented factors (supportive zoning regulations, implementation tools, and performance of land use policies) are more applicable in evaluating advanced projects in Final Design, although they have relevance to projects in Preliminary Engineering. See Table 2.2 for an outline of the rating system.

2.3.4 Rating the Overall Project Transit-Supportive Land Use Criterion

On the cumulative basis of the ratings of the six measurement factors, FTA assigns a summary rating of "High," "Medium-High," "Medium," "Low-Medium," or "Low" to the transit-supportive land use associated with each project. See Table 3.1 in Chapter 3.0 for a listing of projects and overall ratings.

2.3.5 FTA Assessment Process

On the basis of the materials transit agencies had provided, FTA staff, with contractor support, prepared a land use assessment profile and rating for the 30 applicant projects. Each assessment was returned to the appropriate transit agency and FTA Regional staff for review to assure consistency with the materials that had been provided to the contracting firms in November 1997.

Staff from the FTA Headquarters' Offices of Planning, Budget and Policy, and Program Management conferred to evaluate and rate the applicant projects. FTA staff were conscious of the subjectivity of these assessments because of the non-quantifiable nature of some of the supporting data. FTA staff were also aware that this was the first formal effort to define, gather information, and assess transit-supportive land use at proposed projects. This "newness" accounted for some of the redundancies in FTA's guidance for supportive materials and in the agencies' responses. Most transit agency submissions were comprehensive and timely; however, several transit agencies have indicated that they will provide either more complete or more specific data for future land use assessments.

Table 2.1 Transit-Supportive Existing Land Use and Future Patterns: Subfactors Addressed in Assessment of Each Factor

1. Existing Land Use

- Existing Land Use Mix
- Share of Jobs Located in Central Business District (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

- 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

- 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

- Existing Comprehensive Plans, Zoning Ordinances, Parking Policies and/or Pedestrian Access Planning to Support Transit within Corridor (include recent accomplishments or 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

- Promotion of Mixed Land Use and High-Density Land Use
- Process for Development of Corridor and Station Area Plans
- Organizational Participation in the Economic Development and Planning Process
- Process for Public and Private Sector Involvement in Corridor and Station Area Planning
- Level of Jurisdictional Endorsement for Corridor and Station Area Plans

6. Performance of Land Use Policies

- Existing Comprehensive Plans, Zoning Ordinances, Parking Policies and/or Pedestrian Access Planning to Support Transit within Corridor (include recent accomplishments or initiatives to amend existing plans, ordinances, and policies)
- Organizations to Support Joint Development, 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 Proposals and Joint Development Proposals Received

Table 2.2 Ratings Applied in Assessment of Transit-Supportive Land Use

1. *Existing Land Use*

Phase of Project Development	Land Use Assessment Ratings	
Preliminary Engineering and Final Design	HIGH	Current levels of population and employment 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 based on assessment of the following:
- 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; and
- Existing pedestrian-friendly development.

2. *Containment of Sprawl*

Phase of Project Development	Land Use Assessment Ratings	
Preliminary Engineering and 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 based on assessment of the following:
- Existing and planned land use mix;
- Planned density and market trends for suburban and urban development;
- Growth management policies; and
- Existing and planned pedestrian-friendly development.

Table 2.2 Ratings Applied in Assessment of Transit-Supportive Land Use (continued)

3. *Transit-Supportive Corridor Policies*

Phase of Project Development	Land Use Assessment Ratings	
Preliminary Engineering and Final Design	HIGH	A detailed corridor plan and related policies which encourage and facilitate transit-supportive development have been adopted 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 based on assessment of the following:
- 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; and
- Parking management.

4. *Supportive Zoning Regulations Near Transit Stations*

Phase of Project Development	Land Use Assessment Ratings	
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.
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.

Ratings based on assessment of the following:
- 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);
- Promotion of mixed land use and high density land use; and
- Promotion of pedestrian-friendly design.

Table 2.2 Ratings Applied in Assessment of Transit-Supportive Land Use (continued)

5. Tools to Implement Land Use Policies

Phase of Project Development	Land Use Assessment Ratings	
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.
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.

Ratings based on assessment of the following:
- Promotion of pedestrian-friendly design;
- Process 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; and
- Level of jurisdictional endorsement for corridor and station area plans.

Table 2.2 Ratings Applied in Assessment of Transit-Supportive Land Use (continued)

6. Performance of Land Use Policies

Phase of Project Development	Land Use Assessment Ratings	
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.
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.

Ratings based on assessment of the following:

- 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; and
- Station area development proposals and any joint development proposals received.

FTA staff experimented with various means of concisely displaying the six measurement factors and their numerous, sometimes duplicative supporting subfactors. FTA concluded that the most informative presentation format was to group significant subfactors on the basis of whether they related to "Existing Conditions" or to "Policies and Actions to Promote Transit-Supportive Development." (See Table 3.8.) This visual display allows comparisons between significant subfactors and overall FTA ratings for individual projects. Comparisons of these data over time will permit tracking of a project's associated land use from policies and plans into implementation as the project advances from early Preliminary Engineering into Final Design.

3.0 Summary Analysis and Findings

In addition to preparing individual land use assessments for 30 projects included in the *FY 1999 New Starts Report*, FTA reviewed the projects collectively to identify discernible patterns and to provide additional guidance to local transit agencies. This chapter presents FTA's summary analysis of the projects. First, the projects are considered in terms of the six factors FTA used for measuring transit-land use effectiveness:

1. Existing land use;
2. Containment of sprawl;
3. Transit-supportive corridor policies;
4. Supportive zoning regulations;
5. Tools to implement land use policies; and
6. Performance of land use policies.

The projects are also examined relative to these four distinguishing characteristics:

- System mode/technology (light rail, heavy rail, commuter rail, busway, or diesel multiple units);
- Project phase (early preliminary engineering, preliminary engineering, or final design);
- System status (new system or extension of an existing system); and
- Number of jurisdictions through which the project passes (single or multiple).

All federally funded transit projects share similar, overarching objectives, such as providing mobility and contributing to improved air quality. Local jurisdictions and regions, however, plan individual transit projects in response to their unique needs and conditions. Therefore, projects exhibit varying modes, ridership levels, costs, and even linkages with surrounding land use. While FTA has analyzed the FY 1999 New Starts projects in the aggregate to draw some generalized conclusions about their transit-supportive land use, FTA evaluates each project on its independent merits, taking into account that project's compatibility with both national objectives and local needs and conditions.

3.1 Summary of Ratings for Transit-Supportive Land Use Planning

Table 3.1 presents a summary of the 30 projects from the *FY 1999 New Starts Report* assessed for transit-supportive land use, including phase of project development, proposed mode,

Table 3.1 Overall Land Use Ratings For New Starts Projects

City	Project	Phase	Mode	Status	Jurisdictions	Overall Rating
Austin	Northwest/North Central Corridor	Early PE	Light Rail	New	Multiple	Medium-High
Boston	South Boston Piers Transitway, Phase II	PE	Bus	Extension	Single	Medium-High
Cleveland	Euclid Corridor Improvement Project	PE	Bus	Extension	Single	Low-Medium
Dallas	Dallas North Central Corridor	Final Design	Light Rail	Extension	Multiple	Medium
Denver	Southeast Corridor	Early PE	Light Rail	Extension	Multiple	Medium
Fort Lauderdale	Tri-County Commuter Rail	Final Design	Commuter Rail	Extension	Multiple	Medium
Fort Worth	Railtran Phase 2	Final Design	Commuter Rail	Extension	Multiple	Low
Kansas City	Southtown Corridor	PE	Light Rail	New	Single	Low-Medium
Las Vegas	Resort Corridor	Early PE	Light Rail	New	Multiple	Medium
Little Rock	Junction Bridge (River Rail Project)	Early PE	Light Rail	New	Multiple	Medium
Los Angeles	Eastside Extension Phase 2	PE	Heavy Rail	Extension	Single	Medium
Memphis	Medical Center Rail Extension	Early PE	Light Rail	Extension	Single	Low-Medium
Miami	East-West Multimodal Corridor	PE	Heavy Rail	Extension	Multiple	Medium-High
Miami	Northwest 27th Avenue Corridor	PE	Heavy Rail or Busway	Extension	Multiple	Low-Medium
New Orleans	Canal Streetcar Spine	Final Design	Light Rail	Extension	Single	Low-Medium
Norfolk-Virginia Beach	Norfolk-Virginia Beach Corridor	PE	Light Rail	New	Multiple	Low

Table 3.1 Overall Land Use Ratings For New Starts Projects (continued)

City	Project	Phase	Mode	Status	Jurisdictions	Overall Rating
Northern New Jersey	Newark-Elizabeth Rail Link (IOS)	PE	Light Rail	Extension	Single	Medium-High
Orange County, CA	Irvine-Fullerton Corridor	Early PE	Light Rail	New	Multiple	Low-Medium
Orlando	I-4 Central Florida Light Rail	PE	Light Rail	New	Multiple	Medium-High
Pittsburgh	Stage II LRT Project	PE	Light Rail	Extension	Multiple	Low-Medium
Portland	South/North Corridor	PE	Light Rail	Extension	Multiple	High
Raleigh	Phase I Regional Rail	Early PE	DMU	New	Multiple	Low-Medium
Salt Lake City	East-West Corridor	Early PE	Light Rail	Extension	Single	Low-Medium
San Diego	Mission Valley East Light Rail Transit Project	PE	Light Rail	Extension	Multiple	Medium-High
San Diego	Mid-Coast Corridor	PE	Light Rail	Extension	Single	Medium
San Diego County	Oceanside-Escondido Passenger Rail Project	PE	DMU	New	Multiple	Medium
San Francisco	Third Street Light Rail	PE	Light Rail	Extension	Single	High
San Juan	Minillas Extension to Tren Urbano	Early PE	Heavy Rail	Extension	Single	Medium-High
Seattle	Seattle Sound Move (Central LRT)	Early PE	Light Rail	New	Multiple	Medium-High
Washington, D.C.	Metrorail Extension to Largo Town Center	PE	Heavy Rail	Extension	Single	Medium

and overall rating assigned. Overall ratings were roughly distributed between the center three rating levels – eight medium-high, eight medium, and 10 low-medium. Two projects received a high rating and two projects a low rating. This distribution of ratings suggests that most transit agencies and regions have begun, to varying degrees, to link transportation and land use within their project planning and development processes. The consideration of land use as part of FTA's annual *New Starts Report* may encourage transit agencies to incorporate more transit-supportive policies into the transit investment planning process.

3.2 Patterns in Transit-Supportive Land Use

Each project was assessed according to the six transit-supportive land use criterion measurement factors listed in FTA's notice on New Starts criteria in the *Federal Register* (Thursday, December 19, 1996) and associated subfactors identified in FTA's *Technical Guidance on Section 5309 New Starts Criteria* (September 1997). (See previous Table 2.1). The overall ratings in each of the six factors and discernible trends or patterns are discussed in the following sections.

3.2.1 Existing Land Use

Assigned ratings for most projects clustered between the low-medium and medium range. As shown in Table 3.2, two-thirds (21) of the projects earned one of these two ratings. The ratings for the Existing Land Use factor were based on three subfactors:

1. Land use mix and pedestrian-friendly environment;
2. Share of jobs located in the area to be served by the project, e.g., the central business district (CBD), and employment density; and
3. High trip generators along the project corridor.

Table 3.2 Summary of Ratings for Existing Land Use

Rating	Number of Projects
High	2
Medium-High	6
Medium	12
Low-Medium	9
Low	1
Total Projects Rated	**30**

The relatively low ratings in the land use mix and pedestrian-friendly environment subfactor may reflect a separation between residential and commercial uses often present in current zoning and land use planning practices. Mixed uses are somewhat uncommon among the regions and station areas surveyed. Some notable examples of mixed use zoning at the parcel level include San Francisco and Little Rock.

Two subfactors – employment density and high trip generators – received generally higher ratings than the land use mix and pedestrian-friendly environment subfactor. The

relatively higher ratings for employment density and for trip generators may reflect the fact that transit projects tended to be planned to serve such areas and facilities.

3.2.2 Containment of Sprawl

The Containment of Sprawl factor incorporates three subfactors:

1. Planned land use mix;
2. Planned density; and
3. Growth management policies.

A summary of ratings for this factor is presented in Table 3.3.

Table 3.3 Summary of Ratings for Containment of Sprawl

Rating	Number of Projects
High	2
Medium-High	4
Medium	13
Low-Medium	9
Low	2
Total Projects Rated	**30**

For many of the projects, the ratings for the first two subfactors – planned land use mix and planned density – were similar. This may suggest that local jurisdictions recognize the compatibility of mixed land use and population density. The use of growth management policies to contain sprawl was rare. Some jurisdictions, such as metropolitan Portland, Oregon and Dade County, Florida (Miami East-West Corridor) have delineated boundaries within which development may occur. Most other regions, however, were not as specific in constraining regional development. Many had either weak growth management policies or none at all. The relatively lower ratings for growth management and sprawl containment policies may also reflect the fact that such policies generally require cooperation of multiple jurisdictions within a region. For example, if a city has instituted a growth containment policy, development pressure may be transferred to adjacent cities which do not have similar policies. San Diego and Denver have strong growth management policies, but implementation of similar policies in nearby cities and counties vary, thereby minimizing the impact of the metropolitan areas' growth management efforts. These examples indicate that cooperation between jurisdictions is often difficult to achieve, making growth management a complex policy to implement.

3.2.3 Transit-Supportive Corridor Policies

The Transit-Supportive Corridor Policies factor encompasses plans and policies that broadly support transit-oriented land use patterns within transit corridors. Ratings for this factor were generally clustered around the medium rating and more evenly

distributed than ratings for other factors. Table 3.4 presents a summary of the distribution of ratings for this factor. This factor includes three associated subfactors:

1. Plans and policies to promote transit-friendly development;
2. Process for the development of corridor and station area plans; and
3. Parking management policies and requirements.

Table 3.4 Summary of Ratings for Transit-Supportive Corridor Policies

Rating	Number of Projects
High	2
Medium-High	9
Medium	7
Low-Medium	10
Low	2
Total Projects Rated	**30**

In general, the projects earned relatively high ratings for the first subfactor, plans and policies to promote transit-friendly development. Many municipal and regional plans included general language endorsing transit-supportive development. These statements usually focused upon increased density and infill development as well as support for attempts at greater mixes of uses. Plans for improved pedestrian environments, however, were generally absent or loosely constructed.

Ratings assigned to the second subfactor, process for development of corridor and station area plans, were generally low. Many of the projects could benefit by increased citizen participation and increased cooperation between planning agencies and transit agencies. Because this subfactor assesses the application of policy to the station area, it may warrant further review for individual projects as they advance from preliminary design into final design.

Ratings on parking policies among the various transit corridors were also generally weak. A majority of transit projects earned low or low-medium ratings for their parking policies. Examples of parking policies which promote transit-supportive land use are:

- Taxes on parking;
- Parking cash-out programs by which employers offer employees the option of accepting a taxable salary equivalent in lieu of tax-free parking benefits;
- Stated maximum or limit on the minimum of spaces per a specified square footage; and
- Explicit parking policies supportive of transit.

Many transit agencies are not yet involved in pursuing substantive plans to reduce parking requirements to promote transit-supportive development. In many cases, without a transit system actually in place, it is often politically difficult to reduce parking supply, especially when the automobile mode share is high. Regions with strong parking policies tended to be characterized by existing development that is already supportive of pedestrians and transit use, such as in San Francisco and Boston. The example of Orlando, however, demonstrates that newer cities and regions can achieve strong parking management policies.

3.2.4 Supportive Zoning Regulations Near Transit Stations

The ratings for the Supportive Zoning Regulations Near Transit Stations factor suggest that progress in developing transit-supportive zoning is moderate. A summary of ratings for supportive zoning appears in Table 3.5. The Supportive Zoning Regulations Near Transit Stations factor includes two subfactors:

1. Site-specific transit-supportive plans, ordinances, and policies; and
2. General transit-supportive policies.

Table 3.5 Summary of Ratings for Supportive Zoning Regulations

Rating	Number of Projects
High	3
Medium-High	4
Medium	13
Low-Medium	7
Low	3
Total Projects Rated	**30**

Projects tended to earn higher ratings for general policies than for site-specific plans, ordinances, and policies. Many regions and cities, especially those with existing rail systems in other corridors, have general ordinances that promote transit-supportive development. For example, the cities of San Diego, Miami, metropolitan Washington, and Portland have municipal transit-oriented policies that were developed during the planning of previous transit projects. Given the early stage of development of many of the projects analyzed (some still have not designated station locations), the lag in the development of policies specific to station areas is to be expected.

3.2.5 Tools to Implement Land Use Policies

The Tools to Implement Land Use Policies factor incorporates three primary subfactors:

1. Implementation tools to support transit-supportive development;
2. Level of public involvement in corridor and station area planning; and
3. Jurisdictional endorsements for corridor and station area plans.

Table 3.6 Summary of Ratings For Tools To Implement Land Use Policies

Rating	Number of Projects
High	2
Medium-High	8
Medium	12
Low-Medium	7
Low	1
Total Projects Rated	**30**

Contrary to what might be expected, many projects earned higher ratings in the Tools to Implement Land Use Policies factor than in the Transit-Supportive Corridor Policies factor, which is discussed above in Section 3.2.3. Table 3.6 summarizes ratings for the Tools to Implement Land Use Policies factor. The relatively higher ratings for this factor may be due to the fact that it incorporates such subfactors as public

involvement and jurisdictional endorsements, which are requirements of the FTA planning and environmental review processes. Moreover, many jurisdictions have already addressed both of these subfactors in plans and policies developed for existing transportation corridors. Ratings for the first subfactor, implementation tools to support transit-supportive development, are generally equal to or less than ratings for the Transit-Supportive Corridor Policies factor. This pattern follows expectations that implementation tools are developed in order to fulfill certain policies.

3.2.6 Performance of Land Use Policies

The Performance of Land Use Policies factor incorporates three subfactors:

1. Specific enacted transit-supportive plans, ordinances, and policies;
2. Public and private sector organizations; and
3. Market development targets and station area development proposals.

Table 3.7 Summary of Ratings For Performance of Land Use Policies

Rating	Number of Projects
High	1
Medium-High	4
Medium	11
Low-Medium	11
Low	1
Total Projects Rated	**28**

Table 3.7 shows that overall ratings for this factor were generally low, which is likely reflective of the early stage of planning for most of the transit projects evaluated. Almost all of the projects (26 out of 28 that provided information on this factor) were still in preliminary engineering when the land use assessments were performed, with 10 of the 26 in early stages of preliminary engineering. Some of the projects that earned the highest scores in this factor are planned in regions where the transit projects were conceived in tandem with economic development strategies, for example, in Boston, Portland, and San Francisco. It is expected that ratings will rise as project development advances.

3.3 Key Category Ratings

The initial evaluation of transit-supportive land use associated with the *FY 1999 New Starts* projects highlighted 11 key categories which merited further analysis.

Three of these categories characterized Existing Conditions:

1. Corridor economic conditions;
2. Existing zoning; and
3. Existing station area development.

The remaining eight categories comprised Policies and Actions to Promote Transit-Oriented Development:

1. Station area planning;
2. Regional growth management;
3. Urban design guidelines;
4. Promotion and outreach;
5. Parking policies;
6. Zoning changes;
7. Transit-oriented development (TOD) market studies; and
8. Joint development planning.

For this expanded set of categories, ratings were assigned on a three-point scale (high, medium, and low). The condensed rating scale was used in order to derive a more general impression of the transit-supportiveness of land use policies among the 30 transit projects.

3.3.1 General Observations

Ratings for the key categories generally corroborated the ratings for the six original land use factors. Table 3.8 presents all 30 projects by overall land use rating and illustrates their respective ratings for the 11 key categories. Table 3.9 describes the criteria used to assign these category ratings. Table 3.10 summarizes the total number of projects by rating in each category. Examining the distribution of key category ratings among all 30 projects highlights several patterns. Projects with high and medium-high ratings tend to exhibit existing transit-supportive zoning and station area development, as well as moderate to strong economic conditions. Most grantees rated a medium-range score for those categories illustrating policies and actions to promote transit-supportive development. This suggests that the incorporation of transit-supportive policies into the planning process is widespread, but not yet comprehensive. When viewed as a whole, the projects display a general weakness in policies for regional growth management, pedestrian-friendly urban design guidelines, parking management, transit-specific zoning changes, and joint development.

Table 3.8 Key Land Use Category Ratings

System Information					Existing Conditions			Policies and Actions to Promote Transit-Oriented Development							
City	Project	Phase	Mode	Overall Rating	Corridor Economic Conditions	Existing Zoning	Station Area Devel.	Station Area Planning	Regional Growth Mgmnt.	Urban Design Guidelines	Promotion and Outreach	Parking Policies	Zoning Changes	TOD Market Studies	Joint Develop-ment
Portland	South/North Corridor	PE	Light Rail	High	◑	●	◑	●	●	●	●	●	●	◑	●
San Francisco	Third Street Light Rail	PE	Light Rail	High	●	●	●	◑	◑	●	●	◑	◑	◑	○
Austin	Northwest/North Central Corridor	Early PE	Light Rail	Medium-High	●	◑	○	◑	◑	◑	●	○	◑	◑	◑
Boston	South Boston Piers Transitway, Phase II	PE	Bus	Medium-High	●	●	●	◑	◑	●	◑	●	●	●	◑
Miami	East-West Multimodal Corridor	PE	Heavy Rail	Medium-High	◑	●	◑	●	●	◑	●	◑	●	◑	◑
Northern New Jersey	Newark-Elizabeth Rail Link (IOS)	PE	Light Rail	Medium-High	◑	●	●	●	◑	●	●	◑	◑	●	●
Orlando	I-4 Central Florida Light Rail	PE	Light Rail	Medium-High	●	◑	◑	◑	◑	◑	●	◑	◑	◑	◑
San Diego	Mission Valley East Light Rail Transit Project	PE	Light Rail	Medium-High	●	◑	◑	●	◑	●	●	◑	●	◑	●
San Juan	Minillas Extension to Tren Urbano	Early PE	Heavy Rail	Medium-High	○	●	●	◑	○	●	◑	○	◑	◑	○
Seattle	Seattle Sound Move (Central LRT)	Early PE	Light Rail	Medium-High	◑	◑	●	◑	●	○	●	○	○	◑	◑
Dallas	Dallas North Central Corridor	Final Design	Light Rail	Medium	●	○	◑	◑	◑	◑	◑	○	○	●	●
Denver	Southeast Corridor	Early PE	Light Rail	Medium	●	◑	○	○	◑	◑	◑	◑	○	◑	◑
Fort Lauderdale	Tri-County Commuter Rail	Final Design	Commuter Rail	Medium	◑	○	◑	◑	◑	○	◑	○	◑	◑	◑
Las Vegas	Resort Corridor	Early PE	Light Rail	Medium	●	●	◑	○	◑	◑	○	○	○	◑	○
Little Rock	Junction Bridge (River Rail Project)	Early PE	Light Rail	Medium	○	◑	◑	◑	○	●	◑	○	●	◑	○
Los Angeles	Eastside Extension Phase 2	PE	Heavy Rail	Medium	◑	●	●	◑	◑	○	◑	○	○	◑	○
San Diego	Mid-Coast Corridor	PE	Light Rail	Medium	○	◑	◑	◑	◑	◑	◑	◑	◑	○	○
San Diego County	Oceanside-Escondido Passenger Rail Project	PE	DMU	Medium	◑	○	○	◑	◑	◑	◑	○	◑	◑	○
Washington D.C.	Metrorail Extension to Largo Town Center	PE	Heavy Rail	Medium	◑	◑	◑	●	◑	◑	◑	○	◑	◑	●

● High ◑ Medium ○ Low

Table 3.8 Key Land Use Category Ratings *(continued)*

System Information					Existing Conditions			Policies and Actions to Promote Transit-Oriented Development							
City	Project	Phase	Mode	Overall Rating	Corridor Economic Conditions	Existing Zoning	Station Area Devel.	Station Area Planning	Regional Growth Mgmnt.	Urban Design Guidelines	Promotion and Outreach	Parking Policies	Zoning Changes	TOD Market Studies	Joint Develop-ment
Portland	Euclid Corridor Improvement Project	PE	Bus	Low-Medium	○	◑	○	○	○	◑	◑	○	◑	◑	○
Kansas City	Southtown Corridor	PE	Light Rail	Low-Medium	○	◑	○	◑	○	○	◑	○	○	●	○
Memphis	Medical Center Rail Extension	Early PE	Light Rail	Low-Medium	○	○	◑	○	○	○	○	○	○	○	●
Miami	Northwest 27th Avenue Corridor	PE	Heavy Rail or Busway	Low-Medium	○	◑	◑	◑	●	○	◑	◑	○	○	○
New Orleans	Canal Streetcar Spine	Final Design	Light Rail	Low-Medium	○	◑	◑	○	○	○	○	◑	○	◑	◑
Orange County CA	Irvine-Fullerton Corridor	Early PE	Light Rail	Low-Medium	●	◑	◑	◑	◑	○	◑	○	○	◑	○
Pittsburgh	Stage II LRT Project	PE	Light Rail	Low-Medium	○	◑	○	○	○	○	○	◑	○	◑	◑
Raleigh	Phase I Regional Rail	Early PE	DMU	Low-Medium	●	◑	○	◑	◑	○	●	○	○	◑	○
Salt Lake City	East-West Corrider	Early PE	Light Rail	Low-Medium	◑	◑	○	◑	○	◑	◑	○	◑	◑	○
Fort Worth	Railtrain Phase 2	Final Design	Commuter Rail	Low	◑	○	○	◑	○	○	○	○	○	◑	◑
Norfolk-Virginia Beach	Norfolk-Virginia Beach Corridor	PE	Light Rail	Low	○	◑	○	○	○	○	○	○	○	●	○

● High ◑ Medium ○ Low

Table 3.9 Description of Land Use Category Ratings

Category	Rating
Corridor Economic Conditions	H – High growth/strong demand for locating in corridor M – Moderate growth/demand L – Little or no growth
Existing Zoning	H – Very transit-supportive (allowable densities, mix) M – Moderately transit-supportive L – Minimally/not transit-supportive
Existing Station Area Development	H – Existing land use (densities, mix, pedestrian environment, high trip generators) is strongly transit-supportive in most station areas M – Existing land use is moderately transit-supportive, or strong only in some station areas and weak in others L – Existing land use is primarily not transit-supportive
Station Area Planning	H – Planning is being conducted and appears strongly supportive of transit-oriented development (TOD) M – Planning is being conducted and appears weakly supportive of TOD; or agency is setting up process for station area planning (if too early for specific planning) L – No station area planning
Regional Growth Management	H – Strong, regionwide policies implemented which show evidence of effectiveness or probable effectiveness M – Some policies implemented, not strong/comprehensive L – No regional growth management policies
Urban Design Guidelines	H – TOD-supportive guidelines implemented or being developed for most/all station areas M – Guidelines implemented/being developed for some station areas (i.e., specific developer or jurisdiction) L – Guidelines not implemented or being developed
Promotion and Outreach	H – Transit and/or local planning agencies conducting active promotion of TOD and public outreach for TOD land use planning M – Some public participation/outreach for land use planning L – Public participation/outreach for transit system planning only (no land use planning promotion)
Parking Policies	H – Parking policies which are strongly restrictive/transit-supportive exist or are likely to be implemented M – Parking policies which are moderately restrictive transit-supportive exist or are likely to be implemented L – Parking policies are minimally restrictive/transit-supportive
Zoning Changes	H – Changes implemented or being developed which are strongly TOD-supportive, for most/all of system M – Changes implemented or being developed which are moderately TOD-supportive or affect only limited areas L – Specific changes to zoning not being developed

Table 3.9 Description of Land Use Category Ratings (continued)

Category	Rating
TOD/Market Studies	H – Serious/comprehensive studies on TOD market potential being conducted M – Some studies; ad hoc or not comprehensive L – Issue is not being studied
Joint Development Planning	H – Strong/active joint development program M – Developing joint development program, or have sporadic joint development activities L – No joint development program

Table 3.10 Number of Systems By Category Rating

	Existing Conditions			Policies and Actions to Promote Transit-Oriented Development							
	Corr. Econ. Cond.	Existing Zoning	Station Area Devel.	Station Area Planning	Regional Growth Mgmt.	Urban Design Guides	Promotion and Outreach	Parking Policies	Zoning Changes	TOD/ Market Studies	Joint Devel.
High	10	8	6	5	4	7	9	2	5	5	6
Medium	10	11	14	18	16	11	15	10	11	22	10
Low	10	5	10	7	10	12	6	15	14	3	14

3.3.2 Relationship of Overall Ratings to Ratings for Existing Conditions and for Plans and Policies

FTA considered the relationship between existing conditions and plans/policies when evaluating projects and assigning overall land use ratings. In some cases, ratings for existing conditions (including existing station area development, existing zoning, and the economy of the corridor) correlate directly with overall ratings. In a few contexts, however, such as San Juan and Seattle, corridors with strongly transit-supportive existing development patterns had current policies and plans in place that were only adequately transit-supportive. In these contexts, the projects were assigned overall ratings that generally corresponded to the high ratings on existing conditions. The strong weight placed on existing conditions reflects FTA's experience that a major fixed-guideway investment requires some level of transit-supportive land use to justify and support the project. It also reflects FTA's expectation that highly transit-supportive environments will be sustained and enhanced by the construction of proposed projects.

Because most of the transit projects are in initial stages of development and because many transit-supportive plans have been just recently developed, most projects earned lower ratings for the key categories characterizing existing conditions. For some proposed projects, although not rated consistently highly for all existing conditions, such as Austin, the local efforts at encouraging future transit-supportive development were sufficiently strong to result in a relatively high overall rating. In general, projects that earned high ratings for existing conditions tended to earn higher ratings for transit-supportive planning. This suggests that the planning context may influence how plans are developed.

3.3.3 The Relationship Between Overall Ratings and Key Category Ratings

Several patterns appear to emerge when comparing overall ratings and the key category ratings. First, no projects that earned a high or medium-high overall land use rating earned a low score in any of the following four categories:

- Existing zoning;
- Station area planning;
- Economic/market area studies; and
- Promotion and outreach.

This suggests that at least average performance according to these categories was important in obtaining a high overall rating. The combination of these four categories appears to affect positively the potential for development in transit corridors.

Second, demonstration of actual transit-supportive development or at least of strong development potential contributed to high and medium-high ratings. The majority of projects with high and medium-high overall ratings earned high ratings for five categories:

- Station area development;
- Corridor economic conditions;
- Existing zoning;
- Promotion and outreach; and
- Joint development.

Third, most of the 30 projects were assigned low ratings in three key categories:

- Zoning changes;
- Joint development; and
- Parking policies.

Effective planning and implementation in these categories can generally expedite implementation of station area development. Transit agencies and regions that had solid

evidence to point to in these categories generally earned high and medium-high ratings, suggesting that strong performance in these categories may positively influence the quantity of development around stations. As discussed in Chapter 4.0, FTA has updated the *Technical Guidance on Section 5309 New Starts Criteria* to assist project sponsors in reporting these and other categories.

3.4 Analysis of Ratings by Key Characteristics

The previous sections have indicated some general patterns in transit-supportive land use planning among the 30 projects evaluated for the *FY 1999 New Starts Report*. In addition to this analysis, overall land use ratings were compared across New Starts projects to determine if they differed significantly based on specific characteristics of the project. Ratings were compared by four characteristics:

1. **System mode/technology** (light rail, heavy rail, commuter rail, busway, or diesel multiple units);
2. **Project phase** (early preliminary engineering, preliminary engineering, or final design);
3. **System status** (new system or extension of an existing system); and
4. **Number of jurisdictions** through which the project passes (single or multiple).

FTA anticipated that each of these four distinguishing characteristics would have a bearing on both existing land use and transit-supportive policies, and therefore on the overall land use ratings, for reasons described below. The purpose of this analysis was to test whether this correlation appeared in practice.

It should be stated at the outset that the sample size for many of these categories is quite small, and generalizations – whether suggesting the presence or absence of a correspondence – should be made with caution. Also, specific projects can always provide exceptions to any rules or trends noted.

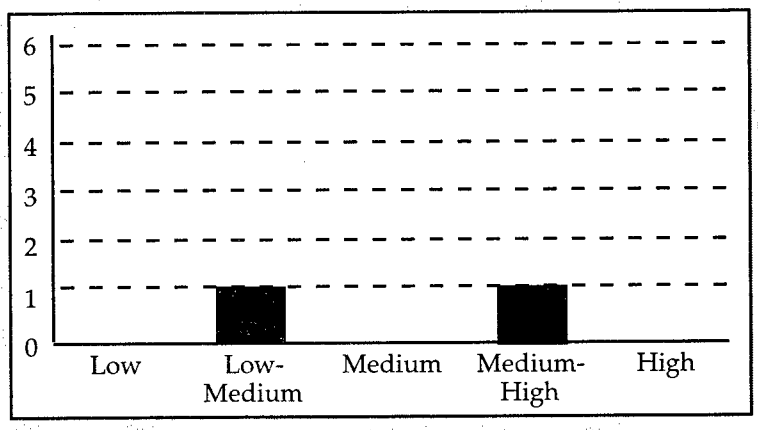
3.4.1 Analysis of Ratings by Mode/Technology

Roughly two-thirds (19) of the FY 1999 New Starts project proposals were for light rail systems. Five proposals were submitted for heavy rail projects, while two each were submitted for busways, commuter rail, and diesel multiple unit (DMU) projects. One system – the Miami North 27th Avenue Corridor – included a busway alternative but was counted only as heavy rail for this analysis. Also, only the light rail element of Seattle's Sound Move Project was analyzed for this report, although the project also includes commuter rail, express bus, and high-occupancy vehicle (HOV) lanes. The distribution of overall land use ratings by system mode/technology is summarized in Figure 3.1 and Table 3.11.

Figure 3.1 Overall Land Use Rating by Project Mode

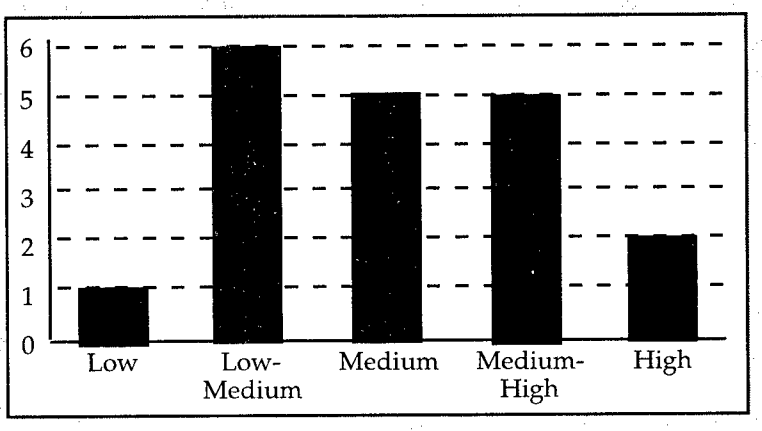
BUS

2 Projects



LIGHT RAIL

19 Projects



HEAVY RAIL

5 Projects

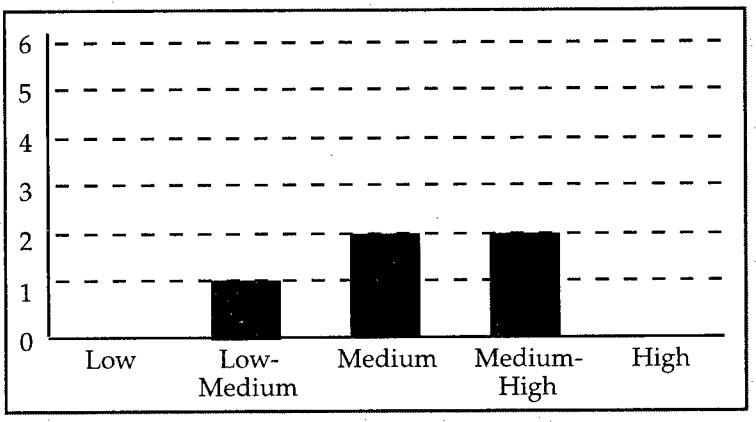
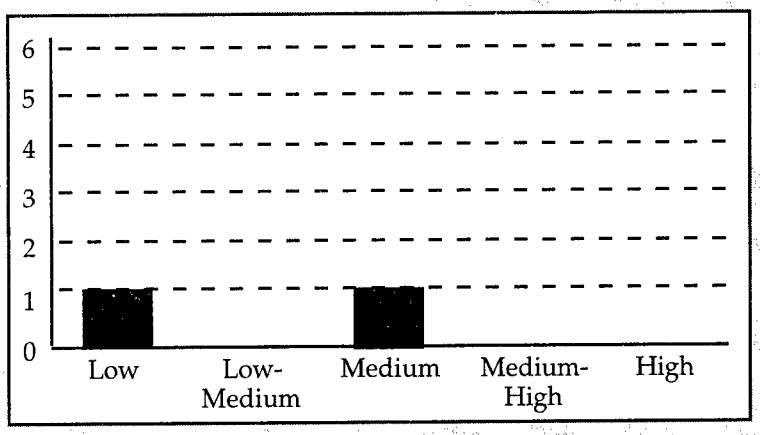


Figure 3.1 Overall Land Use Rating by Project Mode (continued)

COMMUTER RAIL

2 Projects



DIESEL MULTIPLE UNIT

2 Projects

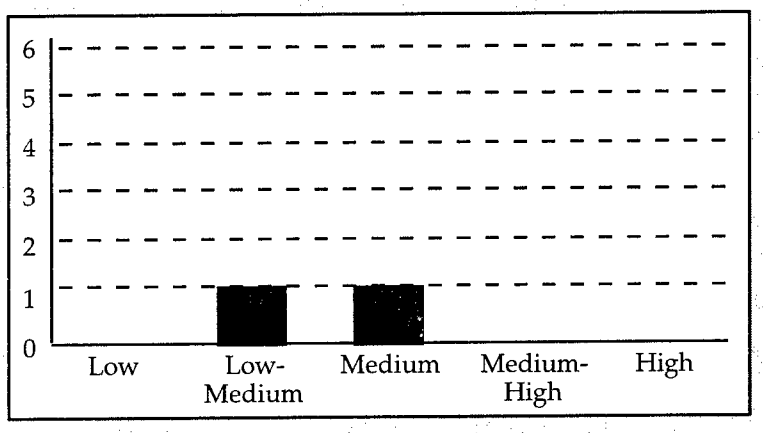


Table 3.11 Overall Land Use Rating by Project Mode

Phase	Low	Low-Medium	Medium	Medium-High	High	Total
Bus	0	1	0	1	0	2
Light Rail	1	6	5	5	2	19
Heavy Rail	0	1	2	2	0	5
Commuter Rail	1	0	1	0	0	2
Diesel Multiple Units	0	1	1	0	0	2
Total	**2**	**9**	**9**	**8**	**2**	**30**

The various systems might be expected to have different land use characteristics and objectives based on the mode of the transit system. This analysis explores the validity of various notions about land use patterns and policies for different types of systems. Heavy and light rail systems, for example, typically require considerable investment in new trackage and possibly right-of-way. As a result, policy objectives frequently include establishing mixed-use and high-density land uses adjacent to the system so that a variety of trip purposes can be served directly by transit and demand is retained throughout the day. Commuter rail projects, in contrast, are frequently intended as a lower-cost means of providing peak-period transit capacity for CBD commuters from outlying suburban and exurban areas, by utilizing existing railroad right-of-way and tracks. Commuter rail may rely primarily on park-and-ride or transit feeder lines rather than dense, transit-oriented development to generate access trips.

Diesel Multiple Units (DMU), an emerging technology often referred to as Diesel Light Rail, seeks to provide the service flexibility of light or heavy rail while utilizing existing rail trackage and right-of-way to economize on investment. Therefore, transit-oriented development may be a long-term goal for this type of system even though existing land use conditions may be similar to those of commuter rail systems. Finally, busways have traditionally been perceived to be less likely than rail to attract transit-oriented development due to a perception that they are less permanent than rail systems. Experience with busways in Pittsburgh and with an exclusive bus tunnel in Seattle, however, suggests that transit-supportive busway development is a realistic possibility. These experiences further indicate that strong planning and promotional efforts by local agencies can have a significant effect on development adjacent to busways, just as they can for rail stations. Many of the proposed busway or Bus Rapid Transit[1] (BRT) projects, which are currently

[1]Bus Rapid Transit (BRT) is an integrated package of bus capital and operation improvements designed to provide for a faster, higher quality mode of travel than traditional bus service. BRT is characterized by all or most of the following characteristics: exclusive busways or near-exclusive lanes; preferential treatment at intersections through signal preemption; boarding islands and raised platforms designed to speed passenger boardings; and advanced fare collection techniques. Ideally, planning for BRT is coordinated with adjacent land use planning to ensure adequate demand for the system, to conserve land and contain urban sprawl.

in planning but not reflected in this report, are undertaking transit-supportive land use efforts.

The preceding discussion suggests that commuter rail, DMU, and busway systems would be less likely to receive favorable overall land use ratings. This appeared to be the case for commuter rail and DMU, since two of these four projects rated "medium" and the other two rated "low-medium" or "low." However, the sample size is too small to draw clear conclusions based on this set of submissions. Also, there was no obvious difference in the overall distribution of ratings provided to light rail, heavy rail, and busway systems.

3.4.2 Analysis of Ratings by Project Phase

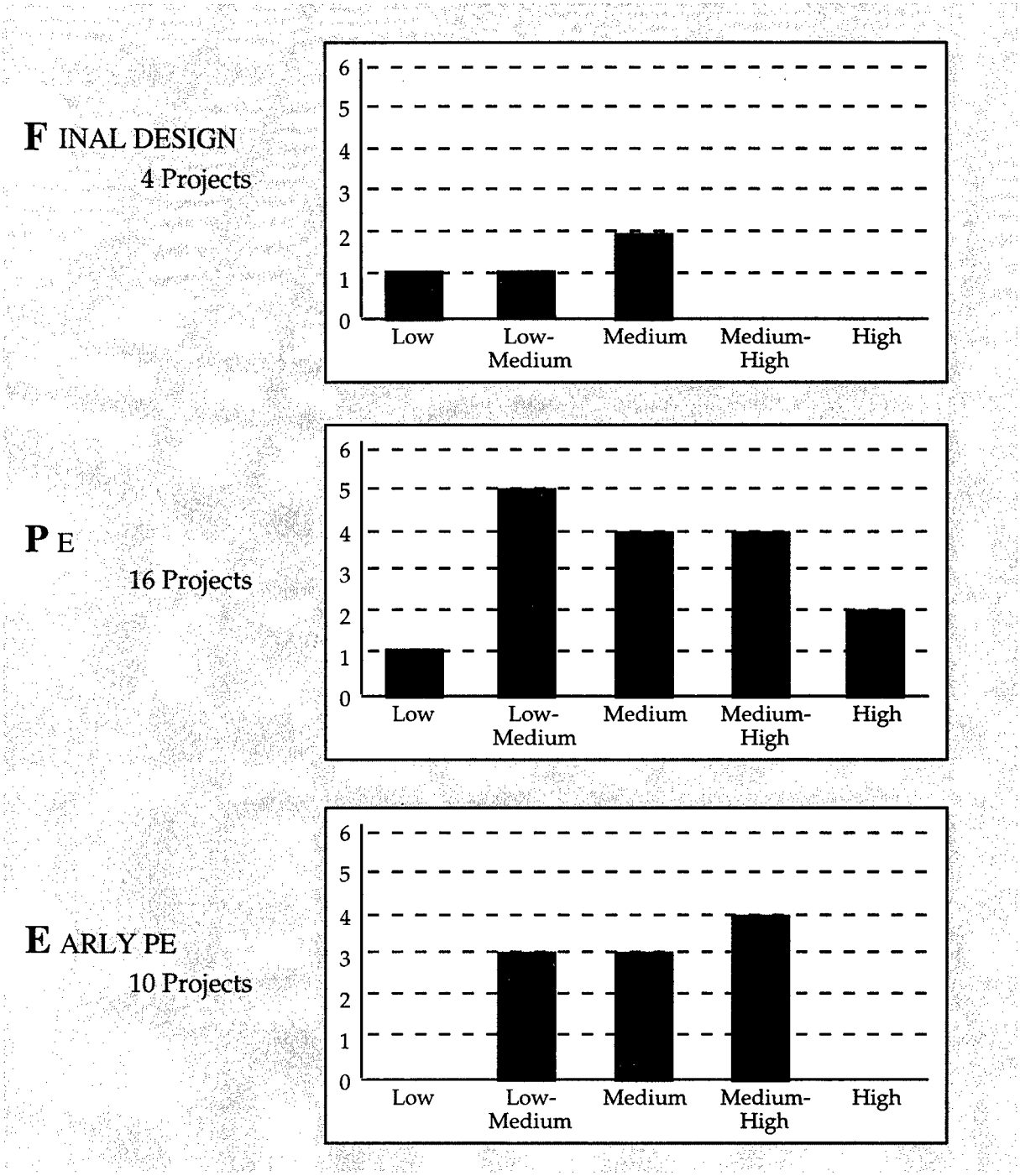
Four of the projects analyzed had entered the final design phase. Of the remainder in preliminary engineering, 10 were in the early stages of preliminary engineering,[2] while 16 were at more advanced stages. Figure 3.2 and Table 3.12 summarize the distribution of overall land use ratings by project phase.

Table 3.12 Overall Land Use Rating by Project Phase

Phase	Low	Low-Medium	Medium	Medium-High	High	Total
Final Design	1	1	2	0	0	4
PE	1	5	4	4	2	16
Early PE	0	3	3	4	0	10
Total	**2**	**9**	**9**	**8**	**2**	**30**

[2]FTA generally does not distinguish between the early and later stages of preliminary engineering when evaluating potential transit projects, but used this approach for analysis purposes to examine the transit-supportive land use and local financial commitment of projects in the *FY 1999 New Starts Report*. This report deals with transit-supportive land use, while the topic of local financial commitment is addressed in FTA's *Assessment of Local Financial Commitment for New Starts Projects: FY 1999 New Starts Report* (September 1998).

Figure 3.2 Overall Land Use Rating by Project Phase



Projects at more advanced stages of development received slightly lower ratings on average than did projects at earlier stages. However, the number of systems included in this set of evaluations, particularly in the final design stage, is probably too small to establish a statistically significant trend. Furthermore, differences in the individual systems may outweigh the effects of differences caused by the stage of design. For example, two of the four final design projects evaluated were commuter rail systems and might be expected to have lower overall ratings.

Project ratings by phase may vary for at least two reasons. First, projects at more advanced stages of development might be expected to receive higher ratings, since transit-supportive policies and implementation tools would be more fully developed, and some transit-oriented development activity might be apparent.

Second, counteracting this expectation is the need on the part of reviewers not to "penalize" systems simply because they are at the early stages of planning. While development of policies and tools should take place as early as possible in the planning process, these policies and tools should become more concrete and more fully implemented as the process advances and as the system design and funding sources are finalized. The ratings for systems early in the process, therefore, may be somewhat cautious since projects have not yet had a chance to demonstrate the ultimate effectiveness and implementation of these tools and policies.

3.4.3 Analysis of Ratings by System Status

One-third (10) of the New Starts projects evaluated were new systems (that is, stand-alone New Starts projects), while two-thirds (20) were extensions of existing systems. The distribution of ratings by system status is shown in Figure 3.3 and Table 3.13. The ratings do not indicate a clear difference in the ratings between new and existing systems.

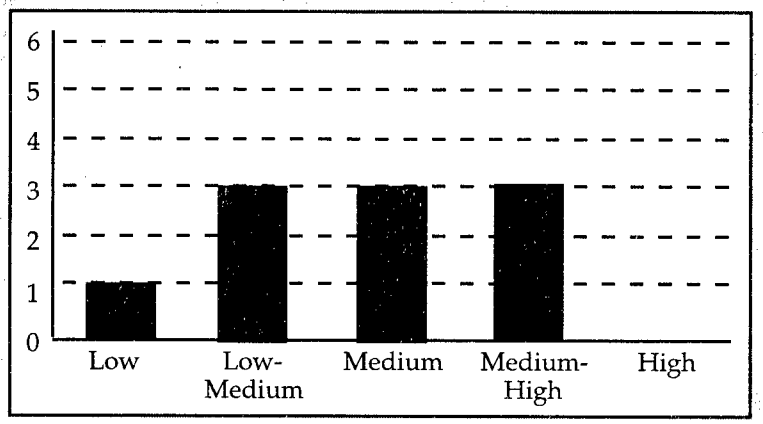
Table 3.13 Overall Land Use Rating by System Status

System Status	Low	Low-Medium	Medium	Medium-High	High	Total
New System	1	3	3	3	0	10
Extension	1	6	6	5	2	20
Total	**2**	**9**	**9**	**8**	**2**	**30**

Figure 3.3 Overall Land Use Rating by System Status

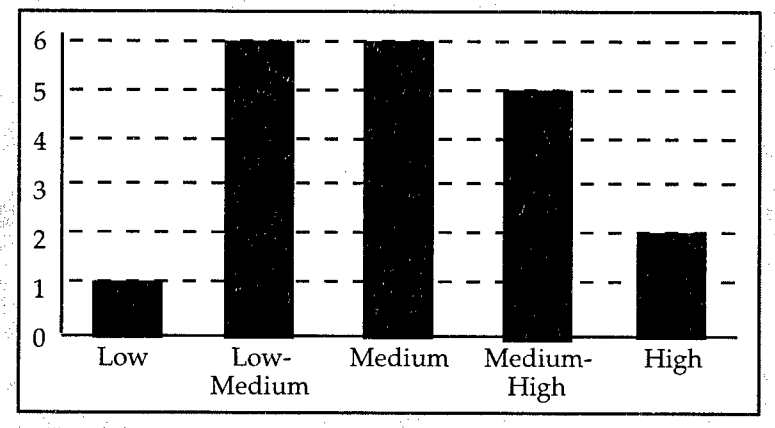
NEW SYSTEM

10 Projects



EXTENSION

20 Projects



While no pattern was apparent from these evaluations, a number of factors might theoretically cause existing system extensions to receive higher overall ratings than new systems. These include:

- Transit agencies and municipalities may have established transit-supportive policies and practices from previous transit system development. The Washington Metropolitan Area Transit Authority, for example, has had an active joint development program in place for many years;

- Transit agencies and municipalities may be able to respond to previous experiences to improve development policies and practices; and,

- Agencies facing the challenge of developing policies and practices for new systems, and gaining local consensus for such policies, lack the benefit of local precedents.

On the other hand, the emphasis on transit-supportive development from a policy perspective has increased greatly in recent years. The state of knowledge about transit-supportive policies and practices, and dissemination of such practices, has also increased significantly. Therefore, some agencies may not have emphasized such practices in previous transit system development and may be at the same stage of developing policies as new systems. This may partially explain why existing systems did not receive overall ratings significantly different than new systems in the current evaluation. Over time, tracking the success of agencies at achieving transit-supportive development on systems already built should help indicate the potential success of system extensions by that agency as well as for similar projects in other areas.

3.4.4 Analysis of Ratings by Number of Jurisdictions

Forty percent (12) of the projects evaluated were contained entirely within one jurisdiction, usually a central city, while two-thirds (18) were contained in multiple jurisdictions. The distribution of ratings by number of jurisdictions is shown in Figure 3.4 and Table 3.14.

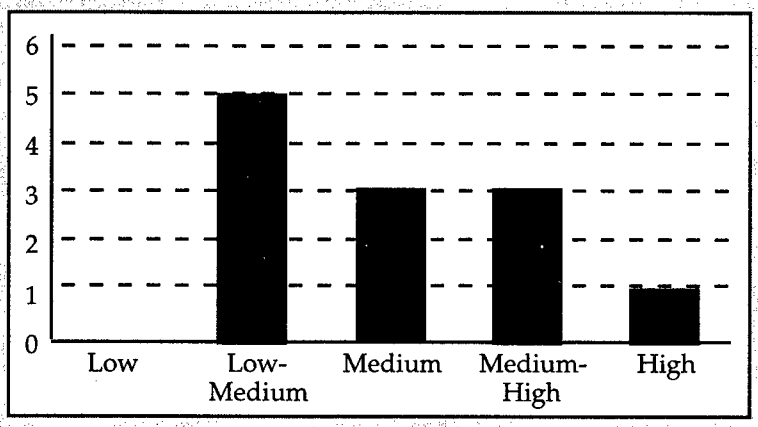
Table 3.14 Overall Land Use Rating by Number Of Jurisdictions

Jurisdictions	Low	Low-Medium	Medium	Medium-High	High	Total
Single	0	5	3	3	1	12
Multiple	2	4	6	5	1	18
Total	**2**	**9**	**9**	**8**	**2**	**30**

Figure 3.4 Overall Land Use Rating by Number of Jurisdictions

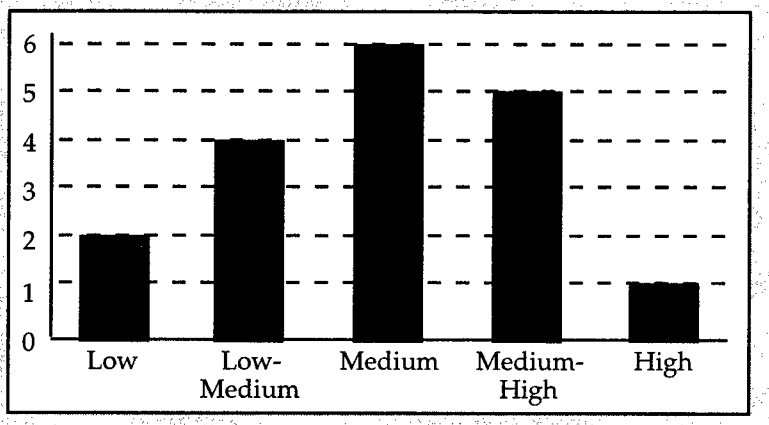
SINGLE JURISDICTION

12 Projects



MULTIPLE JURISDICTION

18 Projects



The ultimate ability to achieve transit-oriented development is largely influenced by policies, tools, and actions taken at the local (municipal) level. Implementation of transit-supportive policies and actions throughout a transit corridor that crosses more than one jurisdiction is dependent on the level of cooperation and interest of the municipalities throughout the corridor. The task of the transit agency to coordinate and promote these actions may be considerably more difficult if the corridor runs through multiple jurisdictions.

