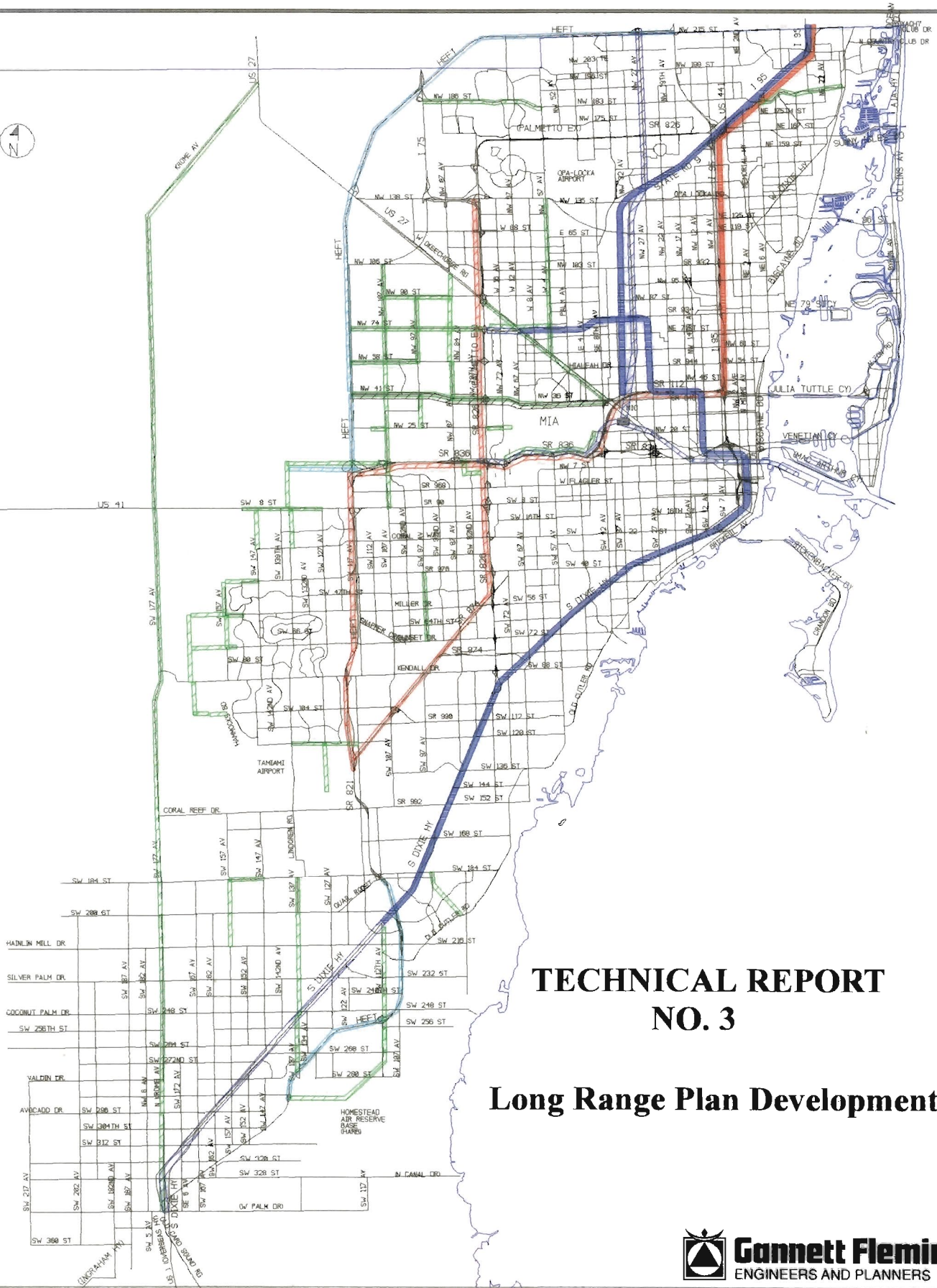


# METRO-DADE TRANSPORTATION PLAN TO THE YEAR 2015

## RECOMMENDED COST FEASIBLE PLAN

(Projects shown are in addition to the 5-year TIP)



### TECHNICAL REPORT NO. 3

### Long Range Plan Development





Marina

01-December-1995

DRAFT

Transmitted by  
Telephone Facsimile  
and First-Class Mail

Mr. Myung-Hak Sung  
Gannett Fleming, Inc.  
4902 Eisenhower Boulevard  
Suite 295  
Tampa, Florida 33634

Re: Initial Comments on the LRTP Document

Dear Mr. Sung:

Enclosed for your information and follow-up on the subject of the Long Range Transportation Plan (LRTP) documentation is a package of comments which I have compiled based upon preliminary comments received from MPO and FDOT staff. Many of the comments reflect the need to incorporate thorough discussion of how the Plan was developed in the ISTEA paradigm.

