



Dade County
Metropolitan Planning
Organization

**Dade County
Transit Corridors
Transitional Analysis**

**Technical
Memorandum
Task 2:**
Identification, Collection,
and Review of
Previous Work

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Dade County Transit Corridors Transitional Study

Task 2

IDENTIFICATION, COLLECTION, AND REVIEW OF PREVIOUS WORK

July 1992

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Metropolitan Dade County
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DADE COUNTY TRANSIT CORRIDORS TRANSITIONAL STUDY

IDENTIFICATION, COLLECTION, AND REVIEW OF PREVIOUS WORK

INTRODUCTION

The Transit Corridors Transitional Study is being conducted by the Dade County Metropolitan Planning Organization to identify and evaluate transit alternatives in six corridors within the County. At the conclusion of the study a set of potential alternatives for each corridor will be presented and one or two corridors will be advanced into a more detailed alternatives analysis/draft environmental impact stage.

The six corridors under study, shown in the attached figure, are:

- **South**
Dadeland South Station Metrorail to Cutler Ridge (8.4 miles)
- **Kendall**
Dadeland North Metrorail Station to S.W. 137th Avenue (7.5 mi.)
- **West**
Downtown Miami to Florida International University at the Homestead Extension of Florida's Turnpike (H.E.F.T.) (12.2 miles)
- **Beach**
Downtown Miami to 71st Street on Miami Beach (10.9 miles)
- **North**
Dr. M.L. King Jr. Metrorail Station to N.W. 215th Street (8.5 miles)
- **Northeast**
Downtown Miami to N.E. 199th Street (13.6 miles)

In addition, a shorter extension of Metrorail has been identified for further study:

- Extension from Okeechobee Station to Palmetto Expressway (0.7 miles),

An inventory was conducted of documents relevant to transit planning in Dade County. The following narrative presents a historical summary of the Dade County transit perspective, including major planning studies and relevant technological issues addressed by the County and various consultants.

A bibliography of data sources and technical reports is included as well as a chronology of transit events.

HISTORICAL SUMMARY

For the last three decades, Metropolitan-Dade County has been developing a balanced comprehensive transportation system, including both roadways and transit. The transit component of this system was first defined in the Miami Urban Area Transportation Study (MUATS) begun in 1964 and updated and revalidated by Gannett Fleming as recently as the late 80s, with the MUATS Model Validation and Year 2010 Plan Update (see References 11a, 11b and 11c and 35). The MUATS Update, which provides a reference point for the present Transitional Study, built upon the County's earlier transit plans, as formulated in the first MUATS round (completed in 1971), then initiated through the 1972 Decade of Progress bond issue, and subsequently expanded in the 1978 Transportation Master Plan for the Year 2000. It also reflected information developed in the Metro-Dade Transportation Plan Update Project (see References 12a and 12b), prepared by Gannett Fleming in the early 80s to incorporate changing fiscal realities and projections of future conditions derived from 1980 census data.

Given the point in the new decade in which this Transitional Study is being prepared, it confronts similar circumstances as those present when the Metro-Dade Transportation Plan Update Project was prepared. Then, new 1980 census data had to be incorporated into the forecasts of travel demands and conditions, and the planning model validated for use in the study. In the present case, the newly released 1990 census data had to be entered into the model, and the model revalidated.

Transit planning in Dade County has been facilitated by the work performed by the County's own staff, starting as early as 1968, when the Planning Department established goals, objectives and policies to guide transportation planning in the County, and developed standards for the initial MUATS work (see Reference 24). Underlying these goals and objectives was the General Land Use Master Plan, adopted in 1965, a forward-looking document which took the County well-beyond existing development to anticipate eventual corridors of growth.

Subsequently, with ever-greater sophistication, the County developed successive comprehensive plans, each of which increased the focus on transit planning to serve the projected expansion of the populated area and activity centers. The Year 2000 and 2010 Comprehensive Master Plan, prepared in 1988 (see Reference 22), clearly established the framework for rapid transit corridors, and identified major traffic generators and attractors through 2010 in its Mass Transit Element.

An even more detailed complement to the County's comprehensive plans is the specific transportation planning documents prepared by the Metropolitan Planning Organization. For example, in the Year 2010 Metro-Dade Transportation Plan (see Reference 27), the projected transit needs of the County as a whole, and each of six areas of analysis are assessed and integrated into proposed priority improvements. The corridors identified in that Plan provide the foundation for this Transitional Study.