Many complex factors influence the land use and transportation policies, plans, and practices of the different jurisdictions in a multi-jurisdictional metropolitan area. A central city may be a strong proponent of transit-supportive development while some suburban communities may be less active in seeking such development. Central cities may see transit as a means of improving access to the central business district, increasing mobility for transit-dependent residents, revitalizing urban neighborhoods, and catalyzing new development in former warehouse and industrial areas. Suburban communities, on the other hand, may be more comfortable with their established "car culture," may view the primary benefit of the transit system as providing access to the CBD for commuters, and may even prefer to see limited transportation funds directed toward suburb-to-suburb travel. These are general observations that do not apply to all central cities or suburban communities. While indications that these conditions were present surfaced to varying degrees during this survey of the New Start project areas, in-depth treatment of these complicated issues was beyond the scope and objectives of this report.

No distinction in overall land use ratings between single and multiple-jurisdiction systems was apparent in this assessment. A qualitative assessment of the projects suggests, however, that single-jurisdiction systems have been more successful at achieving systemwide transit-supportive development policies and programs. The influence of a single, strong central city may be insufficient on its own to achieve transit-supportive development beyond its borders. Regionwide cooperation among jurisdictions is also required to establish transit-supportive growth management policies, since strong local policies to promote transit-supportive development may be relatively ineffective if a regional consensus on managing growth does not exist.

4.0 Conclusions and Lessons Learned

This report summarizes and analyzes FTA's initial application of the transit-supportive land use criterion to proposed New Starts projects profiled in the *FY 1999 New Starts Report*. The experience of gathering, measuring, and evaluating data on transit-supportive land use proved to be instructive to FTA and to applicant grantees.

4.1 Benefits of the Process

The information gathered in the assessment process provided the first national survey on transit-supportive land use associated with applicant New Starts projects. This material enabled FTA to evaluate the potential benefits and likelihood of success of proposed New Starts projects more fully than in the past. The experience of conducting this initial assessment allowed FTA to refine its guidance for future applications of the transit-supportive land use criterion. Continued assessments and analyses will enable FTA to determine long-term patterns in the successful implementation of land use policies.

In the future, transit agencies will be better prepared to submit land use information related to New Starts projects from personally having gone through this initial review or from vicariously experiencing it through this report. FTA anticipates that continued application of the criterion will foster greater understanding and support of transit-land use linkages among local and regional agencies, as well as decision makers, and result in land use plans, policies, and practices that are compatible with proposed transit projects. Increased focus on coordinated transit and land use will promote sound transit capital investments and enhance the viability of communities.

4.2 Key Findings

Analysis of the 30 projects included in the *FY 1999 New Starts Report* permitted FTA to observe closely the transit-supportive land use at those projects. It would be premature, on the basis of this initial effort, for FTA to draw absolute conclusions on any trends from the patterns observed. There are, however, a number of findings about the land use assessment process and the assessments themselves that are worthy of note.

4.2.1 The Process

- Most applicant sponsors provided comprehensive, useful data on transit-supportive land use at proposed projects;

- The FTA rating process facilitated a two-pronged approach for assessing transit-supportive land use at proposed projects – existing conditions, and plans and policies;

- While FTA originally devised six measurement factors for transit-supportive land use, the assessment process identified 11 key categories for reviewing transit-supportive land use:

  - Corridor economic conditions;
  - Existing zoning;
  - Existing station area development;
  - Station area planning;
  - Regional growth management;
  - Urban design guidelines;
  - Promotion and outreach;
  - Parking policies;
  - Zoning changes;
  - Transit-oriented development (TOD) market studies; and
  - Joint development planning.

4.2.2 Summary of Ratings Applied to the 30 Projects in the *FY 1999 New Starts Report*

- There was a full range of ratings, slightly skewed towards the lower end:

  - Two High;
  - Eight Medium-High;
  - Eight Medium;
  - Ten Low-Medium; and
  - Two Low.

- The majority of projects with high and medium-high ratings scored highly in five categories:

  - Station area development; }
  - Corridor economic conditions; } → **Existing Conditions**
  - Existing zoning; }

  - Promotion and outreach; and } → **Plans and Policies**
  - Joint development planning. }

- Most of the 30 projects, regardless of overall rating, scored low (low/low-medium) in the following categories:

  - Zoning changes;
  - Joint development planning; and
  - Parking policies.

- Projects receiving low ratings (low/low-medium) tended to have:

  - Incomplete submissions, and/or
  - Low ratings in the following categories:

    - Zoning changes;
    - Station area development;
    - Urban design guidelines;
    - Joint development;
    - Parking policies; and
    - Corridor economic conditions.

- There was insufficient information to draw conclusions about strong correlations between overall project ratings and the projects' key characteristics, that is:

  - System mode/technology;
  - Project phase;
  - System status; and
  - Number of jurisdictions through which the project passes.

4.3 Issues Regarding Submitted Materials

Overall, the information provided by transit agencies was fundamentally sound. Most project sponsors obviously applied significant time and resources to this effort. For measurement purposes, land use information is difficult to quantify. The quality of information provided, therefore, had considerable bearing on the evaluation of the six measurement factors. The relative impact of existing conditions, planning, and implementation on the final overall rating depended to some extent upon the persuasiveness of the narrative and the level of documentation that each transit agency submitted. Submissions varied widely regarding levels of detail and quality.

Projects that received high overall ratings generally demonstrated one or a combination of two qualities. First, some agencies, which received high ratings for their projects, presented a **clear and convincing portrait of existing transit-supportive development through numerous detailed documents and maps.** Second, some agencies documented a **comprehensive and detailed set of transit-supportive policies with clear and concrete examples of the impact of such policies.**

FTA recognizes that there is an element of subjectivity inherent in evaluating transit-supportive land use because of the difficulty in quantifying data on this subject. There was, however, a sufficient correlation between transit-supportive land use ratings and agency submittals to indicate that proposed projects are more likely to receive higher ratings when the materials:

- Provide actual documentation to substantiate claims rather than reliance upon reference;
- Use detailed documentation and maps, including approved policies and plans, market studies and economic analyses, etc.;
- Quantify data to the extent practicable (e.g., density, employment, trip generators, etc.);
- Are brief and precise, but thorough, in providing explanatory statements; do not omit important information for the sake of brevity;
- Explain the impact of transit-supportive land use policies and how implementation would be achieved, particularly when significant changes are anticipated;
- Compare existing conditions with those expected from planned implementation;
- Demonstrate the containment of sprawl through specific growth management and zoning policies;
- Distinguish between station area, corridor, municipal, and regional transit-supportive policies and plans;
- Appropriately reflect the mix of land uses within the corridor; reflect that land uses along most alignments will not be homogeneous; and
- Address parking policies and pricing strategies.

FTA recognizes that transit agencies face a significant task in gathering the requisite data. While FTA must conduct its review in accordance with statutory reporting schedules, FTA will attempt to give transit agencies with prospective New Starts projects ample time to submit the information. The evaluation timeframe, however, must be enforced to allow sufficient time for review and cross-evaluation by FTA and its contractors. Transit agencies making late or incomplete submissions compromise the evaluation of their transit-supportive land use.

4.4 Issues Regarding FTA Technical Guidance

FTA has revised its *Technical Guidance on Section 5309 New Starts Criteria (Technical Guidance).* In addition to providing transit agencies more guidance on submitting information, as noted in the previous section, the *Technical Guidance* has been revised to:

- Restructure the evaluation format to eliminate duplication in reporting information;
- Clarify language in describing factors and subfactors to identify the intent of the measure;
- Provide more examples that illustrate the type and use of information desired;
- Provide guidance, when the proposed New Starts project is an initial/interim portion of a larger planned major transit investment, for differentiating the land use impacts along the New Starts segment as opposed to the entire corridor; and
- Add a separate category ("Other Land Use Considerations") to provide project sponsors the opportunity to explain any extenuating circumstances, conditions, or constraints under which the transit agency operates that influence the local and regional land use policies and plans (e.g., topography, brownfields redevelopment, central city redevelopment, type and condition of market, such as resort, seasonal, etc.).

4.5 Conclusion

FTA will continue to assess the transit-supportive land use of proposed New Starts projects, as part of the agency's responsibility to evaluate and make recommendations about Federal capital investment funding to those projects. As assessment data cumulate over time, the agency intends to identify additional findings and distinguish patterns and trends in transit-supportive land use. FTA will also continue its outreach to the transit industry to help strengthen the process for land use assessment and the important linkage between transit and land use.

5.0 Summary Assessments

Following are summary assessments of transit-supportive land use associated with each of the 30 projects evaluated and rated in the *FY 1999 New Starts Report*, including a summary of key findings for each project. Each summary contains the substance of the land use information which the transit agency submitted on the project, as well as FTA's assessment of that information.

These summary assessments reflect transit-supportive existing land use, plans, and policies for each proposed New Starts project as of November 1997. Project land use assessment ratings may change in future years as local land use conditions, plans, and policies change and as FTA reviews and analyzes revised land use documentation.

Full transit-supportive land use assessments for each project are included in a separate *Appendix* which, due to its size, is available only in limited numbers. The Introduction of this report provides directions on obtaining the *Appendix* in hard copy and on the FTA Internet Homepage.

RAILTRAN PHASE 2

Project Location:	Dallas-Fort Worth, Texas
Lead Agency:	Fort Worth Transportation Authority
Review Date:	November 1997
FTA Land Use Rating:	Low

PROJECT SUMMARY

Project Phase:	Final Design
Mode:	Commuter Rail
Length:	25 miles (40 kilometers)
Number of Stations:	5 stations
Total Estimated Capital Cost:	$118.6 million ($1997)
2015 Ridership Forecast: (Average Weekday)	10,950

CORRIDOR SUMMARY

Location in Region:	An east-west alignment between downtown Fort Worth and the Dallas metropolitan area.
Transportation Linkages:	Existing Trinity Railroad Express Phase 1 service connecting downtown Dallas to the South Irving Transit Center. Planned connection to Dallas-Fort Worth International Airport by express bus or commuter rail extension at Centreport Station.
Existing Land Use:	Downtown Fort Worth with dense office and hospital development lies at the western end of the line. The outlying suburbs of Fort Worth and Dallas, a few isolated, employment centers, and agricultural land lie along the remainder of the alignment.
High-Trip Generators:	Downtown Fort Worth, Centreport
Significant Factor(s):	Employment Center designation in downtown Fort Worth removes restrictions on density, height, and mandates for parking supply.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Downtown Fort Worth contains the primary concentration of population and employment along the corridor. Density and the extent of land use mixing is generally low along the remainder of the corridor. • The Centreport development in the center of the corridor and downtown Dallas (at the eastern end of the Phase 1 line) are the other primary activity centers in the corridor.	**Low-Medium**
2. Containment of Sprawl • The Employment Center designation for downtown Fort Worth and for the adjacent Medical Center remove restrictions on height and use, indirectly supporting dense, mixed-use developments. • There are no adopted policies to limit the spatial growth of development or to promote infill development in the municipalities along the commuter rail corridor.	**Low**
3. Transit Supportive Corridor Policies • The staff of the city of Fort Worth has begun to develop a Transit-Oriented Development amendment to the zoning ordinance to encourage dense development with a mix of uses clustered around transit stops. • The lack of restrictions on use and the presence of housing subsidies within the Fort Worth Central Business District may support a mix of land uses. • The Employment Center designation for downtown Fort Worth removes potentially expensive requirements for high-parking supplies.	**Low-Medium**
4. Supportive Zoning Regulations Near Transit Stations • Corridor cities have not yet adopted any station area plans, ordinances, or policies to specifically promote transit-supportive development. • Employment Center designation near the proposed Intermodal Center in the Fort Worth central business district appears to be the strongest means to support high density, mixed use land development patterns in the entire corridor.	**Low-Medium**
5. Tools to Implement Land Use Policies • The Downtown Fort Worth Strategic Action Plan supports the establishment of a housing community development corporation, the expanded presence of retail activities, and several urban design guidelines and street environment improvements which generally support transit-oriented development goals.	**Low-Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • Zoning in the Forth Worth CBD allows development at uses and densities that may strongly support transit. • Development at the Centreport business complex incorporates a variety of uses. The development plan, however, does not appear to account for the creation of an amenable pedestrian environment. • Concepts for transit-oriented development in Mosier Valley and the Rock Island Bottom area are still preliminary.	**Low-Medium**

PROJECT DESCRIPTION

The RAILTRAN corridor comprises 34 miles of right-of-way between downtown Dallas and downtown Fort Worth formerly owned by the Rock Island Railroad. The cities of Dallas and Fort Worth purchased the right-of-way in order to ensure continuing freight rail service through the corridor and to provide for the possible development of commuter rail service between the two cities. This corridor is jointly managed by the cities of Dallas and Fort Worth through an administrative entity known as the RAILTRAN Agency. From east to west, the corridor extends from the Dallas CBD through Dallas' Medical Market Center, South Irving, Hurst, and Richmond Hills and terminates in the Fort Worth CBD.

Commuter rail service in the RAILTRAN corridor is known as the Trinity Railway Express (TRE). Phase 1 of the TRE service is currently operating from the eastern terminus of the RAILTRAN corridor in downtown Dallas to the South Irving Transit Station which lies 10 miles to the west of the Dallas CBD. Phase 2 of the project will complete system development for the remaining 25 miles between the South Irving Transit Station and downtown Fort Worth. The completed line will serve 10 stations, five of which are on the Phase 2 segment. The Phase 2 expansion is the focus of this land use assessment profile.

The completed RAILTRAN project will be operated on a cooperative basis between the Fort Worth Transportation Authority, Dallas Area Rapid Transit, and the cities of Dallas and Fort Worth through the RAILTRAN Agency. Actual service is to be operated by a private contractor.

CORRIDOR DESCRIPTION

Phase 1 of the RAILTRAN Commuter Rail service (the Trinity Railway Express) currently operates between downtown Dallas and the South Irving Transit Center to the west. Phase 2 extends from the South Irving Transit Center toward the west to downtown Forth Worth in Tarrant County. The alignment of the railroad tracks follows an almost direct west to east connection between downtown Fort Worth and downtown Dallas. Aside from the Centreport development in the direct center of the corridor, no major development occurs along the alignment. The remainder of the corridor consists of low-density residential development, agricultural land, and vacant land. Much of the development in the corridor is actually clustered along highways to the north and the south of the railroad alignment.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Fort Worth Transportation Authority (FWTA) – Together, FWTA and Dallas Area Rapid Transit (DART) hold the greatest responsibility for project development including project planning, design, and engineering. These two agencies have entered an interlocal agreement which states that each agency will be responsible for development of the RAILTRAN Project within the county it serves (i.e., DART in Dallas County and FWTA in Tarrant County). The FWTA is therefore responsible for the development of Phase 2 of the RAILTRAN Project.

The FWTA is governed by a nine member Executive Committee, with eight members appointed by the Fort Worth City Council and one member appointed by the Tarrant County Commissioners' Court. The Authority is a distinct subdivision of the state of Texas and currently serves the cities of Fort Worth, Lake Worth, Richland Hills, and Blue Mond. The FWTA's Executive Committee establishes policies, standards, and specifications for all services provided by the FWTA. The authority also oversees the operation of local FWTA bus services, demand responsive Mobility Impaired Transportation Services (MITS), Rideshare (a commuter shared ride information service), airport access bus service, and other special transit services.

Dallas Area Rapid Transit (DART) – DART shares responsibility for project development of RAILTRAN with the FWTA and holds primary responsibility for the development of Phase 1 of the system in Dallas County.

The RAILTRAN Agency – Shortly after acquiring the property, the cities of Dallas and Fort Worth jointly created the RAILTRAN Agency and gave it the role of administering rail operations in the corridor – including both freight and commuter rail traffic. At present, the corridor is only used by freight rail carriers which pay user fees to RAILTRAN. RAILTRAN's Policy Committee is composed of six representatives, three appointed by each of the two cities.

Other Agencies – The North Central Texas Council of Governments, the MPO, and Tarrant County provide additional funding assistance for the development of the system.

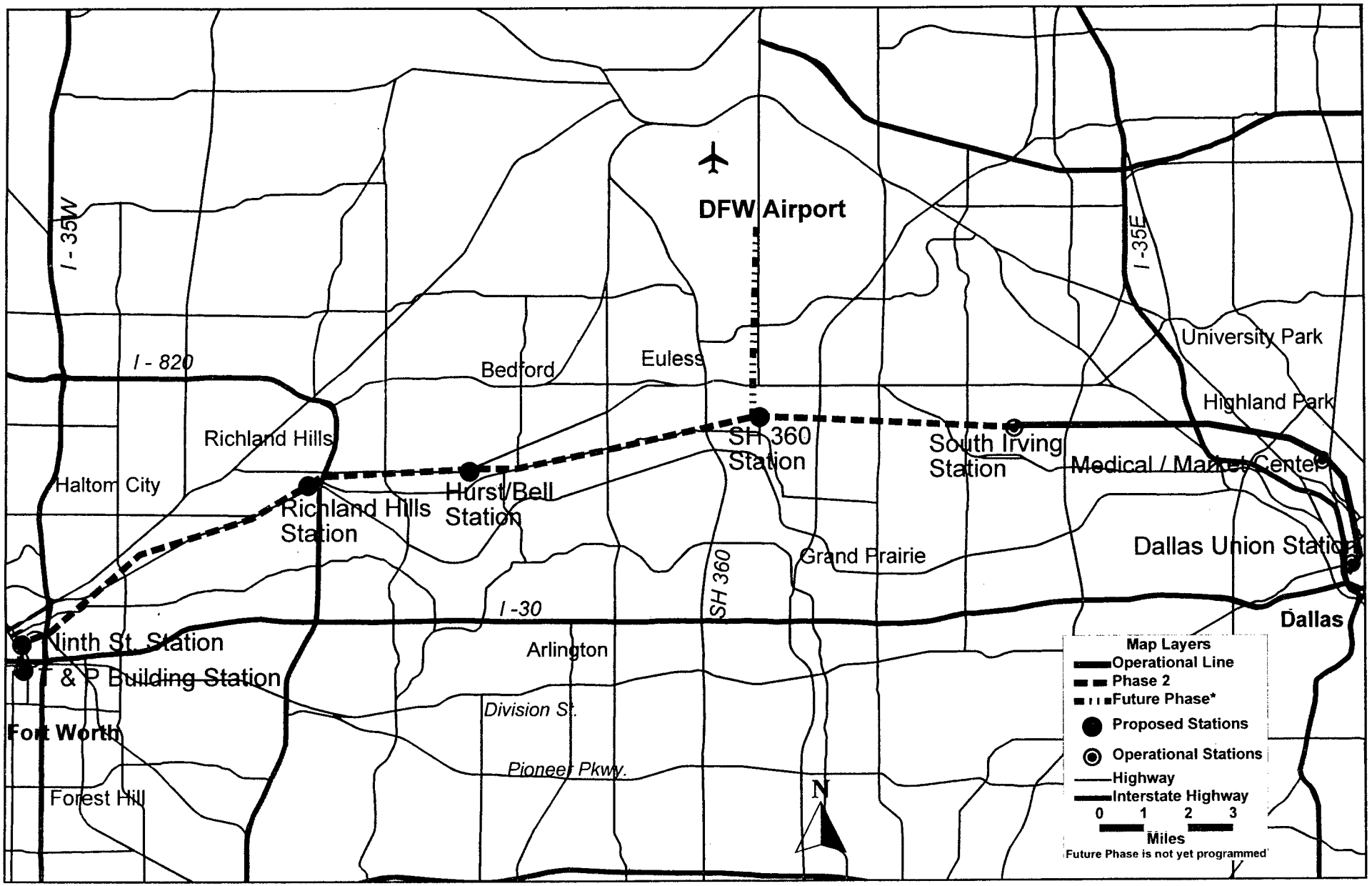
Land Use Planning Agencies

City of Fort Worth – Land use planning in the state of Texas falls largely under the jurisdiction of municipalities. The city of Fort Worth contains a majority of the land around Phase 2 of the RAILTRAN project. The city's Department of Planning and Growth Management thus has the strongest authority to regulate land use policy and regulation for the RAILTRAN corridor and station areas.

Cities of Haltom, Richland Hills, Arlington, Hurst, Euless, and Grand Prairie – These cities also fall within the corridor of the proposed commuter rail line. None appear to have changed their land use plans to locate development or housing around the proposed transit stations.

RAILTRAN Phase 2

Dallas - Fort Worth, TX



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Attention to transit-oriented development is in the preliminary stage. The city of Fort Worth has adopted several policies that support the orientation of land development toward transit. A more comprehensive approach to developing station areas throughout the corridor will strengthen the overall land use plan within consideration of assessment objectives.

- Population and employment densities are generally low throughout the corridor. The corridor is, however, anchored by high concentrations of employment at downtown Fort Worth (at the western end), downtown Dallas and the Dallas Medical Center (at the eastern end), and at the planned Centreport complex (in the middle) of the corridor. Accessibility of residents to the intermediate stations may be difficult because it appears that residential development and roadway access are focused upon highways to the north and south of the rail corridor rather than upon the rail corridor itself.

- A distinctive policy approach to support transit in the city of Fort Worth is the removal of regulations from areas that the city has deemed to be Employment Centers. The city has applied the Employment Center designation to the Central Business District and the Medical Center area. This designation removes restrictions on land use and building height and requirements for minimum supplies of parking. This removal of regulation can help to promote the development of higher density, mixed use districts with low supplies of parking. This decision not to require parking is significant in that it can significantly reduce the cost of development and can promote transit use.

- There appears to be a lack of regional cooperation in general development policy. One major consequence of this lack of cooperation is the absence of any policies to contain growth or to support redevelopment or infill development either for the city of Fort Worth, for Tarrant County, or for North Central Texas. In addition, Fort Worth appears to be the only jurisdiction along Phase 2 of the RAILTRAN project that is actively developing land use policies to support transit. Other corridor cities such as Arlington, Euless, Hurst, and Richland Hills, do not appear to have developed any plans to shape development around proposed commuter rail stations.

- The development of comprehensive transit-oriented development plans is still preliminary. While the designation as Employment Centers does provide some incentives for transit-supportive land uses near downtown Fort Worth, such passive development policies could be more effective if combined with more active efforts for the development of housing and commercial space and with greater attention to pedestrian amenities. Plans for the Mosier Valley area and for Rock Island Bottom do address more issues of design and spatial layout but lack detail on finance and phasing of development. Plans for the Centreport development appear to have the opposite problem. Marketing and development plans for the Centreport area appear to be quite advanced, whereas accommodations for pedestrian-oriented design, land use mix, site planning, and scale and local area circulation do not appear as well developed.

NORTH CENTRAL CORRIDOR

Project Location:	Dallas, TX
Lead Agency:	Dallas Area Rapid Transit (DART)
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	Final Design
Mode:	Light Rail
Length:	12.3 miles
Number of Stations:	8 (2 additional stations in future)
Total Estimated Capital Cost:	$503 million ($ escalated)
2015 Ridership Forecast: (Average Weekday)	34,000 daily on LRT extension; 17,000 new riders

CORRIDOR SUMMARY

Location in Region:	A 12-mile North Central line through Dallas and Richardson to Plano along a north-south alignment directly north of downtown Dallas.
Transportation Linkages:	Extends existing Red Line from Park Lane Station to the north.
Existing Land Use:	Suburban low-density development with clusters of density in office parks and downtowns of medium sized cities.
High-Trip Generators:	Galatyn Park, Downtown Richardson, Downtown Plano
Significant Factor(s):	The Economic/Joint Development Program provides a forum for strong coordination between several DART departments and station area investors and developers.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Commercial space and single-family housing comprise a large percentage of the corridor. Some industrial, public/institutional, high-density residential, and office developments are scattered throughout.	**Medium**
2. Containment of Sprawl • The Growth Policy Plan of the city of Dallas calls for the preparation of station area plans to address the linkage of DART stations to employment centers and residential areas, site layout and design, and development policies. • No formal growth management policies and sprawl containment measures have been enacted or are being proposed for the Dallas area.	**Medium**
3. Transit Supportive Corridor Policies • DART has a well-developed Economic/Joint Development Program which solicits and coordinates development proposals for station areas. The program also marshals the resources of several departments within the DART organization.	**Low-Medium**
4. Supportive Zoning Regulations Near Transit Stations • Transit supportive station area plans are still under development by the three cities in the corridor.	**Medium**
5. Tools to Implement Land Use Policies • DART and the Dallas Area Chamber of Commerce sponsor Economic Development Summits to provide a forum for interaction between DART and investors and developers. The forum highlights potential joint development opportunities along the DART system.	**Medium**
6. Performance of Land Use Policies • Although there are few formal policies or plans that support transit-oriented development throughout the corridor, the pace of development in station areas has proceeded briskly. Several projects have already begun around the existing light rail system and several more are planned and contemplated for the North Central Corridor.	**Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The North Central Corridor Extension is proposed to extend the Dallas Area Rapid Transit's light rail transit (LRT) service along a 12.3-mile alignment from the existing Park Lane LRT Station in Dallas to a proposed new terminus at the Parker Road LRT station adjacent to the existing East Plano Transit Center. The alignment of the proposed extension follows the alignment of a former Southern Pacific Railroad line and generally parallels U.S. Highway 75 (the North Central Expressway) through the cities of Dallas, Richardson, and Plano. New infrastructure in the corridor will include upgrades to the existing track, the addition of a parallel track and eight new stations. Two additional stations are planned for the line, but have been deferred for future construction.

CORRIDOR DESCRIPTION

The proposed North Central light rail extension follows a north to south alignment through the northern suburbs of Dallas. It passes through the Cities of Plano and Richardson and serves the downtown areas of both cities. This corridor generally consists of low-density suburban development. The growth of the telecommunications industry along U.S. Highway 75, however, is contributing to growth in high-density commercial and residential development, making it the fastest growth area in the region.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Dallas Area Rapid Transit (DART) – Dallas Area Rapid Transit plans, constructs, and operates the various transit services in the Dallas area. The DART service includes a regional bus system, a light rail, and a commuter rail service that serves three stations between downtown Dallas and South Irving. Existing light rail service consists of two lines that serve 21 stations. One line travels from Park Lane Station in the north to Westmoreland Station in the southwest. Another line travels from Pearl Station in the north to the Ledbetter Station in the south. Both lines serve the six stations on the downtown Dallas transit mall.

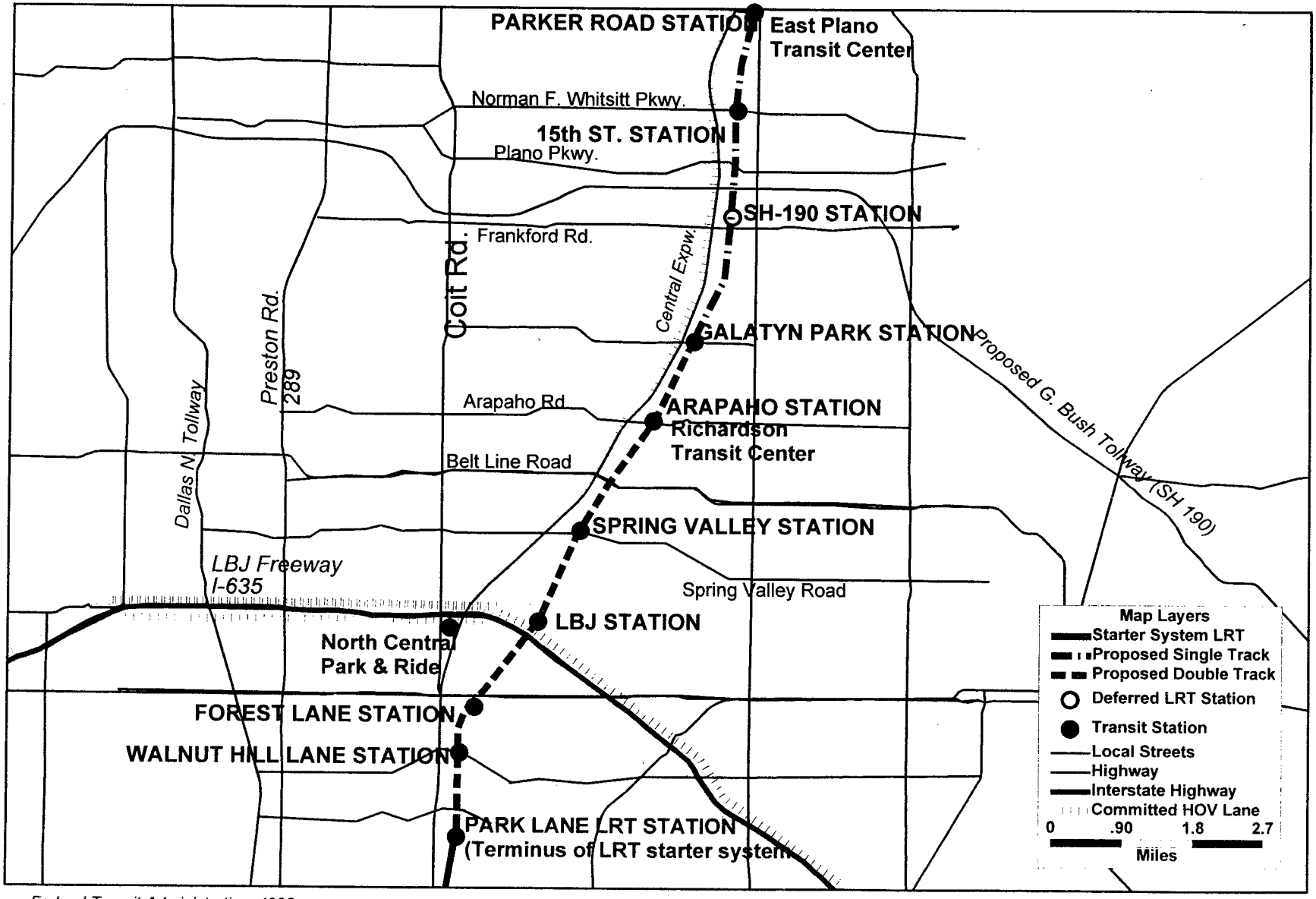
DART has recently initiated planning for development around existing and future rail transit stations. The central piece of this planning effort is the Economic/Joint Development Program. The Economic/ Joint Development Team coordinates the various departments within DART and works with external agencies and developers to solicit and pursue joint development opportunities. DART has already conducted a few Economic Development Summits to disseminate information on joint development in the corridor, as well as to educate developers, planners, and government officials about the potential of transit-oriented development.

Land Use Planning Agencies

Cities of Dallas, Richardson, and Plano – The proposed LRT extension travels through the cities of Dallas, Richardson, and Plano. Each of these cities independently determines land use policy and development planning for land with its jurisdiction.

North Central Texas Council of Governments – The North Central Texas Council of Governments is the metropolitan planning organization for the Dallas-Fort Worth Metroplex region.

North Central LRT
Dallas, TX



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Although land development planning for the Dallas North Central Corridor LRT extension is not fully developed, momentum to create transit-supportive development appears strong. Planning and policy development has just begun and is still at a preliminary survey stage. The cities of Dallas, Richardson, and Plano have individually initiated reviews of local land use plans and policies. In addition, no agency is coordinating the separate efforts of each city. As a result, while some new policies reflect support for transit-oriented development, policy and plan development is uneven. A survey of land use policies in the corridor reveals large differences in the extent to which some topical issues and some geographic areas have been addressed. Despite the slow development of the station area planning process, development around transit stations is proceeding quickly. In fact, the active involvement of the business community contributes to this rapid pace of development around stations.

- DART's efforts to develop transit-supportive land development in light rail station areas center on its Economic/Joint Development Program. This program is supported by significant internal cooperation between various DART departments in order to maximize revenue for the DART system. Activities such as the Economic Development Summits represent a strong stance of cooperation with the Dallas Area business and development community.

- Private sector developers and businesses seem to play a more prominent role in developing plans for station area development than the cities, which are primarily responsible for land use regulation. Developers and large land owners have initiated several independent planning and development proposals around transit stations on the existing and planned DART light rail system. Business organizations have also become more involved with other initiatives supporting transit and transit-oriented development. The Dallas Area Chamber of Commerce has co-hosted with DART several Economic Development Summits. These summits were organized to disseminate information on joint development opportunities to direct developers to consider various sites near transit stations.

- Efforts to accommodate pedestrians tend to focus more upon establishing physical connections such as pathways and connections to pedestrian and bicycle trails. There is less attention on using land use and development policies to accommodate pedestrians. For example, no plans in Dallas have yet addressed such pedestrian amenities as street furniture, sidewalk treatments, shade trees or building facade treatments. Also, no plans have incorporated mandates for proximal spacing of a variety of land uses in order to create pedestrian-oriented districts.

- Policies that involve regional coordination are relatively weak or non-existent in the Dallas area and within the three cities that lie along the alignment of the North Central Extension. For example, there is no policy to regulate or contain urban development sprawl in the region. In addition, there is no policy response to control regional or local parking supplies. Requirements for high-parking supplies can increase the cost of development and can detract from transit use. Coordinated policies for regional and corridor development may help to organize and redirect development structure around the transit investments, especially in the northern sections of the corridor where there are still large plots of vacant land.

- DART may benefit by strengthening its involvement with citizens' groups. Although involvement with the business community is strong, public involvement in land use planning is limited to more passive planning activities such as zoning review and public meetings and hearings. Direct and active public involvement in stations seems to be limited to the Arts Program.

- Developer response to initial phases of DART light rail service has been evident and significant. Current efforts and proposals indicate that such energy will continue in the near future. Dallas area planners might codify such a focus on transit-supportive development within plans and zoning codes such that transit-supportive development spreads beyond a few isolated developments. Regional coordination and coordination with citizens may also help to extend the benefits of the DART light rail transit investment.

TRI-COUNTY COMMUTER RAIL

Project Location:	Southeastern Florida (Counties of Palm Beach, Broward, and Miami-Dade)
Lead Agency:	Tri-County Commuter Rail Authority
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	Final Design
Mode:	Commuter Rail
Length:	71 miles (114.5 kilometers)
Number of Stations:	20 stations (19 current stations)
Total Estimated Capital Cost:	$573.1 million
2015 Ridership Forecast: (Average Weekday)	17,978 new riders

CORRIDOR SUMMARY

Location in Region:	Through the settled areas of southeastern Florida – Palm Beach, Broward, and Miami-Dade Counties.
Transportation Linkages:	Metrorail at Metrorail Station Miami International Airport at Miami Intermodal Center (planned)
Existing Land Use:	Low-density suburban development with several pedestrian-scaled downtowns interspersed along the line.
High-Trip Generators:	Florida Atlantic University, the Palm Center Mall, Mizner Park, the downtowns of most major cities in the three counties, including Palm Beach (downtown Miami and downtown Fort Lauderdale are reachable through a transit connection).
Significant Factor(s):	Plans for joint development around five stations along the corridor appear to provide the strongest promise for coordinated transit-oriented development in the corridor. The potential agreements set terms of lease and timetables for construction and completion of development plans.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Residential development through the corridor is generally built at low- to medium-densities. • The downtowns of most major cities in the three southeastern Florida counties lie along the Tri-Rail corridor, although some require an additional transit connection from Tri-Rail stations.	**Medium**
2. Containment of Sprawl • The state government and several regional councils have sponsored the "Eastward Ho!" initiative to encourage infill and redevelopment in the three corridor counties. Part of this strategy involves the Urban Development Boundary which limits the extension of urban services and infrastructure to developed areas within the boundary. • Transportation Concurrency Exception Areas allow for waivers on regulations where such waivers would promote compact growth, public transportation, or infill development and revitalization.	**Medium**
3. Transit Supportive Corridor Policies • The Miami-Dade County Comprehensive Development Master Plan requires high concentrations and mixes of uses near rail stations and establishes minimum floor area ratios for development around stations. • Parking policy in the corridor has not yet been addressed on a systematic basis. Miami-Dade County has proposed the development of a comprehensive parking management policy.	**Low-Medium**
4. Supportive Zoning Regulations Near Transit Stations • Although development policy in the three counties conforms to transit-supportive goals, implementation awaits incorporation of policies in future zoning code revisions. • Transit-supportive development is facilitated in Miami-Dade County through the provisions of the 1978 Transit Development Ordinance which supports joint development of lands owned by the transit agency and establishes transit-supportive policies for land near transit alignments.	**Medium**
5. Tools to Implement Land Use Policies • Enforcement of zoning codes and planning policies is the primary means of supporting transit-supportive development. • Public meetings and workshops are held to develop station site design and planning guidelines.	**Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • The Tri-County Commuter Rail Authority has begun negotiations with a private development group to jointly develop land around five stations along the corridor. The potential agreement sets terms of lease and timetables for construction and completion of development plans.	**Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Tri-County Commuter Rail (Tri-Rail) service currently travels along the 71-mile South Florida Rail Corridor. Tri-Rail serves 19 stations in Palm Beach County, Broward County, and Miami-Dade County. The current project involves the addition of a second track parallel to the existing single track line. Other improvements involve the rehabilitation of the signaling system, improvements to existing stations, addition of new stations, expansion of parking facilities and expansion of the rail vehicle fleet. These improvements are designed to enable an increase in the frequency and to enhance the reliability of service along the line.

CORRIDOR DESCRIPTION

The Tri-County Commuter Rail line runs from Palm Beach County in the north through Broward County to Miami-Dade County in the South. The line functions as the primary transit link for these three southeastern Florida counties as it travels through the centers of their respective developed areas. The commuter rail line runs parallel to the alignment of Interstate Highway 95 through most of Palm Beach and Broward Counties. In Miami-Dade County the rail line diverges from Interstate 95 and travels to the southwest through the city of Opa-Locka where it then turns to the south as it approaches Miami International Airport. The Tri-Rail line connects to the Metrorail Stage I line at the Metrorail station.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Tri-County Commuter Rail Authority – The Tri-County Commuter Rail Authority (TCRA) was created in 1988 as a legally separate agency of the state of Florida Department of Transportation (FDOT). The agency's Board of Directors consists of representatives of the local counties, business, the Florida Department of Transportation and the state of Florida. The Tri-County Commuter Rail service (Tri-Rail) currently provides the only regional transit service connecting the counties of Palm Beach, Broward and Miami-Dade in South Florida. The Tri-Rail system is also the only operational commuter rail system in the state of Florida. Although the TCRA commuter rail service was originally conceived as a demonstration project to alleviate traffic congestion during the reconstruction of Interstate 95, the Florida legislature has since committed long-term funding for the agency.

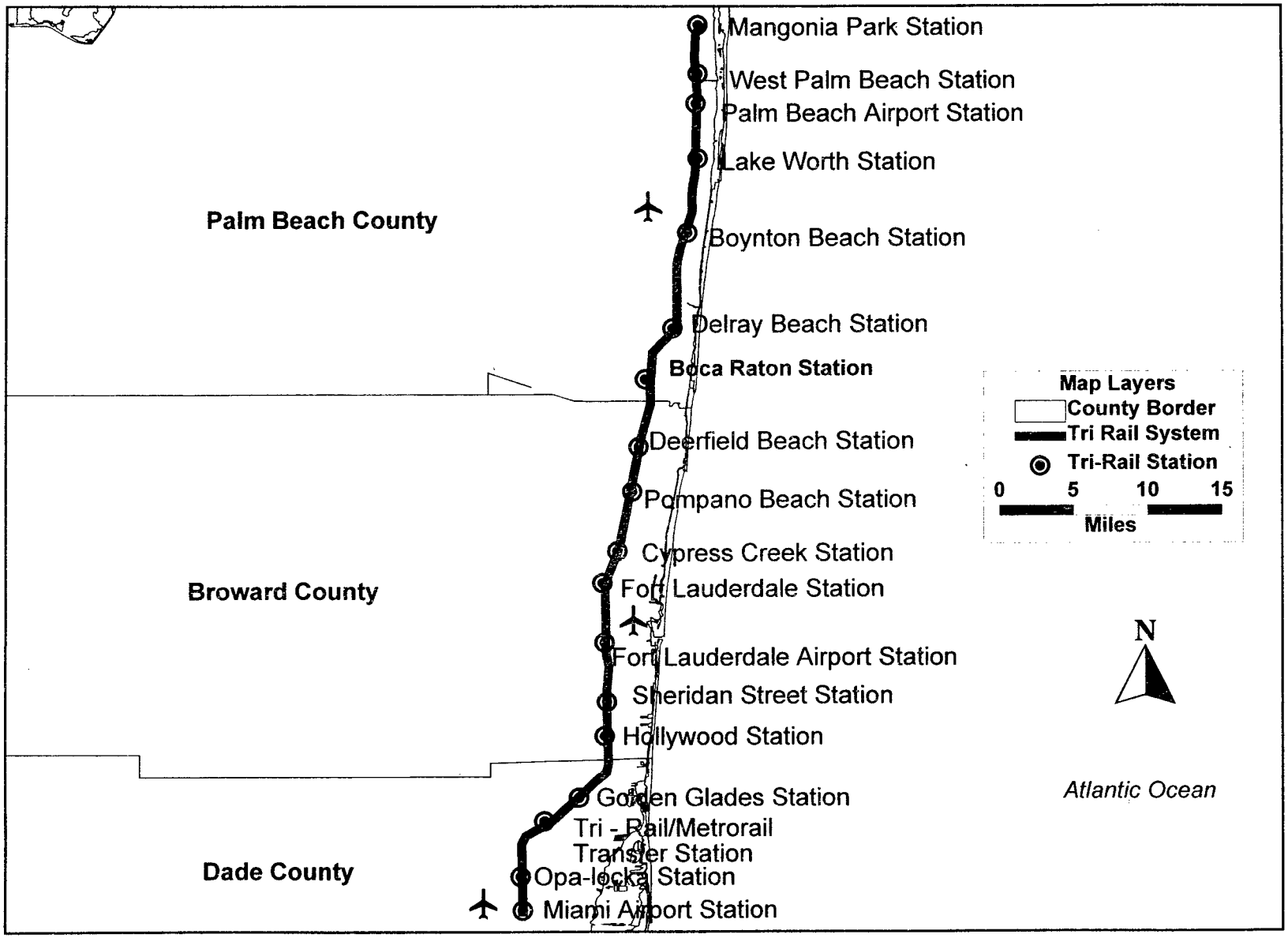
Land Use Planning Agencies

County governments – The existing Tri-County Commuter Rail system serves areas within three counties – Palm Beach County, Broward County, and Miami-Dade County. The cities of West Palm Beach, Boca Raton, Fort Lauderdale, and Miami lie within the three counties in the corridor. Although land development in the corridor is affected by policies of both the county and the municipal jurisdictions, the counties hold much of the responsibility for land use and development planning. Policies developed by counties through their respective planning agencies appear to generally supersede those of the cities. The experience of these counties with land use planning around access sites for transportation investments is mixed. Largely due to its experience in planning to capitalize on its

investments in the Metrorail and Metromover systems, Miami-Dade County has the most advanced transit-oriented policies. Broward County and Palm Beach County have begun developing policies to regulate land development within their jurisdictions but have generally less well developed policies than Miami-Dade County.

Tri-County Commuter Rail

Fort Lauderdale, FL



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Adoption and implementation of transit-supportive land development policies in the Tri-County Commuter Rail corridor are at a very preliminary stage. Existing corridor characteristics are sufficient to support basic commuter rail service. The few transit-supportive policies developed by the state of Florida, and the Counties of Palm Beach, Broward, and Miami-Dade represent positive progress in creating a land development pattern that will support higher capacity and levels of services on the Tri-County Commuter Rail line. Corridor land use planning may benefit from greater coordination between jurisdictions, an articulation of policies on transit-supportive density and land use mix, and parking supply reductions. General characteristics of the link between Tri-Rail and transit-supportive land development are summarized below.

- Development in the corridor is generally dispersed and built out at low- to medium-densities. Notable activity centers in the corridor include the downtowns of Palm Beach and Fort Lauderdale, Florida Atlantic University, the Palm Center Mall, and an international airport in each of the three counties. While most development in the three southeastern Florida counties lies within the general corridor of the Tri-County Commuter Rail service, development is not clustered or focused upon the rail line in any systematic manner.

- The state of Florida has initiated significant efforts to contain urban development in southeastern Florida. Designed to protect wetlands and other natural resources, the "Eastward Ho!" initiative supports infill and redevelopment in the developed areas of the three-county corridor of the Florida East Coast Railroad. Each county has adopted policies to respond to this initiative. Miami-Dade County has adopted an Urban Development Boundary in order to limit urban development and the extension of urban infrastructure and services to areas too distant from existing development. Miami-Dade County has also proposed to designate an Urban Infill Development Area within which the county will provide incentives to promote infill development. Broward and Palm Beach Counties have also incorporated policy statements supporting infill development within their general plans. However, currently there are not any active programs promoting this goal in these two counties.

- A few policy tools are available to support transit-oriented development in the three corridor counties. The 1996 update of the Miami-Dade Comprehensive Development Master Plan contains policies to increase densities in areas identified as centers, to allow for a mix of compatible uses, and to implement an Urban Infill Program. The Broward County Comprehensive Plan requires a minimum residential density of five units per acre and a minimum non-residential floor area ratio of 1.0 in areas designated for development. The Palm Beach County Comprehensive Plan includes a Traditional Neighborhood Development land use category that allows for the tighter integration of residential uses with commercial and industrial ones. Despite the availability of these policy tools within the three counties, planners have not applied them in a systematic manner to Tri-Rail stations and station areas.

- There are no coordinated policies to reduce parking supplies in the corridor. None of the three counties has adopted standards to reduce parking supply for developments in the corridor. Miami-Dade County is the only jurisdiction in the corridor that has explored reducing parking supply. The county recently commissioned a parking policy study to explore parking management, parking pricing, and the coordination of parking policy between local jurisdictions within the county. The Tri-County Commuter Rail Authority policies actually endorse the provision of more parking around

Tri-Rail stations in order to serve the park-and-ride market. This policy prohibits pedestrian access and the development of transit-oriented development within walking distance of Tri-Rail stations.

- The establishment of Transportation Concurrency Exception Areas in the state of Florida provides innovative incentives for development around Tri-Rail stations. Through this mechanism, local jurisdictions can exempt developers from requirements that they provide additional roadway and parking based on the traffic that the planned development will generate. This exception procedure supports transit-oriented development by removing the regulatory burden and cost that might discourage it.

- The Tri-County Commuter Rail Authority made two preliminary efforts to coordinate the commuter rail service with land development. First, the TCRA has developed *Station Site Planning Guidelines* to establish design and site planning guidelines for stations and parking areas. These guidelines, however, do not address design or development beyond the station boundaries. Second, the TCRA has begun negotiations to promote joint development at five stations along the line. These proposed joint development agreements establish concept plans, lease terms, and performance standards for development around the five stations along the line. Although TCRA has not yet developed a complete, comprehensive response to link land development to the commuter rail line, these policies represent significant preliminary gestures.

CANAL STREETCAR LINE

Project Location:	New Orleans, LA
Lead Agency:	Regional Transit Authority (RTA)
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	Final Design
Mode:	Light Rail
Length:	4.7 miles
Number of Stations:	31
Total Estimated Capital Cost:	$136.4 million ($ escalated)
2015 Ridership Forecast: (Average Weekday)	31,600 daily

CORRIDOR SUMMARY

Location in Region:	The proposed line runs from the New Orleans CBD northward through an existing built-up section of the city of New Orleans.
Transportation Linkages:	Riverfront Streetcar Line (southern terminus); St. Charles Streetcar Line in the CBD; proposed bus transfer terminal at northern terminus.
Existing Land Use:	High-density office, retail, hotel, and leisure in CBD area; nearby historic and tourist districts; street-fronting neighborhood commercial surrounded by dense single-family and two- to three-story multi-family elsewhere.
High-Trip Generators:	CBD, Riverfront, and French Quarter; three colleges and universities; City Park (museums, recreation).
Significant Factor(s):	Project is designed to improve transit service and increase attractiveness of CBD and existing urbanized area. No major land use changes are planned or expected.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: Medium**

- Densities, mix, and pedestrian friendliness are generally good in the CBD and historic areas.
- Residential and commercial densities, mix, and design outside of the CBD appear at best to be moderate in terms of transit-supportiveness.
- Land use along the City Park Spur is only minimally transit-supportive.

2. Containment of Sprawl **FTA Rating: Low**

- The region's growth management strategy appears to be a relatively weak "carrot" policy to attract development to the CBD. The city is relying on improved transit access and pedestrian friendliness in the CBD, in conjunction with CBD zoning which permits high-density and mixed-use development, to increase the overall attractiveness of the CBD.
- Regional growth management strategies appear to be weak or nonexistent.

3. Transit Supportive Corridor Policies **FTA Rating: Low-Medium**

- In the CBD area, policies to guide future transit-supportive development are generally permissive rather than proactive. High-density, mixed-use development is allowed, and pedestrian friendliness is encouraged by city design review authority.
- Outside the CBD, no particular policies are in place to promote further development in the corridor, and the corridor is not targeted for development given its already built-up nature.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: Low-Medium**

- Policies focusing specifically on station area development have not been implemented, except for policies to provide good pedestrian access to stations.

5. Tools to Implement Land Use Policies **FTA Rating: Low-Medium**

- The city has some regulatory powers through its design review authority for large projects and has shown an interest in using this authority to promote transit and pedestrian friendliness.
- Outside the CBD, the city has not developed policies or tools to promote transit-oriented development or redevelopment in the corridor.

6. Performance of Land Use Policies **FTA Rating: Low-Medium**

- In the CBD area, policies to guide future transit-supportive development are generally permissive rather than proactive. Policies have not yet had a significant effect, and no specific development targets have been set or proposals received.
- Outside the CBD, no particular policies are in place to promote further development in the corridor.

PROJECT OVERVIEW

PROJECT DESCRIPTION

The "spine" of the proposed Canal Streetcar Line runs 4.15 miles in the median of Canal Street through the city of New Orleans (Orleans Parish). The line begins at the riverfront, where it connects to the existing Riverfront Streetcar Line, which opened in 1988. The lower mile of the line runs through the New Orleans CBD. Above the CBD, the line continues to run in the median of Canal Street through "Mid-City" – an older, built-up urban area. The upper terminus is at the Cemetery District, which will include a transfer station for six bus lines and accessible services. The project proposal includes an additional one-mile perpendicular spur, known as the "City Park Spur," which runs in the median of Carrollton Avenue to City Park.

The total length of the project, including the City Park Spur and operation of some streetcars on both the Riverfront and Canal Street lines, is 4.7 miles. The line includes 31 stops that are spaced approximately 700 feet apart. Projected ridership is 29,000 to 30,000 in initial operation, growing to 31,600 in 2015. This represents a transit ridership increase of 20 percent compared to the bus-only alternative. The estimated capital cost in escalated dollars is $136.4 million, with a projected annual operating and maintenance-cost savings, compared to the bus-only alternative, of $500,000 to $600,000. The option of initially constructing the line without the City Park Spur is also being considered; this would reduce the capital cost to $129 million.

The MIS for the corridor was completed in March 1995, and preliminary engineering was conducted in conjunction with preparation of the EIS. The Final EIS was published in July 1997. FTA issued the project Record of Decision on August 28, 1997, and approved the initiation of Final Design in September 1997.

CORRIDOR DESCRIPTION

The entire Canal Streetcar corridor is an existing built-up urban area, which was originally served by streetcar service along Canal Street before this was replaced by bus service in 1964. The New Orleans CBD includes a high-density mix of office, retail, hotels, and leisure attractions. Adjacent to the CBD are the riverfront and French Quarter historic districts which include tourist and leisure attractions.

Mid-City is largely a mixed-use commercial and residential area, with commercial uses concentrated along Canal Street. Commercial densities are described by the city as "medium." Residential areas in the corridor are primarily single or two-family detached houses with long, narrow lots; there are some pockets of higher density residential, including two- to three-story apartment buildings built as early urban renewal projects. There are also some institutional uses scattered throughout the corridor. Canal Street is an arterial with a 170-foot right-of-way. The tracks will run in the median or "Neutral Ground" which is 48-feet wide in the CBD and 31 feet (proposed 35 feet) wide in Mid-City.