**How these comments are addressed will have direct implications on the LRTP, how it will be perceived and ultimately approved by the agencies.**

The majority of the embellishment to the text, and other enhancements to the document, will not be affected by any changes made to the Plan by the Board, and therefore should be made as soon as possible. I would like to receive the next draft on Thursday, December 7th when you arrive for the Public Hearing. I will then forward copies through this office and FDOT for review.

Please call me if you have any questions.

Sincerely,

Michael T. Moore, Principal Planner  
MPO Secretariat

Enclosure

c: J.L. Mesa (w/ enclosure)  
A. Vandervalk (w/ enclosure)

## PRELIMINARY STAFF COMMENTS ON THE DRAFT YEAR 2015 LRTP DOCUMENTATION

### 1. General

#### a. Extent of Content

In general, the discussion in most of the sections is brief and can be expanded to fully explain each topic. Where a topic may be too substantial to discuss in a particular section, there should be some introductory text explaining the topic, some language to explain the linkage between the topic and the Plan, and reference to where additional information on the topic can be found, whether it be in the appendices or in a separate report.

#### b. Cosmetics

With the high-tech desktop publishing capabilities now available, and the high visibility of this project and documentation, it seems appropriate to request that graphics, pictures, sidebars, etc. be incorporated into the body of the text in various places. We believe that such enhancements which would make the user want to really read the document. You may recall that we provided copies of the Destination 2001: Metro-Miami Marketplace executive summary to offer an example of these enhancements to you.

#### c. Cover

The document cover will be supplied by the MPO Office. Keeping the same basic cover will make it clear that it all belongs to the same family of documents.

### 2. Page 2

This page and the following pages before the Table of Contents should be page-numbered lower case roman numerals.

### 3. Page 4

Please insert the line: J.A. Ojeda, Jr., Assistant County Manager under the County Manager's name.

### 4. Page 5

This table of acknowledgments has some problems. We provided this table in digital format, but some of the names of individuals and departments have been cut off.

Please also adjust the page so that the text at the top of page 6 fits on page 5.

### 5. Table of Contents

The Table of Contents should include the Appendices, the List of Figures and the List of Tables, per our approved outline.

6. Page 1, Section I(A).

"Acknowledgments" section should be referred to as Acknowledgments (Page iv).

7. Page 2, Section I(B).

The text under "Purpose of the LRTP" may be misplaced because it more accurately describes the plan development process. I recommend that you borrow text previously drafted for the promotional brochure and other products to describe the federal mandate and why in general transportation planning and the development of the Plan are good ideas to begin with.

8. Page 4, Section I(C).

In this section, and in other sections throughout the document, references to the Miami Long Range Plan should be changed to "Dade County's Long Range Transportation Plan."

9. Page 6

In the first paragraph, and any other place where it occurs, change the reference "MUATS" to the "Year 2015 Transportation Plan" or similar.

10. Page 7

The discussion on the Public Involvement Process is a good start. I would suggest that a reference be included to steer the reader to request a copy of the MPO's adopted Public Involvement Process document if more detail is needed.

I would also suggest that the text state that the table in the appendix details many of the correspondence steps taken as a part of the public involvement activities. I will also supply you with some of the advertisements we published in the paper, community meeting announcements, and the like, which can be mentioned as well and included in the appendix.

11. Page 8, Section II(A)

Mention that in one of the last public hearings held on the Year 2015 Plan that the MPO's Transportation Aesthetics Review Committee (TARC) requested that an additional Objective be included. The MPO Board unanimously approved it, and it is included herein under the Environmental subheading.

12. Page 9, Objectives

It appears that you may need to insert numbers in front of each of the Objectives in order to accommodate the following comment.

13. Page 10

It is not clear how the ISTEA factors interrelate with the Objectives from the Plan. One suggestion would be to differentiate by doing the following:

ISTEA Planning Factor No. 1: System Preservation/Efficiency - Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently (Year 2015 Plan Objective No. 5)

In addition, refer the reader to the Appendix on "How The ISTEA Planning Factors are Reflected in Dade County's Year 2015 Transportation Plan," while mentioning the table of cross-references.

14. Pages 12 to 14

Some bar charts or other graphics could be incorporated through this section to graphically depict these increases.

15. Page 14

Separate the table from the beginning of the discussion on the Metro-Miami Marketplace.

16. Page 17; Section II(C): The Plan Development Process

The single sentence following this heading is not enough to introduce this section. More introductory text would be good.

Also, this may be the best place to explain how each of the 15 planning factors were addressed in the development of the LRTP. We are drafting a section on this to get you started. It will be transmitted under separate cover.

17. Page 18; Section II(C)2: Financial Resources/Cost Analysis

It may be better to break this section out. Both sections would then need to be beefed up.