Relevant background information for this Transitional Study includes not only the County's transportation plans and plan updates, but also other studies focusing on specific aspects of the evolving transit system. Seminal to this study is the documentation related to the development of Metrorail and Metromover (see References 16a, 16b and 16c as well as 36, 37, 38). The extensive analyses underlying the Stage 1 program, including the ridership forecasts and other assessments, when reviewed with the benefit of almost a decade of use, provide invaluable points of comparison for this Transitional Study.

Other studies, such as the series of reports, prepared by Bombardier, Inc. and Alsthom between 1986 and 1988, concerning the proposed Florida High Speed Rail (see References 3a, 3b, 3c and 9), which is not a factor in the County's transit plans at this time, are interesting from a historical point of view only. Others, such as the Miami Beach Light Rail Transit System Feasibility Study, prepared by Parsons Brinckerhoff Quade & Douglas, Inc. and Metric Engineering in 1988 (see References 32a, 32b, and 32c), contain patronage and design information that must be considered in evaluating the Miami Beach extension of the proposed transit corridor.

The critical subject of system patronage has also been addressed in a variety of other studies prepared to assess the feasibility of developing specific transit system components. These include:

- The Florida East Coast Corridor Study Commuter Rail Forecast, prepared in June 1975 by H.J. Ross Associates, Inc. and DeLeuw, Cather & Company (see Reference 15) to analyze the potential patronage of commuter rail service on the existing Florida East Coast Railway tracks in a corridor running between North Palm Beach and Miami. This very preliminary study utilized previously developed travel data and modal split relationships to determine whether there was sufficient justification to warrant further study and development of plans for commuter rail service in this corridor.
- The Mode Choice Model Patronage Forecasts, prepared by the Kaiser Transit Group in June 1978 (see Reference 16b) for the Stage 1 Rapid Transit System (Metrorail). This study developed a design forecast as well as a short-term forecast, using low, medium, and high projections which reflect, respectively, minor, moderate, and aggressive pro-transit policies.
- The Dade County Parking/Transit Ridership Study, prepared by K.T. Analytics, Inc. in January 1987 (see Reference 17) to identify ways of increasing Metrorail ridership through downtown and station parking policies. This study, commissioned by the Parking Task Force, addressed both parking pricing and parking supply options, for downtown Miami and analyzed the reactions of interested parties in Miami to each one. It also considered bus access and Metrorail station parking and recommended short- and long-term integrated implementation strategies to encourage transit ridership. Finally, it presented other strategies to increase ridership, including fare and service

policies, marketing, auto restraints, land use policies, and regional parking policies.

- The 1986 Southeast Florida Travel Characteristics Evaluation Study, prepared by the COMSIS Corporation (see References 5a and 5b). This two-part study collected and examined data in the three-county region comprising Dade, Broward and Palm Beach, surveying a sample of households to identify household characteristics and travel patterns for internal travel and then surveying motorists at nine sites in the study area to determine external origin-destination trip characteristics.

On more general grounds, in 1991, the American Public Transit Association (APTA) published the results of a study showing that increases in bus fares lead directly to loss in ridership. This APTA study, *Effects of Fare Changes on Bus Ridership* (see Reference 1), attempted to establish a fare elasticity estimation procedure reflective of 90s technology which could be used in diverse transit systems. Unlike the previously used Simpson-Curtin formula, which postulated a 3.3 percent decrease in transit patronage for a 10 percent increase in fare, this study found a range of fare impacts varying between peak and off-peak hours and between large and small cities. The average fare elasticity was found to be -0.40, which is greater than the -0.30 identified by Simpson-Curtin.

Other studies have explored means of providing ground transportation improvements for specific traffic-generating hubs, such as Miami International Airport and the Port of Miami. In January 1989, Frederic R. Harris, Inc. completed the Miami International Airport Transportation Study for the Dade County Metropolitan Planning Organization and the Florida Department of Transportation (see Reference 10a). The study assessed five major conceptual alternative transportation system improvements, including freeway, arterial, intersection, interchange, and mass transit solutions to the Airport's needs as well as those of people using Airport area roads for non-Airport-related travel. It concluded that as much as 80 percent of traffic approaching the Airport on regional roadways will not have an Airport-related destination by 2010. Thus areawide transportation plans and programs must not only consider the needs and priorities of both the Airport area and the entire county, but also must take care not to worsen conditions for Airport-related traffic by introducing new freeway corridors that would attract additional regional traffic into the Airport area. Among the transit-related improvements recommended for further study and implementation are transit system expansion including an East-West line from Downtown to Florida International University with a connector from the Airport, and a multimodal transportation center, located to the east of the Airport, linking Metrorail, Tri-County commuter rail, high-speed rail, and surface buses. For the respective improvements recommended, this study also includes highway volumes and transit ridership estimates, and preliminary impact evaluations.