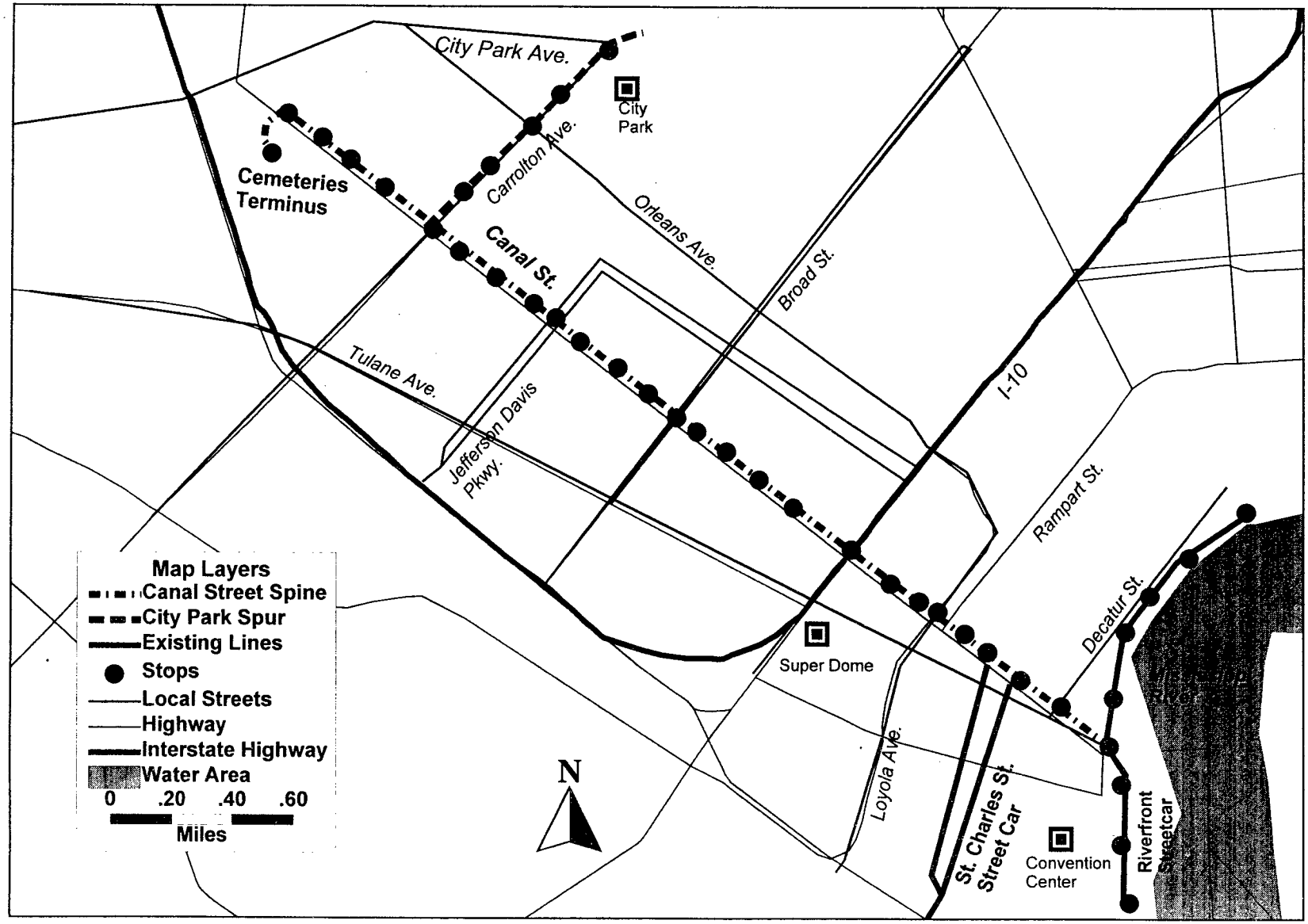
The City Park Spur has some commercial activity along Carrollton Avenue in Mid-City but is primarily lower-density (detached single-family) residential near City Park. City Park contains the New Orleans Museum of Art as well as various outdoor recreation attractions. Carrollton Avenue is also a wide arterial with a cross-section similar to Canal Street.

DESCRIPTION OF LOCAL AGENCIES

The Regional Transit Authority of New Orleans (RTA) is the lead agency for the Canal Streetcar project and for the other bus and rail routes serving New Orleans Parish. Two additional bus routes operated by the Jefferson Parish Transit Administration would connect to the streetcar line.

Since the proposed project is contained entirely within the city of New Orleans, the city has jurisdiction over land uses throughout the corridor. Zoning and development policies are established by the New Orleans City Planning Commission.

Canal Streetcar Spine
New Orleans, LA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The Canal Streetcar Line would serve the CBD and existing built-up areas of the city of New Orleans, and would replace the current bus service along Canal Street. The primary purpose of the project is to increase the quality of transit service and enhance the urban environment in the CBD and Canal Street, rather than to promote new development. While there are some opportunities for development in the CBD, changes to land use in the remainder of the corridor are not expected and are not being planned. The project would complement the St. Charles historic streetcar line, which also serves the CBD, and would terminate at the recently reestablished Riverfront Streetcar Line which was reestablished in 1988.

- Some city policies are in place to encourage transit-friendly development in the CBD. The CBD is moderately large (122,000 jobs) and quite dense (153 employees per acre) and further high-intensity development is permitted. Off-street parking for new development is significantly restricted. The city has design review authority for projects over 50,000 square feet and has used this authority to ensure pedestrian-oriented design and to influence parking policies for the recent Harrah's Casino development. The city has also programmed ongoing street and sidewalk improvements and will develop transit access improvements in conjunction with the streetcar project.

- The remainder of the main line along Canal Street is primarily streetcar-era development, with street-fronting neighborhood commercial surrounded by residential neighborhoods with dense single-family and two- to three-story multi-family. Densities along the City Park Spur are lower, and uses are primarily single-family residential. While sidewalks and crosswalks exist throughout the corridor, pedestrian friendliness is compromised somewhat by the wide cross-section of the streets (170 feet) and multiple lanes of traffic. The only land use change planned for the corridor outside the CBD is a potential joint development opportunity for neighborhood retail and services at the terminus of the main line. The city and RTA are currently discussing development options with the property owner.

- Regional growth management policies do not appear to be in place. The city is relying primarily on improvements to transit access and pedestrian friendliness to attract further commercial development to the CBD.

NORTHWEST/NORTH CENTRAL CORRIDOR

Project Location:	Austin, TX
Lead Agency:	Capital Metropolitan Transit Authority
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	PE/DEIS
Mode:	Light Rail
Length:	30 miles
Number of Stations:	20
Total Estimated Capital Cost:	$182.3 million ($1995)
2020 Ridership Forecast: (Average Weekday)	27,000; 11,760 new riders

CORRIDOR SUMMARY

Location in Region:	From south of the CBD east into East Austin, then north through the city of Austin, then northwest through developing and undeveloped areas in Travis County and the Cities of Leander and Cedar Park.
Transportation Linkages:	No existing major transit linkages – this is the initial rail line for the region. Future extension is planned to the airport.
Existing Land Use:	Moderate-density built-up urban in city of Austin. Alignment has not been determined but may make considerable use of freight railroad right-of-way. Northwest suburban areas are largely undeveloped with some single-family residential.
High-Trip Generators:	CBD, State offices, and University of Texas (one-half to one mile from alignment); UT Pickle Research Area.
Significant Factor(s):	Austin northwest suburbs are a high-growth area for both population and employment. City of Austin has actively pursued policies to manage growth and promote transit-oriented development. Northwest suburbs are also working to develop transit-oriented policies.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: Low-Medium**

- The proposed Red Line primarily would serve low- to medium-density residential and commercial areas in the city of Austin and undeveloped areas north of the city.
- The system directly serves part of the CBD and the UT Pickle Research Area but only indirectly serves other major generators including the University of Texas and the municipal airport. Because the alignment largely follows a freight right-of-way, the ability to serve existing major generators is limited.

2. Containment of Sprawl **FTA Rating: Medium**

- Rapid growth is forecast for the Austin region, and the population is expected to double by the year 2020. Regional policies have been implemented to limit growth in environmentally sensitive areas to the west of Austin.
- The city of Austin has actively pursued growth management policies, including promotion of housing downtown and development of alternative zoning codes to promote neotraditional and transit-oriented development.
- Municipalities at the north end of the corridor have not yet taken significant steps to control densities or to focus growth around transit stations.

3. Transit Supportive Corridor Policies **FTA Rating: Medium-High**

- The regional transit agency, the MPO, and the Austin City Council have all developed significant policies encouraging transit-oriented development.
- The city and the university have taken steps to manage parking in the CBD, on the UT campus, and in higher-density residential and commercial areas.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: Medium**

- Conceptual station area planning has begun, but detailed planning or establishment of zoning regulations has not been performed (precise alignment and station areas have not yet been determined.)
- The transit agency, MPO, and city of Austin have developed policies to create specific station-area guidelines and incentives for transit-oriented development.

5. Tools to Implement Land Use Policies **FTA Rating: High**

- The city of Austin is establishing zoning ordinances supportive of transit-oriented development, and the city and the transit agency have both worked to identify land use development and design improvement projects which are supportive of transit. Community groups and private alliances have also actively promoted transit-oriented planning.
- Communities in the north half of the corridor are still developing master plans and have not yet identified specific tools to implement transit-oriented.

6. Performance of Land Use Policies **FTA Rating: Medium**

- Local agencies and organizations are actively pursuing policies to promote transit-oriented development. Given the early stage of the planning process, however, it is too early to judge the success of these policies and actions.

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Northwest/North Central Corridor runs from downtown Austin north to the cities of Cedar Park and Leander. The Capital Metropolitan Transportation Authority is performing PE and preparing a DEIS on this corridor. The locally preferred investment strategy, the Red Line alignment, calls for a 30-mile light rail transit line from downtown Austin to the city of Leander.

CORRIDOR DESCRIPTION

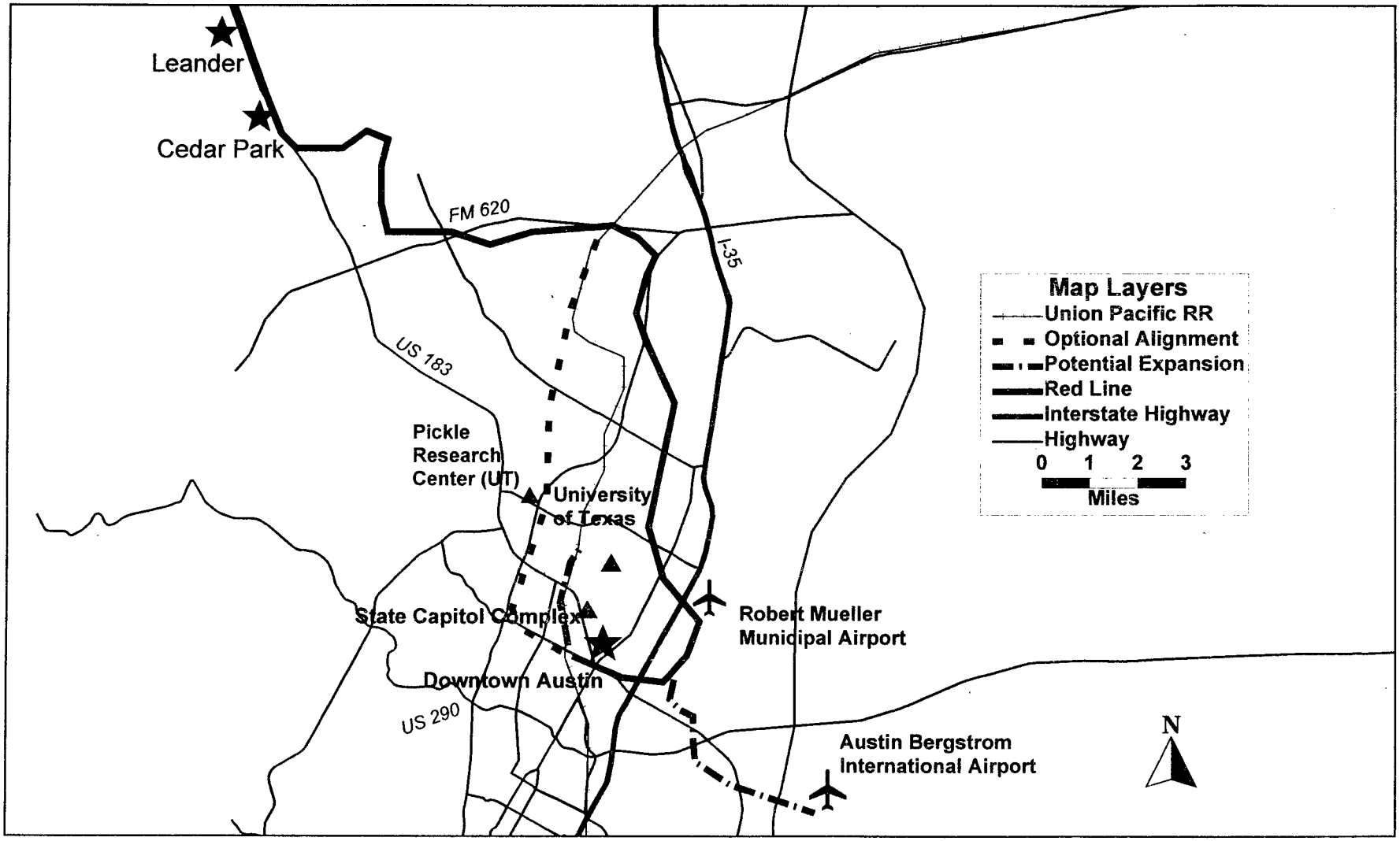
Downtown Austin is home to the state capital complex and the University of Texas. From the south fringe of downtown, the Red Line heads east into East Austin, a predominantly low-income and minority neighborhood. It then turns north, making possible use of the Giddings-Llano Railroad line and the Union Pacific railroad line which have been purchased for mass transit purposes. Farther north in Austin, the line passes within ¼ to ½ mile of the University of Texas Pickle Research Area, a major employment center. Exiting the city of Austin on the north, the line would head northwest through currently undeveloped land, and would then continue through the Cities of Cedar Park and Leander which currently contain primarily single-family residential and undeveloped land. This area is forecast to experience high growth over the next 20 years and to develop major employment and population centers.

DESCRIPTION OF LOCAL AGENCIES

The Capital Metropolitan Transportation Authority (Capital Metro) is the lead agency for the project. Capital Metro consists of eight member cities in four counties, forming a 505-square-mile service area. Capital Metro has worked with the cities of Austin, Leander, and Cedar Park, as well as with local community groups along the proposed rail route, to conduct land use planning. Some land between the cities of Austin and Cedar Park is currently unincorporated and is therefore under the jurisdiction of Travis County. No information was provided on land use policies for Travis County. However, the city of Austin regularly annexes suburban land to control development.

Northwest - North Central Corridor

Austin, TX



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Current land use intensities appear to be marginally transit-supportive in the city of Austin and not at all transit-supportive outside of Austin in the largely undeveloped northwest suburbs. However, rapid employment and population growth is occurring in the northwest area and is expected to continue in the future. Success of the proposed Red Line depends on the ability of local jurisdictions to focus growth to be transit-oriented in both intensity and design. While there appears to be broad-based support for transit-oriented planning in the city of Austin, the level of commitment of suburban jurisdictions to such planning is not yet clear.

- Within the city of Austin, the proposed system serves the CBD area, home to state office buildings and the University of Texas. The system also serves the largely low-income and minority neighborhoods of East Austin. The ability to serve these high-trip generators, however, appears somewhat compromised by the need to economize on alignment. The initial system actually terminates one-half to one mile from the center of the CBD and the UT campus. Furthermore, the majority of the alignment is proposed to run along an existing freight railroad right-of-way, which may compromise the ability to directly serve existing residential and commercial neighborhoods. Also, as a result of serving East Austin, the routing from the CBD to the northern part of the corridor will be very indirect.

- On the positive side, the city of Austin, Capital Metro, and other local organizations are pro-actively pursuing transit-oriented policies. These include working with a developer to build housing downtown; developing alternative zoning and design codes to promote "traditional neighborhood" and transit-oriented development; and pursuing pedestrian and design improvement projects through the FTA Livable Communities Initiative and at the UT campus. Redevelopment opportunities also exist at the Robert Mueller Airport site although it too is not directly adjacent to the alignment.

- Outside of the city of Austin, the corridor is primarily undeveloped, with some scattered areas of single-family residential. The achievement of transit-oriented development in this corridor will depend on the ability of local and regional agencies to implement strong transit-oriented policies to guide future growth in this area. Currently, regional growth management policies exist to protect environmentally sensitive areas to the west of the city from development. This will help focus growth in the vicinity of the transit corridor. Capital Metro and the MPO have both developed policies encouraging transit-oriented development and have been actively pursuing these policies. The commitment to transit-oriented development of the local jurisdictions holding authority over land use, however, is not yet clear. The two existing local communities, Leander and Cedar Park, have developed zoning policies which specify pedestrian linkages to future transit stations. However, they have not yet developed policies to permit or encourage high-intensity and mixed-use development in the vicinity of stations.

SOUTH BOSTON PIERS TRANSITWAY, PHASE II

Project Location:	Boston, MA
Lead Agency:	Massachusetts Bay Transportation Authority
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Bus Transitway
Length:	0.5 miles (0.8 kilometers)
Number of Stations:	3
Total Estimated Capital Cost:	$258 million ($1996)
2015 Ridership Forecast: (Average Weekday)	Not reported

CORRIDOR SUMMARY

Location in Region:	Connects downtown Boston to South Boston Piers immediately to the east.
Transportation Linkages:	Red Line at South Station Orange Line at Chinatown Station Green Line at Boylston Station MBTA Commuter Rail at South Station Amtrak Intercity Rail at South Station Intercity buses at South Station
Existing Land Use:	High densities of commercial, cultural, and retail activity in downtown Boston. Scattered cultural and commercial sites within an industrial and converted industrial district in the South Boston Piers area.
High-Trip Generators:	Federal Reserve Bank tower, State Transportation Building, Tufts New England Medical Center, the Theater District, three museums on Museum Wharf.
Significant Factor(s):	The city of Boston envisions the South Boston Piers area as the future expansion site for downtown Boston and the South Boston Piers Transitway as a central component of the development plan.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • The corridor comprises two primary areas – downtown Boston and the South Boston Piers area. Downtown Boston development is mature and largely built out with office, retail, and entertainment uses at high densities. The South Boston Piers area is industrial and contains sporadic development with some housing and office developments.	**Medium-High**
2. Containment of Sprawl • Although there are no coordinated regional growth management policies, strategies to increase density and promote greater land use mix in downtown Boston strongly support the containment of sprawl. • The Fort Point District Plan seeks to promote a diversified economy with less emphasis on traditional office uses and more emphasis on manufacturing, biomedicine, high-technology research and development, and maritime uses.	**Medium-High**
3. Transit Supportive Corridor Policies • Development requirements support strongly pedestrian-oriented environments through endorsements of traffic calming measures, walkways, pedestrian-oriented landscaping, and specifications on building design (height, massing, facade treatments, and setbacks). • Both downtown Boston and the South Boston Piers area have stringent limits on the total number of parking spaces.	**Medium-High**
4. Supportive Zoning Regulations Near Transit Stations • Zoning provisions in the Fort Point District Plan promote mixed-use, high-density development in the Transitway alignment. • Economic Development Areas in the South Boston Piers direct high densities of development, housing supports, and high-technology and research and development uses around Transitway stations.	**High**
5. Tools to Implement Land Use Policies • The Boston Redevelopment Authority has significant ability to implement pedestrian- and transit-oriented development through its administration of several redevelopment areas in the corridor and its active involvement in the development review process.	**Medium-High**
6. Performance of Land Use Policies • Because downtown Boston lacks large tracts of undeveloped space, the South Boston Piers area may absorb much of the growth focused upon downtown. • Development demand for the corridor appears high with proposals for a total of 7.44 million square feet of space submitted since the publication of the Final Environmental Impact Statement.	**High**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The South Boston Piers Transitway provides a connection between downtown Boston and the existing high-capacity transit system and the South Boston Piers area to the east of downtown. Phase I of the system consists of a one-mile underground Transitway tunnel between South Station and the World Trade Center in the South Boston Piers area. After the expected completion of Phase I of the Transitway project in 2002, buses are planned to travel routes at street level at the eastern end of the South Boston Piers area and then enter the Transitway tunnel near the World Trade Center. From this station, the buses will travel west in the Transitway to South Station. South Station will serve as the transfer point between the Transitway bus service and several transportation services. South Station currently serves as the terminus of the southern commuter rail network of the MBTA and of the intercity Amtrak Northeast Corridor services. Intercity buses and the MBTA Red Line rapid transit service also provide service to South Station.

Phase II of the South Boston Piers Transitway project will extend the Transitway tunnel to the west into downtown Boston an additional one-half mile. This extension will enable additional connections to the existing MBTA high-capacity transit system. At the Chinatown Station, passengers can connect from Transitway buses to the existing Orange Line rapid transit service. Passengers can also connect with the Green Line light rail services at the planned Transitway terminus at Boylston Station. With the construction of the Phase II Transitway, the MBTA also plans to run more bus routes through the Transitway tunnel to replace temporary surface shuttle bus services.

CORRIDOR DESCRIPTION

The South Boston Piers Transitway will provide a transit linkage between Downtown Boston and the South Boston Piers. Downtown Boston is the primary center of employment, retail, and cultural activity in the metropolitan Boston region. The Boston Urban Core contains close to one fifth of all regional jobs, which demonstrates the strength of downtown Boston in the region. The South Boston Piers, which lie immediately to the east of downtown Boston, consist primarily of industrial space and vacant land. Boston planners envision the extension of downtown Boston into the South Boston Piers area through the development of vacant land and the continued conversion of much of these former industrial uses.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Massachusetts Bay Transportation Authority (MBTA) – The Massachusetts Bay Transportation Authority is the primary provider of public transportation services in the city of Boston and in the metropolitan Boston region. The local high-capacity transit system consists of four separate lines (using a combination of rapid transit and light rail) which all connect in downtown Boston. The MBTA also operates a network of commuter rail services that connect downtown Boston and the suburbs of the region. Coordination between the MBTA and relevant land planning and development agencies has

traditionally been strong. The MBTA and the Boston Redevelopment Authority have jointly planned and developed policies to plan and implement transit and development projects in the project area and to evaluate the impacts of those projects.

Land Use Planning Agencies

Boston Redevelopment Authority (BRA) – The Boston Redevelopment Authority has primary authority over and responsibility for development within the downtown area and within the South Boston Piers area. Because it is a redevelopment agency, the BRA has greater ability to assemble parcels of land for development than conventional planning departments. In addition, the BRA exercises more direct control over design and development of land within redevelopment plan boundaries through the development application and review process. Each development must gain approval of the BRA through the Development Review and Approval process. The project area incorporates several different BRA planning areas. The South Boston Piers/Fort Point Channel section of the Transitway service area comprises approximately one-third of the Fort Point Planning Area. Other plan areas administered by the BRA in the corridor are the Chinatown Community, the Park Plaza Renewal area, and the Central Business District.

Other Agencies –

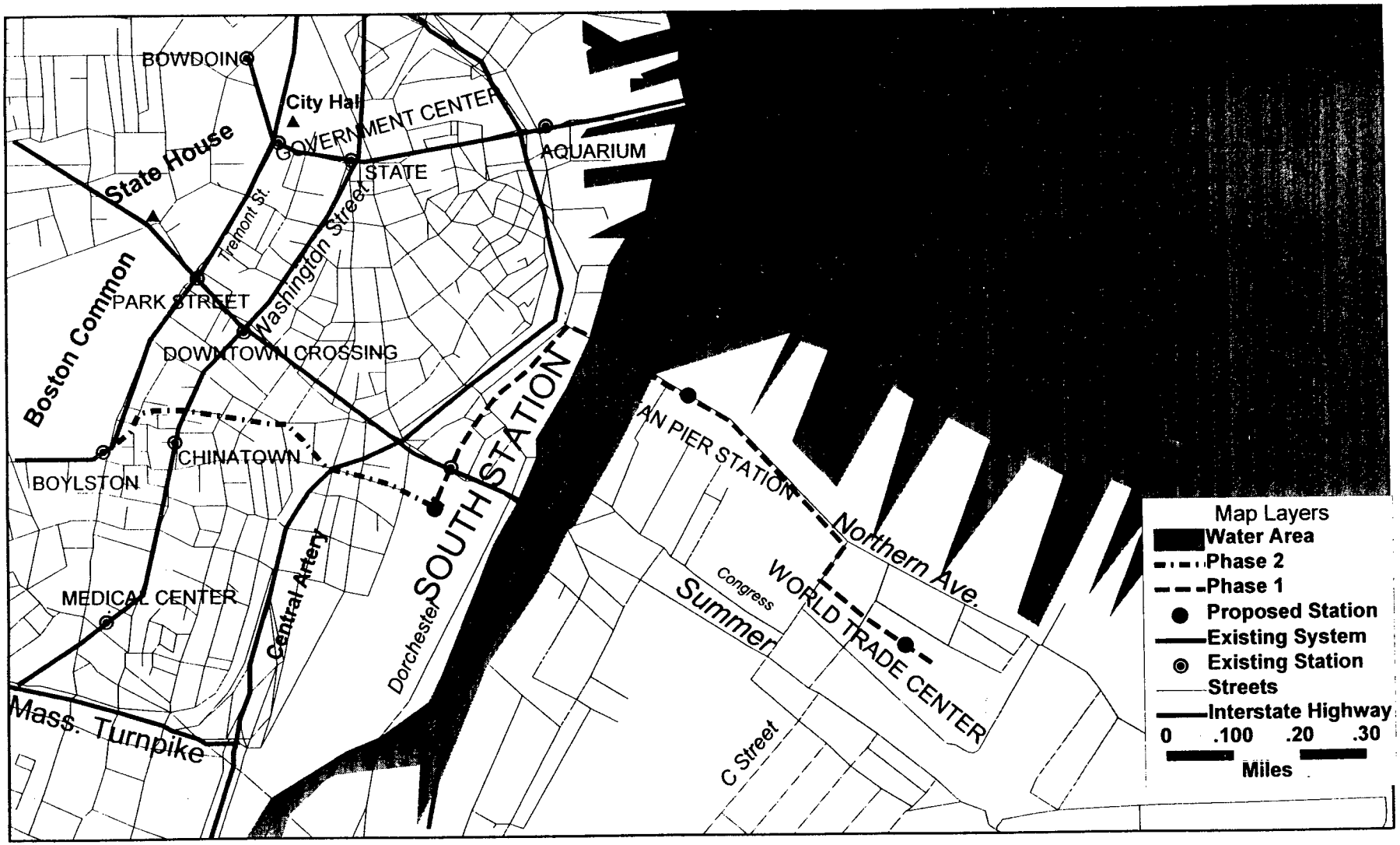
- Metropolitan Area Planning Council – established limits on parking supply in both the Boston Central Business District and in the South Boston area.

- Agencies involved in the development review process:

  - Boston Transportation Department;
  - Boston Water and Sewer Commission;
  - Boston Environment Department;
  - Boston Civic Design Commission;
  - Massachusetts Historical Commission; and
  - Massachusetts Executive Office of Environmental Affairs.

South Boston Piers Transitway, Phase II

Boston, MA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Land development policies and support institutions for implementation of such policies promote transit-supportive land use in the South Boston Piers Transitway Corridor. Development in downtown Boston has increased in intensity within the past few decades through the Boston Redevelopment Authority's (BRA's) administration of its numerous redevelopment areas. The success of the BRA in clustering development in downtown Boston may likely continue as it applies its policies and efforts to the South Boston Piers area as commercial development spreads to that area. Land use policies in the corridor support a highly pedestrian- and transit-oriented environment in downtown Boston. This tradition of transit-oriented planning has continued with the planning for the South Boston Piers/Fort Point Channel area with respect to the South Boston Piers Transitway. Many distinctive planning approaches are present in the proposed project corridor.

- Plans for development capitalize upon the proposed transit investment. Development densities are planned to be highest in clusters designated as Economic Development Areas that surround stations along the project alignment. These areas allow development densities of up to a floor area ratio of 4.25:1, similar to the development densities of downtown Boston.

- The economic development plan of the South Boston Piers area seeks to promote a diverse set of uses such that the area economy does not heavily depend upon the business cycles of the service economy and its demand for office space. The focus on biotechnology and other technology research and development, industry and manufacturing, culture and entertainment, and housing supports these goals and promotes distinctive uses that could provide strong activity centers around proposed Transitway stations.

- Policies to manage regional growth focus primarily upon the promotion of density and activity in downtown Boston and adjoining areas in order to reduce the demand for development at the fringe of the region. As such, this growth management policy is indirect. This strategy could potentially be reinforced through the adoption of a regionally coordinated land development policy to preserve or withhold some land from development or to promote redevelopment and infill development within the already developed portions of the region.

- The Metropolitan Area Planning Council has instituted relatively strong parking management policies within downtown Boston and in South Boston. The Council limited the total number of spaces in downtown Boston to approximately 35,500. This freeze has promoted greater pedestrian and transit access in the downtown area as more development has been accommodated with a constrained parking supply. The Council has recently constrained the number of off-street parking spaces to grow by only 10 percent as the area is redeveloped. This policy is one of the few regionally coordinated land development policies.

- Attention to the pedestrian environment is fairly detailed and thoroughly considered. Pedestrian design guidelines include specifications for sidewalk width, sidewalk design, public spaces, building massing and height, facade treatments, street wall definition, public art, and the location of parking and service delivery access. In addition, several street design specifications call for the use of "neck-downs" at intersections, varied crosswalk paving materials, and designated transit rider areas on sidewalks.

- The Boston Redevelopment Authority administers several different planning areas including the Central Business District, the Chinatown Community, the Park Plaza Renewal Area, and the Fort Point

District which includes the South Boston Piers area. The BRA's strong control over the land development approval process gives its transit-oriented development policies strong implementation powers.

- Citizen involvement in implementation occurs primarily through membership in advisory bodies such as the Fort Point Citizens' Advisory Committee. Involvement in implementation occurs primarily in reaction to project proposals through a citizen review process. The citizen participation process could possibly benefit from a more active citizen involvement in plan implementation in order to supplement the efforts of the BRA.

- Demand for development in the corridor is generally strong. New developments such as the World Trade Center and the Federal Courthouse are among the first major redevelopment projects in the South Boston Piers area. About seven million square feet of new development is currently being advanced for development review and approval. Concepts for additional development in the corridor also include a new convention center, renovated offices for the state Registry of Motor Vehicles, and two hotels comprising 279,000 square feet of hotel space. Development in the entire corridor is expected to increase from approximately 9.2 million square feet in 1986 to approximately 14.1 million square feet by the year 2010 (a low-growth scenario) or to approximately 21.5 million square feet (a high-growth scenario).

EUCLID CORRIDOR IMPROVEMENT PROJECT

Project Location:	Cleveland, Ohio
Lead Agency:	Greater Cleveland Regional Transit Authority (RTA)
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Exclusive bus lanes; rapid transit station reconstruction and relocation (land use not evaluated)
Length:	5.6 miles (bus lanes)
Number of Stations:	Not yet determined
Total Estimated Capital Cost:	$332.5 million ($1996)
2015 Ridership Forecast: (Average Weekday)	3,800 new riders

CORRIDOR SUMMARY

Location in Region:	From the Cleveland central business district (CBD) east to University Circle, along Euclid Avenue.
Transportation Linkages:	Existing Red Line rapid transit serves University Circle and CBD but is underutilized due to location of alignment away from high-trip generators. Busway will improve transit service in this corridor.
Existing Land Use:	High-density commercial (CBD); most of Euclid Avenue currently zoned industrial or commercial but underutilized; multi-family and single-family residential starting within one block of Euclid; institutional uses (universities, medical, museums) at both ends of corridor.
High-Trip Generators:	CBD, University Circle area (multiple institutions).
Significant Factor(s):	Euclid corridor has lost significant employment and population since 1950s. Project is designed to work in conjunction with economic development incentives to revitalize area, in addition to providing improved transit service in a high-use corridor.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • The proposed Euclid Avenue busway serves two major activity centers: the Cleveland CBD, characterized primarily by commercial/office, retail, and institutional uses, and the University Circle area to the east, which includes educational institutions, cultural facilities, and hospitals. • The MidTown area, located between these two anchor areas, is an Empowerment Zone, characterized by marginal commercial/retail and industrial establishments and abandoned industrial sites, with nearby areas of multi-family and single-family housing.	**Low-Medium**
2. Containment of Sprawl • Jurisdictions in the Cleveland area have not adopted policies or regulations to contain sprawl. Policies have instead focused on urban redevelopment and revitalization efforts. • Plans for MidTown stress converting industrial areas to office uses and revitalizing retail and residential activity. Significant reinvestment in the corridor is not yet apparent except for revitalization of the CBD and expansion of existing institutions.	**Low-Medium**
3. Transit Supportive Corridor Policies • Existing city plans focus on the need for redevelopment of the area but do not contain specific transit-oriented policies. • An economic development plan will be prepared for the corridor and is expected to include strategies to encourage transit-oriented development. • Urban design guidelines for the corridor are currently being completed. • There are some parking management strategies in place in the CBD, but they have not been tied to transit in any way.	**Low-Medium**
4. Supportive Zoning Regulations Near Transit Stations • The various plans developed for the corridor stress the need for pedestrian friendly development and promote transit improvements in the corridor. • No zoning changes or pedestrian improvements have yet been proposed or adopted for station areas. • The economic development study scheduled to take place in 1998 is expected to make recommendations for changes to land use regulations in the vicinity of stations.	**Low-Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
5. Tools to Implement Land Use Policies • Because this project is just entering PE, no new tools have yet been implemented. • The economic development study for the project is expected to identify and recommend tools to encourage development in the corridor. • A stakeholder committee has met to discuss design issues, and a detailed public participation process work plan has been developed.	**Medium**
6. Performance of Land Use Policies • Because this project is just entering PE, and no land use policies have been adopted, insufficient data are available to evaluate this project on this factor. • Some general investment not related to the transit system is evident in the MidTown area.	**Low-Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Euclid Corridor Improvement Project (ECIP) includes exclusive bus lanes and related capital improvements on 5.6 miles of Euclid Avenue from Public Square in the center of the Central Business District (CBD) east to University Circle. In addition, six existing Red Line stations will be either relocated or reconstructed to spur economic development and improve access between stations, neighborhoods and activity centers. (The Red Line runs along a railroad right-of-way, from the CBD looping well south of Euclid Avenue, then northeastward to pass near University Circle.) Three stations will be relocated and three stations will be reconstructed in order to allow for improved accessibility.

The project also includes reconfiguration of a portion of East 17th and East 18th Streets into Transit/Auto Pairs to improve traffic and accessibility. The East 17th and East 18th Streets Transit/Auto Pairs will be constructed as one-way streets on their entire rights-of-way between the Inner Belt and Lakeside Avenue to facilitate the north-south movement of buses and other vehicles through downtown Cleveland. Also, included in the project is the designation of a "Transit Zone" in a portion of downtown Cleveland to provide for expanded and more visible bus routes.

This project replaces the Dual Hub rail link project, which had been a proposed light rail line along Euclid Avenue. The ECIP was selected as the locally preferred alternative by the Greater Cleveland Regional Transit Authority in November 1995. PE began in May 1997. PE and a DEIS are to be completed by November 1998. The project connects two major activity centers (the CBD and University Circle) and runs through an Empowerment Zone. A major goal of this project is to spur economic development in the Empowerment Zone.

This evaluation focuses only on the busway portion of the project. The information provided was insufficient to evaluate land uses associated with the proposed improvements to the Red Line rapid transit stations.

CORRIDOR DESCRIPTION

From the west, the transit corridor starts in the CBD at Public Square (the focal point for the CBD). Within the downtown area, Euclid Avenue is fronted by commercial uses, both office and retail. Approximately two blocks from Public Square is Playhouse Square, home to Cleveland's Theater District. Two blocks further east is a state office complex and then the campus of Cleveland State University. This is the eastern edge of downtown. Immediately east of the downtown area, Euclid Avenue enters the Midtown area, an Empowerment Zone. It is an area of the city that needs redevelopment and job creation, and where incentives have been established to encourage economic development. Uses along this portion of the line include general retail, "semi-industry," "unrestricted industry," and a community-serving shopping center. There is substantial multi-family housing within a few blocks of Euclid Avenue along the western half of the corridor. Industrial and commercial/retail uses along Euclid Avenue are generally underutilized and there are also a number of vacant parcels in the corridor.

Several cultural uses are present along the eastern half of Euclid Avenue, including the Cleveland Institute of Art, the Art Museum, Cleveland Botanical Gardens, and the Natural Science History Museum.

These uses are bordered by residential areas which extend away from Euclid in both directions. The eastern terminus of the corridor is at University Circle. Several institutional uses are located here, including the campus of Case Western University (including the School of Medicine and Lakeside Hospital), the State of Ohio W.O. Walker Rehab Center, John May High School, Flora Stone Mather College, a U.S. Veterans Administration Hospital, and the Cleveland Clinic Foundation.

There are a total of 128,000 daily transit trips in the corridor of which 95 percent are by bus and 54,000 are on Euclid Avenue and parallel Carnegie Avenue. This corridor is the highest transit-use corridor in Cleveland, and usage is bi-directional.

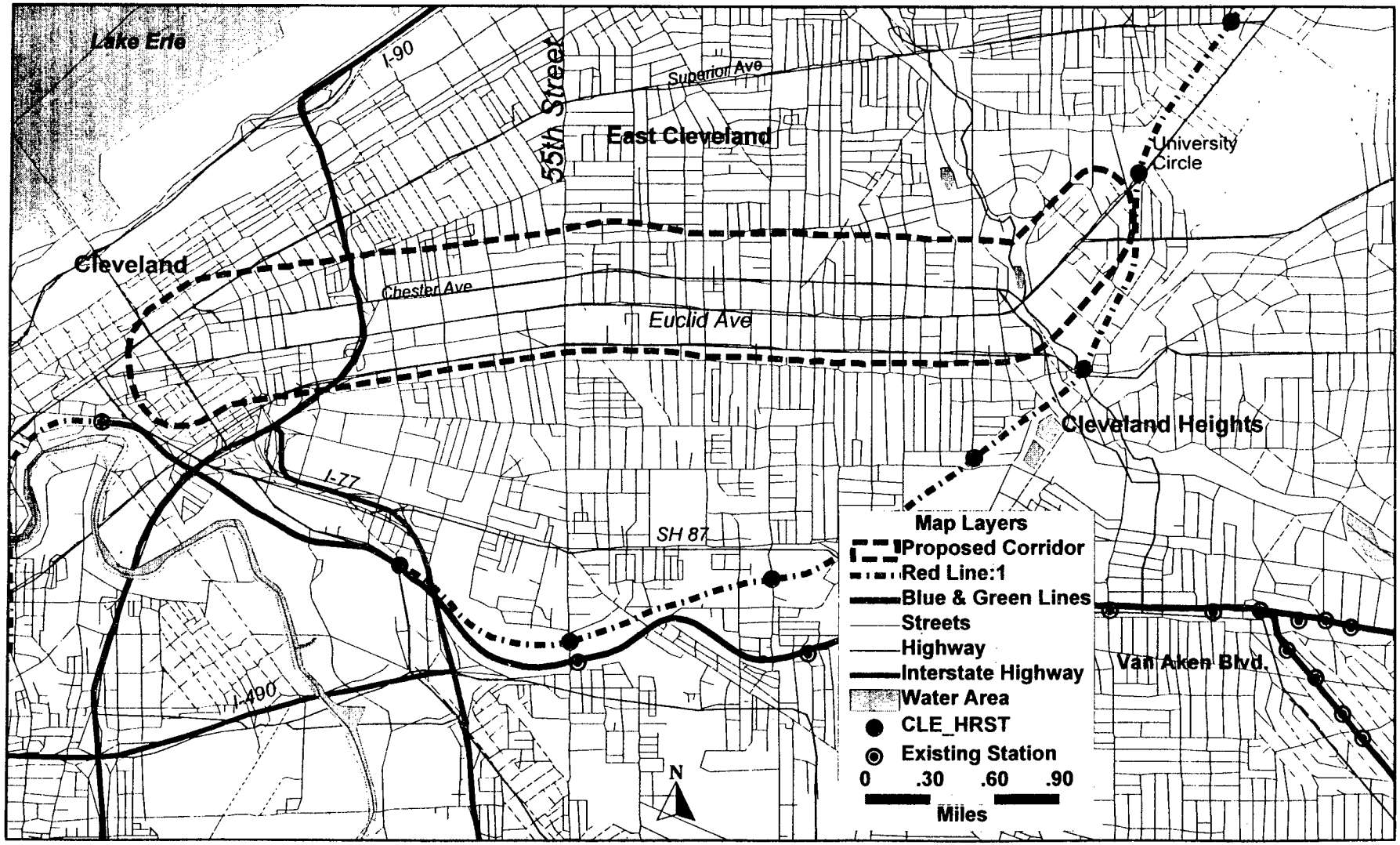
DESCRIPTION OF LOCAL AGENCIES

The Greater Cleveland Regional Transit Authority (RTA) is the sponsoring agency for the project. The regional MPO is the Northeast Ohio Areawide Coordinating Agency (NOACA).

The corridor is contained entirely within the city of Cleveland. The corridor falls within three of the subarea planning districts established by the city, and the city has developed master plans for selected small areas within the corridor. The universities in the corridor also have local jurisdiction over land use and have developed master plans for their properties.

Euclid Corridor

Cleveland, OH



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The Euclid Avenue busway project is designed to improve transit service in an existing high-use transit corridor and to help stimulate commercial and residential redevelopment in an area which has undergone significant economic decline.

- The corridor is currently the highest-use transit corridor in the city of Cleveland. A total of 128,000 daily transit trips occur in the corridor, with 54,000 daily trips on Euclid Avenue and parallel Carnegie Avenue. This usage is provided by major trip generators at both ends of the corridor, in the CBD and University Circle, as well as by commercial activity and residential neighborhoods in the vicinity of Euclid Avenue.

- Despite existing high-transit use, the area between the CBD and University Circle has lost significant employment and population since the 1950s. This is largely a result of the decline of industrial uses and out-migration of population to the suburbs. This decline has in turn severely impacted the neighborhood retail and service activities along Euclid Avenue, and many commercial spaces are vacant or underutilized. However, this decline appears to be stabilizing, and some reinvestment is occurring in the area.

- The city is attempting to stimulate this reinvestment by rezoning industrial and vacant areas for commercial and residential uses. The city has also designated the Midtown area as an Empowerment Zone, meaning that special incentives are available for redevelopment and investment. In addition, the city is currently undertaking an economic development study for the corridor. As part of the economic development study, transit-oriented development and design policies will be evaluated.

- The information provided was insufficient to evaluate land uses associated with the proposed improvements to the five Red Line rapid transit stations. The Red Line, located to the south of the Euclid Avenue corridor, follows freight railroad right-of-way through largely industrial and former industrial areas. Because of the alignment, the line serves areas with relatively low-activity levels and has very low ridership. The proposed station relocations and reconstructions are designed to improve pedestrian connections to nearby neighborhoods.

- Because the busway project was only recently selected as the locally preferred alternative, many of the engineering and design details, including station locations, have not yet been determined. In addition, the city has not yet adopted specific policies, zoning ordinances, or design guidelines to promote transit-oriented development along the busway. Efforts to develop such policies appear to be getting underway in conjunction with the commencement of the PE and environmental documentation processes for the project.

SOUTHEAST CORRIDOR

Project Location:	Denver, Colorado
Lead Agency:	Colorado Department of Transportation (CDOT)
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	MIS completed July 1997
Mode:	Light Rail
Length:	19.7 miles
Number of Stations:	10
Total Estimated Capital Cost:	$480 million ($1997)
2020 Ridership Forecast: (Average Weekday)	30,000

CORRIDOR SUMMARY

Location in Region:	Serves the city of Denver and southeastern suburbs via the I-25 and I-225 freeway corridors.
Transportation Linkages:	Joins with the Southwest Corridor LRT (under construction) to serve the Denver CBD via the existing Central Corridor LRT.
Existing Land Use:	In CBD, high-density office and retail with some residential; in Denver, moderate-density urban residential and commercial; in southeast suburbs, moderate-density office park, single- and multi-family suburban residential, and undeveloped.
High-Trip Generators:	CBD, University of Denver, major employment centers at Colorado Boulevard, Denver Technology Center, other office parks.
Significant Factor(s):	Southeast corridor is a rapidly growing suburban employment center. Some but not all communities in the corridor have developed policies and guidelines to orient development to the transit system.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: Low-Medium**

- Employment in the corridor is moderately high. The corridor serves four major employment/ activity centers: Central Business District (CBD), I-25 and Broadway, I-25 and Colorado Boulevard, and the Denver Technology Center. The Denver CBD contains 102,000 jobs, and an additional 79,000 jobs are located within ½ mile of proposed light rail stations in the corridor.
- Population densities are generally low to moderate, at less than 10 persons per acre in most station areas.
- Local land use characteristics, including mix of uses and pedestrian friendliness and accessibility, were not described in the documentation.

2. Containment of Sprawl **FTA Rating: Low-Medium**

- Significant growth is forecast in the Denver region, and much of the employment growth is expected to occur in the CBD and the Southeast Corridor.
- Most of the growth in the Southeast Corridor is expected to be in the southern half of the corridor, which although somewhat suburban in character has been designated as a future "urban center" with high-intensity, pedestrian-oriented, mixed-use development.
- Future residential population in the corridor is expected to remain relatively small, and it is not clear that regional and local growth management policies are strong enough to make new suburban development significantly more transit-oriented.

3. Transit Supportive Corridor Policies **FTA Rating: Medium**

- General policies for the Denver region and the city of Aurora designate the Southeast Corridor as a future urban center with concentrated mixed-use, transit-oriented development.
- The city of Denver has taken specific actions to promote transit-oriented development within the city, through guidelines for development adjacent to transit, a program to promote transit station-area development, and policies to limit parking in areas well served by transit.
- No transit-supportive policies were identified for Greenwood Village or Arapaho or Douglas Counties, which have jurisdiction over the southern part of the corridor.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: Low-Medium**

- The city of Denver has established transit-oriented design requirements for station-area development and has implemented zoning to support its Transit Station Development Program.
- The city of Aurora has developed zoning for station areas to allow higher densities and mixed use, and to require transit-oriented site design.
- No transit-supportive zoning was identified for Greenwood Village or Arapaho or Douglas Counties.

5. Tools to Implement Land Use Policies **FTA Rating: Medium**

- The city of Denver and the Regional Transportation District (RTD) have undertaken programs to actively promote transit-oriented development, and the RTD is pursuing joint development opportunities.

SUMMARY OF KEY FINDINGS (continued)

6. Performance of Land Use Policies **FTA Rating: Low-Medium**

- In the city of Denver, one major development adjacent to a proposed station is underway, and the city and RTD are identifying opportunities for others.
- The south section of the Southeast Corridor has developed rapidly in recent years. This growth, however, appears to be the result of market forces rather than transit-specific policies. The extent to which growth is oriented around future transit stations is not clear.

PROJECT OVERVIEW

PROJECT DESCRIPTION

The proposed Southeast Corridor light rail transit (LRT) project is a 19.7-mile light rail transit system which runs along freeway right-of-way through the southeast portion of Denver and its suburbs. The line originates at the terminus of the existing Central Corridor light rail line, a 5.3-mile line serving downtown Denver. The main line runs for 15.2 miles along I-25, and a 4.7-mile spur serves neighborhoods to the east along I-225. At the terminus of the Central Corridor, the Southeast Corridor will also connect with the Regional Transit District's Southwest Corridor light rail line which is currently under construction. The line will run on exclusive, grade-separated right-of-way and will have 10 stations.

The Major Investment Study (MIS) for this project was completed in July 1997, with preliminary engineering and environmental work expected to start in early 1998. Total cost of the system is estimated to be $480 million in 1997 dollars. Projected Southeast Corridor LRT ridership is approximately 30,000 per day, an increase of 24,000 transit riders along I-25 over the no-build case.

CORRIDOR DESCRIPTION

The proposed light rail line will directly serve the Denver CBD via the existing Central Corridor. The CBD consists primarily of high-density commercial office space, retail and service establishments. High- and moderate-density residential development also exists at the north end of the CBD, known as Lower Downtown (Lodo).

The inner six stations of the Southeast Corridor, on the north half of the I-25 segment, appear to be in a largely urbanized, built-up area. Population densities vary but are in the range of seven to 10 persons per acre for many zones. Employment is concentrated at I-25 junctions at Broadway (the first station) and at Colorado Boulevard (the fourth station). I-25 and Broadway consists of high-density office space, small commercial establishments, and a big box retail mall, and has been studied as a potential transit-oriented redevelopment site. I-25 and Colorado Boulevard consists primarily of "linear retail development" and high-density commercial office space. The University of Denver is a major generator at the third station along the line.

The outer half of the I-25 corridor contains lower-density suburban residential areas and is also a rapidly growing suburban employment center. Employment, as well as some retail and higher-density residential developments, is largely concentrated in the Denver Technology Center and surrounding areas south of I-225. This area is described as "moderate density office park development, with some supporting commercial and moderate density residential development." The outermost portion of the corridor, near the E/C-470 highway and Lincoln Avenue, consists of largely undeveloped land but is expected to experience rapid employment and residential growth in the future.

LOCAL AGENCY ROLES AND RESPONSIBILITIES

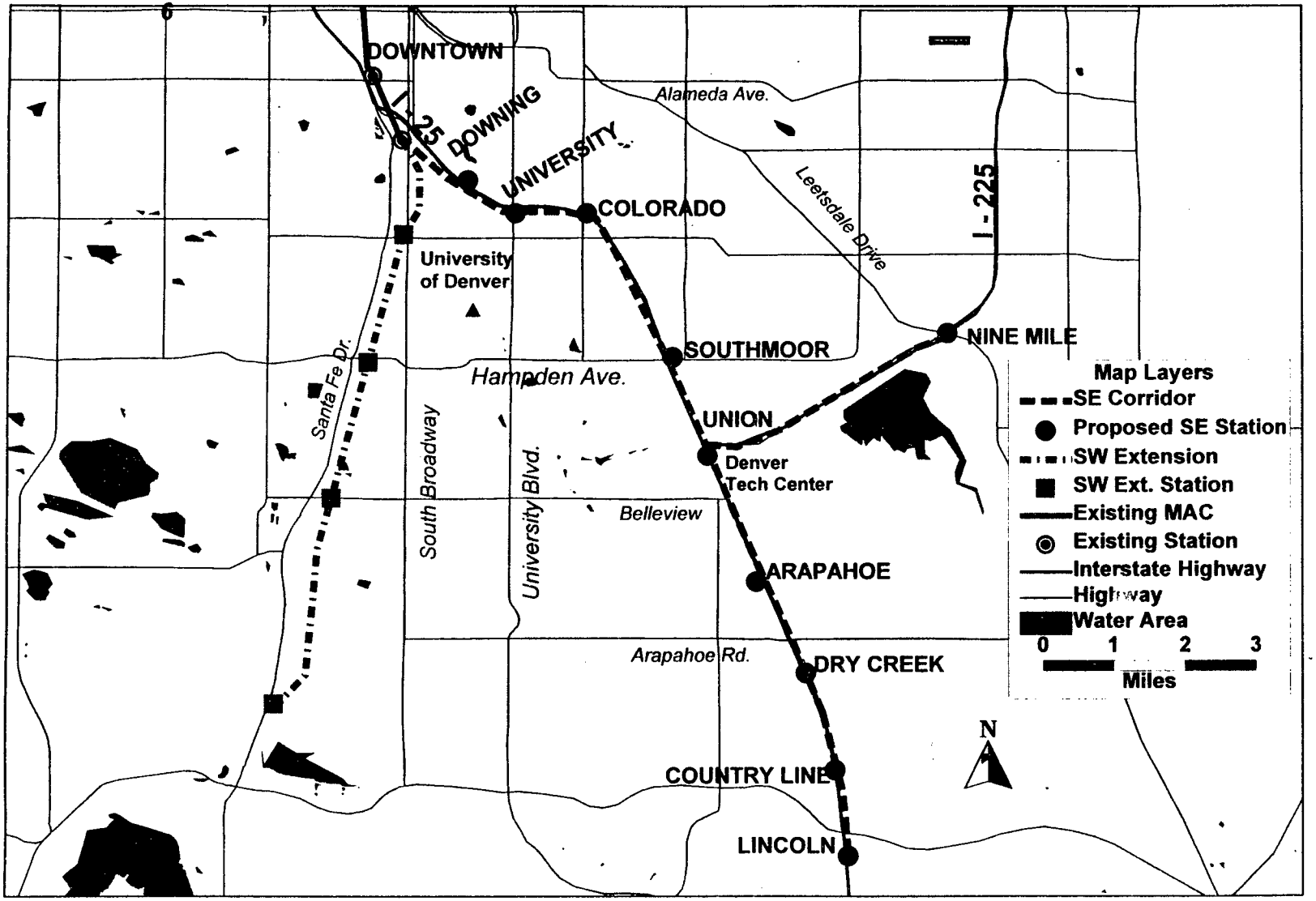
The Colorado Department of Transportation (CDOT) is the sponsoring agency for this project. It is anticipated that the Regional Transportation District (RTD) will operate the LRT line once completed.

A number of municipalities have jurisdiction over the corridor. The inner five stations along I-25 are in the city of Denver. (The city and county of Denver have the same jurisdiction and are operated as a single entity.) Greenwood Village has jurisdiction over the second station on I-25 south of I-225. The next two stations on I-25 are under the jurisdiction of Arapaho County, while the terminus station at Lincoln Road is in Douglas County.