Cost Analysis

Regarding the Capital Costs for highways projects, it should be clearly stated where the costs were obtained from and what they include, mentioning also that some monies have already been expended or programmed by way of the TIP.

We also need to include the latest version of the spreadsheet showing the costs of all of the projects in a technical appendix, per the TPTAC recommendation. You may want to include the spreadsheet now, but we should be sure to update it if the MPO Board makes any changes.

A subheading for Highway O&M should be developed, which would then introduce the corresponding table.

### Financial Resources

This section is sure to get a lot of attention.

A digest of how the financial resources projections were arrived at should be included. It needs to be pointed out that the federal and state funding sources were obtained from the FDOT and that the local sources were developed from scratch and that the assumption that fuel taxes would keep up with inflation needs to be explained. Technical Memorandum No. 9 can be referenced as a stand-alone document, but it is in this document that we must also go into detail and address comments that we anticipate receiving from the Feds.

We must identify the strategies in the discussion of financial feasibility, including in the context of the new funding sources. As we have discussed in the past, language may be borrowed from the East-West/MIC EIS in order to elaborate upon additional/new revenues.

18. Pages 19 to 23

The detailed calculations of the bus purchases seems OK, but the algebraic equations listed for each of the T-Study corridors is overkill. Please refine this section.

19. Page 23

Please review the statement on how the \$500 million for the East-West Corridor was arrived at. Otherwise review this section and the section on the MIC and expand upon them, as appropriate. These projects are centerpieces of this Plan and need to be well written.

20. Page 25

Fix this table. It is labeled "Transit Costs" but none are shown.

Also, for the East-West and MIC, language should be borrowed from the EIS to draft the O&M for these projects.

21. Pages 28 to 30

These pages should be downsized to fit onto letter-size pages.

22. Page 31

Some text should be here to accompany this table, and the table should match the one used in the most recent draft of the Adoption document.





**SUMMARY HIGHLIGHTS OF THE**  
**METRO-DADE TRANSPORTATION PLAN**  
**TO THE YEAR 2015**

- ◆ Population and traffic forecasts projected for the period 1995 to 2015 point to significant increases in travel within the metropolitan area.
- ◆ The twenty-year transportation "Needs" proposals identify nearly one hundred major capacity improvements with a price tag of approximately \$6.1 billion. These improvements are defined to address adopted Comprehensive Development Master Plan (CDMP) transportation level of service standards. Operating and maintaining the transportation system during the plan period is estimated to cost an additional \$7.4 billion for a total estimated "Needs" Plan cost of \$13.5 billion.
- ◆ An assessment of the ability of the urban area to build the proposed projects identifies a shortage of approximately half the needed capital funds over the plan period (\$3 billion), assuming that most revenues for capital improvements will be generated in the future at current levels.
- ◆ In addition, projected funds for the operation and maintenance of the transportation system during the plan period will not be sufficient to support the improvements identified in the Needs Plan. A gap of approximately \$1.7 billion has also been identified.
- ◆ A Cost Feasible Plan, estimated to cost \$8.8 billion has been developed to implement the projects identified as priorities in the plan. These priorities address service demands of major traffic generators and important economic centers in the county such as Miami International Airport and the Port of Miami. Also, the mobility needs of the many communities in the metropolitan area are addressed.
- ◆ Public transportation and ridesharing are emphasized in the projects listed. Identified transit needs call for provision of over 60 miles of exclusive right-of-way priority service along six major travel corridors. Also proposed are approximately 40 miles of High Occupancy Vehicle lanes (HOV) along major expressways. Incorporation of the latest electronic technology (Intelligent Transportation Systems) is also proposed for several major projects as another means of easing congested traffic conditions.

- ◆ Proposals for new highways are relatively insignificant when compared to other types of projects, reflecting the fact that the urban area has matured and that the necessary space to build new major highways is either no longer available or extremely costly. The Plan includes, however, many proposals to widen existing primary and arterial roads that carry heavy loads of traffic among suburbs and to and from the city center.
- ◆ A new commitment to non-motorized modes of transportation (bicycling, pedestrians) and to projects that enhance the aesthetics of the urban landscape is proposed in the Plan through the reservation of one and one-half percent of all eligible surface transportation capital funds for these types of projects.
- ◆ In addition to proposed transportation infrastructure and capital needs, a variety of short-term strategies is identified to deal with urban travel congestion ranging from highway traffic design solutions to employer-based measures to promote use of carpooling and public transit. Also, the Plan is supported by a program of policy studies that will recommend courses of action to deal with the many funding, private sector involvement and project-related community issues that need to be resolved to allow the proposed Transportation Plan to be successfully implemented.