Subsequently, in the Airport Area Multimodal Access Study, prepared in early 1992 by Frederick R. Harris, Inc. (see Reference 10b) the need for an intermodal approach to correcting transportation system deficiencies and serving major activity and employment centers was further addressed. The study advanced the concept of a multimodal access

facility, coordinated with other projects so as to increase ridership on transit modes, including Tri-Rail, Metrorail, eventual High Speed Rail, and Amtrak and to link up with the passenger facilities at Miami International Airport. The focus of this study is consistent with the Intermodal Surface Transportation Efficiency Act of 1991 and the Florida Department of Transportation Intrastate Highway System Policies and Priorities.

Issues related to Port of Miami ground access have been discussed from varying perspectives over the last decade. In 1983, the Downtown Development Authority of the City of Miami summarized the City's concerns about access alternatives being considered to support the Port's projected expansion (see Reference 7). These alternatives encompassed varying bridge and tunnel alignments; but did not include the eventual transit interface made possible by the selected solution: a high-level bridge, now operational, and, if feasible, a tunnel, still under study (see Reference 34 and still unpublished Preliminary Development and Engineering studies prepared by Post, Buckley, Schuh & Jernigan, Inc.).

The transit side of seaport access -- particularly with respect to the cruise passenger ridership between the airport and seaport -- was analyzed in the Tri-Rail Airport-Seaport Connection Feasibility Study, prepared in early 1991 by Post, Buckley, Schuh & Jernigan, Inc. This study, limited to determining whether existing Tri-Rail equipment and State-owned right-of-way could be feasibly utilized to carry cruise passengers between the two points, particularly on weekends, concluded that the implementation of a more comprehensive transit solution would better serve the needs of the community for an Airport-Seaport link.

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CHRONOLOGY: TRANSIT PLANNING AND IMPLEMENTATION IN DADE COUNTY

- 1960 Metropolitan Transit Authority created by County Commission ordinance providing for the purchase, development and operation of countywide mass transit.
 - 1964 Commencement of Miami Urban Area Transportation Study (MUATS) with a transit feasibility study.
 - 1969 First phase of MUATS concluded that a rapid transit system would be feasible and desirable.
 - 1971 Final MUATS recommended \$800-million rapid transit system.
 - 1972 Decade of Progress bond issue (\$132.5 million) approved, with provision for local share of construction of rapid transit plus expanded feeder bus service.
 - 1974 Metro Transit Authority dissolved. Metro Transit Agency created.
 - 1978 Transportation Master Plan for Year 2000 approved by County Commissioners. Plan included eventual expansion of rapid transit lines northeast to 193rd Street near Broward County line, south to Cutler Ridge, and west to the Midway Mall area with a link to Miami International Airport.
 - 1979 Groundbreaking for Stage I of the Metrorail system.
 - 1981 Development of Metropolitan Dade County's Long-Range Transportation Plan. Metro Transit Agency and Dade County's Office of Transportation Administration merge into Metropolitan Dade County Transportation Administration, with jurisdiction over Metrorail, Metrobus and Metromover.
 - 1983 Metro-Dade Transportation Plan Update Project initiated to evaluate and validate information used in forecasting future conditions and impacts of transportation system alternatives.
 - 1984 Metrorail begins operations.
 - 1985 Network '86 implemented to integrate, simplify, and consolidate local transit service.
- Adoption of Long Range Element of the 2005 Metro-Dade Transportation Plan: "Improvement Priorities," identifying transit needs over a 20-year period. This Long Range Element identified a three-stage program of rapid transit improvements in five corridors: to the southwest to Cutler Ridge, to

the west with a connection to Miami International Airport, to the northwest, to the northeast, and to Miami Beach.

- 1988 Miami Urban Area Transportation Study updated and model validated.
- 1989 Stage I Metromover begins operation.
- 1990 Commissioning of studies to refine and implement transit corridors.
- 1991 Dade County Transit Corridors Transitional Study begun.
- (1994) Stage II Metromover to open.

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