The city of Aurora lies east of Denver and has jurisdiction over some of the land adjacent to the terminus station on the I-225 spur (Parker Road). The cities of Cherry Hills Village and Glendale also are located near the proposed rail line and adjacent to the city of Denver.

Southeast LRT

Denver, CO



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The Southeast Corridor light rail transit (LRT) project will serve a traditional function of providing transit access to the Denver Central Business District (CBD) and will also serve rapidly growing regional employment centers in the southeast suburbs. The city of Denver has established transit-oriented design policies and zoning ordinances and has actively pursued transit-focused development opportunities. However, half of the stations in this corridor are outside the city's jurisdiction, and evidence of strong transit-oriented growth policies for most of these suburban communities along the corridor is now lacking.

- The Denver CBD contains 102,000 jobs at a density of 65 per acre, and CBD employment is projected to grow by over 50 percent by the year 2020. Outside the CBD but within the city and county of Denver are three urban employment centers surrounded by moderate-density (seven to 10 persons per acre) residential neighborhoods. Outside of Denver, the Denver Technology Center (DTC) and surrounding office parks represent a major regional center of employment, with nearly 60,000 jobs within a ½-mile radius of proposed transit stations in this part of the corridor. Total employment in the corridor within ½ mile of stations, excluding the CBD, is nearly 80,000 and is forecast to grow to 138,000 by the year 2020. With the exception of some new multi-family clusters in the DTC area, residential development in this area is for the most part suburban-style and low-density.

- The city of Denver has taken a number of steps to encourage transit-oriented development and urban redevelopment. These include redeveloping Lower Downtown as a residential, commercial, and entertainment mixed-use area; establishing a Transit Station Development Program, including supportive zoning and design guidelines and a specific study of the I-25/Broadway station area; planning redevelopment of Denver Union Terminal as an intermodal transit terminal; establishing a transit mall with shuttle which will link the terminal and LRT system to each other and to the CBD; and limiting parking in areas served by transit.

- For the remainder of the corridor, regional policies are in place designating the Southeast Corridor as a future urban center with concentrated mixed-use, transit-oriented development. The Denver Technology Center has adopted design guidelines that emphasize pedestrian-friendly design. In addition, the Regional Transportation District has undertaken programs to actively promote transit-oriented development and is pursuing joint development opportunities. A number of multi-family residential developments exist or are planned in the outer portions of the corridor, and a total of 25,000 households are forecast to be located within ½ mile of transit stations in the year 2020.

- With the exception of Denver and Aurora, however, specific policies and ordinances to encourage transit-oriented station area development were not identified for the communities having jurisdiction over the corridor.

SOUTHTOWN CORRIDOR

Project Location:	Kansas City, MO
Lead Agency:	Kansas City Area Transportation Authority (KCATA)
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	MIS/EA completed December 1995; PE to begin 1997
Mode:	Light Rail
Length:	15.2 miles
Number of Stations:	Not determined
Total Estimated Capital Cost:	$490 million ($1997)
2010 Ridership Forecast: (Average Weekday)	16,800; 8,100 new riders

CORRIDOR SUMMARY

Location in Region:	From Kansas City CBD running due south along street alignments, with a spur from the midpoint running 1.5 miles east and then due south.
Transportation Linkages:	First light rail line in region.
Existing Land Use:	Varies – in northern corridor, some areas are primarily employment centers while others are mixed-use developments of office, hotel, residential, and retail. Southern corridor contains streetcar-era neighborhoods, strip commercial, planned residential. Eastern spur is low-density residential and commercial.
High-Trip Generators:	CBD plus Crown Center, Midtown, and Country Club Plaza employment and mixed-use centers; University of Missouri – Kansas City and Rockhurst College.
Significant Factor(s):	While the city has examined development potential at station areas, development objectives appear incremental and aimed at preserving existing neighborhood character. Regional growth management policies do not exist.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: Low-Medium**

- The Southtown Corridor includes the highest-density employment centers in the region. Nonetheless, the CBD is relatively small, although major employment and mixed-use centers also exist along the northern half of the corridor south of the CBD. The CBD employment has increased by 10,000+ in the last decade.
- Much of the southern half of the Country Club corridor is relatively pedestrian-friendly streetcar-era development with mixed neighborhood commercial and residential land uses. Residential and employment densities appear to be at least moderate for most of this corridor. Some major employment nodes have been developed between the Plaza and the CBD in the past 10 years.

2. Containment of Sprawl **FTA Rating: Low-Medium**

- The city of Kansas City has adopted policies aimed at attracting transit-oriented development to the corridor. However, development potential (particularly residential) is relatively small compared to expected regional development levels.
- Regional trends appear oriented toward low-density suburban development and regional growth management policies do not appear to be in place to influence these trends.

3. Transit Supportive Corridor Policies **FTA Rating: Low-Medium**

- The city's recently adopted comprehensive plan includes broad policy recommendations aimed at promoting transit-oriented development. The KCATA has also performed studies of development potential in the corridor.
- Specific and enforceable policies and zoning regulations have not yet been created.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: Low-Medium**

- The city and KCATA have conducted a detailed study of development potential in the corridor and station areas.
- Specific and enforceable policies and zoning have not yet been created.
- Development goals in most station areas are not very aggressive, and the potential for transit-oriented development appears to be frequently constrained by the need to conform to the scale and nature of existing development.

5. Tools to Implement Land Use Policies **FTA Rating: Low-Medium**

- While specific actions have been recommended to promote transit-oriented development policies in the corridor, tools to implement these policies have not yet been developed.
- Reports issued by the KCATA suggest that the agency understands the need for specific corridor and station-area zoning, incentives, and improvements in attracting new transit-oriented development. However, it is not clear that market forces or the general community will support significant intensification of uses in the corridor.

6. Performance of Land Use Policies **FTA Rating: Medium**

- Due to the early stage of the project (prior to Preliminary Engineering), it is too early to gauge the performance of policies adopted by the city and the KCATA.

PROJECT OVERVIEW

PROJECT DESCRIPTION

The proposed Southtown Corridor project includes 15.2 miles of light rail system in Kansas City, Missouri (KCMO). The first phase of the project would be a 5.6-mile "Starter Project" running from the KCMO central business district south through major employment and activity centers including Crown Center, midtown Kansas City, and Country Club Plaza. The remainder of the project includes two extensions: the Country Club Route, which continues due south from Country Club Plaza to 85th Street and Holmes, and the BRW route, which heads east from the Plaza and then south along Bruce R. Watkins Drive, a major arterial, to 75th Street.

Projected cost is $490 million for the entire system, including $185 million to $233 million for the Starter Project. The project is expected to carry 16,800 riders including 8,100 new transit riders, while the Starter Project is expected to carry 10,800 riders, including 4,800 new transit riders (forecast year is 2010).

The MIS for the 15.2-mile Southtown Corridor has been completed and the preferred alternative has been adopted by the KCATA and included in the Mid-America Regional Council of Governments (the MPO) adopted long-range plan. In October 1995, FTA approved the initiation of Preliminary Engineering (PE) on the project and PE began in early 1997 on the 5.6-mile starter line. However, at the urging of community leaders, the KCATA has suspended PE in order to further review proposed alignment plans.

CORRIDOR DESCRIPTION

From north to south, the districts along the main Southtown Corridor and Country Club Route include:

- The Riverfront, a mixed-use area containing retail, office, wholesale, warehousing and distribution, and emerging residential uses.
- The Kansas City CBD, which primarily contains high-density office uses with limited retail. A convention district lies directly to the west of the main CBD area, and government offices lie directly to the east.
- The Crossroads area, containing mixed commercial and industrial uses.
- Crown Center, a sole-ownership, multi-use development containing office, retail, hotel, and residential uses. Mixed-use development is already increasing in this area because of the redevelopment of Kansas City's long empty, massive Union Station
- Midtown, a primarily commercial area with adjacent high- to medium-density residential development.
- Country Club Plaza ("The Plaza"), a mixed-use area containing up-scale regional retail and offices surrounded by higher density residential, which is experiencing significant new development.

- The Country Club District, a streetcar-era residential area with neighborhood commercial development at intersections.

- The Waldo area, which varies from planned commercial and residential to strip commercial with surrounding residential, and also contains some industrial uses.

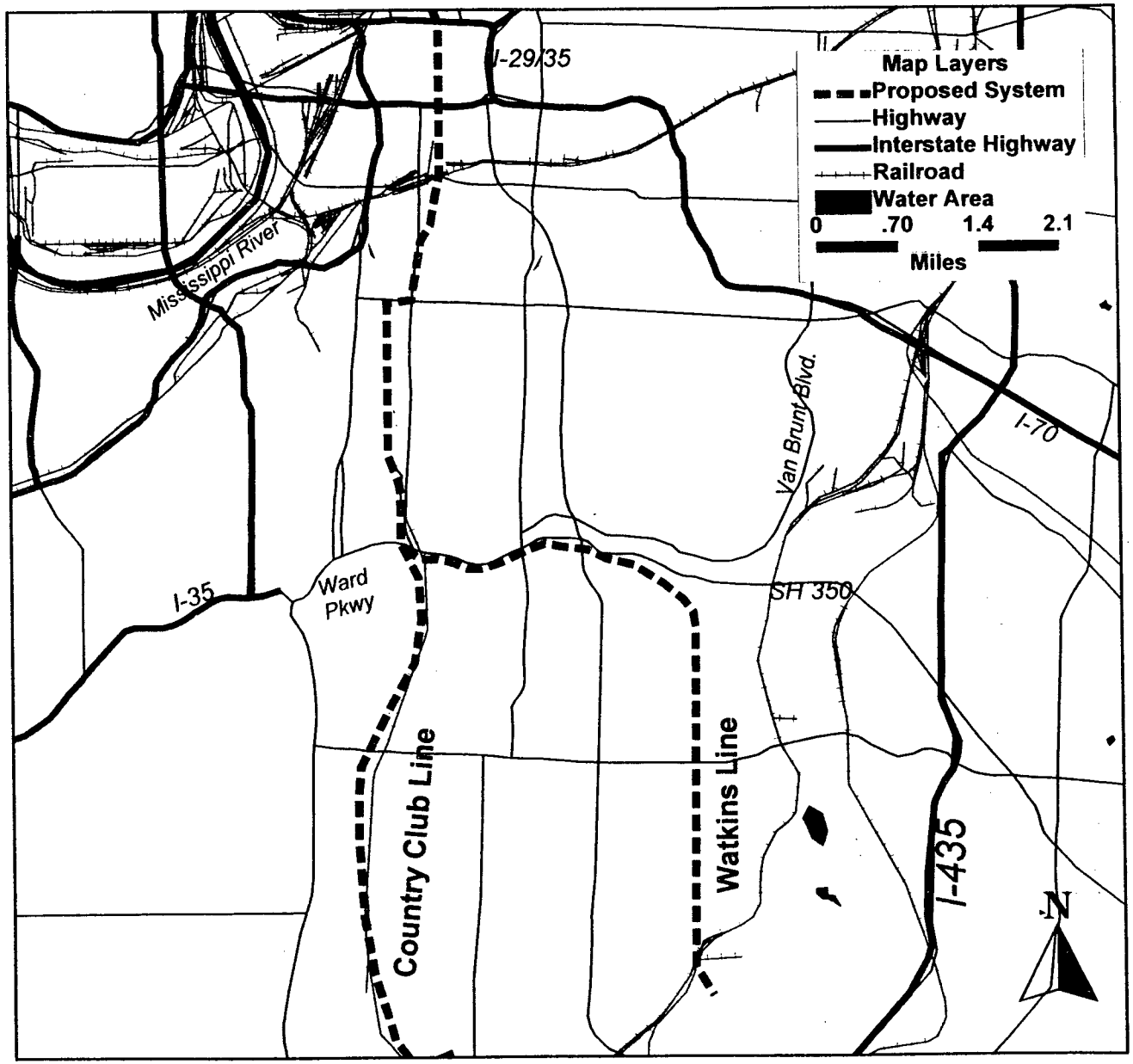
The Bruce R. Watkins Route, which diverges from the Country Club Route south of The Plaza, is mostly single-family residential, with some industrial areas toward the south end.

DESCRIPTION OF LOCAL AGENCIES

The Kansas City Area Transportation Authority (KCATA) is the primary public transit agency for the Kansas City region. The entire Southtown Corridor is contained within the city of Kansas City, Missouri.

Southtown LRT

Kansas City, MO



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- There are a number of areas of pedestrian-friendly and mixed-use development in the corridor, and the KCATA has conducted detailed studies of development potential at proposed transit stations. While the corridor includes the region's densest employment centers, however, total population and employment directly served by the proposed system is relatively small. Furthermore, no policies are in place to significantly increase densities adjacent to transit stations or to manage regional growth. However, Kansas City's Focus plan strongly commits the city to light rail development and identifies the policies that will be implemented as the light rail alignment issues are resolved.

- The northern part of the corridor, from the Riverfront and CBD to Country Club Plaza, is generally more transit-supportive than the southern spurs of the corridor. Approximately 80,000 jobs are located in the CBD and other activity centers in the north corridor, and some of these centers are mixed-use, including residential, retail, and hotel development. Pedestrian-friendliness appears relatively good in many station areas. Some residential neighborhoods to the south are well-preserved streetcar-era developments with street-fronting neighborhood commercial uses. Uses along the southernmost part of the Country Club Corridor and along the BRW Corridor, in contrast, appear primarily auto-oriented and low-density, with strip commercial and single-family suburban residential developments and wide street cross-sections.

- General policies have been adopted by the city and the KCATA in support of transit-oriented development. KCATA has also completed a detailed study of existing land use and development potential in station areas. Specific and enforceable policies and zoning, however, have not yet been created to carry out transit-oriented policies. Station area development targets are not very aggressive and appear to be generally constrained by the need to conform to the scale and nature of existing development. Furthermore, regional trends appear oriented toward low-density suburban development and regional growth management policies do not appear to be in place to influence these trends.

- Overall, current land uses are only marginally transit-supportive, and evidence does not suggest that this will change significantly in the near future.

RESORT CORRIDOR

Project Location:	Las Vegas, Nevada
Lead Agency:	Regional Transportation Commission (RTC)
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	Major Investment Study completed October 1997
Mode:	Fixed Guideway
Length:	5.2 miles (Initial Operating Segment (IOS)); 15.6 miles (full system)
Number of Stations:	10 (IOS); 27 (full system)
Total Estimated Capital Cost:	$380 million ($1996) (IOS only)
2020 Ridership Forecast: (Average Weekday)	93,000 (IOS); 200,000 (full system)

CORRIDOR SUMMARY

Location in Region:	Full system runs from south to north along the Las Vegas Boulevard Resort Corridor, then northeast to the Central Business District (CBD) and east to its terminus. Initial Operating Segment (IOS) consists of northern half of corridor including CBD and part of Resort Corridor.
Transportation Linkages:	Full system includes an eastward extension to McCarran International Airport.
Existing Land Use:	High-density, integrated developments of hotel, casino, entertainment, and retail uses in much of Resort Corridor. Small CBD, mostly government offices and casinos. Single- and multi-family residential to east of corridor, industrial and redevelopment areas to west. Efforts are underway to provide a pedestrian-friendly environment beyond the resort development, particularly in the CBD.
High-Trip Generators:	Eight major hotel/resort developments; convention center; regional shopping malls.
Significant Factor(s):	Rapid growth in both the corridor and region is expected to continue. High-intensity resort uses will continue to be concentrated in the Resort Corridor. Policies are not in place to concentrate residential or non-resort employment growth.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: Medium**

- The Resort Corridor functions as the region's primary employment center. About 50 percent of regional jobs are located in the Corridor.
- The concentration of resort activities along the corridor represents a potentially high source of trip generation by visitors.
- Outside of the major resort areas, a variety of land uses are encountered, including single- and multi-family residential, light industrial, neighborhood retail, and parkland.
- Pedestrian-friendliness is at least fair in the major resort areas but less so in other parts of the corridor, including the CBD.

2. Containment of Sprawl **FTA Rating: Medium**

- Rapid growth is expected to continue in the region, and strong policies and market forces exist to keep high-intensity resort/casino development (a large fraction of the region's economic base) within the corridor to be served by the transit system.
- While market forces attract and zoning restricts integrated hotel development to the corridor, the market nor regional policies support the containment of office or residential growth within the transit corridor.

3. Transit Supportive Corridor Policies **FTA Rating: Medium**

- Regional policies are in place to restrict high-density resort uses to the areas adjacent to the proposed transit corridor.
- The city of Las Vegas is developing policies to attract higher-intensity non-resort commercial uses to the CBD area.
- Some pedestrian improvements have been proposed or are underway in areas of significant pedestrian activity.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: Medium**

- The downtown urban design plan recommends pedestrian-friendly design and mixed, high-intensity use near transit stations. It is too early to predict whether these recommendations will be implemented.
- For other station areas, policies or plans have not yet been developed; a process for this is to be established soon.

5. Tools to Implement Land Use Policies **FTA Rating: Medium**

- Zoning policies which focus high-density resort uses in the corridor have been successful.
- Comprehensive plans and zoning regulations for Clark County communities contain policies to encourage mixed-use development in station areas and to ensure pedestrian connectivity.
- Tools have not yet been developed to implement the policies outlined in the Las Vegas downtown urban design plan.

6. Performance of Land Use Policies **FTA Rating: Medium**

- Given the early stage of the project, it is premature to judge the performance of transit-related land use policies. While growth continues to occur in the corridor, plans and policies have not yet been developed to link this growth to the proposed transit system.

PROJECT OVERVIEW

PROJECT DESCRIPTION

Population and employment in the Las Vegas Valley increased by 120 percent between 1980 and 1995, and are expected to nearly double again by the year 2020. Much of the employment growth is expected to occur within the Resort Corridor, which currently contains 50 percent of the region's employment. In response to the transportation concerns caused by this rapid growth rate, the Regional Transportation Commission (RTC) recently undertook a Major Investment Study (MIS) for the Resort Corridor. The study recommended, among other items, the construction of a 15.6-mile fixed guideway transit system, mostly elevated, with 27 stations. The system will roughly parallel Las Vegas Boulevard, running behind the major resort developments along the strip. Two branches are planned for the southern half of the corridor, one east and one west of Las Vegas Boulevard. An eastward extension to the airport is also planned for the final system.

The proposed Initial Operating Segment (IOS) is 5.2 miles in length and would run north-south through the north end of the corridor, including the Central Business District (CBD) and some of the resort strip. The estimated cost of the IOS is $380 million, of which the RTC is seeking 45 percent federal participation. Ridership is forecast at 93,000 people per day. Currently, roughly three percent of trips within the Resort Corridor are taken by transit, although ridership has grown rapidly with the ongoing expansion of regional bus service, initiated in 1992.

A locally preferred alternative was adopted in January 1997, and the Final Evaluation Report for the corridor MIS was published in October 1997. The request to enter preliminary engineering for the proposed fixed guideway transit project has been made.

CORRIDOR DESCRIPTION

The Las Vegas CBD, near the north end of the corridor, is comprised primarily of federal, state, and local government offices and large-scale hotel/casino developments. There is a small amount of commercial office space. The southern half of the CBD is a mix of parking lots and small-scale, fragmented development. Employment density in the CBD is currently 39 jobs per acre. West of the CBD, across the proposed transit line, are the Union Pacific rail yards which are slated for redevelopment.

The center of the corridor contains the highest employment densities, currently 40 to 67 jobs per acre, primarily in large-scale resort developments which are concentrated in the vicinity of Las Vegas Boulevard South. The south end of the corridor contains a somewhat lower density (26 jobs per acre) of also primarily resort-oriented land uses. The resort developments contain a mix of hotels, casinos, entertainment, and retail facilities. Some of the retail centers serve as major shopping centers for Las Vegas area residents, as well as for visitors. An area of low-employment density (10 jobs per acre) separates the main resort area from the CBD.

Residential areas are concentrated along the east side of the corridor. Uses range from low-density (one unit per acre) single-family units to high-rise multi-family apartments and condominiums, but the dominant residential forms are low-rise, multi-family apartment complexes (18 to 24 dwelling units per acre) and medium-density single-family units (four to six units per acre).

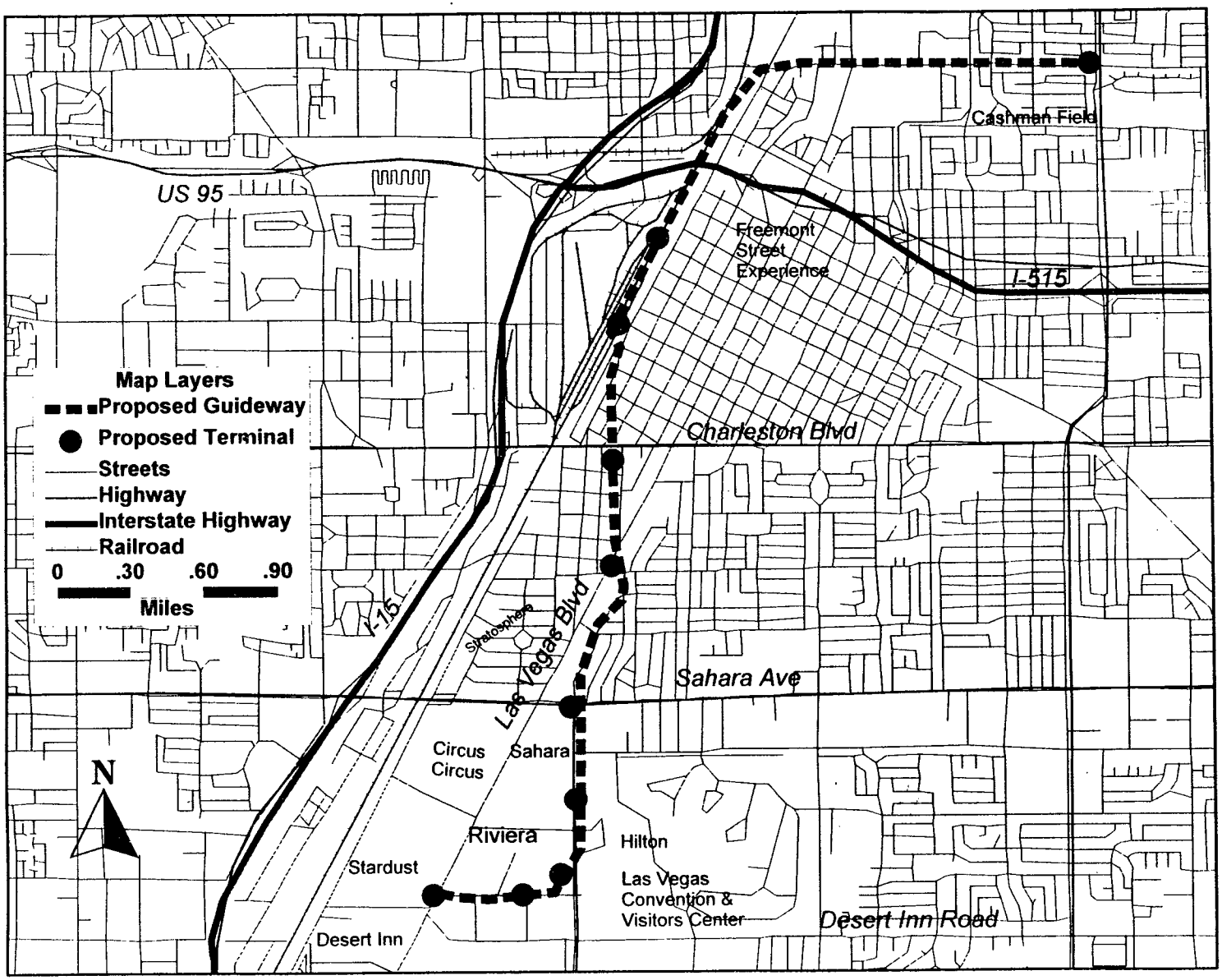
Light industrial uses predominate to the west side of the corridor, primarily to the west of I-15. Neighborhood commercial uses are scattered throughout the corridor along through streets. There are also some parks and golf courses within the corridor.

DESCRIPTION OF LOCAL AGENCIES

The Regional Transportation Commission (RTC) of Clark County, Nevada is the designated metropolitan planning organization (MPO) for the area. The RTC is also responsible for providing public transportation within the county and operates a fixed-route transit system known as Citizens Area Transit (CAT).

The Las Vegas metropolitan area is completely within the boundaries of Clark County, Nevada. The north half of the Resort Corridor is under the jurisdiction of the city of Las Vegas, while the south half is under the jurisdiction of Clark County. The Clark County Department of Comprehensive Planning establishes town plans for the Planning Areas within its jurisdiction. The Winchester and Paradise Planning Areas encompass most of the Resort Corridor immediately south of Las Vegas, while the Enterprise Planning Area encompasses the southernmost portion of the corridor.

Resort Corridor
Las Vegas, NV



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The Resort Corridor functions as the employment center for the Las Vegas region, and system ridership is expected to rely heavily on leisure travelers as well as on business travelers attending conventions. High growth is forecast to continue in the region, with population and employment nearly doubling between 1995 and 2020. Much of the employment growth is expected to be concentrated within the Resort Corridor. Residential growth, in contrast, will primarily occur outside the corridor and will not be directly served by the proposed rail system.

- Employment in the corridor is currently 237,000 or 50 percent of regional employment, of which roughly half is adjacent to the proposed transit system. Much of this employment is in integrated "big-block" resort developments consisting of hotel, casino, entertainment, and retail uses. Employment densities range up to 67 jobs per acre and are expected to range up to 97 per acre in the year 2020. The region has adopted zoning policies which will ensure that high-intensity resort-type uses continue to be concentrated in this corridor. Development will continue on underutilized parcels in the north corridor, adjacent to the Initial Operating Segment, as well as on vacant land in the south portion of the corridor.

- Residential development, primarily along the eastern side of the corridor, varies in character but is largely made up of single-family planned divisions at four to six units per acre and multi-family developments at 18 to 24 units per acre. While these represent moderately high densities, explicit policies are not in place to encourage high-density residential development in the vicinity of the transit system, and most residential growth is expected to take place outside the corridor. Total population in the corridor is 105,000 (although most of this is not directly adjacent to the proposed transit system) and is forecast to grow to 124,000 by the year 2020.

- The big-block resort developments are laid out with internal pedestrian circulation in mind, and the RTC is working with property owners to integrate rail stations into existing and future developments. In addition, a number of pedestrian overpasses are being constructed or planned to improve access across Las Vegas Boulevard and major cross-streets. Outside of the major resort areas, however, pedestrian design has been given minimal consideration, and zoning to control development has been weak or nonexistent. The CBD, in particular, is not considered a pedestrian-friendly environment and contains rather low-intensity development and numerous surface parking lots. The city of Las Vegas has developed an urban design master plan which would make the CBD significantly more pedestrian-friendly and transit-oriented. However, transit-oriented design policies have not been developed for other parts of the corridor.

JUNCTION BRIDGE (RIVER RAIL PROJECT)

Project Location:	Little Rock, AR
Lead Agency:	Central Arkansas Transit Authority (CATA)
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	PE
Mode:	Light Rail (historic replica trolley)
Length:	1.9 miles
Number of Stations:	Not determined
Total Estimated Capital Cost:	$10.5 million ($1997)
2020 Ridership Forecast: (Average Weekday)	1,200

CORRIDOR SUMMARY

Location in Region:	Will connect the Little Rock and North Little Rock CBDs via the north-south Junction Bridge crossing of the Arkansas River.
Transportation Linkages:	No major linkages.
Existing Land Use:	Moderate-density office, commercial, and public/institutional in both CBDs; redeveloping warehouse districts along waterfront.
High-Trip Generators:	Little Rock and North Little Rock CBDs; Alltel Arena; Convention Center; other historic attractions and civic uses; Clinton Presidential Library (proposed).
Significant Factor(s):	Project is under $25 million and is exempt from Section 5309 reporting requirements and from MIS process.

SUMMARY OF KEY FINDINGS

1. Existing Land Use — **FTA Rating: Medium**

- Existing land uses in the Little Rock and North Little Rock CBDs consist primarily of moderate-density commercial, office, retail, and public/institutional uses. There are some multi-family and single-family areas on the outskirts of the CBDs.
- There are redevelopment and revitalization activities underway, including infill and adaptive reuse of older warehouse districts.

2. Containment of Sprawl — **FTA Rating: Medium**

- The general trend in the region is outward migration of population from the central city and development of employment in suburban areas.
- The regional MPO and the cities of Little Rock and North Little Rock are adopting policies to attempt to reverse this trend. However, no evidence was provided that other communities in the region are developing growth management policies.

3. Transit Supportive Corridor Policies — **FTA Rating: Medium**

- The cities of both Little Rock and North Little Rock have developed policies and plans to increase economic, residential, and tourist activity in the CBD areas, to allow mixed uses, and to increase the pedestrian-friendliness and transit orientation of these areas.
- While not all of these policies have been formally adopted, both cities are strongly interested in pursuing these policies and have also worked with the transit agency to develop policies and guidelines for transit-oriented development.

4. Supportive Zoning Regulations Near Transit Stations — **FTA Rating: Medium**

- The River Rail project has just completed the planning stages, and station area planning has not yet been initiated.
- Both cities have developed a number of zoning and design regulations for the CBD areas which are supportive of transit. These include allowing residential and mixed-use development throughout the CBD areas and requiring pedestrian-friendly design to support new development.

5. Tools to Implement Land Use Policies — **FTA Rating: Medium**

- Ordinances and zoning changes to implement emerging land use policies in the Little Rock/ North Little Rock CBDs are being developed but have not yet been adopted.
- Specific tools to achieve other goals such as commercial and residential development have not yet been created.
- Both cities have actively been pursuing public development and redevelopment opportunities.

6. Performance of Land Use Policies — **FTA Rating: N/A**

- The cities of Little Rock and North Little Rock are undertaking a number of redevelopment projects in the River District, which would be served by the proposed rail line.
- For the most part, specific private-sector projects have not yet been identified.
- Given the status of the project, it is too early to tell whether policies will be effective at inducing development in the area, particularly as related to transit.

PROJECT OVERVIEW

PROJECT DESCRIPTION

The proposed River Rail project calls for the development of 1.9 miles of streetcar service on one mile of existing freight track and on 0.9 miles of new track to be laid in existing public street right-of-way. A 0.4-mile extension to the future William Jefferson Clinton Presidential Library site is also proposed. The streetcars will be historic replicas. The River Rail project will operate as a circulator in the Little Rock CBD, connecting major trip generators.

Since the total capital cost of the project is less than $25 million, the project is exempt from the FTA Section 5309 New Starts criteria. FTA has also determined that the project is exempt from MIS requirements.

CORRIDOR DESCRIPTION

The proposed project will connect the CBDs of Little Rock and North Little Rock via the Junction Bridge crossing of the Arkansas River. The line will run from north to south through North Little Rock on railroad right-of-way and cross the river on an existing railroad bridge. The line will then turn west to run as a one-way couplet parallel to the river along 2nd Street and Markham Street in downtown Little Rock. The study corridor is defined for reporting purposes as including an area within a 10-minute walking distance or approximately a quarter-mile radius from the proposed alignment.

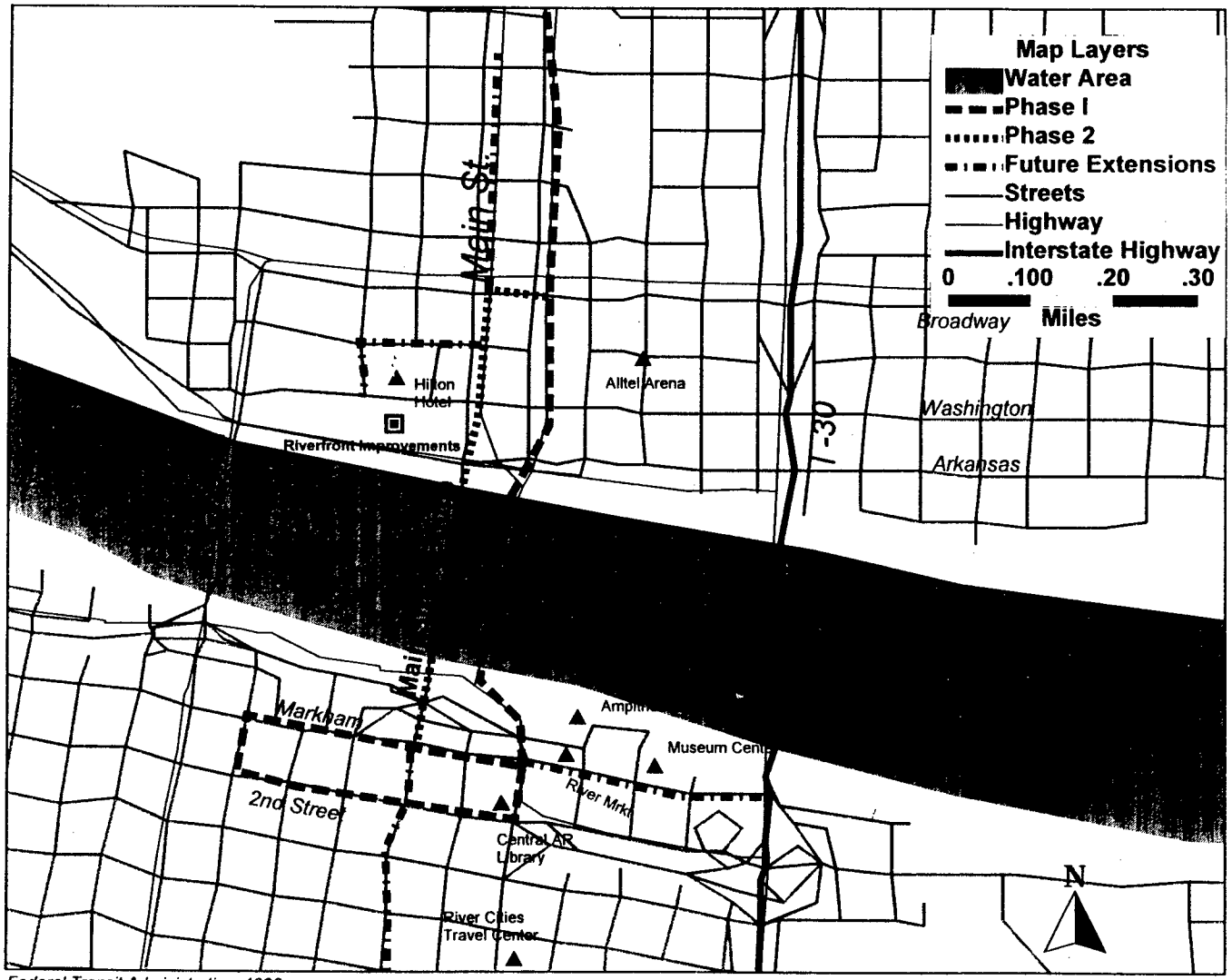
Both CBDs feature moderate-density urban uses, primarily office, commercial, and public/institutional uses. The highest employment densities are in the Little Rock CBD. Little Rock and North Little Rock have jointly undertaken a River Project study to evaluate development and redevelopment opportunities and propose transportation, land use, and design improvements to the areas near the river which would be served by the proposed system.

DESCRIPTION OF LOCAL AGENCIES

The Central Arkansas Transit Authority (CATA) is the sponsoring agency for the project. CATA has full authority to plan, design, and build all modes of public transportation. Six local governments appoint the CATA governing board and apportion the capital and operating costs among themselves based upon vehicle-miles of service. The rail project impacts three jurisdictions including Little Rock, North Little Rock, and Pulaski County, which have negotiated a three-way cost split.

River Rail Project

Little Rock, AR



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The River Rail Project is a small-scale project which will utilize historic replica streetcars to provide local transportation between the Little Rock and North Little Rock CBDs and the riverfront area. Both cities have undertaken recent initiatives to promote mixed-use development (including residential) in the CBD and riverfront areas and to improve pedestrian design in these areas. However, the existing population to be served by the system is quite small and it is not clear that this will change significantly in the near future.

- Employment in the Little Rock and North Little Rock CBDs is relatively small (44,000) both in total and as a proportion of regional employment. Population has declined to roughly 5,000 in 1990, most of which is not adjacent to the rail system. No regional growth management policies are in place.

- Both Little Rock and North Little Rock have been developing policies and zoning ordinances to promote mixed-use redevelopment in the CBD and waterfront areas and to increase the pedestrian-friendliness of these areas. The city of Little Rock has created a draft Downtown Plan promoting mixed-use and residential development, and establishing pedestrian-oriented design guidelines. North Little Rock has recently adopted zoning changes that allow multi-family residential and mixed commercial/residential development in the CBD. Both cities have also adopted design overlay districts to increase pedestrian-friendliness in certain areas.

- Some redevelopment and revitalization projects are already underway in the area. Little Rock is encouraging creative redevelopment of warehouses and commercial structures in the Riverfront area, and both cities are developing parks along the waterfront which connect to the adjacent city streets. A number of institutional and civic development and redevelopment projects are also underway or planned in the corridor. These include the 19,000 seat Alltel arena, the River Market public market, a new Central Arkansas Main Library, and a proposed Clinton Presidential Library.

EAST SIDE EXTENSION, PHASE II

Project Location:	Los Angeles, California
Lead Agency:	Los Angeles County Metropolitan Transportation Authority (MTA)
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	Preliminary Engineering; FEIS/FEIR completed June 1994;
Mode:	Heavy Rail (Subway)
Length:	3.1 miles – Phase II (6.8 miles – full extension)
Number of Stations:	3 – Phase II (7 – full extension)
Total Estimated Capital Cost:	$1,216 million ($ escalated) (full extension)
2015 Ridership Forecast: (Average Weekday)	28,000

CORRIDOR SUMMARY

Location in Region:	From the Los Angeles CBD east into East Los Angeles.
Transportation Linkages:	Extension of the Red Line subway along Wilshire Boulevard; connects with Blue Line light rail and Metrolink commuter rail in CBD.
Existing Land Use:	High-density commercial and mixed-use on existing line in CBD. Eastside extension is primarily residential with population densities of 25 to 32 persons per acre. Commercial districts located on major arterials, directly adjacent to proposed station sites.
High-Trip Generators:	CBD; two hospitals.
Significant Factor(s):	Funding is committed for the East Side Extension Phase I (four stations in the city of Los Angeles). This evaluation focuses on the East Side Extension Phase II (three stations in East Los Angeles).

SUMMARY OF KEY FINDINGS	
1. Existing Land Use	**FTA Rating: Medium-High**
• This is primarily a residential area with population densities of 25 to 32 persons per acre. • Commercial districts are located on major arterials, directly adjacent to the proposed station sites.	
2. Containment of Sprawl	**FTA Rating: Medium**
• The project's role in containing sprawl is limited given the small size of the project in relation to the metropolitan area and the largely built-up nature of the community. • While there are some opportunities for additional development, local policies and zoning are largely focused on preserving and rehabilitating existing housing stock and maintaining existing densities.	
3. Transit Supportive Corridor Policies	**FTA Rating: Medium-High**
• Local policies allow moderate intensification of both commercial and residential uses over existing levels in the vicinity of transit stations. However, policies do not call for a significant intensification or change in the nature of development in the corridor. • The MTA has begun station area planning activities and expects to work with Los Angeles County and the local community under established processes to complete these activities.	
4. Supportive Zoning Regulations Near Transit Stations	**FTA Rating: Medium**
• The MTA has developed plans for areas directly adjacent to stations which would fall under its ownership. Initiatives have not yet been undertaken to develop station-area plans outside of the future MTA property areas. • Current zoning allows medium-density residential (up to 30 units per acre) throughout most of the area and allows commercial uses with a height limit of 35 to 40 feet in some areas.	
5. Tools to Implement Land Use Policies	**FTA Rating: Medium**
• The MTA has been the lead agency in developing conceptual station area plans. • Broader station area and corridor planning efforts aimed at fostering transit-oriented development have not been undertaken, and specific tools to implement transit-supportive development have not yet been developed.	
6. Performance of Land Use Policies	**FTA Rating: Low-Medium**
• There is no indication of new development efforts being planned in conjunction with the East Side Extension. No changes are anticipated until more detailed planning has been completed.	

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Locally Preferred Alternative (LPA) for the East Side Corridor is a below-grade (subway) extension of the existing heavy rail Metro Red Line. The LPA would be approximately 6.8 miles long, would include seven stations, and would extend from the Red Line's current eastern terminus at Union Station east to the intersection of Whittier and Atlantic Boulevards.

For implementation purposes, this corridor has been divided into two segments, to be constructed in two phases. A full funding grant agreement (FFGA) for the construction of the East Side Extension Phase I was signed in May 1993 for a four-station, 3.7-mile project which would extend the Red Line east to a station at First and Lorena Streets. Due to project management and financial difficulties, MTA stopped work on this segment and is developing a recovery plan. The construction of the East Side Extension Phase II, a 3.1-mile, three-station subway from First and Lorena Streets east to Whittier and Atlantic Boulevards, is not currently funded. This land use review focuses on the Phase II project which has not yet been the subject of a FFGA.

Ridership and cost statistics for the East Side Extension Phase II segment alone were not provided. For the full East Side extension, a total of 64,000 daily boardings and alightings are projected in 2010. Total regional transit trips are forecast to increase by 28,000 over the no-build alternative. Capital cost is estimated at $1.216 billion (escalated dollars).

CORRIDOR DESCRIPTION

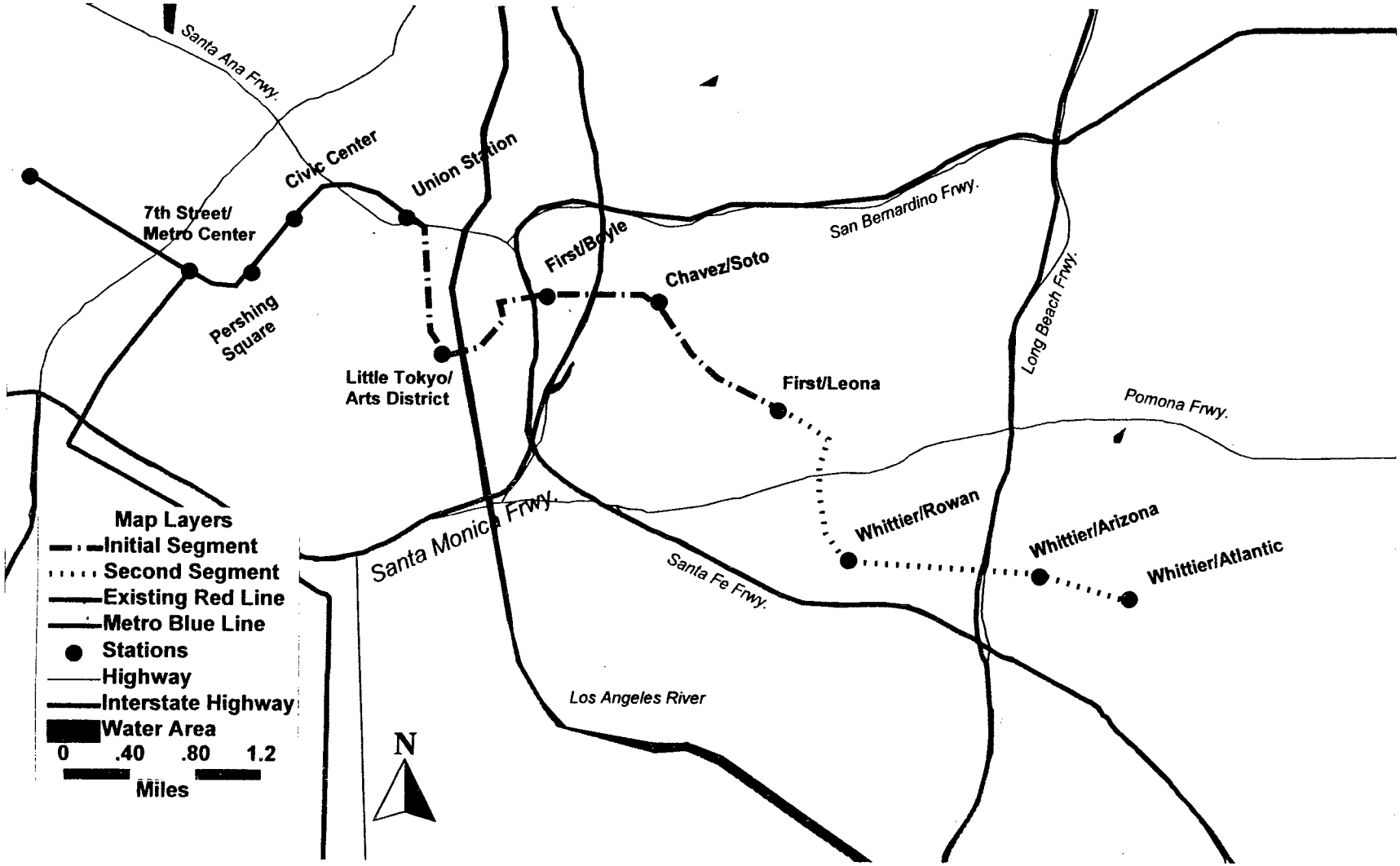
The section of East Los Angeles that would be served by the East Side Extension Phase II project is relatively homogenous with respect to population density and uses. The area is primarily urban medium-density residential, with densities of 25 to 32 persons per acre. Neighborhood commercial districts are located on major arterials, in some cases directly adjacent to the proposed station sites. The area also includes scattered civic and institutional uses such as schools and hospitals.

DESCRIPTION OF LOCAL AGENCIES

The project sponsor is the Los Angeles County Metropolitan Transportation Authority (MTA). The Phase II project falls within East Los Angeles, an unincorporated portion of Los Angeles County. The Los Angeles County Department of Regional Planning is responsible for planning in this and other unincorporated areas of the county.

Eastside Corridor Extension

Los Angeles, CA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- East Los Angeles is a heavily urbanized yet unincorporated area to the east of the Los Angeles CBD, with a predominantly Hispanic population. Residential densities are moderately high and there are neighborhood commercial uses along the major arterials. Any significant change in the nature and intensity of development in conjunction with the transit system would generally be in conflict with community interests.

- Residential densities of 25 to 32 persons per acre can be considered moderately transit-supportive. Sidewalks also exist throughout the corridor, and most shopping districts are oriented to pedestrian travel. While there are no major employment centers adjacent to the East Side Extension Phase II, the entire Eastside Corridor contains 87,000 jobs, and the system significantly reduces transit travel times to the CBD for this neighborhood.

- While current zoning allows residential densities of up to 30 units per acre and commercial uses of 35 to 40 feet in most of the study area, a significant intensification of uses above current levels is not expected. The MTA has developed station area plans which provide for pedestrian and transportation integration into surrounding neighborhoods and which suggest some possibilities for additional development on land owned by the MTA. The MTA further expects to work with Los Angeles County and local communities to extend station area planning once funding for the project has been approved. Overall development targets in current station area plans are incremental, however, and policies and plans to promote additional transit-oriented development have not been established. Community goals generally call for the preservation of existing residential densities and housing stock, and there is little vacant land available for new development.

MEDICAL CENTER RAIL EXTENSION

Project Location:	Memphis, Tennessee
Lead Agency:	Memphis Area Transit Authority
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Light Rail
Length:	2.5 miles (4 kilometers)
Number of Stations:	10
Total Estimated Capital Cost:	$30.4 million ($1995)
2015 Ridership Forecast: (Average Weekday)	4,200

CORRIDOR SUMMARY

Location in Region:	Along a west to east street-running alignment between downtown Memphis and the Memphis Medical Center.
Transportation Linkages:	Main Street Trolley in downtown Memphis
Existing Land Use:	Office development and civic and entertainment space in downtown Memphis; hospital and medical facilities at the eastern end.
High-Trip Generators:	Downtown Memphis, Memphis Medical Center
Significant Factor(s):	Joint development policies provide significant progress on transit-oriented development despite the lack of policies to systematically increase density and the mix of land use and to reduce parking supply.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Two clusters of development – downtown Memphis and the Memphis Medical Center – lie at the ends of the proposed rail line. Downtown Memphis contains a mix of densely developed commercial, office, and government land uses. The Memphis Medical Center contains seven hospitals and two colleges and universities. • Old and vacant commercial and industrial development lies in the middle of the corridor.	**Medium**
2. Containment of Sprawl • There are no specific plans to increase density or the mix of land use. • The city of Memphis and Shelby County have developed a joint Balanced Growth Policy. This policy, however, emphasizes growth in the tax base of the city rather than a containment of developmental sprawl.	**Low-Medium**
3. Transit Supportive Corridor Policies • The Memphis Regional Transit Plan reveals preliminary considerations of transit-oriented development. The plan identifies rail stations that have market potential for new development, but none of the identified stations lie along the proposed Medical Center Rail Extension. • There are no plans to increase densities or land use mix or decrease parking supply.	**Low**
4. Supportive Zoning Regulations Near Transit Stations • None of the plans, ordinances, or policies that apply to the corridor directly address transit-oriented development other than to allow development to occur according to the existing development patterns.	**Low**
5. Tools to Implement Land Use Policies • The city of Memphis and Shelby County have established zoning review processes. There are, however, no specifically transit-oriented zoning ordinances or plans.	**Low-Medium**
6. Performance of Land Use Policies • Although there are no active transit-oriented policies or plans, the Memphis Area Transit Authority demonstrates an active role in supporting development around certain transit stations such as at the Central Station and a new transit transfer facility. These facilities include a mix of uses such as commercial space, offices, and transportation terminals. • Designs for the downtown baseball stadium incorporate access to light rail service.	**Low-Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Medical Center Light Rail Extension is planned as an addition to the existing Main Street Trolley through downtown Memphis. The proposed light rail line will travel between downtown Memphis and the Medical Center. The Memphis Area Transit Authority (MATA) is considering four alternative alignments along the 2.5-mile corridor that traverses Jackson Street, Monroe Street, or Madison Street or some combination of the previously mentioned streets. Although the MATA is endorsing the use of vintage streetcars for the light rail extension, it expects to design the system to accommodate eventual conversion to standard light rail vehicles (LRVs) after future extensions or connections to other rail lines. This light rail extension is planned as the first segment of a high-capacity transit line proposed in the regional transit plan to extend from downtown Memphis to the east through the Midtown area and then toward the eastern Shelby County via the Norfolk and Southern Railroad right-of-way.

CORRIDOR DESCRIPTION

The corridor follows a west to east alignment through the Downtown and Midtown sections of the city of Memphis. Two prominent activity centers – downtown Memphis and the Memphis Medical Center – anchor both ends of the corridor. These activity centers contain a large portion of the employment and most of the cultural activity in the region. Light industrial and commercial uses developed at low densities comprise the area between the two nodes.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

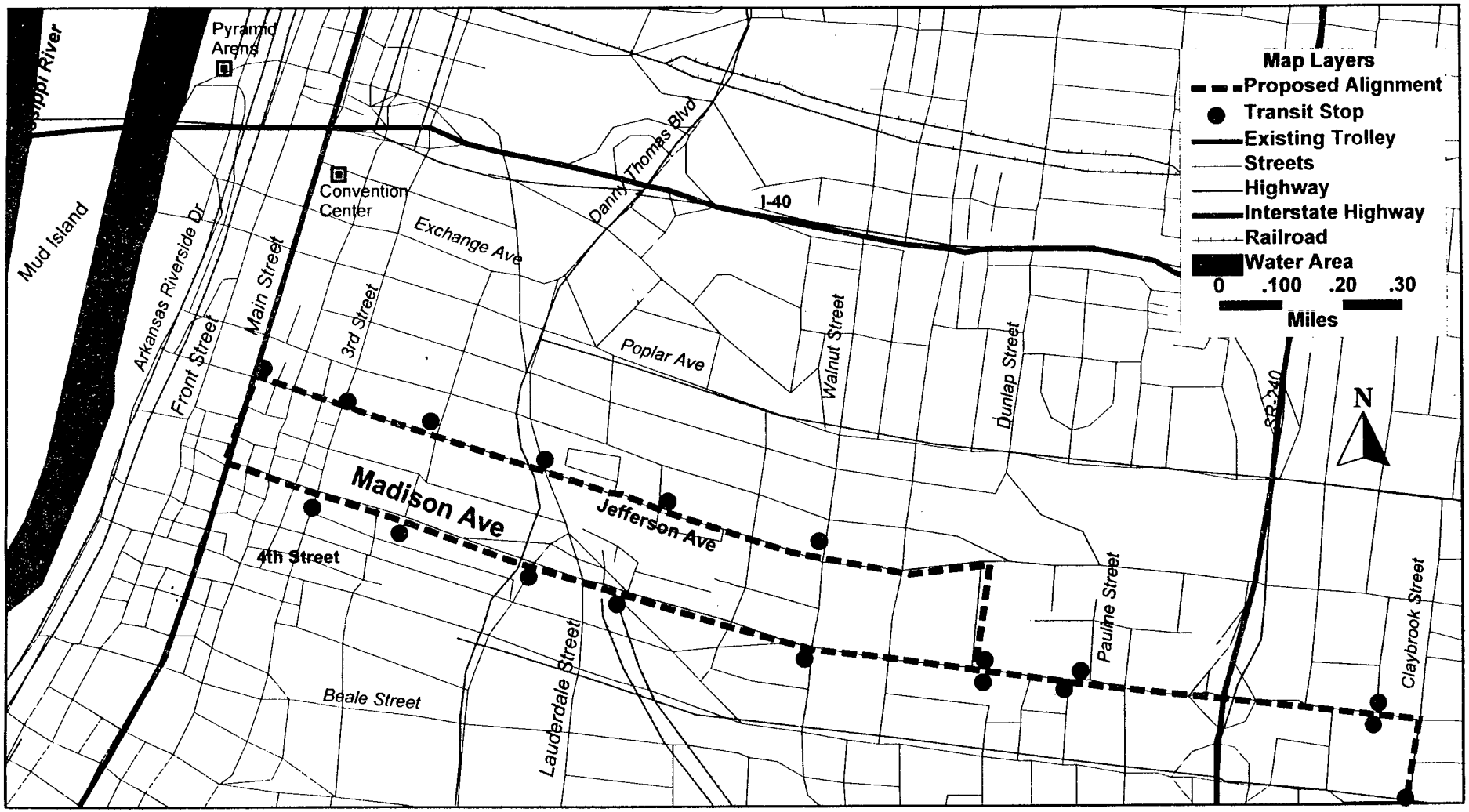
Memphis Area Transit Authority (MATA) – The Memphis Area Transit Authority is responsible for planning and operating transit service in Memphis and Shelby County. MATA operates bus service with a fleet of approximately 160 buses, paratransit service, and light rail service. MATA's experience with coordinating land use and development with its transit service is mixed. In the Memphis Regional Transit Plan, MATA explored the option of developing transit-oriented communities along its high-capacity transit routes. This exploration was largely conception and the MATA has not yet actively pursued the local jurisdictions to change land development policies to focus on transit. MATA appears to be more highly involved with individual joint development projects. The agency has supported strategic investments to support its transportation system such as through its development of two major transit terminals. MATA has recently opened the North End Terminal for service and plans to incorporate housing and office space into the Central Station during its renovation.

Land Use Planning Agencies

Memphis and Shelby County Office of Planning and Development (OPD) – The Memphis and Shelby County Office of Planning and Development (OPD) holds the primary responsibility for development regulation in the corridor. The OPD administers the zoning code and develops land use plans for the city and county. In addition, the OPD develops policies relevant to the region such as growth management policies. The Memphis Metropolitan Planning Organization (MPO) develops regional policies based upon macroscopic models of regional growth. The MPO includes Shelby County and portions of Desoto and Fayette Counties.

Medical Center Rail Extension

Memphis, TN



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The Medical Center Light Rail Transit Extension appears to satisfy minimum requirements for transit. The corridor contains two relatively strong nodes at both ends of the proposed line. Some transit-oriented development does occur in isolated cases. There is no comprehensive planning effort to develop transit-supportive development especially in the center of the corridor. There are no specific transit-oriented plans, policies, or ordinances in the corridor or within the region, nor are there any systematic processes to develop them. Several highlights of transit-oriented development in the corridor include:

- High concentrations of employment occur at the two ends of the proposed line in downtown Memphis and the University of Tennessee Medical Center. The University of Tennessee Medical Center area contains the University of Tennessee at Memphis, Shelby Community College and eight hospitals. Employment in the corridor is projected to increase by 16 percent while population in the corridor is projected to increase by 40 percent.

- The city of Memphis and Shelby County have jointly developed a Balanced Growth Policy. However, this growth policy focuses development in any specific corridors. The growth policy addresses the spatial expansion of the city of Memphis through annexation of lands in Shelby County as they become developed.

- Planning policies in the corridor do not incorporate any provisions for increased parcel densities, increased land use mix, or more amenable pedestrian environments. There are also no provisions to reduce parking in the areas immediately adjacent to the proposed alignments.

- Isolated transit-oriented development does occur within the corridor. Designs for a new baseball park within the center of downtown Memphis incorporate future access to the proposed light rail line. In addition, the Memphis Area Transit Authority is developing two mixed-use transit centers. One such project is the redevelopment of the Central Station into an intermodal transfer station, and a mixed use development that includes housing, office space, retail space, and conference space.

EAST-WEST MULTIMODAL CORRIDOR

Project Location:	Miami-Dade County, Florida
Lead Agency:	Florida Department of Transportation (FDOT)
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Heavy Rail
Length:	11.9 miles
Number of Stations:	10 (6 elevated, 4 underground)
Total Estimated Capital Cost:	$2.02 billion ($ escalated)
2015 Ridership Forecast: (Average Weekday)	31,500 on East-West line; 13,300 new riders

CORRIDOR SUMMARY

Location in Region:	Along a west to east alignment in the center of the region between the city of Sweetwater, Downtown Miami and Miami Beach.
Transportation Linkages:	Tri-County Commuter Rail at Miami Intermodal Center Miami International Airport at Miami Intermodal Center Miami Cruise Ship Terminals at Port of Miami Metrorail North-South line at the Government Center Station Metromover at the Park West Station
Existing Land Use:	Dense, concentrated development in downtown Miami, low-density suburban development elsewhere.
High-Trip Generators:	Florida International University, Miami Intermodal Center, Miami International Airport, Downtown Miami, Port of Miami
Significant Factor(s):	The line was conceived to connect the numerous transportation services in the corridor to each other and with downtown Miami.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Increases in currently low densities are planned through infill development at existing zoned densities, rather than by increasing zoned densities. • Growth in the corridor will not dramatically change the share of total county population and employment. • High-trip generators of varied use exist throughout the corridor contributing to potentially strong off-peak hour and bi-directional passenger trip consumption.	**Medium-High**
2. Containment of Sprawl • Housing subsidies and incentives, specialty use districts, and density bonuses support land use mixing and dense development in downtown Miami. • Sprawl containment policies are comprehensive and include an Urban Development Boundary (UDB), an urban infill policy, and regional cooperation for the concentration of development in a regional core.	**Medium**
3. Transit Supportive Corridor Policies • Recent revisions to the Comprehensive Development Master Plan (CDMP) reflect a clear policy shift to highlight concentration and intensification of development around centers of activity. • The Station Area Aesthetics, Design and Development (SAAD&D) Program is a strong community-oriented planning process to develop area plans and design guidelines for each station. • No county-wide parking policy exists for Miami-Dade County.	**Medium-High**
4. Supportive Zoning Regulations Near Transit Stations • The 1978 Transit Development Ordinance established two overlay zones. The Rapid Transit Zone emphasizes joint development while the Rapid Transit Developmental Impact Zone determines policy for lands in close proximity to the rapid transit system.	**Medium-High**
5. Tools to Implement Land Use Policies • The SAAD&D program, although just recently begun, supports strong public participation in planning and implementation. • The Rapid Transit Developmental Impact Committee is composed of representatives from Miami-Dade County and all local jurisdictions that contain rapid transit facilities. • Miami-Dade County exercises strong control over land use and development policy within the corridor, even within smaller jurisdictions.	**Medium-High**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • Support for transit-oriented development is strong at many levels of government. • The Downtown Development Authority seems to have strong control over development within downtown Miami. • Progress toward station area development is evident, although uneven.	**Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The East-West Multimodal Corridor begins at the Tamiami campus of Florida International University (FIU) in the west and follows the length of State Route 836, Interstate 395 through downtown Miami and ends at the Miami Beach Convention Center. The Major Investment Study/Draft Environmental Impact Statement has recommended a combination of transportation improvements including two rail lines and one set of highway improvements in the corridor. Only one of these rail lines has been carried through to this initial project phase.

The primary transit improvement in the East-West corridor involves an elevated heavy rail line that will extend for 11.9 miles (19 km) from the Palmetto Expressway (SR 826) to the Port of Miami. The alignment will travel east from the Palmetto Expressway to SR 836 along NW 7th Street to the Tamiami Canal, where it would then turn to follow an alignment parallel to the canal to reach NW 57th Avenue. From NW 57th Avenue, the line would approach and parallel SR 836 on the south side and would then turn north at Le Jeune Road to follow an alignment on the west side of the road to reach the Miami Intermodal Center (MIC). The MIC is planned to become a major transfer terminal for passengers transferring between the East-West heavy rail line, the regional Tri-County Commuter Rail line, and the Miami International Airport. From the MIC, the rail line would travel along the south side of the Miami River to NW 27th Avenue, along the median of the SR 836 to NW 17th Avenue, and southeast to the Orange Bowl. From that station, the elevated line would transition into a tunnel through Downtown Miami and then would end at the Port of Miami cruise ship terminals. This line connects many major activity centers in the corridor including Miami International Airport, the Civic Center and major medical complex, downtown Miami, a new sports arena under construction, and the cruise ship terminals at the Port of Miami.

The second element of the East-West Multimodal Corridor Transportation Plan is a set of improvements to Florida State Route 836. These improvements include adding auxiliary lanes, intersection modifications along the route, automating the toll facility, and the construction of two HOV lanes from Florida's Turnpike along SR 836 to connect to the MIC. This combination of transportation infrastructure investments is expected to generally enhance travel through the east-west corridor.

CORRIDOR DESCRIPTION

The East-West Corridor follows a west to east orientation through the center of the metropolitan Miami area and runs roughly parallel to Florida State Route 836. The corridor includes many prominent communities within Miami-Dade County including downtown Miami, Little Havana, and Overtown in the city of Miami. The proposed transit investment is also planned to serve the communities of Grapeland Heights, Flagami, Fontainebleau, and West Dade – Airport West in the city of Miami, the city of Sweetwater, and several unincorporated sections of Miami-Dade County. The East-West corridor rail improvement is also planned to function as a connection between the existing Stage 1 Metrorail line (traveling between southwestern Miami-Dade County and northwestern Miami-Dade County via Downtown Miami), the Tri-County Commuter Rail service (serving Broward and Palm Beach Counties to the north), the Miami International Airport, and the Port of Miami cruise ship terminals.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Florida Department of Transportation (FDOT) – The Florida Department of Transportation, through its offices in District VI, is leading the planning and development of the various transportation improvements in the East-West Multimodal Corridor. Although a majority of the projects that FDOT administers are related to highways, FDOT has demonstrated commitment in this corridor to transit and transit-oriented development through the completion of the FEIS and its administration of the Station Area Aesthetics Design and Development program.

Miami-Dade Transit Agency (MDTA) – The Miami-Dade Transit Agency, which operates the transit system for Miami-Dade County, has been a department of Miami-Dade County since 1961. The MDTA operates 69 fixed-route bus lines, one heavy rail line (between Downtown Miami and northwest and southwest Miami-Dade County), and three people mover lines (within Downtown Miami). As a department of Miami-Dade County, the MDTA reports to the same political representatives within the county structure as the Miami-Dade County Department of Planning, Development, and Regulation. This situation creates opportunities for stronger coordination of land use policy and transit infrastructure development.

Land Use Planning Agencies

Miami-Dade County Department of Planning, Development, and Regulation – Agency most directly involved with the coordination of land use regulation. Miami-Dade County sets county-wide (and corridor-wide) policies and regulations on land use and development and administers the Rapid Transit Developmental Impact Zone county-wide.

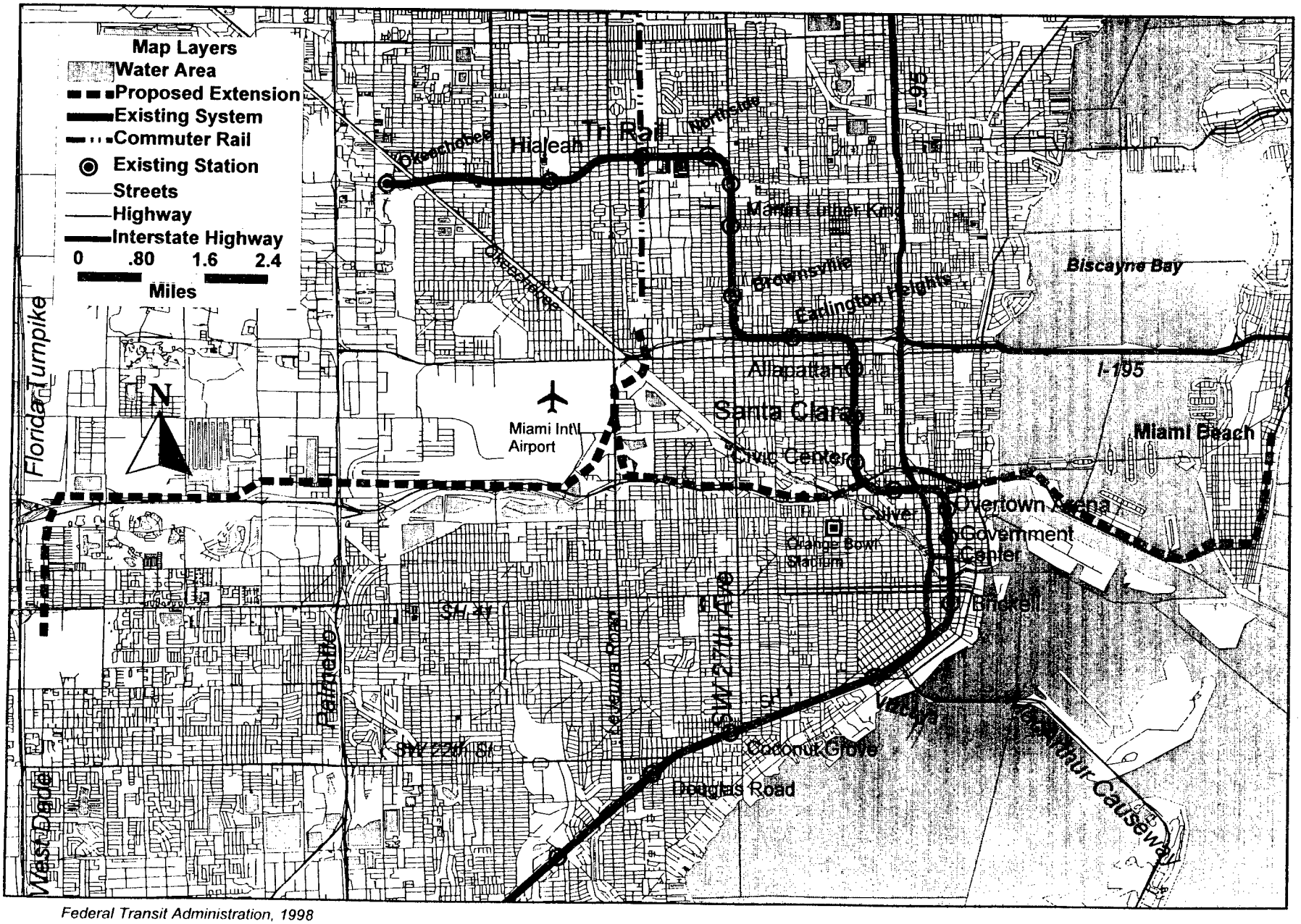
Municipal Departments of Planning and Zoning – Sets regulations on land use and development for areas not within the Rapid Transit Developmental Impact Zone. The City of Miami Department of Planning, Building and Zoning and the City of Sweetwater Planning Department fulfill these functions for their respective cities.

Other Agencies

- South Florida Regional Planning Council – sets regional policies primarily on growth management;
- State of Florida Department of Community Affairs;
- Downtown Development Authority – plans and implements development in Downtown Miami; and
- Transportation Management Agencies: Civic Center Transportation Management Agency, Downtown Miami Transportation Management Agency, Transportation Management Initiatives in the Airport West area.

East - West Corridor

Miami, FL



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Policy makers and planners have addressed most of the major land use issues concerning the transit investments proposed within the East-West corridor. The land development planning process has produced policies and plans that promote the objectives of increased intensification of land development, greater land use mixing, the containment of sprawl, the development of a pedestrian-oriented environment, and support of transit. While policies within the corridor and within the station areas are well developed, policy for areas outside station areas has not been as thoroughly considered. Corridor land use planning could benefit from greater attention to impacts of the regional real estate market upon policies affecting office development, housing, growth management, and parking supply.

- The East-West Multimodal corridor has a balanced variety of land uses with several high-trip generators, including the Miami International Airport, Florida International University, and the Port of Miami. Downtown Miami serves as a high-employment and tourist-related activity center serving both rail transit options. Population and employment projections show that growth within the area is expected to keep pace with the growth of the entire Miami-Dade County area, suggesting that the market for patrons for this particular transit line will grow. Interests in downtown Miami have developed phasing plans and development policies for the entire downtown area with the aim of clustering incremental development around Metrorail stations. Development planners may look to ensure that that growth is clustered and channeled around station sites in the rest of the corridor rather than dispersed throughout the entire corridor in order to take full advantage of the transit investment. Such plans have already been developed for downtown Miami. A more rigorous analysis of projected development may help to develop phased plans for development in the station areas and to coordinate those plans with the general plans in the corridor and in the region.

- Two major policies support the containment of sprawl. First, the Urban Development Boundary (UDB) dictates the locations to which urban infrastructure and services can be extended. Miami-Dade County sets the boundary according to projected development needs to constrain development as well as to protect wetlands and groundwater recharge areas. However, setting the boundary of the UDB and the associated Urban Expansion Area occurs on an ad hoc basis according to development pressures. Miami-Dade County may consider defining the timeframe for boundary expansion (if any) and incorporating strategies to reduce incentives to develop outside of the boundary (e.g., using transfer development rights) such that pressure to expand the boundary is lessened. Second, policies to support infill, particularly, the proposed establishment of the Urban Infill Development Area, may effect more compact development within the Urban Development Boundary. The Urban Infill Development Area and other policies of the county-appointed Infill Strategy Task Force have not yet been incorporated into the Comprehensive Development Master Plan (CDMP) as the Infill Strategy Task Force has just released its recommendations. Adoption and implementation of the recommendations are required to affect land development patterns.

- Created by the 1978 Transit Development Ordinance, the Station Area Aesthetics, Design and Development (SAAD&D) Program is the central program for implementing transit-supportive design and development policies around transit stations. A Rapid Transit Developmental Impact committee comprises members from Miami-Dade County and various affected municipalities who oversee the SAAD&D program. The SAAD&D program involves local citizens and other vested interests in the planning process to develop the aesthetic elements, design guidelines, and development policies for each individual station. As the project nears final design, corridor planners should solidify the changes

proposed in the SAAD&D planning process currently underway such that the zoning code reflects development priorities for the station areas and the corridor.

- The CDMP incorporates many policies that support enhanced land use mixing, more amenable pedestrian environments, higher densities, and containment of sprawl. Significantly, the Miami-Dade County Department of Planning, Development and Regulation amended the Land Use Element of the CDMP in 1996 to emphasize the concentration and intensification of development around centers of activity, making special mention of transit-oriented development and infill development.

- Ad hoc parking management plans have been developed for certain areas. For example, maximum parking ratios exist for developments in downtown Miami. A county-wide policy to address parking management, pricing, and coordination of policy is under development. It may be useful for planners to use this policy to modify the corridor redevelopment plans, especially those surrounding the station areas.

- Development planners have considered plans to phase in development around the stations in Downtown Miami. Land development policy for areas outside station areas is not as well developed as for those within station areas. Station areas outside of downtown Miami can also benefit from a more rigorous analysis of projected development with respect to projected regional growth, especially when crafting policy for office development, housing, sprawl containment, and parking. This analysis can help planners establish phased plans for development in these station areas and to coordinate those plans with the general plans in the corridor and in the region.

NORTHWEST 27TH AVENUE CORRIDOR

Project Location:	Miami-Dade County, Florida
Lead Agency:	Miami-Dade Transit Agency (MDTA)
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Heavy Rail or Busway
Length:	9.5 miles (15.3 kilometers)
Number of Stations:	7 stations (for heavy rail option)
Total Estimated Capital Cost:	$473 million ($1997)
2015 Ridership Forecast: (Average Weekday)	11,250 (for heavy rail)

CORRIDOR SUMMARY

Location in Region:	Along the north-south alignment of NW 27th Avenue in the north-central region of Miami-Dade County between NW 62nd Street to the Broward County line.
Transportation Linkages:	Metrorail Stage 1 Line at Martin Luther King Station
Existing Land Use:	Low-density residential suburban development adjacent to a commercial strip.
High-Trip Generators:	Miami-Dade Community College (North campus), Pro Player Stadium
Significant Factor(s):	The lack of a firm definition on project mode and alignment may contribute to the slow pace of planned transit-oriented development.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Strip commercial uses line the NW 27th Avenue while residential units built at low- to medium-densities surround the adjoining areas.	**Medium**
2. Containment of Sprawl • Sprawl containment policies appear comprehensive with an Urban Development Boundary, an urban infill policy, and regional cooperation for the concentration of development in a regional core. The Urban Infill Development Area incorporates most of the NW 27th Avenue corridor. • Although the Comprehensive Development Master Plan (CDMP) endorses the development of transit station areas into community or regional centers, there are not yet any specific plans to develop the station areas in the NW 27th Avenue corridor into such centers.	**Medium**
3. Transit Supportive Corridor Policies • Recent revisions to the CDMP reflect a clear policy shift to highlight concentration and intensification of development around centers of activity. • The Station Area Aesthetics, Design and Development (SAAD&D) Program is a strong community-oriented planning process to develop area plans and design guidelines for each station. The applicability of the SAAD&D program to this corridor is limited, however, by the fact that the mode and alignment have not yet been decided. • No county-wide parking policy exists for Miami-Dade County.	**Medium**
4. Supportive Zoning Regulations Near Transit Stations • The Transit Development Ordinance applies transit-oriented development policies toward land in close proximity to the rapid transit system. Application of this ordinance is limited due to the lack of a decision on the modal option for the NW 27th Avenue Corridor. • During the development of the Draft Environmental Impact Statement, planners began a program to tie each station to the adjoining residential neighborhoods through pedestrian connections and bus transfers.	**Medium**
5. Tools to Implement Land Use Policies • Advisory meetings (including Public Station Area meetings and those of the Citizens Advisory Committee and the Technical Advisory Committee) have provided the primary means of public involvement. • If the heavy rail mode were chosen, the Station Area Aesthetics Design & Development program would be applied to create design guidelines and development policies for each individual station area.	**Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • Specific policies and ordinances (such as the 1978 Transit Development Ordinance) have been enacted although they have not yet been strongly applied to the NW 27th Avenue corridor. • There are not yet any market development targets or development proposals in the corridor that respond to the proposed transit investment.	**Low-Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The NW 27th Avenue Corridor comprises 9.5 miles of NW 27th Avenue from NW 62nd Street north to the Miami-Dade/Broward County Line. The Miami-Dade Transit Agency (MDTA) has not yet decided the mode and alignment of the Locally Preferred Alternative (LPA). Options for the Locally Preferred Alternative include the following:

Modal Option: MDTA is considering two modal options for the North Corridor Project. These are the continuation of the local Metrorail (i.e., heavy rail) system or construction of a peak-period only busway.

- **Metrorail**: The Metrorail option would extend the heavy rail service on an elevated structure for the full 9.5-mile alignment. While the exact station locations for this option have not been established, MDTA has identified tentative sites reflecting the location of prominent activity centers. This North Corridor Metrorail "branch" would be fully integrated into the existing Metrorail system.

- **Busway**: The busway option provides for an exclusive right-of-way for peak-period, peak-direction Metrobuses. Broward County buses would also be permitted to operate "closed door" service along the busway to connect riders with Metrorail services. Busway design calls for the development of 10 busway stops.

Alignment Option: MDTA is considering an alignment for the rail mode that is principally along the east and west side of the avenue with limited portions along the median. A 50-foot wide right-of-way would be purchased and feature two-way busway lanes alongside of NW 27th Avenue. For those portions that would be located within the median, an Metrorail elevated structure or a one-lane reversible busway would be featured.

CORRIDOR DESCRIPTION

The Northwest 27th Avenue Corridor follows the north to south alignment of Northwest 27th Avenue through the north-central suburbs of Miami-Dade County. It extends the existing Metrorail Stage 1 line to the Broward County line. A strip of commercial uses line the entire length of the avenue. Low- and medium-density residential uses lie to either side of the commercial strip. Although there are strong activity centers along the proposed alignment, such as Pro-Player Stadium and the north campus of the Miami-Dade Community College, there are no particularly strong clusters of development.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Miami-Dade Transit Agency (MDTA) – The Miami-Dade Transit Agency is the primary agency in charge of planning and operation of the NW 27th Avenue Corridor project. The MDTA, which operates the transit system for Miami-Dade County, has been a department of Miami-Dade County since 1961. The MDTA operates 69 fixed-route bus lines, one heavy rail line (between Downtown Miami and northwest and southwest Miami-Dade County), and three people mover lines (within Downtown Miami).

As a department of Miami-Dade County, the MDTA reports to the same political representatives within the county structure as the Miami-Dade County Department of Planning, Development and Regulation. This situation creates opportunities for stronger coordination of land use policy and transit infrastructure development.

Land Use Planning Agencies

Miami-Dade County Department of Planning, Development and Regulation – Agency most directly involved with the coordination of land use regulation. Miami-Dade County sets county-wide (and corridor-wide) policies and regulations on land use and development and administers the Rapid Transit Developmental Impact Zone county-wide.

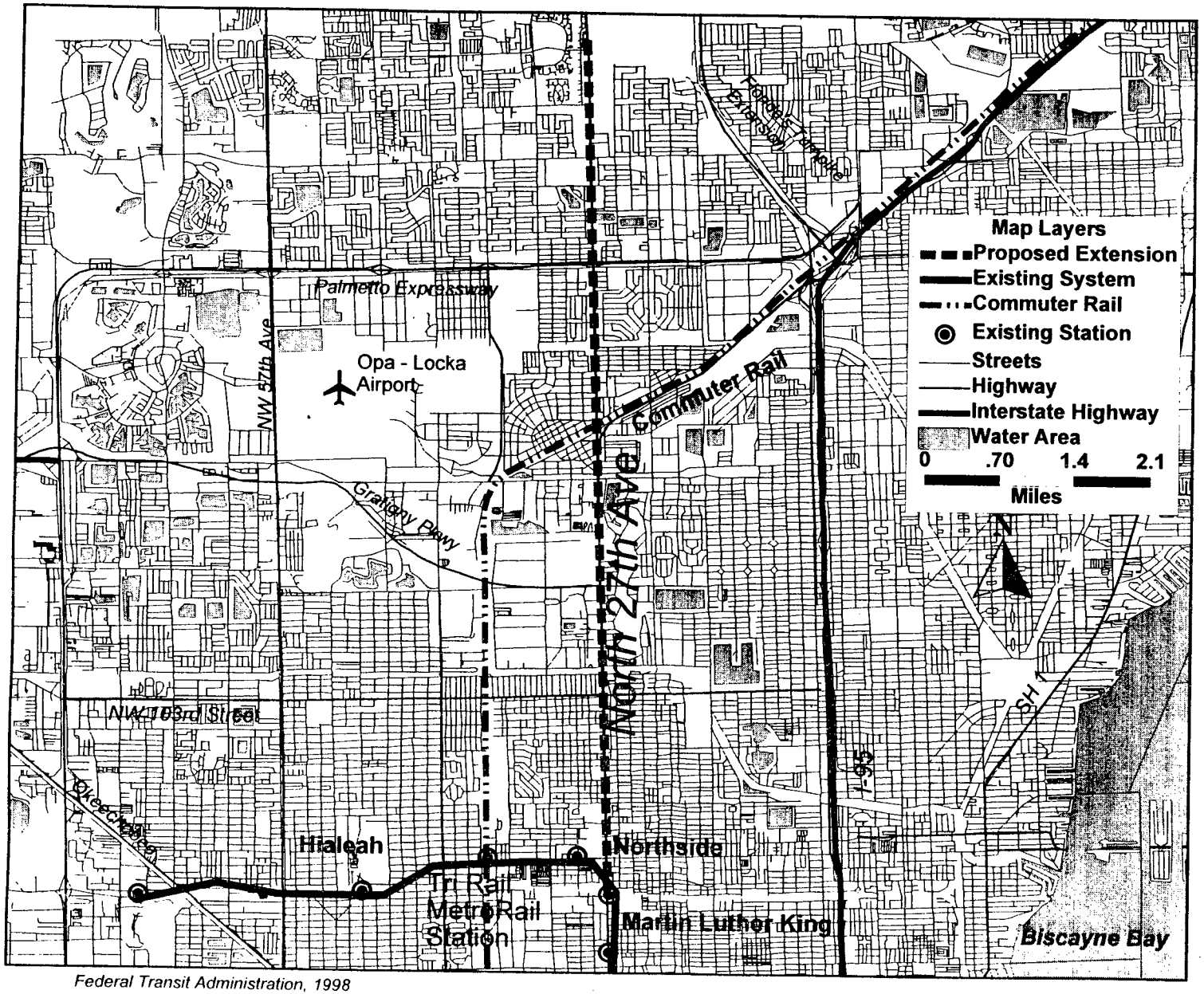
Municipal Departments of Planning and Zoning – Sets regulations on land use and development for areas not within the Rapid Transit Developmental Impact Zone. The city of Opalacka.

Other Agencies

- South Florida Regional Planning Council – sets regional policies primarily on growth management
- State of Florida Department of Community Affairs
- Downtown Development Authority – plans and implements development in Downtown Miami
- Transportation Management Agencies: Civic Center Transportation Management Agency, Downtown Miami Transportation Management Agency, Transportation Management Initiatives in the Airport West Area.

North 27th Avenue Corridor

Miami, FL



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The land development planning process for areas surrounding transit investments in Miami-Dade County is generally well developed. Application of these policies to the Miami Northwest 27th Avenue Corridor, however, has not taken full advantage of the planning tools available. The development of transit-oriented plans will follow definition of the transit improvement mode and alignment.

- The generally low densities in the corridor and the lack of strong plans to increase densities at the parcel level may be too low if the chosen mode is heavy rail. Residential densities are generally between six and 13 units per acre and are not expected to increase greatly. The corridor contains approximately 14,200 jobs within one-half mile of the proposed alignment.

- The lack of definition on the mode and alignment of the transit investment appear to be limiting the progress of land development planning and the process of public participation. Both Miami-Dade County and the city of Miami appear to have well developed policies and planning processes that support transit-oriented development. For example, the Station Area Aesthetics, Design and Development (SAAD&D) Program involves local citizens and other vested interests in the planning process to develop the aesthetic elements, design guidelines, and development policies for each individual station. No planning or implementation body, however, has taken advantage of this established process to develop transit-oriented plans or to initiate significant development in response to the proposed transit investment.

- Two major policies support the containment of sprawl. First, the Urban Development Boundary (UDB) dictates the locations to which urban infrastructure and services can be extended. Miami-Dade County sets the boundary according to projected development needs to constrain development as well as to protect wetlands and groundwater recharge areas. Setting the boundary of the UDB and the associated Urban Expansion Area occurs on an ad hoc basis according to development pressures. Miami-Dade County may consider defining the timeframe for boundary expansion (if any) and incorporating strategies to reduce incentives to develop outside of the boundary (e.g., using transfer development rights) such that pressure to expand the boundary is lessened. Second, policies to support infill, particularly the proposed establishment of the Urban Infill Development Area, may effect more compact development within the Urban Development Boundary. The county-appointed Infill Strategy Task Force has just released its recommendations; hence, the Urban Infill Development Area and other task force policies have not yet been incorporated into the County Development Master Plan. Adoption and implementation of the recommendations with specific action in the Northwest 27th Avenue Corridor are required to affect land development patterns.

- The Comprehensive Development Master Plan (CDMP) incorporates many policies that support enhanced land use mixing, more amenable pedestrian environments, higher densities, and containment of sprawl. Significantly, Miami-Dade County Department of Planning, Development and Regulation amended the Land Use Element of the CDMP in 1996 to emphasize the concentration and intensification of development around centers of activity, making special mention of transit-oriented development and infill development. There are, however, no plans within the corridor that promote these policies.

- Ad hoc parking management plans have been developed for certain areas. For example, maximum parking ratios exist for developments in downtown Miami. A county-wide policy to address parking management, pricing, and coordination of policy is under development. This policy could be used to modify the corridor redevelopment plans, especially those surrounding the station areas.

NORFOLK-VIRGINIA BEACH CORRIDOR

Project Location:	Norfolk, VA
Lead Agency:	Tidewater Transportation District Commission (TTDC)
Review Date:	November 1997
FTA Land Use Rating:	Low

PROJECT SUMMARY

Project Phase:	MIS completed January 1997. EIS and PE are underway
Mode:	Light Rail
Length:	18.25 miles
Number of Stations:	15
Total Estimated Capital Cost:	$376.5 million ($1996)
2015 Ridership Forecast: (Average Weekday)	32,800 – 39,000 daily

CORRIDOR SUMMARY

Location in Region:	From the Norfolk CBD eastward to the Oceanfront area in Virginia Beach.
Transportation Linkages:	First rail project in region.
Existing Land Use:	Various, including two moderate-intensity CBD employment centers, low-density strip commercial development, suburban residential, military, and resort areas. Generally follows railroad right-of-way.
High-Trip Generators:	The Norfolk and Pembroke CBDs, military facilities, Old Dominion University, Eastern Virginia Medical Center, Norfolk State University, Pavilion Convention Center.
Significant Factor(s):	Evaluation is incomplete due to limited availability of information. Significant transit-oriented development policies were not evident.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Land uses include two CBD employment centers, low-density strip commercial development, suburban residential, military, and tourist/visitor areas. • No clear information or maps were available for this assessment.	**Low-Medium**
2. Containment of Sprawl • Although the plans for Norfolk and Virginia Beach contain policies linking land use and transportation, too little information is provided to make an informed assessment of their strength and potential effectiveness. • Some development projects are planned or underway in the vicinity of proposed stations, particularly in the Norfolk and Pembroke CBDs and the Virginia Beach Pavilion Station area.	**Low-Medium**
3. Transit Supportive Corridor Policies • The City of Virginia Beach has adopted a Core Area Master Plan to create a new mixed-use downtown adjacent to the proposed Pembroke Mall LRT station. • Excerpts provided from the General Plan for Norfolk and the Comprehensive Plan for the City of Virginia Beach both reference links between transportation and land use planning. • No other transit-supportive policies are identified.	**Low**
4. Supportive Zoning Regulations Near Transit Stations • Rezoning of the Pembroke Mall station area to support high-density, mixed-use development is planned. • No additional information was available for either specific station-area planning efforts or general transit-supportive zoning regulations.	**Low**
5. Tools to Implement Land Use Policies • Limited information was available about the tools to implement land use policies. No tools have been developed.	**Low**
6. Performance of Land Use Policies • Although a number of potential developments in the vicinity of future stations are identified, the relationship of these developments to stations is frequently not identified, nor is the role of transit-specific policies and actions in facilitating these developments discussed. Available information was extremely limited and not useful for a rating on this factor.	**N/A**

PROJECT DESCRIPTION

The Norfolk-Virginia Beach Corridor Light Rail project is an 18.25-mile line from downtown Norfolk to the Oceanfront area in Virginia Beach. The alignment in downtown Norfolk would be within the city street system. For most of the remainder of the corridor, the line generally follows the Norfolk Southern right-of-way.

Detailed evaluation has focused on the Route 44/I-264 corridor between downtown Norfolk and the Virginia Beach Pavilion. As part of the study effort, a westward extension to the Norfolk Naval Base and service to the airport will also be evaluated.

The project is currently in the PE/DEIS phase. The Tidewater Transportation District Commission completed an MIS for the corridor which resulted in the light rail project being selected as the locally preferred alternative in January 1997. The estimated cost of the project is $376.5 million ($1996). Total daily transit trips in the year 2015 are expected to be between 32,800 and 39,000 under the light rail alternative.

CORRIDOR DESCRIPTION

Downtown Norfolk is relatively small compared to major urban CBDs in the U.S., but existing vacant office and retail space provides a number of opportunities for intensification of use. A major urban mall is under construction in downtown, two blocks from a proposed light rail station. Proceeding eastward, the line serves a new minor league baseball stadium, Norfolk State University, and Riverside Corporate Center which has opportunities for office space development. The line then proceeds through a largely single-family residential area on the east side of Norfolk.

The Newtown Road Station on the Norfolk-Virginia Beach border is adjacent to a corporate center containing warehouse office, warehouse distribution, and strip office and retail space. The next station area is at Pembroke CBD, which currently contains office, entertainment, and multi-family residential uses and is slated for ultimate development of six to nine million square feet. The next two station areas to the east contain a mixture of low-rise office, strip commercial, warehouse distribution, and residential uses. The next two stations serve the Oceana Naval Air Station (NAS), a growing military base. These two station areas, as well as the next station to the east, are surrounded by single- and multi-family residential and neighborhood commercial uses. The eastern terminus at Pavilion Station includes the Pavilion Convention Center, two hotels, and an office tower. Further office and entertainment development is proposed for the area.

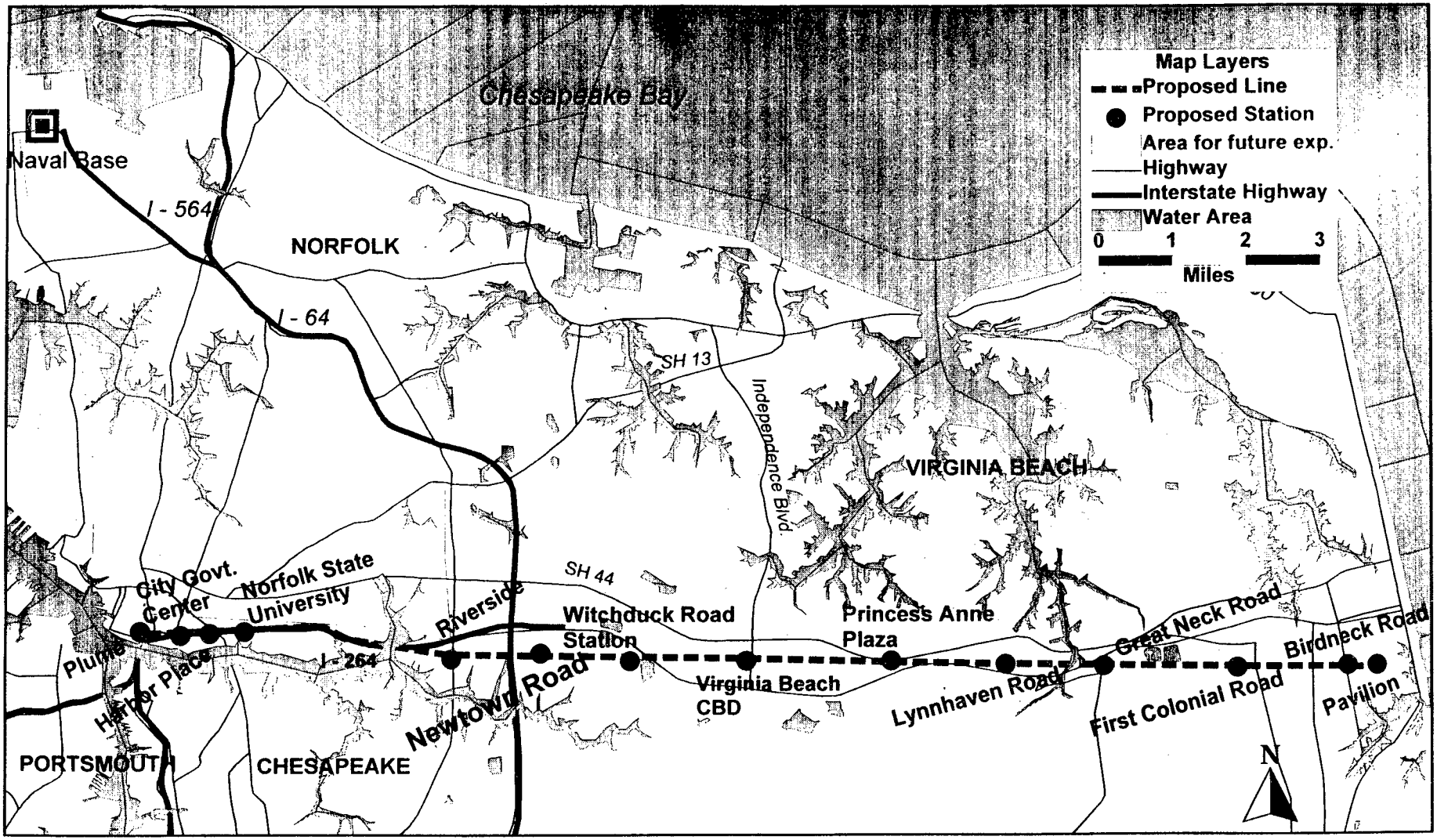
DESCRIPTION OF LOCAL AGENCIES

The Tidewater Transportation District Commission (TTDC) is sponsoring the project. The Cities of Norfolk and Virginia Beach have jurisdiction over land use in the corridor.

The Hampton Roads Planning District Commission (HRPDC) is the regional MPO. The region as a whole is referred to as "Hampton Roads," which is the name of the mouth of the James River dividing the region. "South Hampton Roads" is the urbanized area to the south of Hampton Roads, including Norfolk, Virginia Beach, Portsmouth, Chesapeake, and Suffolk.

Norfolk - Virginia Beach Corridor

Norfolk, VA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The information submitted was not sufficient to fully evaluate the transit-supportiveness of existing and proposed land uses in the corridor. Two military bases along the corridor represent potential major trip generators. However, the Norfolk CBD is relatively small, and land uses elsewhere along the corridor appear to be relatively low-density and primarily automobile-oriented in nature. While station area development opportunities have been identified, for the most part specific policies, tools, and zoning ordinances to support transit-oriented development do not appear to be in place.

- Based on station area assessments, the current nature of the corridor appears to be marginal in terms of its transit orientation. The most transit-oriented areas appear to be the Norfolk CBD and possibly the Pembroke CBD, which is being developed by a single property owner as a mixed-use area with office, retail, hotel, and multi-family residential uses. Development at the Pavilion Station and at Norfolk State University is also potentially transit-supportive although this could not be clearly assessed. Most other parts of the corridor appear generally lower-density and automobile-oriented with a mix of strip retail and low-rise office buildings, single-family residential and occasional multi-family developments, and warehousing and distribution space. Current population served by the corridor is relatively low, with 13,300 households within ½ mile of proposed stations.

- The South Hampton Roads economy is somewhat unique in its high level of dependence on the military, although an expanding private sector has allowed regional growth to continue despite recent military downsizing. Even so, the office market was overbuilt in the late 1980s, resulting in a considerable amount of vacant commercial space in the Norfolk CBD and elsewhere as well as proposed developments which were not completed in other parts of the corridor. While this indicates a potential for future transit-oriented development in the corridor, such development will occur only if regional policies are implemented to focus this development to be transit-oriented. The information provided was insufficient to assess whether such policies are being developed or are likely to be implemented.

NEWARK-ELIZABETH RAIL LINK

Project Location:	Northern New Jersey
Lead Agency:	New Jersey Transit Corporation (NJ Transit)
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	FEIS on Initial Operable Segment (IOS) to be completed early 1998
Mode:	Light Rail
Length:	1 mile (IOS)
Number of Stations:	4
Total Estimated Capital Cost:	$141 million ($1995)
2015 Ridership Forecast: (Average Weekday)	13,000

CORRIDOR SUMMARY

Location in Region:	Through part of the Newark CBD, near the Passaic River waterfront.
Transportation Linkages:	IOS connects CBD to Penn Station on the south (a major rail and bus hub), and to Broad Street commuter rail station on the north. Connects to existing 4.3-mile Newark City Subway at Penn Station. Full 8.8-mile system will serve Newark International Airport.
Existing Land Use:	Older, mostly built-up CBD with moderate to high densities and a variety of commercial, civic, and institutional land uses (also some parking and vacant sites). Pedestrian friendliness varies.
High-Trip Generators:	Office complexes, especially around Penn Station; Rutgers University and Seton Hall Law School; the New Jersey Performing Arts Center; Penn Station.
Significant Factor(s):	Project is exempt from Section 5309 New Starts criteria. Local agencies are aggressively pursuing redevelopment opportunities in the area as part of the New Jersey Urban Core project, and have recently adopted stringent parking and urban design policies.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • The area is an older, mostly built-up CBD with overall moderate to high densities and a variety of commercial, civic, and institutional land uses. • The relatively small size relative to many major CBDs in the U.S. is offset by an existing high-transit mode share and level of accessibility, especially at Penn Station. • Older areas of pedestrian-friendly streetscape are counteracted by newer developments around Penn Station and near the Passaic River where parking garages or lots are the primary street-level activity.	**Medium-High**
2. Containment of Sprawl • The Newark CBD has the potential to support further transit-focused commercial development (five to seven million square feet) and residential development (1,000 units) as an alternative to suburban development. The city appears to have incentive and design policies in place to promote this development. • Information was not provided on regional market trends or growth management policies.	**Medium**
3. Transit Supportive Corridor Policies • The city of Newark has policies in place which are strongly transit-supportive. These include pedestrian design improvements and amenities; strict limitations on parking at new developments; promotion of high-density and mixed use development; and identification of specific development projects.	**Medium-High**
4. Supportive Zoning Regulations Near Transit Stations • The Penn Station Area Master Plan will specify high-density, mixed-use, and pedestrian-friendly development in this area. • City zoning codes permit high-density transit-oriented development in the entire corridor, and conceptual plans have been developed for station areas.	**Medium-High**
5. Tools to Implement Land Use Policies • Tools to implement transit-supportive development and design policies are in place. • The planning process is oriented toward the promotion of transit-supportive development. The city of Newark, in particular, has been actively working with other public agencies, business groups, and local institutions to develop policies and plans and to identify and implement specific projects.	**Medium-High**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • Collaborative projects with the New Jersey Performing Arts Center are underway and there are a significant number of other proposed projects in the corridor. Information was not provided on the level of commercial interest or on how likely or how soon these are to occur. • Downtown businesses and property owners support the project and have been working to fund safety and design improvements in the area.	**Medium-High**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Newark-Elizabeth Rail Link (NERL) project is a proposed 8.8-mile, 15-station light rail transit line linking Newark, Elizabeth, and Newark International Airport. This evaluation focuses on a proposed one-mile, five-station initial operating segment (IOS) connecting Broad Street Station in Newark to Newark Penn Station. The IOS will be physically connected to the existing 4.3-mile Newark City Subway light rail line at Penn Station. The IOS will provide access from the City Subway and the two rail/intermodal stations to the portion of the CBD adjacent to the Passaic River. The projected cost of the IOS in 1995 dollars is $141 million, with an estimated 13,300 riders per day in 2015.

A DEIS was completed in January 1997; the FEIS is scheduled for completion in early 1998. Section 3031(c) of the Intermodal Surface Transportation Efficiency Act of 1991 exempts the NERL from the requirements of the Section 5309 New Starts Criteria. The project is reviewed here for informational purposes only.

CORRIDOR DESCRIPTION

The IOS runs through a portion of the Newark CBD, an older, mostly built-up CBD with overall moderate to high densities and a variety of commercial, civic, and institutional land uses. The Penn Station area (at the south end of the IOS) has a number of newer office buildings connected by a pedestrian skywalk system. The corridor is bounded on the east by the Passaic River. There are some redevelopment opportunities, particularly near the river and towards the north end of the IOS corridor, where there are some vacant parcels, surface parking lots, and former industrial and warehouse uses. Some residential areas exist on the fringes of the corridor to the north, south, and west.

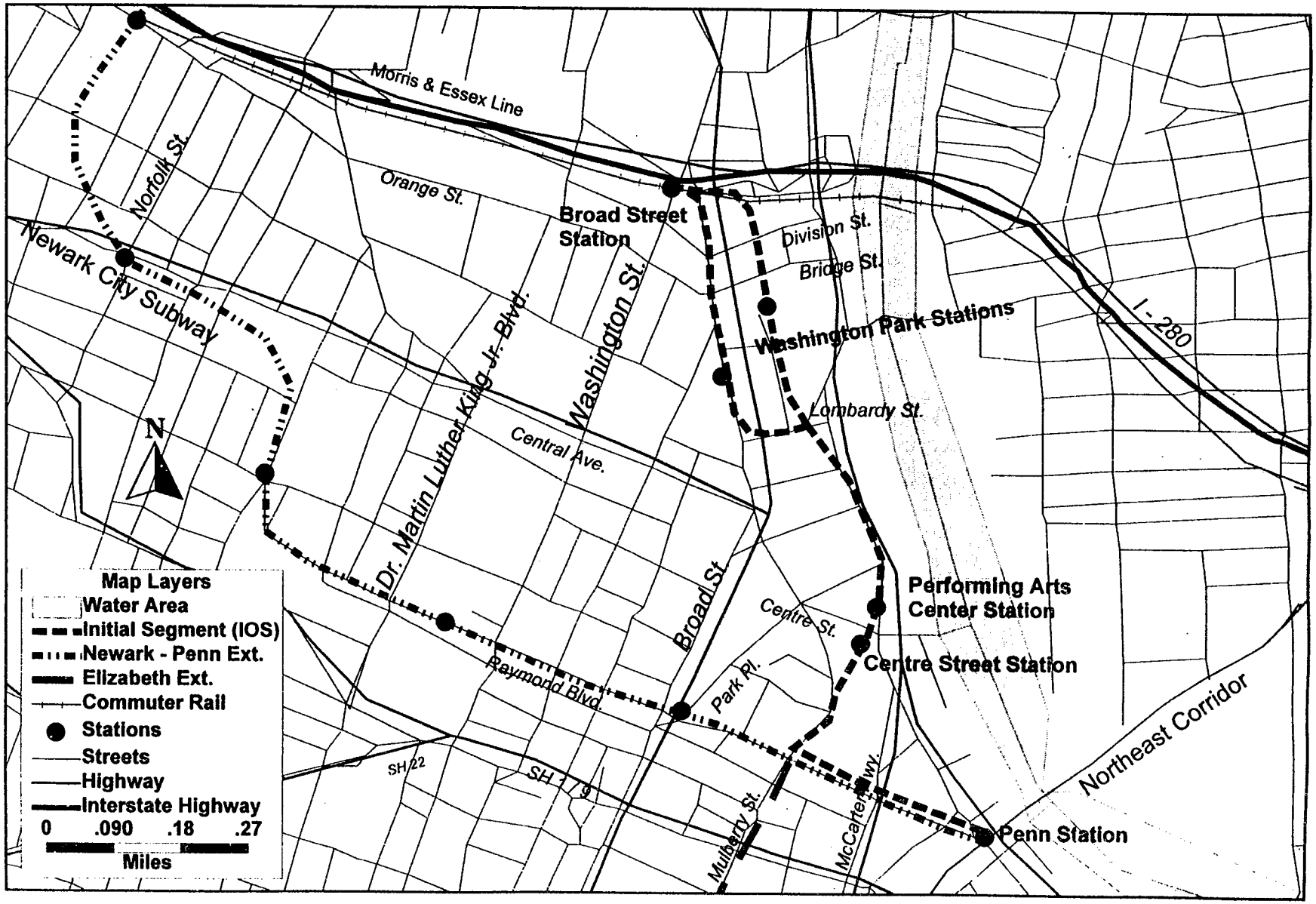
DESCRIPTION OF LOCAL AGENCIES

The NERL project is operated by the New Jersey Transit Corporation (NJ Transit). Penn Station is served by NJ Transit and a variety of other rail and bus operations, including three NJ Transit rail lines, the Newark City Subway, Amtrak, Port Authority Trans-Hudson Rapid Transit service, Greyhound intercity buses, and 26 NJ Transit and private bus lines.

The IOS is contained entirely within the city of Newark, which has jurisdiction over zoning and land use policies for the area. Relevant economic development activities are carried out by the city as well as by the New Jersey Economic Development Authority and the Essex County Improvement Authority.

Newark - Elizabeth Rail Link

Northern New Jersey



Fedoral Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The Newark-Elizabeth Rail Link project extends rail transit access in an older urban core area which is already strongly reliant on transit. The Newark CBD is currently developed at moderate levels of intensity and is mixed in terms of pedestrian-friendliness. The city of Newark and NJ Transit are aggressively pursuing development opportunities on the remaining land available for development, and have recently taken steps to improve pedestrian design and increase the mix of uses in the area.

- Transit orientation of the existing environment varies. The most intense development in the corridor consists of office buildings in the vicinity of Penn Station. Various other office, retail, and institutional uses are also scattered throughout the corridor. Pedestrian-friendliness appears good in some areas but not in others. Many streets away from the river are older commercial districts with ground floor retail and a number of historic structures. On the other hand, there are a number of vacant and surface parking lots in the north part of the corridor, and the Penn Station area, although linked by a skywalk system, has parking structures fronting at street level and major roads which act as barriers to pedestrian movement.

- The city of Newark appears to be taking aggressive steps to promote transit-oriented development and increase the pedestrian-friendliness of the area. The city's 1990 Master Plan has a goal of encouraging transit-oriented development, and the Penn Station Master Plan (not yet finalized) will specify high-density, mixed-use, and pedestrian-friendly development in this area. The corridor has the potential for five to seven million square feet of commercial development and up to 1,000 residential units, and the city has identified eight ongoing and proposed development projects totaling roughly 3.7 million square feet. Tax abatements and other incentives are available to support development in the corridor, which is part of the Newark Urban Enterprise Zone.

- NJ Transit has also been actively working to ensure transit-oriented design and to secure joint development projects for station areas. Conceptual plans have been prepared for station areas, and two stations are being designed to integrate with adjacent developments and to allow air rights construction above the stations. NJ Transit and the city have been collaborating with the New Jersey Performing Arts Center on integrating a station area development. Other public and private groups, including the county, the State, and a consortium of downtown businesses and property owners, have also undertaken efforts to support development and design opportunities oriented toward transit.

- While there is significant local support for this project and for the continued revitalization of downtown Newark, no information was provided on regional growth trends or market forces, and the strength of regional growth management policies could not be assessed. The real estate market in downtown Newark has been dormant for several years. While recent indicators suggest that demand for new commercial and residential once again exists, the extent to which market forces will support the full set of redevelopment opportunities in the area is not yet clear.

CENTRAL ORANGE COUNTY TRANSITWAY CORRIDOR

Project Location:	Orange County, CA
Lead Agency:	Orange County Transportation Authority (OCTA)
Review Date:	November 1997
FTA Land Use Rating:	Low/Medium

PROJECT SUMMARY

Project Phase:	Beginning PE
Mode:	Fixed Guideway
Length:	28 miles
Number of Stations:	Approximately 30
Total Estimated Capital Cost:	$1.6 billion ($1996)
2020 Ridership Forecast: (Average Weekday)	63,000

CORRIDOR SUMMARY

Location in Region:	Runs generally north to south through Fullerton, Anaheim, Orange, Garden Grove, Santa Ana and Costa Mesa; then generally east through Irvine. Roughly follows I-5 corridor.
Transportation Linkages:	Stations at Fullerton, Anaheim, and Irvine Transportation Centers provide connections to Amtrak and Metrolink commuter rail systems, as well as OCTA bus services. Potential future links to Los Angeles Metro Rail system and to OCTA light rail from Santa Ana to Garden Grove and Stanton.
Existing Land Use:	Various land uses include dense single-and multi-family residential areas, strip commercial development, some dense office and industrial parks, shopping malls, and some undeveloped tracts in the south.
High-Trip Generators:	Office parks, Disneyland, Anaheim Stadium, two large medical centers, three large shopping centers, and downtown Santa Ana/Orange County Civic Center, John Wayne Airport.
Significant Factor(s):	Level of interest in transit-oriented development varies considerably among the seven communities in the corridor. Some communities have transit-supportive policies in local land use plans. It is anticipated that local jurisdictions will examine transit-oriented development opportunities in the near future

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • The corridor contains a mix of land uses including dense multi- and single-family residential areas, strip commercial development, some dense office and industrial parks, and shopping malls. There are a number of major regional trip generators. • A number of tracts of land are still undeveloped, particularly in the southern part of the corridor.	**Medium**
2. Containment of Sprawl • Significant employment and some residential growth is forecast for the corridor, and the county and municipalities have adopted a general growth management framework. • Specific policies do not yet appear to be in place to focus either commercial or residential development into station areas for the proposed system.	**Low-Medium**
3. Transit Supportive Corridor Policies • General language encouraging growth management and transit-oriented development has been adopted by Orange County and by the seven municipalities in the corridor. • For the most part, specific policies and plans to concentrate growth and achieve transit-oriented development have not been implemented.	**Low-Medium**
4. Supportive Zoning Regulations Near Transit Stations • In general, zoning to encourage transit-oriented development at station areas has not yet been adopted, but will be considered as the planning process progresses. • The intensity and nature of land development permitted by existing land use regulations varies throughout the corridor. Entitlements for urban rail system development exist in Irvine and other communities.	**Medium**
5. Tools to Implement Land Use Policies • OCTA has developed station area assessments and will work with municipalities and communities to conduct further station area planning. • The corridor includes some designated planning or development areas, particularly in Santa Ana. For the most part, however, municipal tools for implementing transit-oriented land use policies were not identified and the level of interest in carrying out such policies is not clear.	**Low-Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • Some market-driven development is expected to occur in station areas, due in particular to the high projected growth rate of employment in the county. • Some transit-oriented development has occurred at each of the Amtrak/Metrolink stations in Orange County, including Fullerton, Anaheim, and Irvine on the urban rail route. However, there is little other evidence to date that land use and growth management policies have encouraged transit-oriented development in station areas or specific transit-oriented planning by municipalities.	**Low**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Central Orange County Fixed Guideway Project is a proposed 28-mile urban rail system running from the Fullerton Transportation Center to the Irvine Transportation Center. The system would be at-grade and elevated where necessary. The alignment would generally run from north to south from Fullerton to Costa Mesa, and then would run east through Irvine. The specific alignment has not yet been determined.

The project is the priority corridor selected from a 87-mile Urban Rail Network studied by the Orange County Transportation Authority. The full network also includes a westward extension of the urban rail system from Fullerton to Norwalk, and a line connecting downtown Santa Ana to Garden Grove and Stanton to the northwest. Assuming an elevated rail system, the project is estimated to cost $1.6 billion and to carry 63,000 riders per day.

CORRIDOR DESCRIPTION

The northern terminus, Fullerton Transportation Center, is an existing bus transfer terminal and commuter rail station. It is located in an older downtown area, the civic and cultural center of Fullerton. The north part of the corridor (Fullerton and north Anaheim) appears to consist largely of strip commercial development along arterials surrounded by primarily single-family residential development on a grid or broken-grid pattern.

South Anaheim and Orange are more suburban in character with office parks, shopping malls, and self-contained residential neighborhoods. The alignment serves Disneyland, Anaheim Stadium, and Anaheim Pond in Anaheim and U.C. Irvine Medical Center in Orange.

Greater Santa Ana, like Fullerton, appears to be an older suburban area with a grid street pattern, both single-family and multi-family housing, and strip commercial uses fronting arterials. Downtown Santa Ana is a traditional downtown with street-fronting commercial/retail and civic uses and a surrounding grid street pattern.

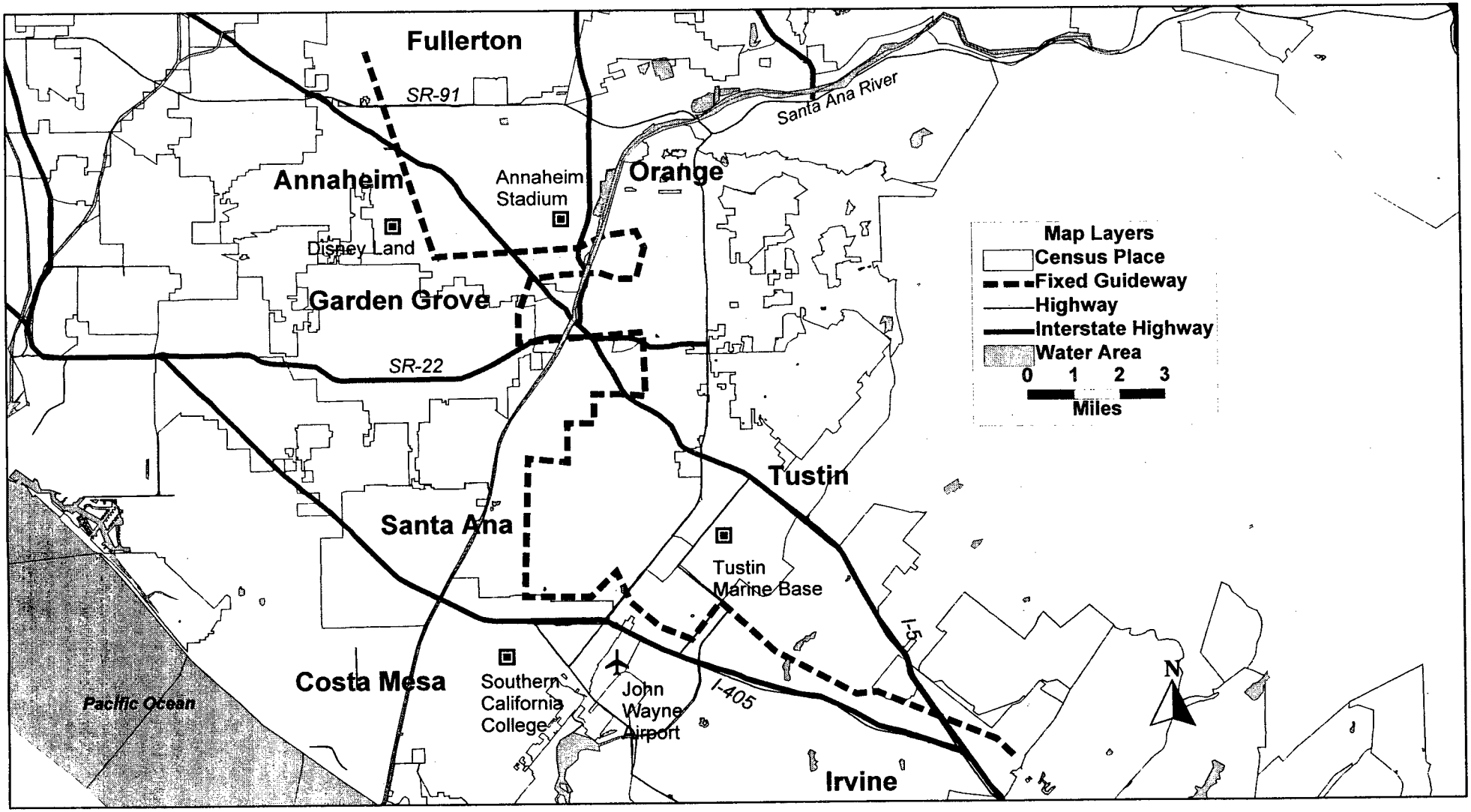
Irvine is dominated by suburban land uses, including office parks, mixed office/industrial areas, shopping malls, and self-contained residential areas. Pedestrian access is limited in many areas by transportation and drainage structures and by local site design which is oriented towards automobile access and parking. Irvine also contains a number of tracts of undeveloped land adjacent to station sites. The southern terminus of the line, Irvine Transportation Center, provides access to county and intercity bus services, commuter rail, and Amtrak.

DESCRIPTION OF LOCAL AGENCIES

The Orange County Transportation Authority (OCTA) is the sponsoring agency for the project. From north to south, the project would serve the communities of Fullerton, Anaheim, Orange, Garden Grove, Santa Ana, Costa Mesa, and Irvine.

Orange County Transitway (Irvine - Fullerton Corridor)

Orange County, CA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- While the corridor contains one-half of the county's employment and one-third of its population, most of this is not directly adjacent to proposed transit stations and existing development in the corridor is predominantly oriented toward automobile access. High-growth rates are forecast for the corridor, particularly for employment, and OCTA has evaluated station areas and established development concepts. However, the commitment of most local agencies to developing and implementing strong transit-oriented development policies is not yet clear.

- The character of existing development varies considerably throughout the corridor. The downtown areas of Santa Ana and Fullerton are currently the most transit-friendly areas in the corridor, with street-fronting commercial development and a grid street pattern. Major trip generators throughout the corridor, including a number of office parks and special generators, may also provide significant transit ridership opportunities if good access is provided from stations. However, other parts of the corridor are characterized by automobile-oriented strip commercial development along arterial streets or by suburban-style shopping malls and office and industrial parks. In much of Anaheim and Irvine, pedestrian access is further limited by transportation and drainage structures and by local site design which is oriented towards automobile access and parking.

- While net population and employment densities in the corridor are moderate (eight to 10 people or jobs per acre) and a respectable total of 47,200 households are located within ½ mile of station areas, growth projections indicate that most of the population and employment increases will occur outside of areas directly adjacent to transit stations. Also, although OCTA has undertaken commendable station area conceptual planning efforts, the commitment of local communities to achieving transit-oriented development appears at best mixed. The Cities of Santa Ana and Fullerton have specified detailed goals for transit-oriented development. However, while all of the communities in the corridor have adopted general policies voicing support for "transit-oriented development," they have generally not yet developed specific policies, zoning ordinances, or other programs to actively promote such development. It is anticipated that this will occur in the near future as further planning and engineering work on the urban rail system progresses.

NORTH/SOUTH CORRIDOR

Project Location:	Orlando, FL
Lead Agency:	Central Florida Regional Transportation Authority (LYNX)
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Light Rail
Length:	26.8 miles
Number of Stations:	27
Total Estimated Capital Cost:	$879 million ($1997)
2020 Ridership Forecast: (Average Weekday)	113,400; 39,000 new riders

CORRIDOR SUMMARY

Location in Region:	Runs from the International Drive Resort Area near Walt Disney World northeast to Orlando Central Business District (CBD), then due north through northern suburbs of Orlando.
Transportation Linkages:	Planned connections to an airport Light Rail Transit (LRT) and a Florida High-Speed Rail system.
Existing Land Use:	International Drive (hotels, tourist attractions) is an "active pedestrian corridor," Orlando CBD is pedestrian-friendly; some suburban residential communities have traditional town centers; elsewhere, generally low- to moderate-suburban residential and commercial (densities less than 10 persons per acre) and some warehouse and industrial areas.
High-Trip Generators:	International Drive Resort Area (Sea World, Wet 'n' Wild, Universal Studios, Convention Center); Orlando CBD; two major medical centers; Winter Park and Loch Haven Park (cultural and tourist destinations).
Significant Factor(s):	Regional and local policies for encouraging transit-oriented development are relatively aggressive. Policies are stronger in the southern half of the corridor than in the northern half.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • The corridor passes through several distinct areas, including the internationally recognized tourist area around Universal Studios and SeaWorld, the Orlando CBD, and several smaller suburban residential communities with traditional town centers. • Outside of these major generator areas, residential and employment densities are low to moderate (less than 10 persons or jobs per acre). • Efforts have been made to encourage pedestrian-oriented design in the CBD and in several of the town centers.	**Medium**
2. Containment of Sprawl • Containment of sprawl is central to plans and policies from the state level to the local level, and transportation and land use plans are well-coordinated. • The corridor is expected to sustain high growth over the next two decades. Infill development and redevelopment is encouraged, and plans emphasize pedestrian amenities.	**Medium-High**
3. Transit Supportive Corridor Policies • Transit friendly and pedestrian-oriented development is emphasized in plans at all levels. Policies appear stronger in the southern half of the corridor (Orange County and the city of Orlando). • Station area planning has begun, with a preliminary study of potential development at stations and 11 corridor meetings to elicit input. A work plan for station area planning activities has been developed. • Downtown Orlando has developed strong parking management policies, although specific parking policies were not indicated for most other parts of the corridor.	**Medium-High**
4. Supportive Zoning Regulations Near Transit Stations • Existing plans support transit-oriented, mixed use development in the corridor. • No policies or zoning specific to stations have been proposed or adopted yet. It is anticipated that these types of policies and regulations will be recommended as part of the PE/FEIS process as station locations become more certain.	**Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
5. Tools to Implement Land Use Policies • LYNX has hired a separate contractor to oversee station area planning and is developing a manual to serve as a planning model for the rail corridor. • Initial discussions and contacts have been made with several major property owners and developers in the corridor to coordinate new development plans with the LRT. • Orlando and Orange County have both adopted specific policies and incentives for transit-oriented development.	**Medium-High**
6. Performance of Land Use Policies • Existing policies encourage joint development initiatives, incentives are expected to be developed in the next phase, and several initial discussions have been held with developers who have plans near potential stations. • No new policies have been adopted to date, and no joint development proposals have been received.	**Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The proposed North/South Corridor of the Central Florida Light Rail Transit System serves the Orlando metropolitan area including the Orlando CBD, north and south suburbs, and the International Drive Resort Area near Walt Disney World. The line is 26.8 miles in length and includes 27 stations. Bus service will be expanded to enhance the LRT.

The review draft DEIS was completed and submitted to FTA in October 1997. Public review occurred in November 1997. The project entered preliminary engineering in early 1998. Approximately 113,000 total systemwide daily transit trips are predicted in 2020 if the LRT project is built, an increase of 55,000 trips over the no-build alternative. Capital costs for the full LRT corridor are estimated at $879 million in 1997 dollars.

CORRIDOR DESCRIPTION

The southern terminus of the line is at Central Florida Parkway and I-4, adjacent to Sea World and approximately four miles from Walt Disney World (although transit connections to Disney World are not discussed). The line continues north through the International Drive Resort Area, a major tourist destination area which includes Sea World, Wet 'n Wild, the Orange County Convention Center, Universal Studios, and substantial supporting commercial uses such as hotels, restaurants, retail, and entertainment facilities. Nine stations within approximately five miles serve this area, and both aerial and at-grade stations are being evaluated at some locations due to alignment constraints. The line then proceeds northeast along I-4 for approximately six miles, passing through primarily lower-density residential areas (less than 10 persons per acre).

South of downtown Orlando, the line joins the CSXT railroad right-of-way and a station will be located which serves an existing Amtrak intermodal station, a major medical complex within an industrial area, and nearby residential neighborhoods which are primarily minority and low-income. Within the CBD, alignments are being considered both along the CSXT right-of-way and along the route of an existing circulator bus service known as "LYMMO."

North of downtown, the line continues at-grade along the CSXT right-of-way through neighborhoods and a warehousing and commercial area before entering Loch Haven Park. This village contains several cultural facilities and two medical complexes in the vicinity of the corridor. The line continues north through largely residential areas (two to 10 persons per acre), and then into downtown Winter Park, a "unique urban village" with shops and entertainment. Between Winter Park and Maitland, the line passes through residential neighborhoods to the east and warehousing/light industrial areas to the west. Maitland contains some denser residential areas (apartments and condominiums), and the downtown area is an older town center with some commercial, some warehousing/industrial uses, a redevelopment area, and municipal buildings. The line then continues through Altamonte Springs (primarily residential) and Longwood (industrial/warehousing, commercial uses in downtown, and possibilities for redevelopment) before terminating at SR 434.

The study corridor is two miles wide in the southern half and three to four miles wide in the northern half (four alternatives for a branch line are being evaluated in the northern section of the corridor.) In

addition to the full system, the transit agency has defined a Minimum Operable Segment (MOS 1) which includes the southern part of the corridor, from Central Florida Parkway to downtown Orlando, with a length of 14.7 miles and 17 stations. The North/South Corridor includes planned connections to an airport LRT and a Florida High-Speed Rail system.

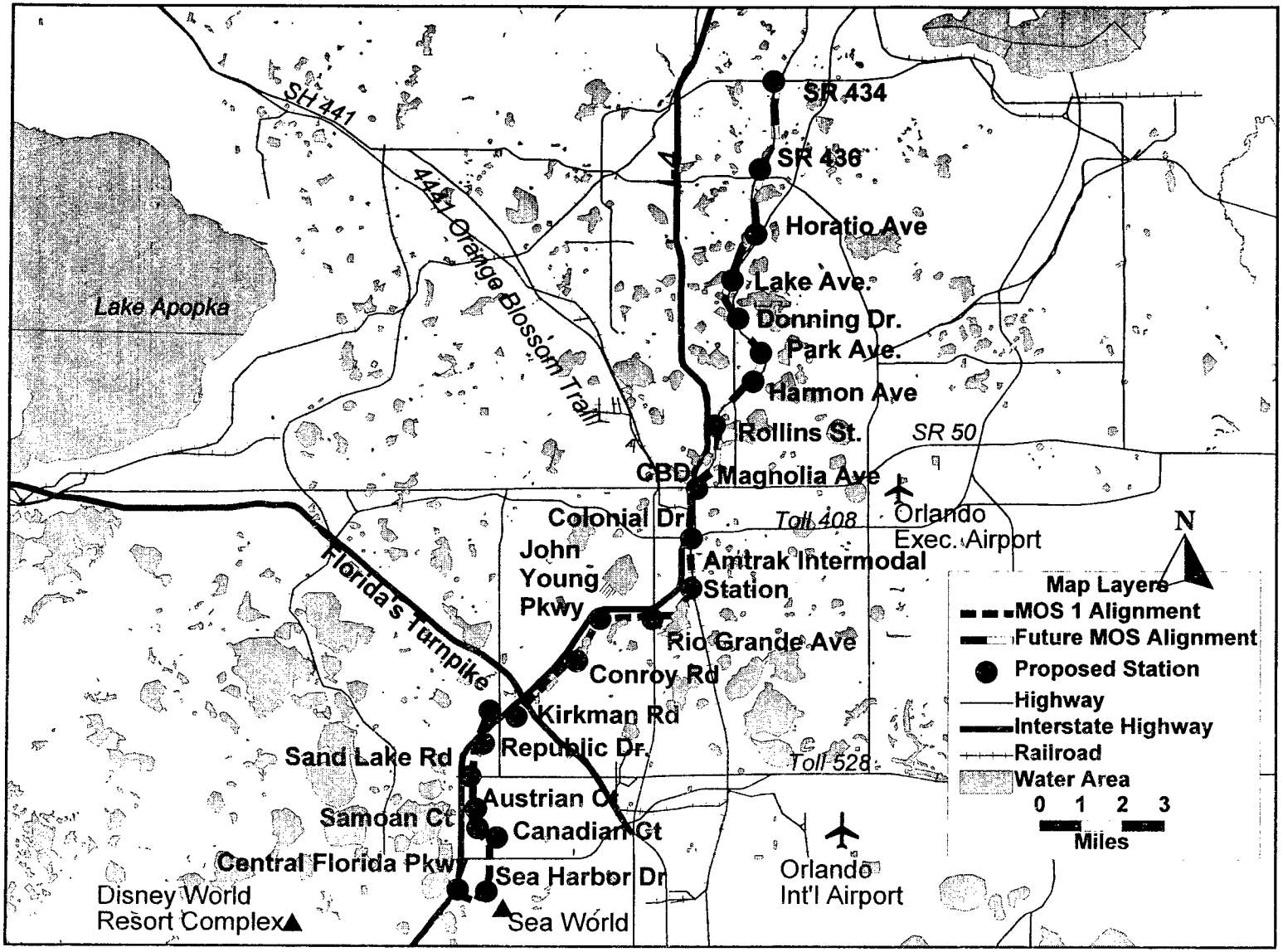
DESCRIPTION OF LOCAL AGENCIES

The Central Florida Regional Transportation Authority (known locally as "LYNX") is cooperating with the Florida Department of Transportation (FDOT) to perform engineering and environmental analysis for the project. The full corridor is within the jurisdiction of the East Central Florida Regional Planning Council (ECFRPC) which has in place a Comprehensive Regional Policy Plan consistent with planning and growth management guidelines issued by the state of Florida.

Nine local governments have jurisdiction over land use and zoning in the corridor. The two northernmost stations are located in Seminole County, while the remainder of the corridor is within Orange County. Orange County has jurisdiction over the International Drive Resort Area while the city of Orlando encompasses the remainder of the southern half of the corridor. North of Orlando, municipalities include (from south to north) the Cities of Winter Park, Maitland, Altamonte Springs, Casselberry, and Longwood.

Central Florida Light Rail System

Orlando, FL



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Existing and future land uses appear mixed in terms of transit-supportiveness; there are a number of major trip generators, but population and employment densities outside of the CBD and the International Drive Resort Area are generally low. Future land use patterns are likely to become more transit-supportive. The city of Orlando and Orange County, which together have jurisdiction over the central and southern portions of the corridor, have adopted aggressive policies to promote transit-oriented development. Communities at the north end of the corridor have also adopted transit-oriented development policies, although land uses appear less likely to change significantly in this area.

- Employment densities are also generally low except for the International Drive Resort Area and the CBD (total employment within reach of transit stations is not specified). Population densities are low through most of the corridor (less than 10 people per acre) and roughly 15,000 households are located within ½ mile of proposed boarding points. Accessibility to the system is limited in some areas since much of the alignment will be along freeway median or former railroad right-of-way. On the other hand, the system is expected to benefit from the large number of visitors in the south corridor, and some visitor destinations including Winter Park Village and cultural and entertainment activities in Loch Haven Park are also located to the north of the Orlando CBD. Also, the CBD and some town centers appear to be relatively pedestrian-friendly.

- The city of Orlando and Orange County have implemented relatively aggressive policies to promote transit-oriented development and pedestrian-oriented design. The city provides development density and intensity bonuses within various Activity Center districts in exchange for mass transit facilities, and has implemented pedestrian improvements and design guidelines in the CBD. Orange County, which has jurisdiction over the International Drive Resort Area, has implemented overlay districts which provide intensity, setback, sidewalk, and parking requirements consistent with Transit-Oriented Design principles. LYNX has also actively pursued transit-oriented development, including identification of joint development opportunities, discussions with property owners, and development of a rail corridor planning manual. Policies to manage growth and to guide future growth toward activity centers served by transit have also been adopted by ECFRPC, and municipalities are required to adopt measures consistent with these regional policies according to statewide legislation.

- The effectiveness of these policies remains to be demonstrated. There are numerous proposals for new development particularly in the southern part of the corridor which may be influenced in both timing and design by the transit system. Significant transit-oriented development appears less likely to occur in the near future in the northern part of the corridor. The smaller municipalities with jurisdiction over this area have passed various transit-oriented development and design policies, but significant development targets have not been set. Opportunities for new development appear more constrained by the nature and scale of existing development. It is unlikely that the generally low densities in the northern part of the corridor will change significantly.

STAGE II LIGHT RAIL TRANSIT (LRT) PROJECT

Project Location:	Pittsburgh, PA
Lead Agency:	Port Authority of Allegheny County
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	Final engineering began in 1997
Mode:	Light Rail
Length:	12 miles
Number of Stations:	Information not available
Total Estimated Capital Cost:	$492.8 million ($ escalated)
2005 Ridership Forecast: (Average Weekday)	25,000 daily, 9,000 new riders

CORRIDOR SUMMARY

Location in Region:	Runs from Pittsburgh Central Business District (CBD) south to southern border of Allegheny County.
Transportation Linkages:	Complements the existing Stage I LRT system by providing faster, parallel service from southern Allegheny County to the Pittsburgh CBD.
Existing Land Use:	CBD is compact with high employment and densities. Remainder of corridor is primarily low- to medium density residential (under five dwelling units per acre), with some forested areas and a few commercial developments.
High-Trip Generators:	Pittsburgh CBD includes office, regional retail, cultural centers, convention center, professional sports stadium; South Hills Village Mall.
Significant Factor(s):	Project is a reconstruction and modernization of an older streetcar line. Viewed as an upgrade to existing service; significant land use changes are not planned.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. EXISTING LAND USE • The proposed line serves a compact regional CBD with high levels of employment, high-employment densities, and other major trip generators. • Elsewhere in the corridor, the land use is primarily low- to medium-density residential (less than five dwelling units per acre) and there are no major employment centers or trip generators except for a shopping mall. • The streetcar-era nature of development provides for pedestrian friendliness.	**Low**
2. CONTAINMENT OF SPRAWL • Because of recent regional declines in population and employment, containment of sprawl has not been a significant issue in the Pittsburgh region. While these declines are expected to reverse in the next two decades, policies for guiding future growth were not discussed. • Significant employment growth is expected to occur in the CBD, but only limited opportunities exist for additional residential and neighborhood commercial development in the remainder of the corridor.	**Low-Medium**
3. TRANSIT SUPPORTIVE CORRIDOR POLICIES • The region's long-range transportation plan contains general policies to encourage growth in the urban core and areas served by transit and to limit development in areas not served by infrastructure. • The city of Pittsburgh has established child care and parking incentives for businesses to locate near transit. Other specific policies supportive of transit-oriented development in the Stage II corridor have not been established.	**Low-Medium**
4. SUPPORTIVE ZONING REGULATIONS NEAR TRANSIT STATIONS • Aside from child care and parking incentives for businesses to locate near transit in the city of Pittsburgh and permitted high-intensity development in the CBD, specific station-area zoning supportive of transit has not been established.	**Low**
5. TOOLS TO IMPLEMENT LAND USE POLICIES • A general set of tools and policies has not been established for promoting transit-oriented development. • The Port Authority has taken the initiative in identifying joint development opportunities and working with municipalities and developers to achieve these opportunities.	**Medium**

SUMMARY OF KEY FINDINGS	*FTA Rating*
6. PERFORMANCE OF LAND USE POLICIES • A few projects have been approved and proposals received for development along the Port Authority's Stage I and Stage II LRT lines. However, the scale of these projects is small. • Current opportunities for development are very limited and local municipalities do not appear interested in significantly changing the nature or scale of development in the corridor or adjacent to transit stations.	**Low-Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Pittsburgh Stage II LRT Project involves reconstruction of three trolley lines – the Overbrook, Drake, and Library Lines – along their existing routes. New roadbed, track, power distribution and signal systems, and stations will be built. On the Overbrook Line, single-track sections will be double-tracked, curves straightened, and old bridges replaced. New light rail vehicles will increase the capacity of the system and permit replacement of older PCC trolleys. New surface and structured park-and-ride lots totaling 2,400 spaces will be added, and a new operations control center will be constructed. The Stage II Project complements the Stage I Project, in which 10.5 miles of trolley lines were reconstructed to light rail transit standards in the 1980s.

The Planning Process/Environmental Assessment for the project was begun in 1988. The FTA issued a Finding of No Significant Impact in February 1996, and engineering began in January 1997. Construction will begin in 1998 and is anticipated to be completed in 2004.

Statistics on system length, number of stations, cost, and forecast ridership for the Stage II Project were not provided. Total rail ridership for Allegheny County is projected at 49,500 after completion of the system.

CORRIDOR DESCRIPTION

The Stage II Project runs north-south and would bring commuters from older suburban communities in Allegheny County, south of Pittsburgh, into downtown Pittsburgh. The project serves urban and suburban communities which were developed when the rail lines were built in the late 1800s and early 1900s. Residents living in newer communities in Washington County, south of Allegheny County, would access the system by driving to a park-and-ride facility or using a feeder bus. Most of the land along the corridor is already heavily developed, while most of the remainder is undevelopable due to topographic constraints.

The Pittsburgh CBD is a compact, high-density area of primarily commercial offices and retail. The Stage I and Stage II Projects share the same entry to the CBD. South of the CBD, the Stage I Project's Beechview Line serves the most densely developed suburban communities, with many areas of residential densities greater than five dwelling units per acre.

The Stage II Project's Overbrook Line diverges eastward from the Beechview Line, roughly parallels it, re-intersects with this line, and then branches into the Library Line to serve the southern half of Allegheny County. The Stage II Project also includes a short extension to the Stage I Beechview Line known as the Drake Line. The Stage II Project serves areas of somewhat less dense residential development than the existing Stage I system. Most areas directly adjacent to the Stage II lines have indicated densities of two to five dwelling units per acre.

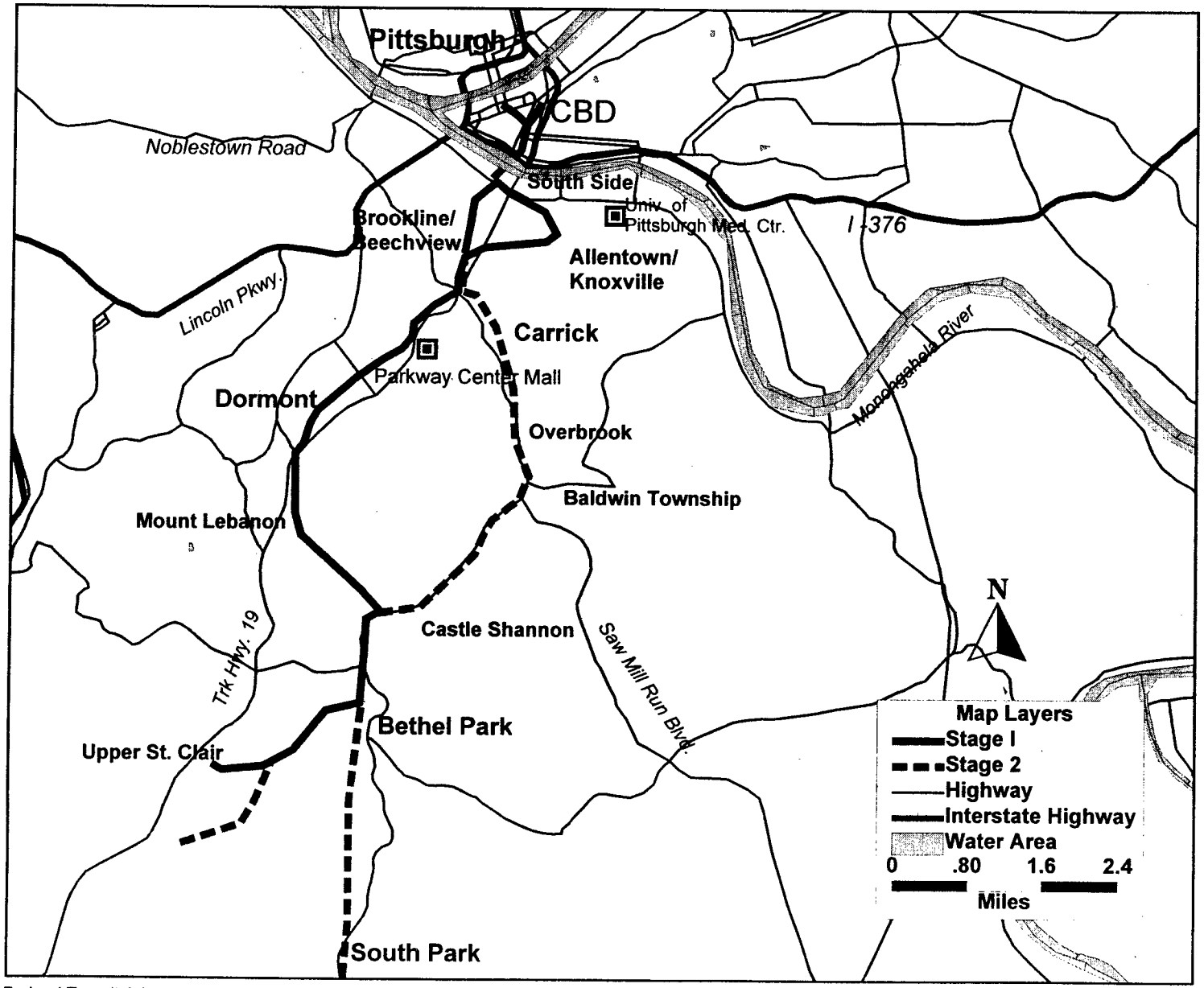
In addition to serving other communities, a primary purpose of the Stage II Project is to increase ridership and reduce operating costs per passenger by serving as a higher speed alternative to the Stage I Beechview Line for access from the southern half of Allegheny County.

DESCRIPTION OF LOCAL AGENCIES

The project is being planned and operated by the Port Authority of Allegheny County. The project is contained entirely within Allegheny County, but terminates at the border of Washington County on the south. The Stage I and Stage II corridor includes seven neighborhoods in the city of Pittsburgh, seven other municipalities in Allegheny County, and three municipalities in Washington County which are not directly served by the line. The Southwest Pennsylvania Regional Planning Commission is the Pittsburgh area MPO.

Stage II LRT

Pittsburgh, PA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The primary purpose of the Stage II project is to improve transit service in the corridor through reconstruction and modernization of an older streetcar line. The area is largely developed and significant land use changes are not planned. While the Pittsburgh CBD is compact and contains significant trip generation potential, the remainder of the corridor consists primarily of low- to medium-density residential areas.

- Both the Stage I and Stage II LRT projects follow older streetcar alignments and therefore serve streetcar-era suburban areas. The highest population densities are located along the Stage I line, which is currently operational. However, the Stage II line will complement Stage I service by providing faster, parallel service to the CBD from the southern half of Allegheny County, as well as serving communities along its own route. The CBD contains relatively high employment (160,000) and is compact (190 jobs per acre), so a significant amount of regional employment is accessible from the transit system.

- Significant transit-oriented development is not expected to occur in the corridor. A few projects have been approved, and proposals have been received for development along the Port Authority's Stage I and Stage II LRT lines. The Port Authority is also pursuing joint development agreements where feasible. However, the scale of these projects is small. Current opportunities for development are very limited, and local municipalities do not appear interested in significantly changing the nature or scale of development in the corridor or adjacent to transit stations.

- An additional factor working against further transit-oriented development is that the Pittsburgh region has experienced recent declines in population and employment, although these declines are expected to reverse and growth is expected to occur in the next two decades. Regional and local policies for guiding future residential growth were not discussed, and significant opportunities for residential growth in the corridor are not apparent. On the positive side, much of future regional employment growth is expected to occur in the CBD, and expansion of entertainment and residential uses is also planned for the CBD.

SOUTH/NORTH CORRIDOR

Project Location:	Portland, Oregon
Lead Agency:	Tri-County Metropolitan Transportation District of Oregon
Review Date:	November 1997
FTA Land Use Rating:	High

PROJECT SUMMARY

Project Phase:	Preliminary Engineering and Environmental Documentation
Mode:	Light Rail
Length:	20 miles (32 kilometers) (total project)
Number of Stations:	37
Total Estimated Capital Cost:	$1.36 billion ($1996, total project)
2015 Ridership Forecast: (Average Weekday)	68,000 (39,100 new riders)

CORRIDOR SUMMARY

Location in Region:	Between Clackamas Regional Center in Clackamas County, Oregon to Vancouver Washington through downtown Portland, Oregon.
Transportation Linkages:	Eastside line to Gresham and Westside line to Goose Hollow (later to Hillsboro) in downtown Portland.
Existing Land Use:	A prominent regional commercial and civic center. Downtown Portland lies near the center with smaller subregional centers spread along the corridor. Industrial, recreational, and cultural uses are scattered throughout.
High-Trip Generators:	Downtown Portland, Clackamas Regional Center, city of Milwaukie Central Business District, downtown Vancouver (Washington), Portland State University, Oregon Convention Center, Rose Garden Arena, Portland Metropolitan Exposition Center.
Significant Factor(s):	The 2040 Growth Concept and the Regional Framework Plan developed by Portland Metro provide a strong foundation for transit-oriented and land conserving development policy throughout the region, including the South/North Corridor.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Downtown Portland has a relatively high share of total regional employment at 20 percent. Employment in the downtown area is expected to grow 73 percent between 1994 and 2015. • A high number of cultural and entertainment facilities and medical and educational institutions appear to provide strong off-peak transit travel demand in the corridor.	**High**
2. Containment of Sprawl • The 2040 Growth Concept and the Regional Framework Plan direct commercial and residential growth in mixed use centers built at a pedestrian scale. Local jurisdictions are revising local plans accordingly. • The Urban Growth Boundary (est. 1979) enclosed an area within which urban development and urban infrastructure investment can occur. Adherence to the boundary is such that the area enclosed within the boundary increased by only 1.5 percent between 1979 and 1997.	**High**
3. Transit Supportive Corridor Policies • Oregon's Transportation Planning Rule provides a strong mandate for local transit-oriented land development policies. • The Station Area Planning program involves a comprehensive process to review and analyze station area characteristics and to create appropriate development plans. • A comprehensive set of parking policies reduce parking requirements, promote shared parking agreements, and impose parking controls in downtown Portland and transit nodes.	**High**
4. Supportive Zoning Regulations Near Transit Stations • Comprehensive plans for all local jurisdictions in the South / North Corridor either have been amended or are expected to be amended to implement state, regional, and corridor transit-oriented land development policies.	**High**
5. Tools to Implement Land Use Policies • Housing support programs promote the inclusion of residential use in districts around transit where the other uses might displace them. • Urban Growth Management Functional Plan has been adopted by all local governments.	**High**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • The region has developed targets for short-range and long-range development in the Urban Growth Management Functional Plan and models of regional and local development form in the 2040 Growth Concept. • Housing densities in the region have experienced dramatic increases. • Progress on development in the corridor is evident with several projects in planning or construction.	**Medium-High**

PROJECT DESCRIPTION

The South/North Corridor is planned as a 20-mile light rail transit line traveling along a north-to-south direction through the center of the Portland metropolitan area. The light rail line would connect the Clackamas Regional Center in the city of Milwaukie, various communities in the city of Portland (including the downtown area), and the city of Vancouver in the state of Washington. The proposed line will serve 37 stations in Clackamas and Multnomah Counties in Oregon and Clark County in Washington. The guideway is planned to follow existing street and highway rights-of-way except for one section of Southern Pacific/Union Pacific railroad track along McLoughlin Boulevard between downtown Portland and the Milwaukie Regional Center.

CORRIDOR DESCRIPTION

The South/North Corridor follows the central north to south axis of the Portland Metropolitan region between Vancouver, Washington and the Clackamas Town Center. Between the two termini, the proposed light rail line will serve (from north to south) the communities of Hayden Island, North Portland, Eliot, downtown Portland, McLoughlin Boulevard, Milwaukie Regional Center, and East Milwaukie. The corridor has no unifying pattern of land use. Commercial uses are concentrated in downtown Portland, downtown Vancouver, Eliot, and the Clackamas Regional Center. Residential, industrial, and recreational uses are scattered throughout. The corridor includes prominent cultural facilities such as the Memorial Coliseum, the Rose Garden Arena, and the Oregon Convention Center.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Tri-County Metropolitan Transportation District of Oregon (Tri-Met) – The Tri-County Metropolitan Transportation District of Oregon is the primary agency responsible for planning, building, and operating transit services in the Portland metropolitan area. The Tri-Met transit network consists of a bus network with 86 routes (including nine express routes) and a light rail line extending from Gresham at the eastern end of the metropolitan area through downtown Portland to the Goose Hollow District (just west of downtown Portland in the center of the metropolitan area). Tri-Met plans to begin service on the Westside Light Rail line to Beaverton and Hillsboro in September 1998. Tri-Met coordinates closely with Portland Metro, the regional planning agency, to associate transit-supportive land development plans with its transit investments.

Land Use Planning Agencies

Portland Metro – The most active agency in the Portland metropolitan area in land development planning is Portland Metro, which is administered by an elected Metro Council. Metro sets general frameworks for regional development by designating the location and nature of clusters of residential and commercial development. The most prominent of these policies is the Regional Framework Plan and the Urban Growth Management Functional Plan. These plans introduced the Regional Urban

Growth Goals and Objectives and Urban Growth Boundary which are prominent transit-oriented and growth management measures.

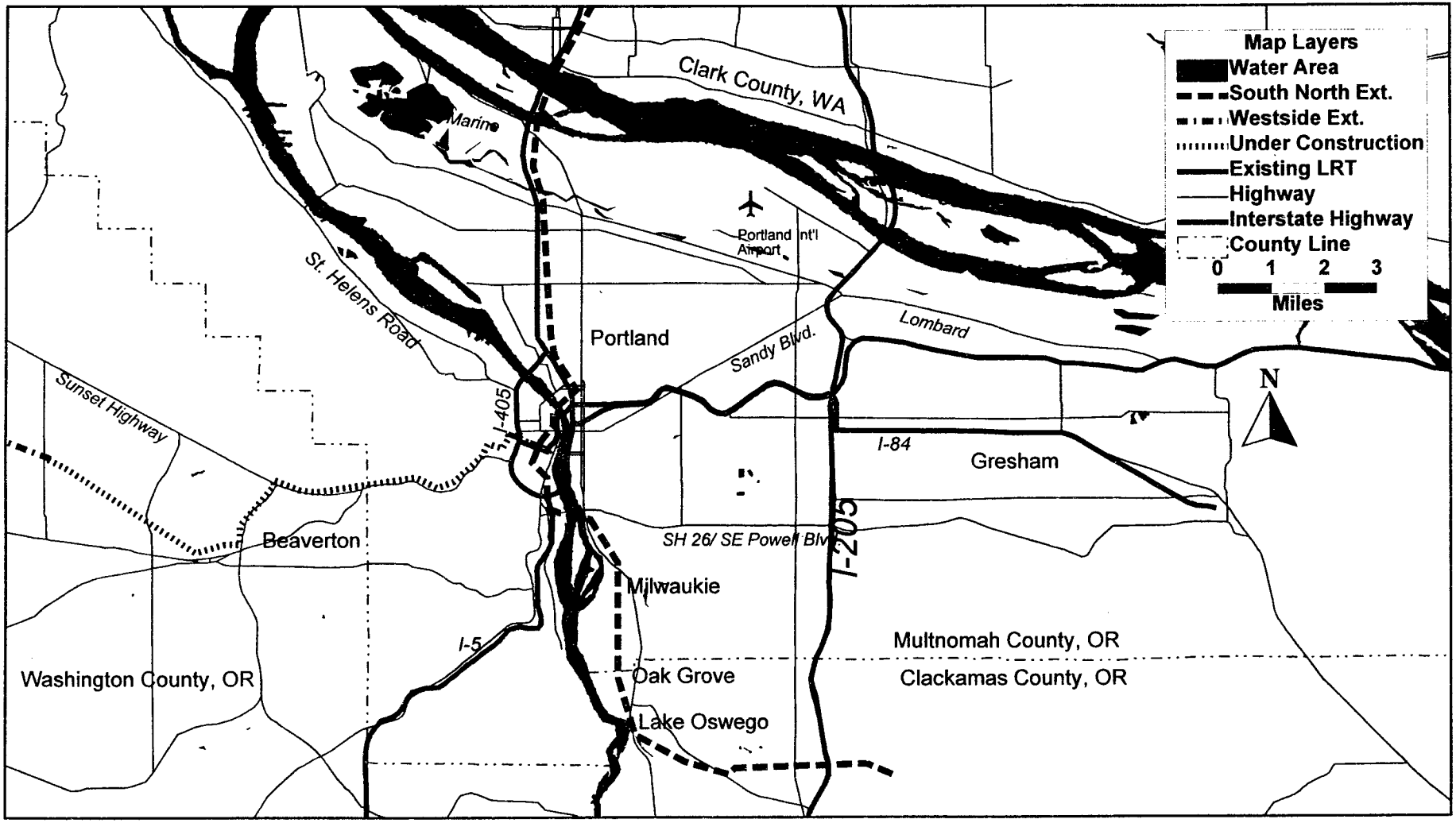
The State of Oregon – The state of Oregon, primarily through the Land Conservation and Development Commission, has adopted goals and guidelines for all cities and counties to use in developing their local comprehensive plans. Most prominently, the Land Conservation and Development Commission developed the Transportation Planning Rule which required cities and counties to amend comprehensive plans and zoning ordinances to support development patterns and policies that are oriented toward pedestrians, bicyclists, and transit patrons.

Counties (Clackamas County and Multnomah County; Clark County, WA) and **Municipalities (Milwaukie, Portland, Vancouver, WA)** – Counties in Oregon generally develop local plans, zoning ordinances, urban design guidelines, and other development regulations for unincorporated areas within their boundaries. The counties are subject to state and regional policies that call for local plans to conform to state and regional goals. Cities fulfill much of the same roles as counties but apply their regulations to the area within their incorporated boundaries. The city of Portland has been particularly active in developing transit-oriented plans and policies that address pedestrian-oriented street spacing and building design standards.

Portland Development Commission – The Portland Development Commission initiates and implements redevelopment projects within the city of Portland and funds joint development projects such as housing development near planned and existing light rail lines.

South - North Corridor

Portland, OR



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Support for transit-oriented land development in the Portland region appears to be strong and thorough. Planners and policy makers have charted a relatively clear vision of regional development and have created a comprehensive set of tools to implement it. Policies have been specified with sufficient detail and appear to be supported by sufficient implementation power. Land development policies both in the South/North Corridor and in the entire Portland region reflect a strong integration with the development of the high-quality transit service. The following are highlights of the Portland region's policies.

- Coordination and cooperation among government agencies and jurisdictions appears strong and contributes to a comprehensive approach to transit-oriented regional development. This cooperation is, in fact, mandated by the laws of the state of Oregon, which require regions to establish growth management tools and cities to adopt zoning and comprehensive plans that are consistent with regional plans. Notably, mandates of the law promote consistency by requiring jurisdictions to adopt changes to zoning and local comprehensive plans within two years. This strong intergovernmental cooperation also reflects strong citizen support for many of the land development planning initiatives.

- The plan incorporates projections of regional growth for a significantly long period (until the year 2040). Most significantly, the region has adopted an Urban Growth Boundary that strongly constrains development in the region. Planning for the land within the boundary reflects a sophisticated understanding of the relationship between land development and the transportation system and sets targets and goals for development within the region accordingly. Specifically, the 2040 Growth Concept designates functional roles for portions within the region and sets general goals for the appropriate densities to accommodate projected growth.

- Accommodation of housing appears to be a key component of regional development planning. The development of housing, especially in districts near transit, is supported by redevelopment housing projects, increases in the density of existing residential zones, the conversion of certain zones to multi-family residential zones and mixed use zones, the reduction of average lot sizes for residential subdivisions, and the establishment of a $25 million housing subsidy fund in the city of Portland. These strategies are expected to increase the percentage of multi-family housing units built at densities of greater than 23 units per acre from 13 percent of all units built before 1995 to 74 percent of all units planned to be built between 1995 and 2015.

- The Portland region has adopted a comprehensive approach to parking management with policies at every level of government. State mandates have prompted the region to set maximum limits on the minimum and maximum parking requirement ratios. Portland Metro has also endorsed shared parking arrangements between adjacent uses. The city of Portland has placed limits on parking in districts near light rail and other high level-of-service transit and in downtown Portland and the adjacent Lloyd District.

PHASE I REGIONAL RAIL

Project Location:	Raleigh-Durham, NC
Lead Agency:	Triangle Transit Authority (TTA)
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	PE and Environmental Documentation process to begin in early 1998
Mode:	Regional commuter rail (diesel multiple units)
Length:	35 miles
Number of Stations:	16
Total Estimated Capital Cost:	$250 million ($1996)
2020 Ridership Forecast: (Average Weekday)	14,000 daily new riders

CORRIDOR SUMMARY

Location in Region:	Runs from Durham east and southeast to Raleigh, terminating on northeast outskirts of Raleigh.
Transportation Linkages:	Shuttle connections to Raleigh-Durham Airport.
Existing Land Use:	Varies; includes high-density employment in downtown Raleigh; universities; commercial and research office parks; lower to medium-density residential; and industrial.
High-Trip Generators:	Raleigh CBD, Duke University, North Carolina Central University, North Carolina State University, Research Triangle Park, State Fairgrounds.
Significant Factor(s):	Project utilizes existing railroad right-of-way and access will largely rely on shuttle/feeder bus service. Regional and local interest in growth management and transit-oriented development appears substantial.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Existing land use adjacent to the proposed rail stations varies and includes high-density employment in downtown Raleigh; universities; commercial and research office parks; lower to medium-density residential; and industrial. • Existing pedestrian access and design is adversely impacted by the nature of the corridor as a freight right-of-way and proximity to freeways at a number of station areas. • The system will largely rely on shuttles and feeder buses to access major trip generators located in the corridor but not directly adjacent to stations.	**Low-Medium**
2. Containment of Sprawl • Relatively high-growth levels are forecast for the region, and interest in growth management policies appears considerable at all levels. Regional planning efforts as well as local plans by the counties and major cities in the region have resulted in general policies and recommended actions aimed at facilitating more transit-oriented land use. • The actual implementation of strong transit-oriented development policies is awaiting the results of various transit and development planning efforts underway in the Triangle Region.	**Medium**
3. Transit Supportive Corridor Policies • Each major municipality has established policies in its comprehensive plan for promoting transit-oriented development, although the strength of these policies varies. • TTA has developed conceptual plans for station areas and has established a specific set of policies and tools which municipalities can use to guide station-area development.	**Medium**
4. Supportive Zoning Regulations Near Transit Stations • Specific transit-supportive zoning and ordinance changes have not yet been adopted in most areas. Changes to municipal zoning ordinances are expected to follow completion and adoption/acceptance of TTA's *Station Area Development Guidelines*.	**Low-Medium**
5. Tools to Implement Land Use Policies • TTA has developed tools for municipalities to implement transit-oriented development and has worked with developers, municipalities, and the public to promote these tools. • The Durham comprehensive plan identifies specific actions to implement transit-oriented policies. Other communities have not yet developed specific tools to implement the transit-oriented policies set forth in their comprehensive plans.	**Medium-High**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • Specific development projects related to the proposed transit system have not been identified. • Given the early stages of project planning, it is too early to judge the success of land use policies at attracting development.	**Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

Phase I Regional Rail service for the Raleigh-Durham area will connect major cities and other destinations in the region using self-propelled diesel rail cars on existing railroad rights-of-way. The Phase I project is part of the Regional Transit Plan adopted by the Triangle Transit Authority and the Triangle Region's two MPOs, which calls for expanded regional bus service and a regional rail system supported by shuttle and local bus service.

The Phase I project will be 35 miles in length with 16 stations. Station locations have been proposed but not finalized. Current plans call for construction of a dedicated single track with passing sidings in the existing rights-of-way, and for vehicles to run at 15-minute headways. Preliminary engineering and environmental documentation was scheduled to begin in January 1998. The project is planned to be completed by 2004 at a construction cost of $250 million. Ridership is forecast at 14,000 per day by the year 2020.

CORRIDOR DESCRIPTION

The first four proposed stations are located in the city of Durham and would serve the Duke Medical Center, the Duke University East Campus, the Durham CBD, and the east Durham, respectively. There are an estimated 8,600 jobs in the Durham CBD. Various other land uses near stations two through four include multi-family residential (including student housing), single-family residential, retail, automobile sales and services, and light and heavy industrial.

The next two stations, to the southeast of Durham, serve Research Triangle Park, a campus-style office and research and development complex. Some buildings will be within walking distance of these stations, while others will be connected via shuttle buses. From this area, a Phase II rail route to Raleigh-Durham Airport is also proposed.

Stations seven and eight are in the Towns of Morrisville and Cary, respectively. Land uses in this area are for the most part lower-density suburban residential and industrial. In Cary, the proposed station is located adjacent to the town center and government offices.

The remaining stations serve the city of Raleigh, including the western suburbs, CBD, and northeastern suburbs. Station nine is largely undeveloped and is being viewed as a location for transit-oriented development. Station 10 serves the State Fairgrounds, a football stadium and coliseum, and some industrial and low-rise suburban office developments. Station 11 is urban in character and serves North Carolina State University and surrounding residential and retail neighborhoods.

Stations 12 and 13 serve downtown Raleigh, which includes high-density office and retail uses as well as a former industrial/warehouse district with redevelopment potential. Downtown will largely rely on shuttle service for access since many of the larger buildings are not located within easy walking distance of proposed station areas.

Station 14 includes low-density warehouse uses and a nearby suburban employment center, and has some potential for residential and commercial infill development. Station 15 is largely undeveloped and is

being viewed as a location for transit-oriented development. Station 16, the eastern terminus, includes about 1,100 units of residential at relatively high densities, and also includes some manufacturing and warehousing sites. Much of the residential development is recent, and former industrial sites are being rezoned to permit further multi-family residential infill development.

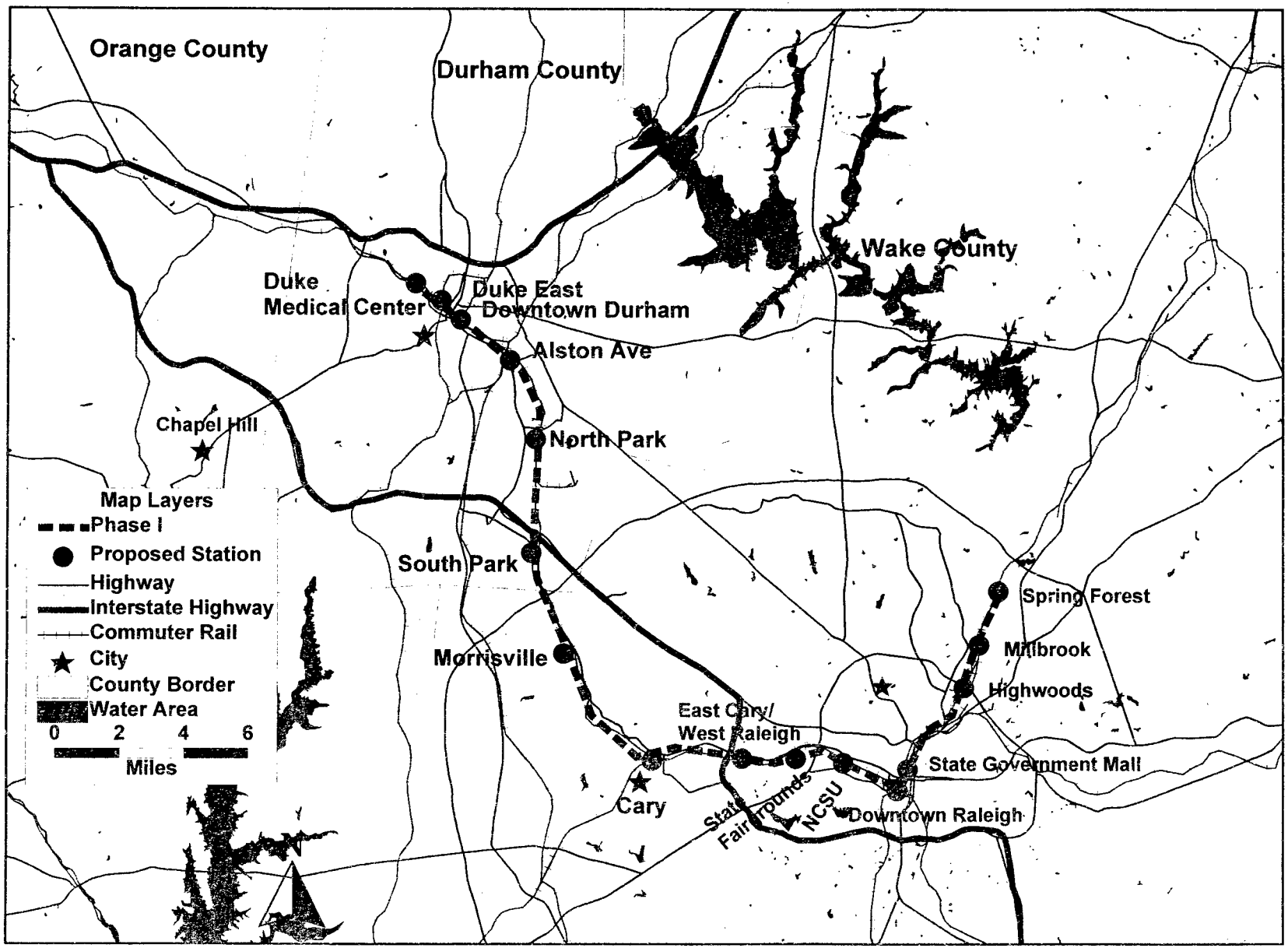
DESCRIPTION OF LOCAL AGENCIES

The Triangle Transit Authority (TTA), a regional public transit agency serving the Triangle Region of North Carolina, is the sponsoring agency for the project. The Triangle Region includes Wake, Durham, and Orange Counties. Two MPOs serve the region. The Durham-Chapel Hill-Carrboro MPO (DCHC MPO) includes Durham and Orange Counties (Orange County is to the west of Durham County and includes Chapel Hill). The Capital Area MPO (CAMPO) covers Wake County, which includes the cities of Raleigh and Cary. The Cities of Durham and Raleigh, respectively, serve as the Lead Planning Agencies for the DCHC and Capital Area MPOs.

Of the 16 stations, four are located in the city of Durham, eight in Raleigh, and one each in the Towns of Cary and Morrisville. Two stations are located in Research Triangle Park, whose land use and development requirements are administered by the Research Triangle Foundation, a private, non-profit organization. In addition, two stations are dominated by land owned and developed by Duke University and North Carolina State University.

Regional Transit Plan

Raleigh, NC



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The proposed Phase I Regional Rail represents a unique approach to providing regional transit service with a relatively small investment. Existing land use patterns and alignment considerations mean that most of the trip generators near the system will have to rely on shuttle and feeder bus service rather than having direct pedestrian access. Future development is likely to become more transit-oriented, however, as the TTA is aggressively promoting station area development and municipalities appear generally interested in adopting transit-oriented development policies.

- The proposed system will connect many of the major trip generators in the Triangle region, including major universities, employment centers, and the airport. A relatively small number of stations are planned, and stations will primarily be located to serve these activity centers although some stations will also have a residential and neighborhood commercial orientation. Most of the major destinations in the corridor are either campus-like or not located directly adjacent to station areas (there are currently 65,000 jobs within ½ mile of proposed stations). Shuttle and feeder bus service is being planned to serve these destinations as well as residential areas.

- The TTA is strongly promoting planning for transit-oriented development. It has developed *Station Area Development Guidelines* which classify each station area by proposed activity level, station type, and primary use, and which show conceptual plans and development possibilities. The guidelines also establish pedestrian-oriented design principles. All major municipalities, including the Cities of Raleigh, Durham, and Cary, have established policies in their comprehensive plans for promoting transit-oriented development, although the strength of these policies varies. Specific changes to municipal zoning ordinances have not been adopted but are expected to follow completion and adoption/acceptance of the *Station Area Development Guidelines*.

- For the region as a whole, relatively high-growth levels are forecast, and all major municipalities have expressed interest in taking actions to manage and concentrate this growth. General policies and recommended actions aimed at facilitating more transit-oriented land use have been adopted in regional planning efforts and in local plans by the counties and major cities in the region. The actual implementation of strong transit-oriented development policies, however, is awaiting the results of various transit and development planning efforts. The potential for transit-oriented employment growth appears high, and employment adjacent to transit stations is forecast to increase from 13 to 17 percent of regional employment by 2020, an absolute increase of 85,000 jobs or 130 percent. In contrast, the overall potential for transit-oriented residential development appears much lower, and the regional share of households near stations is projected to decline slightly to 3.2 percent (although this still represents an absolute increase of 5,500 households or 52 percent).

WEST-EAST CORRIDOR

Project Location:	Salt Lake City, UT
Lead Agency:	Wasatch Front Regional Council (WFRC)
Review Date:	November 1997
FTA Land Use Rating:	Low-Medium

PROJECT SUMMARY

Project Phase:	PE initiation pending
Mode:	Light Rail
Length:	10 miles
Number of Stations:	17
Total Estimated Capital Cost:	$374 million ($1996)
2015 Ridership Forecast: (Average Weekday)	13,000 daily boardings

CORRIDOR SUMMARY

Location in Region:	Runs from west to east, from airport to CBD to University of Utah.
Transportation Linkages:	Salt Lake City International Airport; existing north-south light rail has northern terminus in CBD.
Existing Land Use:	Pedestrian-friendly, moderate density residential and neighborhood commercial between CBD and University. Industrial/warehouse redevelopment area directly west of CBD. Lower-density strip commercial and industrial between CBD and airport. Some specific locations throughout corridor have been designed as pedestrian campuses.
High-Trip Generators:	CBD (small – 50,000 jobs), airport, University of Utah, two sports centers, two medical centers, convention center, Salt Lake Temple and Temple Square, State Fair Park, state government office complex.
Significant Factor(s):	Project is intended to be completed in time for 2002 Winter Olympics.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • The proposed line connects three major employment sources (the airport, the CBD, and the University of Utah). However, the CBD is relatively small, containing 50,000 jobs or 13 percent of total employment in the Salt Lake Area. The corridor supports a moderate residential base of 51,000 people. • Urban residential neighborhoods to the east of the CBD are relatively pedestrian-friendly. Commercial, industrial, and residential development to the west of the CBD is lower-density and less pedestrian-friendly.	**Low-Medium**
2. Containment of Sprawl • There is some commercial development taking place in the Salt Lake CBD and some potential for residential and mixed-use redevelopment directly east and west of the CBD. Initiatives are also underway to ensure pedestrian-friendliness in these areas. • The vast majority of regional employment and residential growth is expected to occur outside of Salt Lake City. While the city itself appears interested in promoting transit-friendly development, there is little evidence of regional interest in growth management.	**Low-Medium**
3. Transit Supportive Corridor Policies • The city has established policies in its master plan of promoting transit-oriented development where opportunities are available. However, the areas slated for near-term redevelopment are of limited scale, and station-area plans have not yet been established. • Both the city and the University have taken some actions to manage parking and reduce parking requirements in areas served by transit.	**Medium**
4. Supportive Zoning Regulations Near Transit Stations • Zoning is in place to allow "high-density," mixed-use development in some station areas, notably in the CBD and East Downtown, and regulations have been established to ensure pedestrian-friendly development and design in the CBD area. • While policies encouraging transit-oriented development have been established for other areas of the corridor, specific zoning ordinances have not yet been established to achieve these goals, and station area plans have not yet been developed.	**Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
5. Tools to Implement Land Use Policies • The city has developed policies supporting transit-oriented development and has implemented supportive zoning regulations in some areas. The city has also involved numerous community and business groups in transit-oriented planning. • Current regulations are generally permissive rather than proactive, and the success of the city's policies in attracting real transit-oriented development to the corridor remains to be demonstrated. • UTA has developed a handbook for community planners and decision-makers for coordinating land use and transit.	**Medium**
6. Performance of Land Use Policies • One residential station area proposal has been received, and some warehouses are being converted to residential in the West Gateway district. • While "many proposals are in the discussion stage," strong commercial interest in the area is not yet apparent and the corridor is forecast to receive only a very small proportion of the region's future population growth.	**Low-Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The proposed West-East Light Rail Transit Corridor runs 10.9 miles from Salt Lake City International Airport on the west, through the Salt Lake City CBD, and terminates at the University of Utah on the east. The line would contain 17 stations and would connect to the northern terminus of the existing North-South light rail line in the CBD. The MIS and DEIS have been completed. Preliminary engineering is expected to proceeding early 1998. Completion of construction is anticipated in time for the 2002 Winter Olympics.

The estimated capital cost for the East-West Corridor is $374 million in 1996 dollars. Annual operating and maintenance costs are estimated at $7.5 million, with an offsetting savings of $0.9 million in bus operation compared to the no-build alternative. Ridership is estimated at 13,000 daily boarders by 2015, an increase of 5,800 daily transit riders over the no-build alternative. Many of these transit riders are expected to be connections from the existing North-South rail line.

CORRIDOR DESCRIPTION

The East-West Corridor can be divided into five areas, from west to east:

- The airport area includes Salt Lake City International Airport, scattered airport support uses, a golf course, and transportation structures related to I-15 and I-80. The terminus of the rail line is adjacent to the main terminal of the airport, and the line parallels highway alignments out of the airport and east to the east side of I-15. Land uses in the airport area are restricted due to compatibility issues.

- In the "West Central" area, the proposed rail line runs along North Temple Street, the historical east-west entry to downtown from the west. This area is a mixture of patterns including strip commercial along North Temple, two isolated residential neighborhoods to the north and south, several business parks with a concentration of state government offices, heavy industrial uses between North Temple and I-80 to the south, and the Utah State Fair Park. The uses are generally distinct and separated by major roadways, highways, or the Jordan River. There is very little vacant land, but there is some potential for secondary development and redevelopment of existing deteriorating areas. The visual quality of the area varies.

- The downtown area contains major commercial, shopping, hotel/motel, office and government uses, and arts and entertainment facilities. From North Temple, the proposed rail line heads south for five blocks before continuing east on 400 South Street, and also intersects with the existing North/South rail line at two points. On the west side of the CBD is the Gateway District, a 650-acre primarily warehouse and industrial area which is slated for high-density residential and commercial redevelopment and which would be served by the proposed rail line. On the east side of the CBD along the proposed line is East Downtown, a three to four-block area which is zoned for high-density residential mixed-use development.

- In the "East Central" area, the proposed rail line follows 400 South east to the University area. This neighborhood is predominantly an older residential area, with a mix of multi-family and single-family housing. Neighborhood retail and commercial services are concentrated along 400 South and scattered

elsewhere, and there are some office buildings although these are now being discouraged in favor of residential mixed-use. The scale of buildings and mature trees create a strong pedestrian streetscape. There are several residential historic districts in the area, and preserving these neighborhoods is a strong policy goal of the city. There is only minor potential for secondary development and redevelopment in this area.

- The University area includes the University of Utah as well as the University Medical Complex, the University Research Park, a state park, a garden and arboretum, a single-family residential neighborhood, and the Fort Douglas army base. The predominant urban form is heavily landscaped and campus-like. There is possible redevelopment potential at Fort Douglas.

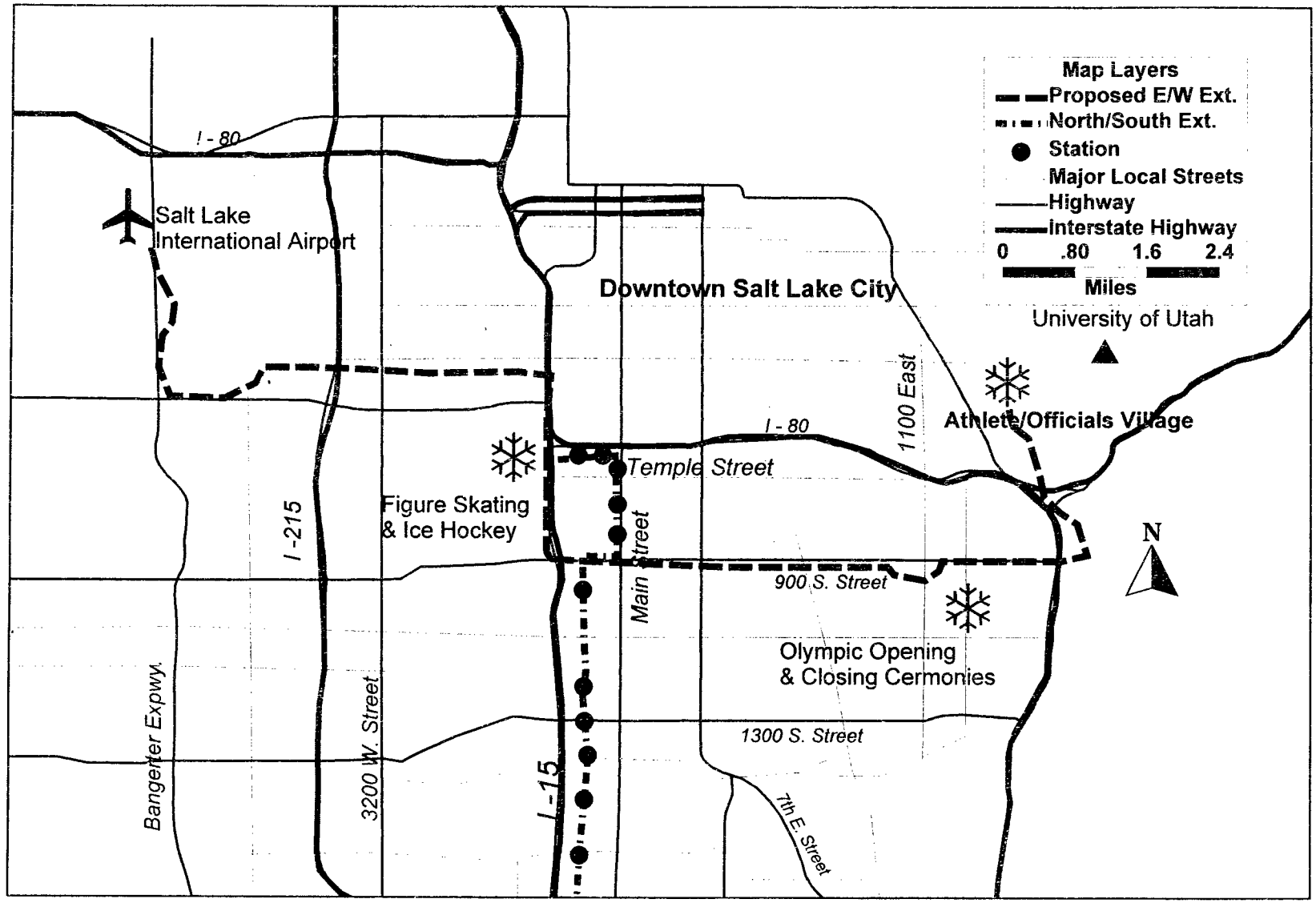
DESCRIPTION OF LOCAL AGENCIES

The proposed East-West Corridor line is entirely within the city of Salt Lake City and is therefore subject to the policies and zoning regulations of the city. The Salt Lake City International Airport and the University of Utah are major property owners with jurisdiction over the west and east ends of the corridor, respectively.

The Salt Lake City metropolitan area includes six counties and numerous municipalities. The Wasatch Front Regional Council (WFRC) is the MPO for the region and has prepared the MIS and DEIS for the East-West Corridor. The Utah Transit Authority will operate the system.

Airport to University (East - West) Light Rail Line

Salt Lake City, UT



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The proposed West-East Corridor serves a number of major trip generators and some pedestrian-friendly, moderate-density residential neighborhoods. Some opportunities for higher-density residential and mixed-use redevelopment exist near the rail line directly east and west of downtown. However, total employment and population in the corridor are relatively low and are not forecast to increase significantly despite high-regional growth. The region as a whole currently does not have an adopted regional growth management policy.

- Existing trip generators in the corridor include Salt Lake City International Airport; the University of Utah, including a hospital and sports center; civic and cultural attractions in the CBD such as the Church of Latter Day-Saints, professional basketball arena, and convention center; and State Fair Park and the state office campus between the CBD and the airport. The WFRC is also counting on the rail system to serve the large numbers of visitors who will attend the Winter Olympics in 2002. Developments served by a number of stations have been laid out as pedestrian campuses, and residential neighborhoods east of the CBD are relatively pedestrian-friendly, with moderate residential densities and street-fronting neighborhood commercial uses.

- Despite these attributes, however, the corridor suffers from the fact that total employment and population served is relatively small. The CBD contains only 50,000 jobs, with an additional 25,000 at the airport and the University of Utah. Employment densities in the remainder of the corridor are generally low. Population served is also relatively low, with an estimated 16,300 households within ½ mile of proposed stations. Land uses between the CBD and the airport are for the most part not transit-supportive.

- The city is currently pursuing high-density residential development opportunities in a three to four-block area east of downtown, and is planning for residential and mixed-use redevelopment of the West Gateway area, a former industrial and warehousing district west of downtown. However, near-term opportunities for transit-oriented development appear relatively small. Furthermore, regional policies and market trends do not appear to support significant intensification of uses in the transit corridor. Regional growth management policies are not in place, and while forecasts show high-future growth levels, both employment and population growth are expected to be regionally dispersed. While the corridor provides connection to the three major employers in the region, forecasts indicate a projected population growth in the study corridor of only 9,000 (to 60,000 population) by the year 2020, compared with overall regional growth of 400,000 (to 1.2 million total).

MID-COAST CORRIDOR

Project Location:	San Diego, CA
Lead Agency:	Metropolitan Transit Development Board
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	Preliminary Engineering and Final EIS
Mode:	Light Rail (initial phase), Commuter Rail improvements, and HOV lanes
Length:	Total: 10.4 miles (16.6 kilometers) Initial Phase: 3.4 miles (5.4 kilometers)
Number of Stations:	Total: Nine stations; Initial Phase (Balboa Segment): three stations
Total Estimated Capital Cost:	Total: $374.9 million ($1997) Initial Phase: $90.8 million ($1997)
2015 Ridership Forecast: (Average Weekday)	15,600 (5,600 new riders)

CORRIDOR SUMMARY

Location in Region:	A north to south alignment to the immediate east of the Mission Bay and north of Old Town San Diego and Centre City San Diego. Phase I provides an initial extension toward La Jolla to the north.
Transportation Linkages:	Extends the existing North-South line from Old Town Station; Connects to Mission Valley line at Old Town Station.
Existing Land Use:	Low-density, in-town suburban development to the east of the corridor with freeway right-of-way and the Mission Bay recreational resources to the west.
High-Trip Generators:	Mission Bay
Significant Factor(s):	The city of San Diego has a comprehensive set of transit-oriented policies and guidelines, and is applying these policies to the Mid-Coast corridor.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • There are two primary land use patterns in the corridor which are separated by Interstate 5 which runs parallel to the rail alignment. The Mission Bay recreational facilities lie to the west of the freeway and a low-density residential community with some clusters of commercial developments lies to the east.	**Medium**
2. Containment of Sprawl • San Diego's *Progress Guide and General Plan* has "Guidelines for Future Development" to support a phased expansion of urbanized areas and of infrastructure and services. • There are no initiatives to strongly increase densities in the already developed area around the Balboa Extension of the Mid-Coast Corridor.	**Medium**
3. Transit Supportive Corridor Policies • The *Transit-Oriented Development Design Guidelines* comprehensively address such issues as site planning, redevelopment strategies, open space, street design, and parking supply and design. The guidelines have been incorporated into the General Plan and will soon be incorporated into the Zoning Code and the Street Design Manual. • The city of San Diego has begun preliminary steps to reduce parking supply in the corridor and throughout the region through reductions of both the maximum and minimum parking supply requirements.	**Medium-High**
4. Supportive Zoning Regulations Near Transit Stations • New zoning definitions and revisions to existing zone definitions allow for higher density single-unit housing, provide for more flexible site planning and development, and reduce requirements for minimum parking supply. • Revisions to the Street Design Manual provide for a finer-grained network of streets and new street types and designs that promote the safety and comfort of pedestrians and bicyclists.	**Medium-High**
5. Tools to Implement Land Use Policies • Planning for the Mid-Coast Corridor transit improvement involved a strong, comprehensive program of public information and public involvement in order to settle conflicts regarding improvement options.	**Medium-High**
6. Performance of Land Use Policies • Successful development near transit has already been demonstrated throughout the region along the existing East, North-South, and Mission Valley light rail lines and some bus corridors.	**Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Metropolitan Transit Development Board (MTDB) plans an extension of the existing North-South LRT line. The Mid-Coast Corridor project is planned to extend San Diego Trolley light rail service to the north serving nine stations along a 10.4-mile alignment between the existing Old Town San Diego Station and La Jolla. The alignment of the first phase (Balboa Extension) of the proposed light rail line lies immediately to the east of Interstate 5 freeway and parallels the freeway for 3.4 miles. Phase 1 will serve the southernmost three stations on the proposed line.

CORRIDOR DESCRIPTION

The proposed transit investment will serve the communities of Linda Vista, Clairemont, and Pacific Beach. These communities consist primarily of residential development built at low densities with a few isolated clusters of low-density commercial development. Because the alignment of the proposed light rail project lies immediately to the west of the freeway, the freeway right-of-way and infrastructure comprise a large portion of the light rail corridor. The Mission Bay and its associated recreational facilities lie to the west of the freeway. For most of the 3.4 miles of the alignment, only half of the area (the area to the east) contains developed and inhabited space.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Metropolitan Transit Development Board (MTDB) – The MTDB is responsible for planning and programming of major transit investments in San Diego County including the Mission Valley East line. The San Diego Trolley (a non-profit subsidiary of the MTDB) operates the San Diego Trolley light rail system. Because the MTDB is responsible for planning and programming the transit system and because the MTDB actually owns the rail transit infrastructure and some adjacent land, the MTDB also plans and develops policies for the areas around light rail stations and in high-capacity bus corridors. The MTDB has instituted strong policies to promote transit-oriented development and to capitalize on joint development opportunities. One example of the MTDB's proactive stance is its publication of a manual, entitled *Designing for Transit*, that serves as a guide for design, planning, and development around light rail transit stations and high-capacity bus transit corridors. The MTDB has also developed a Policy on Joint Use and Development of Property to systematically assess and pursue joint development proposals for each of the properties it owns.

Land Use Planning Agencies

City of San Diego – Most of the land within the Mission Valley East corridor lies in the city of San Diego. The city's policies, therefore, have a great impact upon transit-oriented land development.

- **San Diego Planning Department –** The San Diego Planning Department articulates its land development policies through the *Progress Guide and General Plan* and the Zoning Code. The Planning Department also publishes specific policies for 40 smaller planning areas within the city.

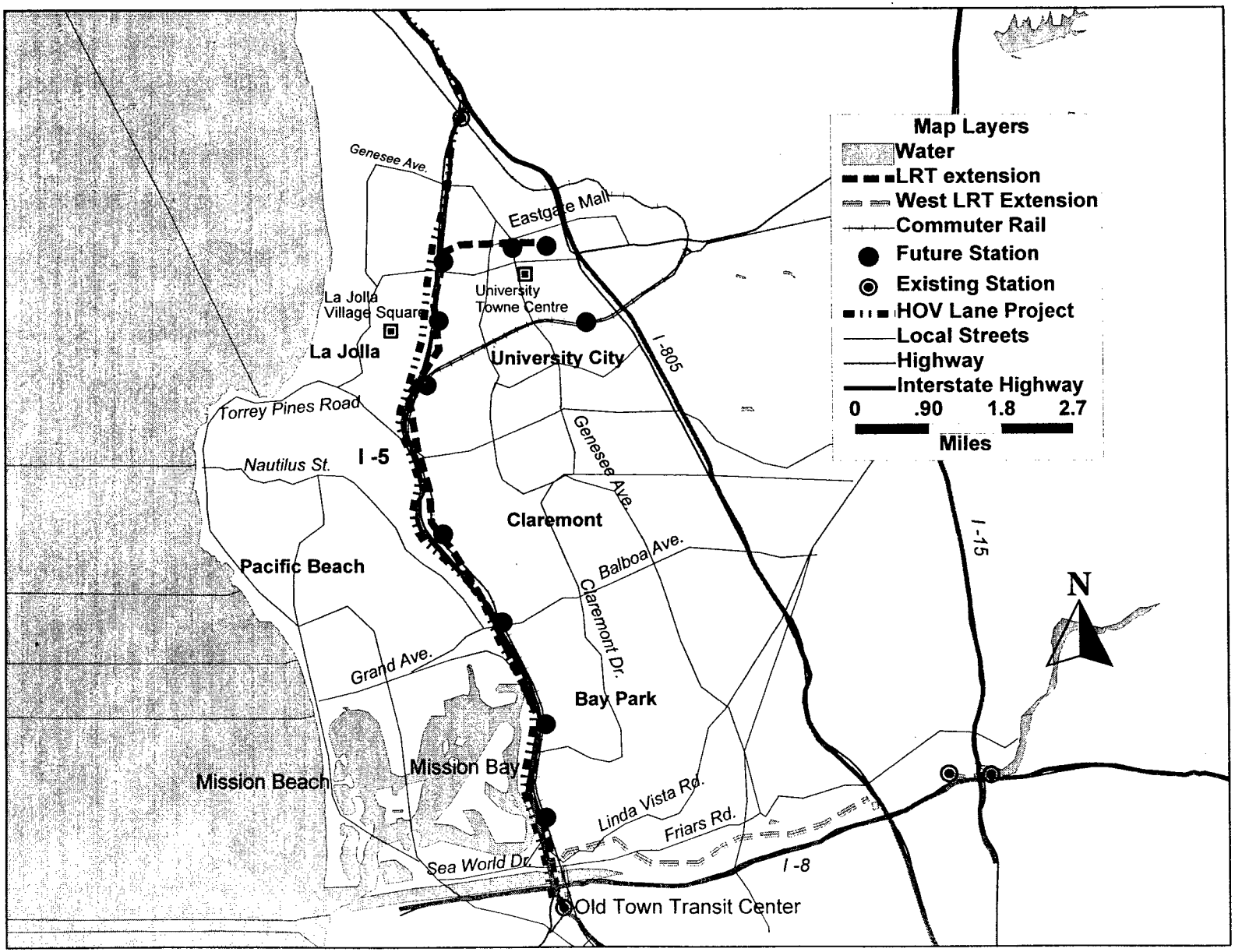
The *Mission Valley Community Plan* and the *College Area Community Plan* contain specific policies for much of the project corridor.

- **San Diego Redevelopment Authority** – While all land is subject to city-wide policies and zoning ordinances, special policies and oversight apply to areas designated as redevelopment project areas (e.g., the College Community Redevelopment Area) which lie in the project corridor.

San Diego Association of Governments (SANDAG) –The San Diego Association of Governments is the metropolitan planning organization for San Diego region. While SANDAG does develop regional initiatives that relate to land development policy, such as the *Regional Growth Management Strategy*, these regional initiatives are nonbinding. SANDAG has no authority to enforce the provisions it endorses or to compel local jurisdictions to do so. The success of such regional policies, therefore, depends upon the decision of each member local jurisdiction to comply.

Mid Coast Corridor

San Diego, CA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The city of San Diego has developed and adopted a comprehensive set of policies to promote transit-oriented development within the city. These policies, however, have not yet been fully implemented anywhere in the Mid-Coast corridor. Designs and plans have only been developed up to the conceptual stage. Three major characteristics of land development planning in the city are summarized below.

- Planning and zoning guidelines address a comprehensive set of issues to promote transit-oriented development and urban form. The *Transit-Oriented Development Design Guidelines* specify standards for urban form, provision of open space, the spatial layout of the street and circulation system, the location and design of transit stops, and the design of parking facilities. Revisions to the Zoning Code incorporate several transit-oriented zone designations. These revisions promote denser single family housing by allowing subdivision into smaller lots and by including a Townhouse Zone. The Zoning Code also includes an Urban Village Overlay Zone to allow more flexible site planning and a Transit Area Overlay Zone to reduce parking supply in areas with high levels of transit service.

- The city of San Diego appears to have taken significant steps to reduce regional parking supply, especially in vicinity of transit station areas. The planning department can apply a Transit Area Overlay Zone to reduce parking for developments (especially for commercial uses) in areas with high levels of transit service. The planning department also allows for reductions for multiple family housing and for mixed use projects based on shared parking ratios. The city has also taken the significant step of placing limits on parking supply throughout the city. Parking requirements outside of transit station areas, however, remain relatively high. For example, the planning department requires that office or commercial developments supply between 3.3 and four parking spaces per 1,000 gross square feet of gross leasable area.

- Revisions to the *Street Design Manual* include notable accommodations to pedestrians in street layouts and design standards. The manual includes several new classifications of streets such as pedestrianways, bikeways, and transitways. Several changes also enhance the pedestrian environment by reducing the requirement for intersection spacing, prohibiting cul-de-sacs where they would impede pedestrian or transit circulation, and accommodating traffic calming features. The manual also removes prohibitions on alleys as a means to relocate automobile access to the back of lots.

MISSION VALLEY EAST LIGHT RAIL TRANSIT PROJECT

Project Location:	San Diego, CA
Lead Agency:	Metropolitan Transit Development Board
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Light Rail
Length:	5.9 miles (9.4 kilometers)
Number of Stations:	4
Total Estimated Capital Cost:	$332 million ($1997)
2015 Ridership Forecast: (Average Weekday)	10,800 (7,400 new riders)

CORRIDOR SUMMARY

Location in Region:	Northeast of downtown San Diego following a west to east alignment within the Mission Valley.
Transportation Linkages:	Extends Mission Valley West line from Mission San Diego Station. Connects to Orange line to Santee (at Grossmont Transit Center)
Existing Land Use:	Moderate suburban densities with land uses concentrated in three clusters.
High-Trip Generators:	San Diego State University, Alvarado Medical Center
Significant Factor(s):	The Mission Valley Community Plan was established in 1990 to support concentrated development around a transit corridor. The San Diego State University has strong initiatives to support the proposed light rail line and transit-oriented development in the station area.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Land uses in the Mission Valley East corridor generally fall into three clusters (an employment center, an institutional cluster, and a suburban community), yielding a diverse set of trip origins and destinations. • The San Diego State University and its associated event sites such as the Cox Activity Center and other stadiums is one of the most prominent activity centers in the corridor.	**Medium-High**
2. Containment of Sprawl • San Diego's Progress Guide and General Plan has "Guidelines for Future Development" that support a phased expansion of urbanized areas and of infrastructure and services. • The San Diego State University Foundation is planning a mixed-use, pedestrian-oriented development with housing and retail services within the College Community Redevelopment Area located to the south of the campus.	**Medium**
3. Transit Supportive Corridor Policies • The Transit-Oriented Development Design Guidelines comprehensively address such issues as site planning, redevelopment strategies, open space, street design, and parking supply and design. The guidelines have been incorporated into the General Plan and will soon be incorporated into the Zoning Code and the Street Design Manual. • The city of San Diego has begun preliminary steps to reduce parking supply in the corridor and throughout the region through reductions of both the maximum and minimum parking supply requirements.	**Medium-High**
4. Supportive Zoning Regulations Near Transit Stations • New zoning definitions and revisions to existing zone definitions allow for higher density single-unit housing, provide for more flexible site planning and development, and reduce requirements for minimum parking supply. • Revisions to the Street Design Manual provide for a finer-grained network of streets and new street types and designs that promote the safety and comfort of pedestrians and bicyclists.	**Medium-High**
5. Tools to Implement Land Use Policies • The establishment of redevelopment plan areas provides more focused attention to planning in certain corridor districts. • Public participation has traditionally been strong through the planning for the transit improvement. Planning for land development in station areas, however, appears to involve public participation to a lesser extent.	**Medium-High**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • Several local community plans in Mission Valley already incorporate elements which promote transit-supportive development. • Transit-oriented development principles have already been demonstrated throughout the region along the existing Orange, Blue, and Mission Valley lines.	**Medium-High**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The San Diego Mission Valley East LRT line is proposed as an extension of the Mission Valley West line which opened in November 1997 and which terminates at the Mission San Diego Station. The proposed line would extend approximately 5.9 miles from the Mission San Diego Station on the Mission Valley West line to the Grossmont Transit Center on the existing Orange line which connects to Santee. The alignment of the line is proposed to follow Interstate Highway 8 (I-8) for much of the route. The route alignment would run south from I-8 through a tunnel to serve the San Diego State University. Because the Mission Valley East Light Rail Transit project is proposed to connect the existing Mission Valley line and the existing Orange line, the project will provide a stronger transit connection to both Centre City San Diego and to the communities of La Mesa and Santee from the Mission Valley.

CORRIDOR DESCRIPTION

The proposed transit improvement passes through the eastern portion of the Mission Valley which runs in a west to east direction north of downtown San Diego. The corridor links the eastern San Diego County suburbs of La Mesa, El Cajon, and Santee with the communities in western Mission Valley (Normal Heights, Hillcrest, and Linda Vista) and the Mission Bay. Because of the possibility of floods from the San Diego River, the city of San Diego has planned development to occur in three clusters. The western cluster in Grantville contains a medium density employment center with medium density residential uses. The center cluster contains prominent institutions – San Diego State University and the Alvarado Medical center. The eastern cluster contains lower density suburban development with a small concentration of commercial development near the transit line.

DESCRIPTION OF LOCAL AGENCIES

Transportation agencies

Metropolitan Transit Development Board (MTDB) – The MTDB is responsible for planning and programming of major transit investments in San Diego County including the Mission Valley East line. The San Diego Trolley (a non-profit subsidiary of the MTDB) operates the San Diego Trolley light rail system. Because the MTDB is responsible for planning and programming the transit system and because the MTDB actually owns the rail transit infrastructure and some adjacent land, the MTDB also plans and develops policies for the areas around light rail stations and in high-capacity bus corridors. The MTDB has instituted strong policies to promote transit-oriented development and to capitalize on joint development opportunities. One example of the MTDB's proactive stance is its publication of a manual, entitled *Designing for Transit*, that serves as a guide for design, planning, and development around light rail transit stations and high-capacity bus transit corridors. The MTDB has also developed a Policy on Joint Use and Development of Property to systematically assess and pursue joint development proposals for each of the properties it owns.

Land Use Planning Agencies

City of San Diego – Most of the land within the Mission Valley East corridor lies in the city of San Diego. The city's policies, therefore, have a great impact upon transit-oriented land development.

San Diego Planning Department – The San Diego Planning Department articulates its land development policies through the *Progress Guide and General Plan* and the Zoning Code. The Planning Department also publishes specific policies for 40 smaller planning areas within the city. The *Mission Valley Community Plan* and the *College Area Community Plan* contain specific policies for much of the project corridor.

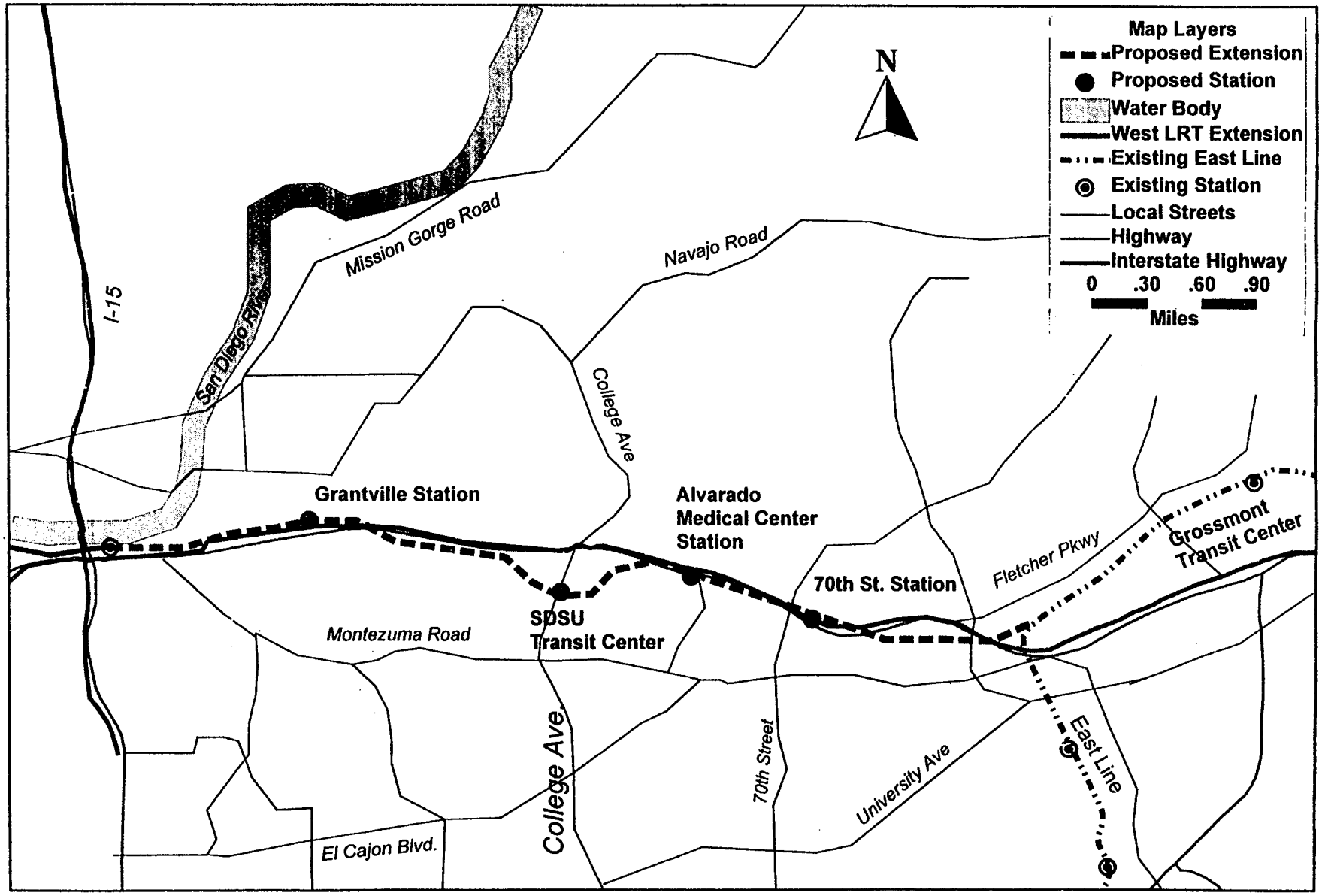
San Diego Redevelopment Authority – While all land is subject to city-wide policies and zoning ordinances, special policies and oversight apply to areas designated as redevelopment project areas (e.g., the College Community Redevelopment Area) which lie in the project corridor.

City of La Mesa – The city of La Mesa sets land development policy for land around the Grossmont station which lies at the east end of the proposed Mission Valley East line and connects to the existing Orange line.

San Diego Association of Governments (SANDAG) – The San Diego Association of Governments is the metropolitan planning organization for San Diego region. While SANDAG develops regional initiatives that relate to land development policy, such as the *Regional Growth Management Strategy*, these regional initiatives are nonbinding. SANDAG has no authority to enforce the provisions it endorses or to compel local jurisdictions to do so. The success of such regional policies, therefore, depends upon the decision of each member local jurisdiction to comply.

Mission Valley East LRT Corridor

San Diego, CA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The city of San Diego has developed and adopted a comprehensive set of policies to promote transit-oriented development in the Mission Valley East corridor. Actual development in the corridor appears to be producing the clustered urban form originally called for in the *Mission Valley Community Plan*. Major characteristics of land development and land development planning in the corridor are summarized below.

- Development in the San Diego Mission Valley East corridor is organized around the proposed light rail line in three general clusters. A medium-sized employment center with small factories, medical facilities, and other industrial and commercial land uses surrounds the westernmost two stations of the proposed light rail line. Large single-use institutions (San Diego State University and the Alvarado Medical Center) surround the two stations toward the center of the project corridor. A fully developed suburban community surrounds the easternmost two stations of the corridor. Plans for future development appear to be supportive of the proposed light rail investment.

- The San Diego State University (SDSU) provides a strong focal point for the Mission Valley East corridor. With a large, non-resident student population and event venues such as the Cox Arena, the SDSU is a strong activity center. SDSU has also provided strong support for development of the Mission Valley East Light Rail Transit segment and of transit-oriented development in the corridor. The University has entered into agreements with the Metropolitan Transit Development Board (MTDB) to share facilities and costs for the development of the SDSU station. In addition the SDSU Foundation, a private, non-profit entity associated with the university, owns much of the land within the College Community Redevelopment Area and is planning to develop the properties into a transit-oriented village that includes higher intensities of housing and retail services.

- The city of San Diego has developed a comprehensive set of city-wide policies to promote transit-oriented development and urban form. The *Transit-Oriented Development Design Guidelines* specify standards for urban form, provision of open space, the spatial layout of the street and circulation system, the location and design of transit stops, and the design of parking facilities. Revisions to the Zoning Code incorporate several transit-oriented zone designations. These revisions promote denser single family housing by allowing subdivision of smaller lots and by including a Townhouse Zone. The Zoning Code also includes an Urban Village Overlay Zone to allow more flexible site planning and a Transit Area Overlay Zone to reduce parking supply in areas with high levels of transit service.

- The city of San Diego appears to have taken significant steps to reduce regional parking supply, especially in the vicinity of transit station areas. The planning department can apply a Transit Area Overlay Zone to reduce parking for developments (especially for commercial uses) in areas with high levels of transit service. The planning department also allows for reductions for multiple family housing and for mixed use projects based on shared parking ratios. The city has also taken the significant step of placing limits on parking supply throughout the city. Parking requirements outside of transit station areas, however, remain relatively high. For example, the planning department requires that office or commercial developments supply between 3.3 and four parking spaces per 1,000 gross square feet of gross leasable area.

- Revisions to the *Street Design Manual* include notable accommodations to pedestrians in street layouts and design standards. The manual includes several new classifications of streets such as

pedestrianways, bikeways, and transitways. Several changes also enhance the pedestrian environment by reducing the requirement for intersection spacing, prohibiting cul-de-sacs where they would impede pedestrian or transit circulation, and accommodating traffic calming features. The manual also removes prohibitions on alleys as a means to relocate automobile access to the back of lots.

- Although there is no comprehensive corridor-wide strategy to coordinate development throughout the six stations of the Mission Valley East corridor, the necessary policy tools to implement transit-oriented development are in place. The city has provided comprehensive guidance on design, development standards, and pedestrian circulation. Individual communities and private entities have taken direction independent of these general policies to establish local area development plans that support the proposed transit investment. The corridor could benefit from some general oversight to ensure that local community plans are implemented in a manner consistent with the rest of the corridor.

OCEANSIDE – ESCONDIDO PASSENGER RAIL PROJECT

Project Location:	San Diego County, CA
Lead Agency:	North San Diego County Transit Development Board (NSDCTDB) and North County Transit District (NCTD)
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Commuter Rail
Length:	22 miles (35.2 kilometers)
Number of Stations:	15 stations
Total Estimated Capital Cost:	$193.7 million ($1995)
2015 Ridership Forecast: (Average Weekday)	19,768 daily, 15,100 new riders

CORRIDOR SUMMARY

Location in Region:	A west to east alignment in northern San Diego County connecting the coastal city of Oceanside with medium-sized inland cities.
Transportation Linkages:	• Metrolink commuter rail service to Orange and Los Angeles Counties at the Oceanside Transit Center; • Amtrak intercity rail at the Oceanside Transit Center; • Coaster commuter rail service to San Diego at the Oceanside Transit Center; • Greyhound Bus service from Oceanside Transit Center; and • Escondido Transit Center.
Existing Land Use:	Large suburban residential tracts with commercial and industrial space scattered throughout.
High-Trip Generators:	The central business districts of Oceanside, Vista, San Marcos, and Escondido; California State University at San Marcos.
Significant Factor(s):	The presence of redevelopment plan areas in the corridor, especially in the central business districts of several cities, can provide strong implementation support for transit-oriented development if policies were strengthened.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Land development in the corridor is generally a mix of residential, commercial, and industrial space built at low densities. There is no prevalent land use pattern and no strong focus on the proposed rail corridor. • While population and employment are generally dispersed, concentrations of activity occur within the central business districts of Oceanside, Vista, San Marcos, and Escondido, several hospitals, and the campus of the California State University at San Marcos.	**Low-Medium**
2. Containment of Sprawl • The northern San Diego County area has experienced high rates of growth in population of between two percent to four percent per year between 1990 and 1995. • Policies to contain sprawl have been adopted but lack strict limits on the spatial expansion of development. The San Diego Association of Governments (SANDAG) is encouraging more intense development around transit stations. In the northern county, SANDAG has sponsored a Multiple Habitat Conservation Plan to identify lands to be preserved as wild habitat.	**Medium**
3. Transit Supportive Corridor Policies • Land development regulation is uneven among the different jurisdictions in the corridor. The city of Oceanside has been the most active in defining opportunities for pedestrian-oriented mixed use development. • Requirements for infrastructure payments by developers may indirectly encourage infill development.	**Low-Medium**
4. Supportive Zoning Regulations Near Transit Stations • The Transit District Overlay Zone in Oceanside allows flexibility to promote mixed use clustered development within a pedestrian-friendly context. • Requirements for affordable housing in redevelopment districts may indirectly support transit-oriented development around transit centers in the Cities of Oceanside, Vista, and Escondido.	**Medium**
5. Tools to Implement Land Use Policies • Advocacy for transit-oriented development involves non-conventional constituencies such as the associations of realtors and the building industry and the San Diego Chamber of Commerce. These organizations have endorsed the San Diego Air Pollution Control District's *Tools for Reducing Vehicle Trips Through Land Use Design.*	**Medium**

SUMMARY OF KEY FINDINGS (continued)	*FTA Rating*
6. Performance of Land Use Policies • The North County Transit District has made joint development agreements with owners of property adjacent to a few stations sites. These agreements have a narrow focus on station access, off-site improvements, and parking provision, with no provisions for land development. • Guided by more direct transit-oriented policies, redevelopment agencies can provide strong institutional support for transit-oriented development, especially in the downtown areas in the corridor.	**Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Oceanside-Escondido Corridor Passenger Rail Project involves the conversion of an existing 22-mile freight rail corridor into a light rail transit system that would travel in an east-west alignment in northern San Diego County. The proposed light rail line would travel between the coastal city of Oceanside and Escondido passing through the cities of Vista and San Marcos. The rail system will serve 15 stations, including four that connect at existing transit centers.

CORRIDOR DESCRIPTION

The Oceanside – Escondido Corridor contains the primary centers of population in northern San Diego County. The corridor includes the medium-sized cities of Oceanside, Vista, San Marcos, and Escondido. The rail alignment generally follows State Route 78, the primary west to east corridor in northern San Diego County, between Interstate Highways 5 and 15. Low-density suburban residential development comprises a large portion of the corridor area. Commercial and industrial clusters are scattered throughout the corridor.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Administration of transit in northern San Diego County is handled by two entities – the North San Diego County Transit Development Board (NSDCTDB) and the North County Transit District (NCTD).

North San Diego County Transit Development Board (NSDCTDB) – The NSDCTDB has the task of planning and programming capital improvements for transit in a region that extends from the northern boundary of San Diego County through the city of Del Mar and from the Pacific Coast to the city of Escondido. The board is composed of elected officials from each of the local jurisdictions in its service area. The local jurisdictions represented on the NSDCTDB include the cities of Oceanside, Carlsbad, Encinitas, Solana Beach, Del Mar, Vista, San Marcos, and Escondido, and the county of San Diego (which represents the unincorporated communities in the area).

North County Transit District (NCTD) – The NCTD is the operating agency of the NSDCTDB and is expected to operate the Oceanside - Escondido Rail Project. Existing NCTD service includes three modes – bus, commuter rail, and dial-a-ride paratransit. NCTD's bus service network includes 33 bus routes operated with a fleet of 154 buses. The NCTD also operates the Coastal Express Rail line (also known as the Coaster) between Oceanside at the northern edge of San Diego County and downtown San Diego.

Land Use Planning Agencies

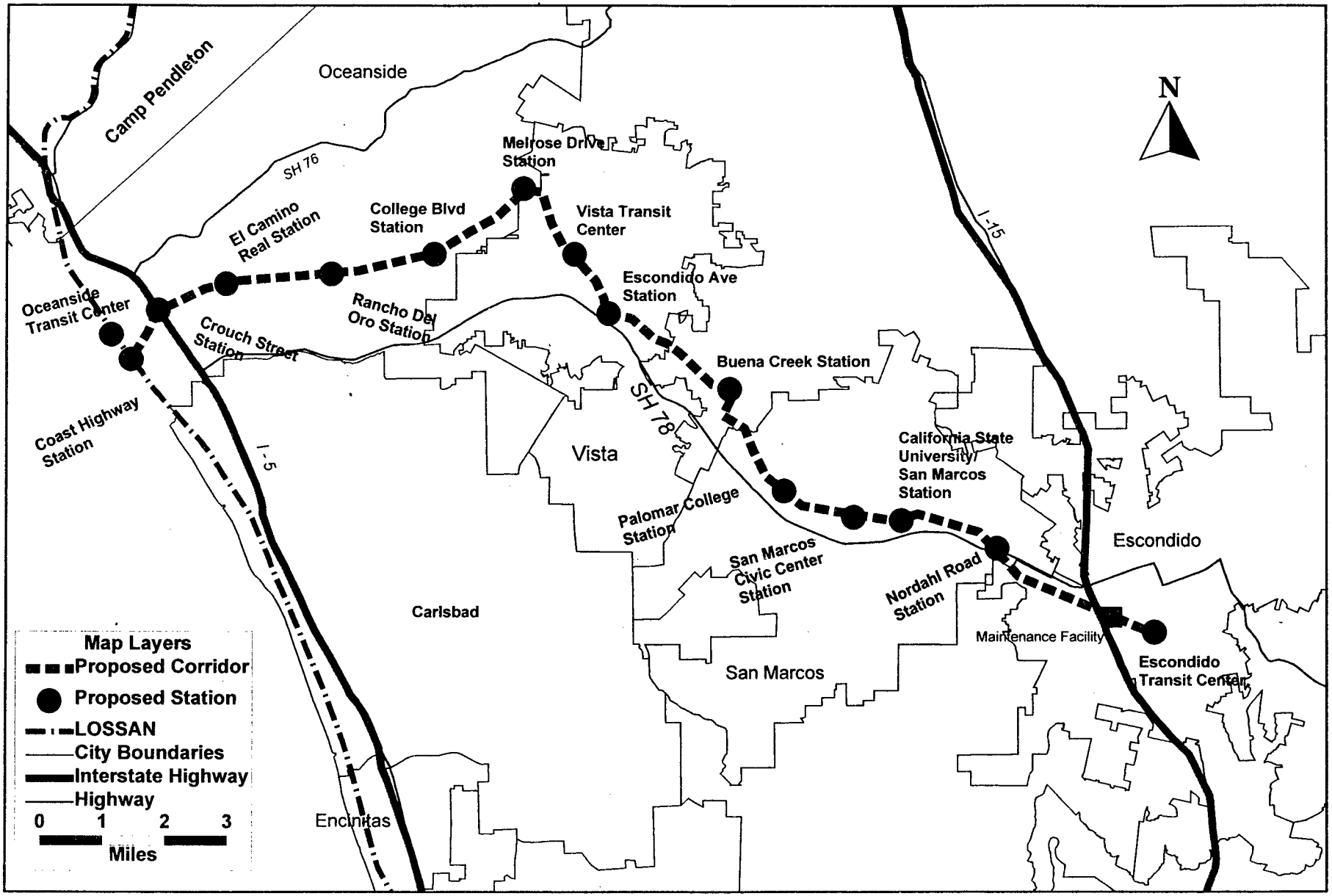
Cities – The corridor passes through four incorporated cities – Oceanside, Vista, San Marcos, and Escondido – which lie within the county of San Diego. Each individual city determines land use and development policies for the land contained within its municipal boundaries. The county of San Diego

provides the same function for unincorporated areas within its boundaries. The county of San Diego, however, does not have direct policy control over incorporated areas.

San Diego Association of Governments (SANDAG) – The San Diego Association of Governments is the metropolitan planning organization for San Diego region. While SANDAG does develop regional initiatives that relate to land development policy, such as the *Regional Growth Management Strategy*, these regional initiatives are nonbinding. SANDAG has no authority to enforce the provisions it endorses or to compel local jurisdictions to do so. The success of such regional policies, therefore, depends upon the decision of each member local jurisdiction to comply.

Oceanside - Escondido Corridor

San Diego, CA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The response of local planning agencies and other institutions in terms of developing transit-supportive land use policies is mixed. This reflects the early stage of project development and the fact that planning and development policy fall under many different jurisdictions. Nonetheless, the four corridor cities have begun to adopt policies that support the proposed rail project.

- Although the corridor appears to be developed generally at low densities, population forecasts indicate that the region may experience high rates of population growth. This high rate of population growth, coupled with the shift of the local housing industry to produce housing at higher densities, may make the corridor more amenable to transit. The corridor, however, appears to lack strong policies to ensure that this additional population and housing are absorbed in higher density clusters around the proposed rail stations.

- The city of Oceanside has developed the most transit-supportive land development policies among the corridor cities. The city has commissioned an Oceanside Transit Corridor Study to determine appropriate strategies to promote pedestrian-oriented, mixed use, intense development around the seven stations proposed for the city. In addition, the city's Rancho del Oro Specific Plan allows for a transfer of residential development within the specific plan area and for the development of mixed-use districts.

- Redevelopment projects seem to be the strongest implementation tool for transit-oriented development in the corridor. The Cities of Oceanside, Vista, and Escondido all have active redevelopment projects in their respective central business districts. Redevelopment projects in the state of California generally place a strong emphasis on the creation of affordable housing. The redevelopment project status of these districts may also allow for greater attention to be paid to urban design and pedestrian amenity. The Oceanside downtown redevelopment district also contains a Transit District Overlay Zone. The regulations that apply to this zone promote mixed-use clustered development, reduced parking requirements, and plans for bicycle and pedestrian facilities.

- San Diego County appears to have a strong foundation for growth management policies. The San Diego Association of Governments has developed a *Regional Growth Management Strategy* that encourages more intense residential and commercial development in major bus corridors and around rail transit stations. The strategy also proposes mixed-use development in community center areas. Compliance, however, depends upon the policies of each individual municipality in the region. This strategy could therefore benefit from stronger provisions to contain sprawl and to focus development. The Multiple Habitat Conservation Plan sets aside some portions of northern San Diego County for long-term preservation from development.

- The San Diego Building Industry Association, the San Diego Chamber of Commerce, and the San Diego Association of Realtors have endorsed a guidance document for local governments called *Tools for Reducing Vehicle Trips Through Land Use*. The guidance document, developed by the local Air Pollution Control District, supports the adoption of pedestrian friendly designs in general plans and zoning ordinances. These endorsements suggest that transit-oriented plans may receive strong implementation support.

THIRD STREET LIGHT RAIL

Project Location:	San Francisco, CA
Lead Agency:	San Francisco Municipal Railway (MUNI)
Review Date:	November 1997
FTA Land Use Rating:	High

PROJECT SUMMARY

Project Phase:	PE initiated in fall 1997. Completion of DEIS/DEIR expected by September 1998
Mode:	Light Rail
Length:	7 miles
Number of Stations:	24
Total Estimated Capital Cost:	$445.7 million ($ escalated) Phase I IOS
2015 Ridership Forecast: (Average Weekday)	79,965 daily; 2,351 new riders

CORRIDOR SUMMARY

Location in Region:	Runs from San Francisco CBD south to San Francisco city/county line, parallel to shore of San Francisco Bay.
Transportation Linkages:	Existing MUNI streetcar/subway lines (five) in CBD; BART regional rapid transit in CBD; Caltrain commuter rail.
Existing Land Use:	Dense, large regional CBD with mixed uses; high-density urban residential and neighborhood commercial; industrial/warehouse and redevelopment areas.
High-Trip Generators:	San Francisco CBD; high-density residential neighborhoods with existing high-transit use; Mission Bay development under construction.
Significant Factor(s):	Industrial/warehouse areas in corridor are currently undergoing redevelopment or redevelopment planning for high-intensity mixed use.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: High**

- The proposed system serves a very dense regional CBD (over 200,000 jobs in a square mile) as well as medium- to high-density (30 to 54 units per acre) urban residential neighborhoods with integrated neighborhood commercial uses.
- The system also serves a number of industrial areas, many of which are currently underutilized but are being redeveloped for various residential, commercial, and entertainment uses as well as for manufacturing.
- Neighborhoods throughout the corridor are pedestrian-scaled and walkable, and many areas are highly pedestrian-oriented.

2. Containment of Sprawl **FTA Rating: High**

- The north part of the corridor is attracting considerable redevelopment which is in keeping with the general character of the city as a high-density, mixed-use urban environment. The city views improved transit service as a key factor in attracting further redevelopment to the corridor.
- The larger context of regional market trends and growth management policies was not discussed in the documentation.

3. Transit Supportive Corridor Policies **FTA Rating: High**

- San Francisco's *General Plan* has long encouraged higher-density and transit-oriented development.
- Area plans have been developed for much of the corridor and redevelopment planning is being conducted through an established process which includes considerable community and professional involvement. These planning efforts contain a strong focus on achieving high-density, transit and pedestrian-oriented development.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: High**

- City and area plans are supportive of transit-oriented development throughout the corridor.
- The city is currently preparing detailed plans for redevelopment areas of the corridor which will include specific land use and improvement proposals, design guidelines, and proposed zoning changes.

5. Tools to Implement Land Use Policies **FTA Rating: Medium-High**

- Transit-supportive planning policies and zoning requirements currently exist throughout the city and more specific plans are being developed for redevelopment areas in the corridor.
- The San Francisco Redevelopment Agency has special powers to facilitate redevelopment in these areas.

SUMMARY OF KEY FINDINGS (continued)

6. Performance of Land Use Policies **FTA Rating: Medium-High**

- Planning and implementation of specific new development projects have been occurring most rapidly in the northern part of the corridor, particularly in the South of Market and Mission Bay areas.
- In the southern part of the corridor, economic development planning efforts are expected to facilitate both the revitalization of the commercial district in Bayview and future employment growth, including industrial employment.
- While light rail is an integral part of planning and development, it is not clear to what extent development is being shaped specifically by policies and planning related to rail transit as contrasted with general development planning efforts or market forces.

PROJECT OVERVIEW

PROJECT DESCRIPTION

The proposed LRT line, formerly referred to as the Bayshore Corridor, which would be seven miles long and contain 24 stations, would be built in two phases. The five-mile Phase 1 (Initial Operating Segment) will operate as a surface line from the Bayshore Caltrain station on the south (at the San Francisco city/county line) to King Street. At King Street, it will connect to an existing MUNI Metro line which serves the waterfront via the Embarcadero and downtown via a tunnel underneath Market Street. Phase 2 would extend the new line north from King Street via subway into downtown, with the terminal in Chinatown. The subsequent assessment is based on specifying differences between those two phases of the project, to reflect both the increased funding uncertainty associated with Phase 2 and the very different land use patterns in the two construction phases of the corridor.

A significant rationale for the project is to improve the quality of transit service in a corridor of existing high-transit usage, and to accommodate future increases in transit use as a result of urban redevelopment in the corridor. A total of 66,000 daily transit trips are currently made in the corridor, and this is forecast to double to 135,000 in 2015 under the No Build/TSM alternative. Construction of the light rail system is expected to result in an additional 2,000 transit trips in Phase 1 and 7,000 trips in Phase 2.

The locally preferred alternative was selected in July 1997, and a financial plan to fund Phase 1 is being developed. Preliminary engineering was initiated in the fall of 1997. Completion of the DEIS/DEIR is expected by September 1998. Capital costs (in 1997 dollars) are estimated at $370 million for Phase 1 and $510 million for Phase 2, for a total of $880 million.

CORRIDOR DESCRIPTION

From north to south:

- The San Francisco CBD is large and dense, with 200,000 to 240,000 jobs in an area of about one square mile. The CBD also contains a variety of other uses, including regional retail, civic, and cultural centers, high-rise residential, and entertainment. Chinatown, which will be served by the Phase 2 extension, is north of the CBD and is a very high-density urban residential and commercial neighborhood.

- South of Market has traditionally been a location for industry and working-class housing but is changing rapidly. Former industrial sites are being redeveloped or adapted for high-density residential, high-tech office, and retail uses. A new major league baseball stadium is planned at the waterfront and would be located near the terminus of the Phase 1 project (south portal for the Phase 2 Central Subway).

- Mission Bay is an underutilized industrial area and brownfield site which is expected to undergo a major redevelopment beginning within the next three years. This will include a new medical research campus for the University of California at San Francisco, up to 6,000 residential units, 1.4 million square feet of retail space, and 5.6 million square feet of research and development, light industrial, and office use.

- Central Waterfront is an area of industrial and warehousing uses near Third Street, transitioning to medium-density residential uses farther west. Some new housing developments have been constructed, but the area is not expected to undergo significant redevelopment.

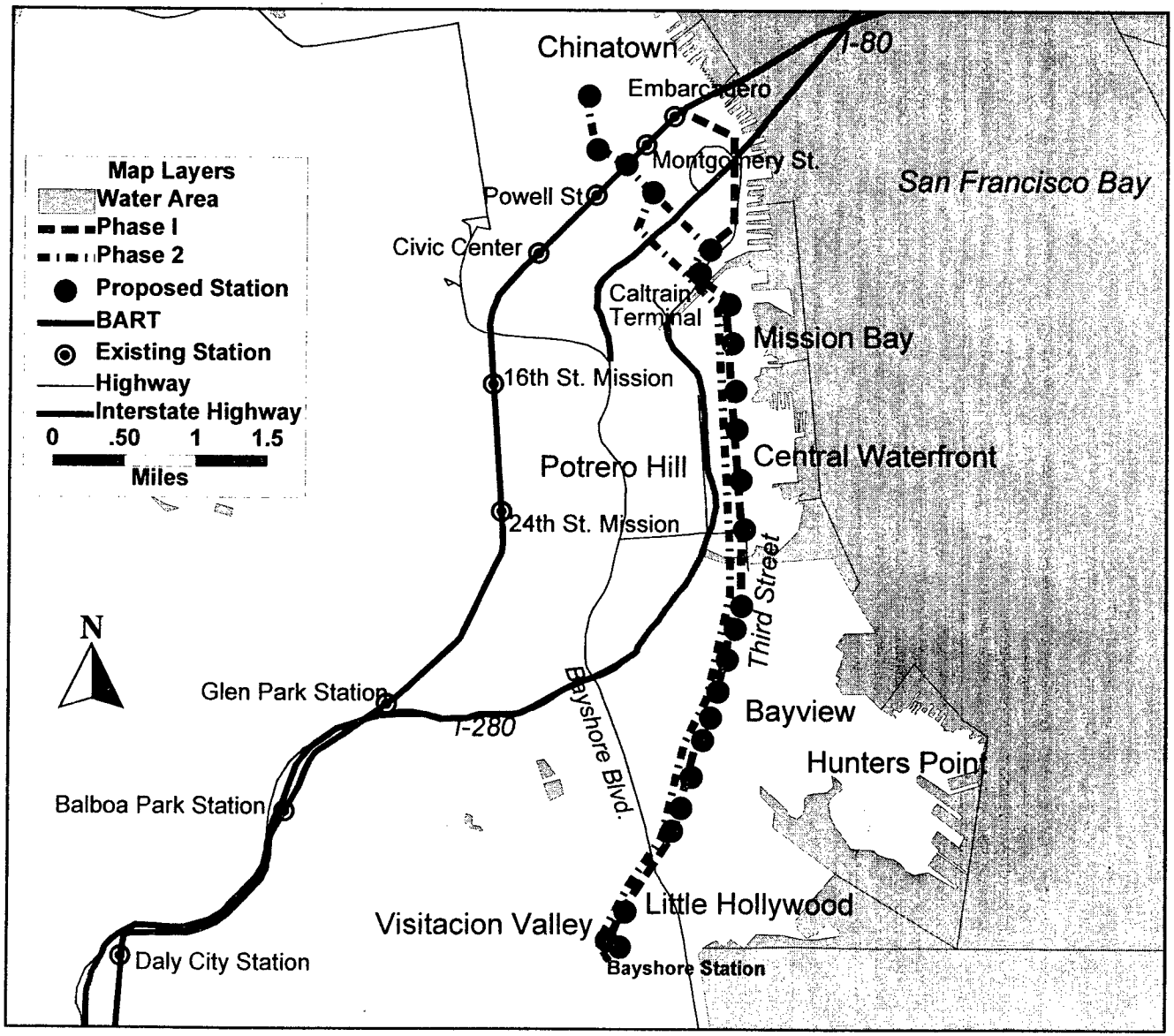
- The Bayview/Hunters Point and Visitacion Valley neighborhoods are characterized mainly by medium-density residential development with some high-density residential as well as light industrial and warehouse uses, and neighborhood commercial along Third Street. These areas include a significant low-income population, and there are a number of empty storefronts and vacant lots. Both neighborhoods are designated as Federal Enterprise Communities. 3Com (Candlestick) Park, a professional sports stadium, is located not far from the terminus of the line.

DESCRIPTION OF LOCAL AGENCIES

The San Francisco Municipal Railway (MUNI) is the sponsoring transit agency for the project. MUNI is responsible for local bus and streetcar service within the city of San Francisco. The entire corridor is contained within the city of San Francisco and is subject to its planning processes and regulations.

Third Street LRT

San Francisco, CA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The Third Street Light Rail Project serves a mix of medium to high-density urban, residential and commercial neighborhoods, as well as industrial and warehouse areas. Some industrial areas, particularly in the northern half of the corridor, are being redeveloped for a variety of high-intensity uses, and transit ridership in this corridor is expected to grow substantially in the future. While the light rail system itself is expected to increase transit use by a relatively small amount over existing bus ridership, it is viewed as a key element in facilitating future development by providing improved transit service quality and adequate capacity to support this development.

- San Francisco is densely developed and transit usage in most areas of the city, including the Third Street corridor, is high. (Residential areas in the corridor have densities of 30 to 54 units per acre and current transit ridership is 66,000 daily). The Phase 1 project will provide some improvements over existing bus service in the corridor by providing rail access to the CBD. However, the most significant benefits will be realized under Phase 2, which will provide more direct access to the CBD via a new subway. Phase 2 will also provide subway service to densely developed Chinatown.

- Transit ridership in the corridor is currently limited somewhat because the corridor passes through a number of underutilized industrial and warehousing areas. Redevelopment is either taking place or planned in some of these areas, and is supported by both market forces and planning activities by the city. The South of Market area has been experiencing considerable new residential, retail, and commercial development, as well as reuse of older structures for high-tech office and research and development uses. A large tract of Mission Bay is owned by a single developer, who is planning high-density residential, retail, commercial, and institutional development. In the southern part of the corridor, the city is undertaking redevelopment planning for the Bayview/Hunters Point neighborhood, although a specific development program has not yet been created.

- Although specific station area plans for the system have not been developed, the city has a number of general zoning and design policies in place to ensure that development is transit-oriented and pedestrian-friendly. The city's *General Plan* and various redevelopment or area plans contain policies and guidelines intended to maintain a high-density profile and scale, with a mixture of land uses in many areas. These policies include vertical as well as horizontal zoning regulations to permit mixed neighborhood commercial and residential development; limitations on parking, particularly in the CBD; and guidelines for pedestrian and transit-oriented design. Plans specific to this corridor include the *South Bayshore Area Plan* and the draft *Design Guidelines for Mission Bay*, as well as the redevelopment plans being developed for the Bayview/Hunters Point neighborhood.

MINILLAS EXTENSION TO TREN URBANO

Project Location:	San Juan, Puerto Rico
Lead Agency:	Puerto Rico Highway and Transportation Authority (PRHTA)
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	Preliminary Engineering
Mode:	Heavy Rail
Length:	1 mile (1.6 kilometers)
Number of Stations:	2 stations
Total Estimated Capital Cost:	$432 million ($ escalated)
2015 Ridership Forecast: (Average Weekday)	9,300 to 14,400 new riders

CORRIDOR SUMMARY

Location in Region:	The corridor is located near the economic and cultural center of the San Juan Metropolitan Area between Old San Juan and Condado to the northwest and the Hato Rey financial district to the southeast.
Transportation Linkages:	Extends the Phase I Tren Urbano line (under construction) from the Sagrado Corazón Station.
Existing Land Use:	High densities of commercial and mixed use development along Avenida Ponce de León with more residential development on adjacent blocks. Numerous institutions and civic and cultural facilities are scattered throughout.
High-Trip Generators:	Minillas Government Center, Fine Arts Center, the Pavía, San Jorge, and San Carlos Hospitals, Sagrado Corazón University.
Significant Factor(s):	Although land use plans are not strongly transit-oriented, the densities and land use mixes of the existing pattern of development can support a high-capacity transit service.

SUMMARY OF KEY FINDINGS	*FTA Rating*
1. Existing Land Use • Land uses in the Santurce district are highly varied with a mixture of commercial, civic, cultural, and residential uses. Development appears to have such high densities and to be located and designed in a finely grained pattern to yield a pedestrian-friendly urban form. • Activity centers such as the Center of Fine Arts, the Minillas Government Center and several hospitals and colleges appear to provide strong focal points of activity for the San Juan metropolitan area.	**Medium-High**
2. Containment of Sprawl • The Santurce area is already a highly built up district making dramatic changes in land use mix and density difficult. • Policies of the Commonwealth of Puerto Rico contain language that supports management of development growth, yet it is unclear how these policies will be implemented and what the strength of enforcement will be.	**Medium**
3. Transit Supportive Corridor Policies • The lack of a definite alignment and station sites may limit the development of transit-oriented plans. • Established parking policies do not appear strongly transit-supportive.	**Medium**
4. Supportive Zoning Regulations Near Transit Stations • No planning processes are in place or are specifically designed to support transit-oriented corridor development. • The Commonwealth's Special Zoning Regulation for Santurce includes pedestrian treatments and design for streetscapes, densification of uses, and a promotion of a mix of uses.	**Medium**
5. Tools to Implement Land Use Policies • There do not yet appear to be any implementation tools to support transit-supportive development in the corridor.	**Low-Medium**
6. Performance of Land Use Policies • For this turnkey design-build project, the Puerto Rico Highway and Transportation Authority (PRHTA) has contracted with a consulting firm to coordinate the development of the transit system with development of transit-supportive station areas. • Several significant development projects are proceeding at proposed station sites despite the lack of an existing station planning process.	**Low-Medium**

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Puerto Rico Department of Transportation and Public Works (DTPW), through its Highway and Transportation Authority (PRHTA), is proposing a one-mile extension of the Tren Urbano transit system which is currently under construction between the Sagrado Corazón Station in the southern section of the Santurce district in the city of San Juan to the Bayamón Centro Station in the city of Bayamón. The proposed project would extend the Tren Urbano system north from the Sagrado Corazón Station into the district of Santurce to serve an additional two stations, terminating near the Minillas Government Center.

There are two alignment options for the proposed extension. One alignment would extend to the west from the Sagrado Corazón Station on an elevated guideway along the north side of Avenida Muñoz Rivera and then turn to the north along the western edge of the Route 22 highway. The elevated guideway would descend into a depressed cut south of Fernandez Juncos Avenue and continue in an open cut to an underground station just south of Avenida Ponce de León. A second alignment would extend north from the Sagrado Corazón Station and descend into a subway alignment to travel under Avenida Ponce de León. At Avenida Ponce de León, the alignment would turn to the west under Ponce de León serving two stations at Avenida J. Fidalgo Díaz and the Minillas Government Center.

CORRIDOR DESCRIPTION

The proposed Minillas Extension to the Phase I Tren Urbano transit line extends into the Santurce district of the Municipality of San Juan. This district has traditionally been the center of commercial and cultural activity in San Juan. Although much of the focus of commercial activity has moved to the financial district of Hato Rey to the south, Santurce remains as the site of high densities of commercial activity and housing. As mentioned in the project summary, there are two alignment options for the proposed extension. One alignment would extend to the west from the Sagrado Corazón Station along the north side of Avenida Muñoz Rivera and then turn to the north to travel along the Route 22 highway. The second alignment would extend north from the Sagrado Corazón Station toward Avenida Ponce de León where it will turn west to follow Avenida Ponce de León. Both alignment options serve the Minillas Government Center. The alignment option which follows Avenida Ponce de León (the main thoroughfare through the district of Santurce) has stations which are closer to the central commercial and cultural facilities in the district. The alignment which follows the highways has a higher proportion of highway right-of-way and residential uses close to the stations.

DESCRIPTION OF LOCAL AGENCIES

Transportation Agencies

Puerto Rico Highway and Transportation Authority (PRHTA) [*Autoridad de Carreterras y Transportation (ACT)*] is responsible for administration and management of the Tren Urbano Program. The HTA is organized under laws of Puerto Rico as a corporate body constituting a public corporation and governmental instrumentality. The Tren Urbano Office (TUO) functions within the framework of the HTA and is responsible for the planning, design, procurement and construction of the Tren Urbano Program. Decisions concerning the Tren Urbano project, therefore, are centralized in the office of the

Department of Transportation and Public Works (DTPW) [*Departamento de Transportation y Obras Publicas (DTOP)*] with ultimate authority in the Secretary of Transportation. The Department of Transportation and Public Works is active in land development planning through the development of station area surveys and the development of a Short-Range Transit Center Plan.

Land Use Planning Agencies

Puerto Rico Planning Board (Commonwealth of Puerto Rico Office of the Governor) –The Puerto Rico Planning Board develops general land use policy for the entire commonwealth through documents such as the Objectives and Public Policy of the Land Use Plan of Puerto Rico and the Land Use Plan for the San Juan Metropolitan Area. The commonwealth's regulatory power appears to extend to the local level. For example, this Board developed the Special Zoning Regulation for Santurce. Other commonwealth bodies impact land development and urban form. The Puerto Rico Governor's Office of Urban Affairs developed general guidelines for the public infrastructure and public space.

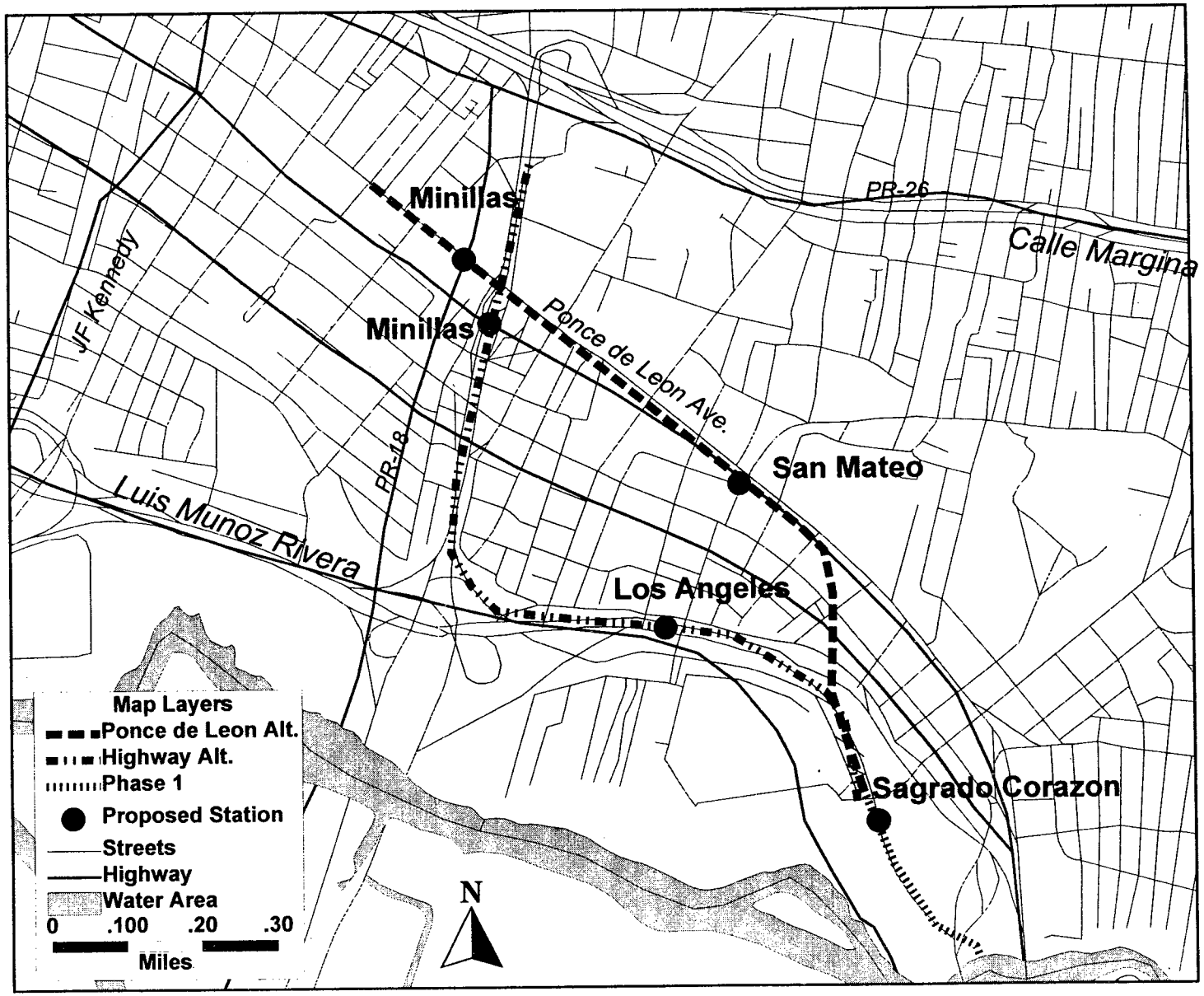
Other entities that affect local land use policy:

Municipality of San Juan Planning Department – The Municipality of San Juan Planning Department performs basic planning oversight. It has expressed support for Tren Urbano and seeks to work with the Tren Urbano Office on the development of station areas within the municipality of San Juan.

General Management and Architectural and Engineering Consultant (GMAEC). PRHTA has a turnkey design-build contract with a general management and architectural and engineering consultant (GMAEC) to provide managerial and technical expertise for the Tren Urbano Phase I Project. The GMAEC reports to the HTA through the TUO. General implementation of planning and environmental issues is coordinated within the GMAEC.

Minillas Extension

San Juan, Puerto Rico



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The corridor for the proposed Minillas extension of the Tren Urbano rail line demonstrates an intensity of development that can already both benefit from and support high-quality, high-capacity transit service. The lack of a definite alignment in the corridor, however, appears to be delaying the establishment of transit-supportive land use and urban design plans. Some additional general observations are summarized below.

- The mixture of uses and intensity of development and the dense street pattern in the Minillas area appear to support an amenable pedestrian environment. One of the proposed alignments (which follows Avenida Muñoz Rivera and Route 22), however, places stations adjacent to wide highway facilities. The width of these highway facilities creates an environment that may limit the extent to which pedestrians can access the stations.

- San Juan has a comprehensive set of policies that collectively support transit-oriented development. These policies endorse mixed use development, walkways in commercial areas and urban centers, and the provision of medium and high-density housing. Planners and policy makers might improve these policies by specifying in them in greater detail and by empowering certain agencies to implement them.

- The Commonwealth of Puerto Rico has established growth management strategies for the San Juan Metropolitan Area and general guidelines on urban infrastructure. The policies, however, do not appear to indicate which agencies can enforce them or how stringently they apply.

- The General Management and Architectural and Engineering Consultant (GMAEC) provides both transportation planning and some land development planning services, which facilitates coordinated planning for station areas with planning for the Minillas extension. The GMAEC's central role in the development of the Minillas extension may compensate for the lack of an established station area planning process.

SEATTLE SOUND MOVE (CENTRAL LIGHT RAIL TRANSIT)

Project Location:	Seattle, WA
Lead Agency:	Central Puget Sound Regional Transit Authority (RTA)
Review Date:	November 1997
FTA Land Use Rating:	Medium-High

PROJECT SUMMARY

Project Phase:	Initiation of PE pending; DEIS to be issued fall 1998
Mode:	Light Rail
Length:	23 miles
Number of Stations:	23
Total Estimated Capital Cost:	$1.7 billion ($1995)
2020 Ridership Forecast: (Average Weekday)	107,000

CORRIDOR SUMMARY

Location in Region:	Runs north-south through city of Seattle, from North Seattle to CBD, south Seattle neighborhoods, and Cities of Tukwila and SeaTac.
Transportation Linkages:	SeaTac International Airport (southern terminus). The Light Rail Transit (LRT) project is part of a regional transit investment program including commuter rail, express bus/high-occupancy vehicle lanes.
Existing Land Use:	CBD has high-total employment and density. Some dense, pedestrian-oriented residential/mixed-use neighborhoods. Other areas with lower density yet still urban residential and neighborhood commercial. Land use characteristics in Tukwila and SeaTac are not available.
High-Trip Generators:	CBD, University of Washington, First Hill/Capitol Hill neighborhood, SeaTac International Airport, two shopping malls, three smaller colleges/universities, four hospitals, two suburban employment centers.
Significant Factor(s):	High growth area; strong growth management and transit-oriented development policies adopted at both regional and city level.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: Medium-High**

- The Seattle CBD has high total employment and density. The corridor also runs through some very dense residential areas and serves several large trip generators with a large portion of transit trips, (the corridor currently generates 140,000 transit trips daily).
- The CBD and several of the neighborhoods served by the project are characterized by mixed uses (commercial, retail and residential) in a pedestrian friendly environment.
- The information provided was not sufficient to assess density, land use mix, and pedestrian environment for the southern part of the corridor.

2. Containment of Sprawl **FTA Rating: Medium-High**

- The region is expected to continue to grow over the next 20 years. Strong growth management policies have been adopted by the State and the region which establish urban growth boundaries and call for higher-density, transit- and pedestrian-focused development. Local consistency with these plans is required.
- While growth management policies appear strong at all levels, supporting documentation was not provided and details of these policies could not be assessed.

3. Transit Supportive Corridor Policies **FTA Rating: Medium-High**

- Dense, mixed use transit and pedestrian-oriented development is promoted in a wide range of land use plans for jurisdictions in the corridor.
- The station area planning process has recently begun.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: Medium**

- Because this project is just entering preliminary engineering and station locations have not been finalized, station area planning is in early stages. Design charettes have been held to begin gathering public input into station area planning in the university area and Ranier Valley.
- Existing plans support dense, mixed use development along the corridor, but no new amendments or zoning specific to transit stations have been adopted yet.

5. Tools to Implement Land Use Policies **FTA Rating: Medium**

- Specific tools to implement transit-oriented policies from local and regional plans were not identified.
- The RTA has a strong tradition of community involvement, and some charettes and meetings have been held in neighborhoods along the corridor.

6. Performance of Land Use Policies **FTA Rating: Medium**

- No new policies have been implemented in conjunction with the project, and the project is not advanced enough to expect station-area development proposals.
- The RTA board has established a task force to explore joint development opportunities.

PROJECT OVERVIEW

PROJECT DESCRIPTION

The Central Puget Sound Regional Transit Authority is set to begin preliminary engineering for the Sound Move project. This project is described as "a comprehensive, integrated regional system of high-capacity transit services, including:

- A 23-mile Central LRT project running north to south from Northgate through downtown Seattle, Southeast Seattle and the cities of Tukwila and SeaTac, plus a two-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 14 new direct access ramps and a number of new park-and-ride lots and transit centers, integrated with 100 miles of existing HOV lanes."

Capital costs for the entire project are estimated at $3.07 billion, including $1.70 billion for the LRT and $539 million for the commuter rail (1995 dollars). The project is expected to increase daily transit ridership in the region by 131,000, and total ridership on the LRT line is projected to be 107,000.

This land use evaluation focuses only on the Central LRT portion of the project. No information was provided on land use for the commuter rail, bus, or Tacoma LRT portions of the project.

CORRIDOR DESCRIPTION

The Central LRT corridor is defined to include any traffic analysis zone through which the LRT runs. From north to south, the proposed light rail system serves the following areas:

- Northgate is the northern terminus of the line. It contains a major shopping center, college, office and medical employment centers, and a transit transfer station serving King and Snohomish County buses. The area currently has 16,000 residents and 12,000 jobs and is expected to grow to 22,000 residents and 21,000 jobs by the year 2010. Currently the design is primarily auto-oriented, but the Northgate Plan establishes a transition to a pedestrian-oriented, walkable urban neighborhood served by light rail and improved bus service.

- The University District is home to the University of Washington which has 35,000 students. This district is characterized by dense, mixed-use development, with retail on the ground floor under office or residential uses. A majority of the University community uses transit, walking, or bicycling, and the University's overall single-occupancy vehicle mode split is 24 percent.

- First Hill/Capitol Hill is a very dense residential and mixed-use neighborhood containing 47,000 residents and 38,000 jobs. The neighborhood is characterized by mid- and high-rise apartments and multiple-use buildings. It is also a center of hospital and medical-related employment and contains a college and a university.

- Downtown Seattle contains 160,000 jobs as well as retail, government, and entertainment centers at high densities. The proposed light rail line will be accommodated by a new 1.4-mile, five-station tunnel currently used by buses. Transit mode share to the CBD is approximately 40 percent, and over 10,000 people live downtown.

- Southeast Seattle is a primarily residential area with about 65,000 people and 20,000 jobs. The main thoroughfare is characterized by active commercial areas and high-transit ridership. The area contains both low-income and high-income neighborhoods as well as a variety of ethnic groups.

- The city of Tukwila has a population of 15,000 and employment of 47,000, with employment anticipated to grow to 62,000 by 2010 and 74,000 by 2020. The city is a manufacturing and industrial center.

- The city of SeaTac is home to SeaTac International Airport. The city is forecast to experience high-employment growth and is working to create a pedestrian-oriented urban center.

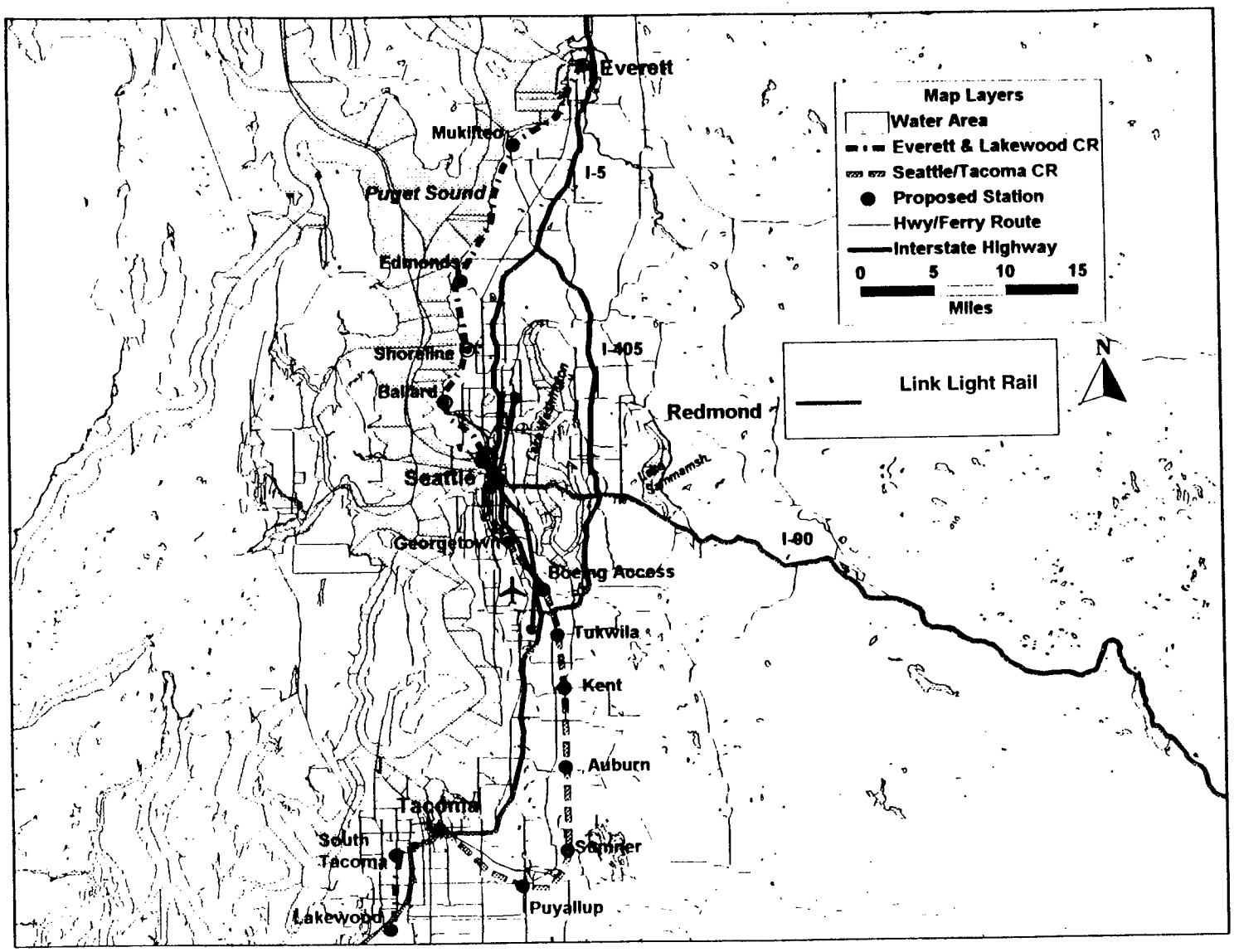
DESCRIPTION OF LOCAL AGENCIES

The Central Puget Sound Regional Transit Authority (RTA) is the sponsoring agency for the project. The RTA board is made up of elected officials from cities and counties throughout the region, and most RTA board members also serve on the board of the Puget Sound Regional Council, the regional MPO. Also, by law, at least half of the board members must serve on the governing boards of local transit operators.

Land use in the light rail corridor falls under the jurisdiction of the city of Seattle, the city of Tukwila, unincorporated King County, and the city of SeaTac. The state of Washington and the Puget Sound region have also adopted policies which affect land use and transportation planning at the regional and municipal level.

Sound Move Regional Transit System

Central Puget Sound, WA



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- The proposed Central LRT Corridor is an existing high-use transit corridor, generally serving the densest neighborhoods in the city of Seattle. Some stations also serve lower-density suburban employment centers and industrial areas which appear to have the potential for transit-oriented development. Both the city and the region have adopted policies which are strongly oriented toward containing sprawl and focusing growth around transit hubs, so additional transit-oriented development appears likely to occur in conjunction with the rail system.

- The First Hill/Capitol Hill and University of Washington neighborhoods, north of the CBD, contain existing high-population densities, pedestrian-friendliness, and transit usage. The CBD itself also contains a large number of jobs (160,000) at a high density. Neighborhoods in south Seattle are somewhat lower density but are still urban in character and exhibit relatively high-transit usage. Many of these neighborhoods have a significant low-income population.

- State, regional, and local agencies, including the State, MPO, city of Seattle, and RTA, appear strongly interested in managing growth to limit sprawl and to become transit-focused. The State has adopted policies to establish urban growth boundaries and to establish legally enforceable mechanisms to plan for and manage growth. The region has adopted *Vision 2020*, a land use plan and growth strategy which identifies a network of high-density urban centers connected by transit, and with which local comprehensive plans must be compatible. The region's 1995 *Metropolitan Transportation Plan* identifies the transportation network necessary to support *Vision 2020*. Seattle's comprehensive plan identifies a network of Urban Centers, Hub Urban Centers, and Residential Villages within which new growth will be concentrated.

- Despite strong regional and local policies aimed at focusing future development to be transit-oriented, few specific opportunities for such development in the Central Corridor were identified. Northgate, the northern terminus of the rail line, is an employment, college, shopping, and medical center which is currently suburban and auto-oriented in character. The Northgate Plan establishes a transition to a pedestrian-oriented, walkable urban neighborhood served by light rail and improved bus service. High-employment growth is forecast at the south end of the corridor in the cities of Tukwila and SeaTac. The Comprehensive Plans of these cities recognize their role as "Designated Urban Centers" under *Vision 2020*, and SeaTac is working to improve its pedestrian environment. However, specific policies by these cities to facilitate transit-oriented development around light rail stations were not available for review, and their commitment to focusing future growth to be transit-oriented cannot be assessed. Also, most of the corridor within the city of Seattle is already urbanized, and specific opportunities for transit-oriented redevelopment and infill were not identified in the documentation.

LARGO CORRIDOR METRORAIL EXTENSION

Project Location:	Washington, D.C. Metropolitan Area (Prince George's County, MD)
Lead Agency:	Maryland Mass Transit Administration (MTA)
Review Date:	November 1997
FTA Land Use Rating:	Medium

PROJECT SUMMARY

Project Phase:	Currently in PE; FEIS to be completed by January 1998
Mode:	Heavy Rail
Length:	3.1 miles
Number of Stations:	2
Total Estimated Capital Cost:	$397.1 million ($ escalated)
2015 Ridership Forecast: (Average Weekday)	28,500 daily

CORRIDOR SUMMARY

Location in Region:	Eastward extension of Washington Metropolitan Area Transit Authority (WMATA) Metrorail Blue Line from Addison Road; serves eastern suburbs of Washington, D.C., terminating at Beltway.
Transportation Linkages:	Extension of existing WMATA Metrorail line.
Existing Land Use:	Low-density suburban residential interspersed with multi-family housing, office parks, civic uses, and two major professional sports/ entertainment facilities. Much of land adjacent to station areas is not yet developed or is being developed according to Master Plans.
High-Trip Generators:	USAirways Arena; Jack Kent Cooke professional football stadium (located ½ to one mile away). Three nearby business parks.
Significant Factor(s):	A major function of stations is park-and-ride access. Master plans for station areas also include a mix of office, retail, and residential uses with integrated pedestrian access.

SUMMARY OF KEY FINDINGS

1. Existing Land Use **FTA Rating: Medium**

- The study area as a whole appears to consist of low-density suburban residential development interspersed with multi-family housing, office parks, civic uses, and two major professional sports/ entertainment facilities.
- Much of the land directly adjacent to the two station areas is not yet developed or is in the process of being developed according to established plans. These plans call for mixed uses, higher intensities, and pedestrian design in station areas.

2. Containment of Sprawl **FTA Rating: Medium-High**

- Developments are planned or underway for both station areas which would include a mix of office, retail, and residential uses with integrated pedestrian access. If the Metrorail extension is constructed, station-area development is expected to occur at densities higher than elsewhere in the area.
- Both the State and the county have growth management policies although the effectiveness of these policies at channeling growth into areas served by transit is not clear.

3. Transit Supportive Corridor Policies **FTA Rating: Medium**

- WMATA has an extensive history of facilitating transit-oriented development at Metrorail stations.
- Local plans call for mixed-use, transit-oriented development. While these would occur at moderate densities, county-wide processes are in place to allow for consideration of increased densities in the future.

4. Supportive Zoning Regulations Near Transit Stations **FTA Rating: Medium**

- Existing zoning by the local communities permits moderate-density mixed-use commercial and residential development in station areas.
- County and transit agency policies allow for the development of Transit District Overlay Zones which can be used to increase densities.
- More specific zoning and plans for the station areas are expected to be developed once construction of the WMATA Metrorail extension has been approved.

5. Tools to Implement Land Use Policies **FTA Rating: Medium**

- Prince George's County has a number of tools available which could potentially be used to provide incentives for development in the corridor and in station areas.
- WMATA continues to actively pursue joint development opportunities under a formalized program.

6. Performance of Land Use Policies **FTA Rating: Medium**

- Some development has been occurring in the Largo Town Center area according to existing plans.
- Since the Metrorail extension has not yet been approved, it is too early to judge the success of land use policies at achieving higher-intensity transit-oriented development in the proposed station areas. However, WMATA has actively pursued transit-oriented development at other stations and the local jurisdictions appear potentially supportive of further transit-oriented planning efforts.

PROJECT OVERVIEW

PROJECT DESCRIPTION

This project is a three-mile extension of the Washington Metropolitan Area Transit Authority's (WMATA) Metrorail Blue Line from Addison Road Station east to Largo Town Center. The project includes two new stations: Summerfield and Largo Town Center. The terminal Largo Station is located on the outer side of the Capital Beltway (I-495). As a heavy rail system, the line would run on exclusive right-of-way primarily at-grade and on elevated structures, but with some tunnels due to topography.

Preliminary engineering is underway, and the Final Environmental Impact Statement was completed in October 1997. Capital cost is estimated at $347 to $374 million in 1997 dollars. Ridership in 2020 is forecast at 20,000 trips, of which 15,300 are new transit trips.

CORRIDOR DESCRIPTION

The proposed extension serves a suburban area with a mix of developed and undeveloped land. Developed land includes low-density single-family residential, planned-unit multi-family (apartment and condominium complexes), office parks, civic uses, and two major professional sports/entertainment facilities. Existing developments are generally self-contained and served by a hierarchical street system oriented toward automobile access. Bicycle and pedestrian through-trails are also being developed in conjunction with park planning for the area.

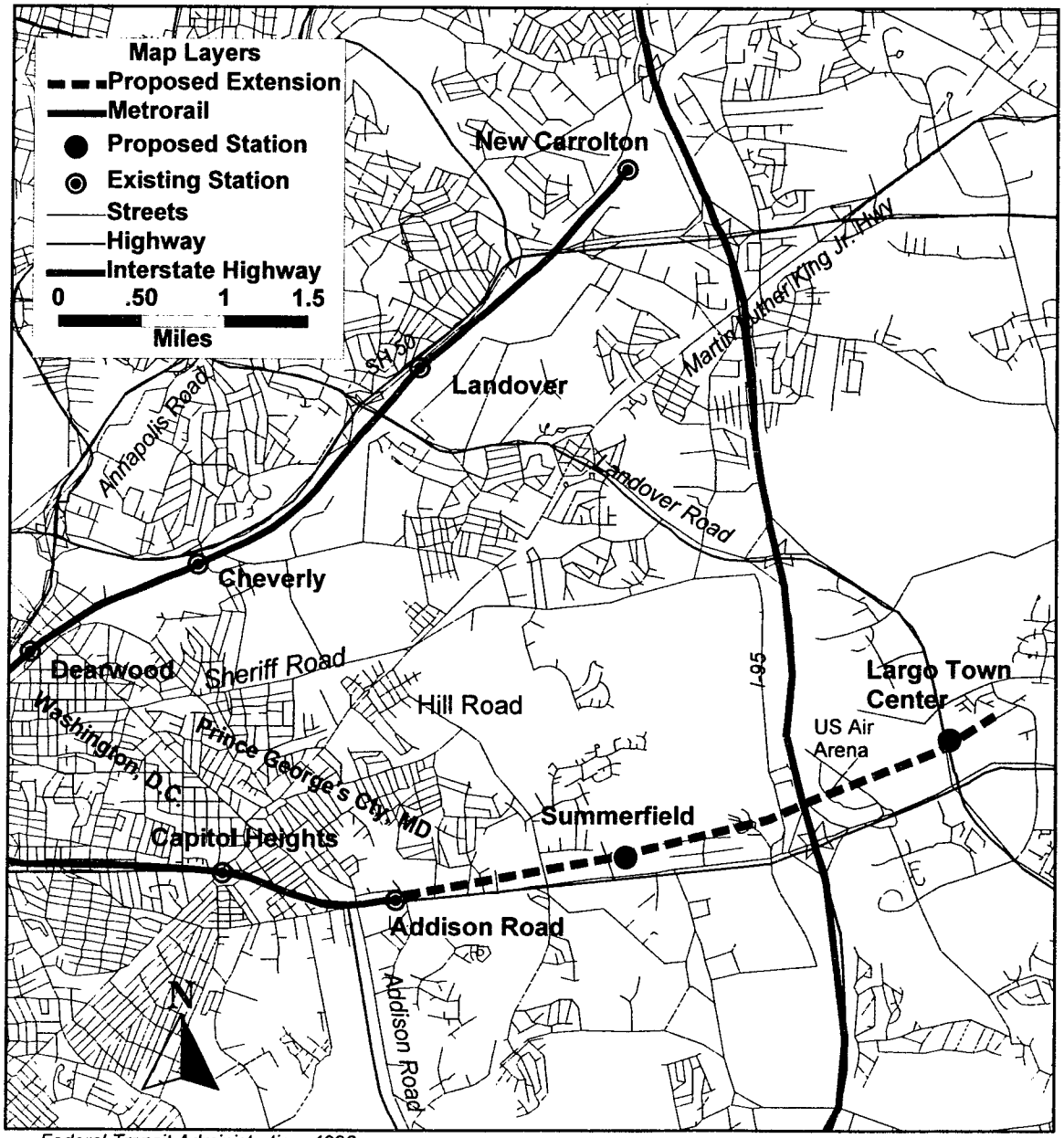
Much of the land in the station areas is undeveloped or is currently being developed according to recently adopted plans. These plans call for mixed uses, higher intensities, and pedestrian access and design in station areas. The Summerfield Station contains a nearby residential community and a planned transit-oriented Local Activity Center. Largo Town Center contains the USAirways Arena and 162 acres planned for residential, office, and retail development, some of which has been completed. Both stations also incorporate park-and-ride lots.

DESCRIPTION OF LOCAL AGENCIES

While the Washington Metropolitan Area Transit Authority (WMATA) is the operator of the Metrorail transit system, the Maryland Mass Transit Administration (MTA) has taken the lead on planning for this project. The two agencies have been working cooperatively on land use planning issues.

The proposed extension serves the towns of Landover (Summerfield Station) and Largo-Lottsford (Largo Station). Planning for both towns is conducted by the Maryland-National Capital Park and Planning Commission (M-NCPPC), which is the planning agency for Prince George's and Montgomery Counties. The National Capital Region Transportation Planning Board (TPB) is the region's MPO.

Metrorail to Largo Town Center
Washington, D.C.



Federal Transit Administration, 1998

SUMMARY AND CONCLUSIONS

- Existing land uses in the Washington Metropolitan Area Transit Authority's (WMATA) Metrorail Blue Line Extension corridor are generally suburban in nature and oriented toward automobile access. Master plans for both station areas call for mixed-use residential, office, and retail, and civic "town center" developments with integrated pedestrian access to transit stations. While construction of the transit system will lead to increased densities in station areas compared to development which would occur otherwise, overall densities in proximity to stations are still likely to be relatively moderate. A primary function of the extension is, and will continue to be, improved access for park-and-ride commuters from the Beltway and from central and eastern Prince George's County.

- Existing developed land use in the area consists of low-density single-family residential, planned-unit multi-family (apartment and condominium complexes), office parks, and civic uses. Two major professional sports/entertainment facilities are also located in the area: the USAirways Arena is located adjacent to Largo Station, while the new Jack Kent Cooke professional football stadium is located ½ to one mile away. Existing developments are generally self-contained and served by a hierarchical street system oriented toward automobile access. Bicycle and pedestrian through-trails are also being developed in conjunction with park planning for the area, and are expected to be connected to station areas to increase non-motorized access to stations.

- County policies recommend the concentration of land uses within a quarter-mile radius of Metrorail stations, and the county has the option to activate a Transit District Overlay Zoning (TDOZ) to increase densities in station areas. The county has also developed master plans for the communities which include the station areas. The *Landover and Vicinity Master Plan* proposes major community activities, retail and office uses for the Hill Road Community integrated with the future Summerfield Station, as well as a mixed-use, transit-oriented Local Activity Center in the station area. Residential densities of 10 to 20 dwelling units per acre are planned for the station area. The *Largo-Lottsford Master Plan* includes a mixed-use development of multi-family residential, office, and retail in the Largo Town Center. Plans for Largo Town Center call for over two million square feet of office space, over 300,000 square feet of retail, hotel, and restaurant space, and 1,500 dwelling units (of which 630 are now complete) at densities of 10 to 48 per acre. Master plans also include integrated pedestrian access to stations. Finally, WMATA has also been active in promoting station area and joint development and is designing stations to allow future air rights and integrated development.

- While these policies and plans suggest that transit-oriented station area development is likely to occur, specific station area plans and zoning changes to allow an increase in density over existing permitted levels have not yet been developed. Once the project has been approved, further specific planning activities will be undertaken.

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