METROPOLITAN  
PLANNING  
ORGANIZATION

GOVERNING BOARD

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Katy Sorenson	Javier D. Souto
Raul Valdes-Fauli	Non-Voting Membership: Florida Department of Transportation

Armando Vidal, P.E., County Manager

José-Luís Mesa, MPO Director

## Acknowledgements

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 Dade County Department of Environmental Protection  
 Dade County School Board

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Carolyn Dekle	South Florida Regional	Jose- Luis	MPO Secretariat

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Mario Garcia	Metro-Dade Transit Agency	Bruce Coward	Dade County DERM
Gary Donn	FDOT, District VI	David Daniels	Tri-County Commuter Rail Authority
Rene	FDOT, District VI	Walt Jagemann	Dade County Public Works Department

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Frank Baron	MPO Secretariat	Don Hinson	CTAC
Beth Beltran	Tri-County Commuter Rail	Walt Jagemann	Dade County Public Works
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Wilson	MDTA - Planning &	Norman	CTAC Chairman
Carl Filer	FDOT District VI Programs	Mark Woerner	Dade County Planning Department

The Metropolitan Planning Organization Acknowledges The Valuable Assistance of The CITIZENS' TRANSPORTATION ADVISORY COMMITTEE in Conducting the Public Review Process for the Year 2015 Transportation Plan Throughout the Various Neighborhoods of the County, and Advising Staff on the Many Complex Issues Involved in the Development and Preparation of the Plan.

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# I. Introduction and Purpose

## **I. Introduction and Purpose -**

The Year 2015 Long Range Transportation Plan Update is the 1995 version of the state and federally mandated Long Range Plan for the Metro-Dade urbanized area. The Long Range Plan Update was developed to ascertain the multi-modal transportation improvements necessary to enhance urban mobility in the metropolitan area.

The draft Metro-Dade Transportation Plan Update to the Year 2015 has been developed to guide transportation investments in the metropolitan area during the next twenty years. The Plan is intended to be comprehensive, including connections to major activity centers, between and among roadways, transit facilities and other means of transportation.

### **I(A). Transportation Planning in the Miami Urbanized Area -**

This Plan was developed by the staff of the Metropolitan Planning Organization (MPO) and their consultants in cooperation with the Year 2015 Transportation Plan Update Steering Committee. The members of the Steering Committee, as well as the agencies they represent, are detailed in the “Acknowledgements” section of this report.

The agencies listed are all responsible for some aspect of transportation planning in the Metro-Dade area. Their representation on this Committee ensured coordination among the transportation planning efforts of the individual agencies. Section IV of this report describes the inter-relationship between this Long Range Plan and the various other transportation-related plans developed by these other agencies.



**I(B). Purpose of the LRTP -**

Having a current, carefully developed Long Range Transportation Plan in place gives an urbanized area the ability to plan ahead regarding:

- ▶ right-of-way reservation or acquisition for new or expanding transportation facilities;
- ▶ land use and zoning decisions, where the capacity of the adjacent transportation system will impact these decisions; and
- ▶ budgetary considerations, so that long range financial planning for transportation improvements can occur.

To effectuate these planning measures, a "Needs Plan" or list of all of the transportation improvements found to be *needed* between the present and the Horizon Year (2015), is first developed. The Needs Plan illustrates the facilities necessary to maintain or achieve desired level-of-service standards, where possible. This plan is developed without regard to the costs of the proposed projects.

A Financial Resources Plan is subsequently developed to ascertain the funding levels that will be available toward financing the aforementioned Needs Plan. The Financial Resources document allows those developing the Long Range Plan to determine at what levels the Needs Plan can be financed. This allows a subset of the Needs Plan to be extracted. Those Needs Plan projects that are affordable, per the Financial Resources Plan become the *Cost Feasible Plan*.

Finally, the Cost Feasible Plan projects are prioritized. Priority I projects consist of those found in the current (FY96) Transportation Improvements Program (TIP). Other priority years are as follows:

- ◆ Priority II 2001-2005
- ◆ Priority III 2006-2010
- ◆ Priority IV 2011-2015

The Cost Feasible Plan, with projects listed by priorities can be found in Section III. of this document.

The Year 2015 Transportation Plan can be considered a refinement and enhancement of the last major update of the Plan (The Year 2010 Plan), which was adopted in November, 1990. The current update effort was started in November, 1993. The resulting two-year study has consisted of a complete reassessment of the future capital and operational needs for the County's transit systems and roadway network. In particular, the intent, provisions, and considerations articulated in the Federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 served as direction through the Plan development process, resulting in a comprehensive, multimodal transportation plan for Dade County.

Plan development took many months of technical work and public involvement activities. The Plan was developed through the use of a detailed engineering model and other analytical tools, the results of which were evaluated by a Steering Committee made up of professionals representing state, regional and local agencies. This multidisciplinary perspective facilitated the development of the Plan using a multimodal approach and looked beyond strictly transportation considerations, as ISTEA intended. The citizenry was also represented on the Steering Committee, by members of the Citizens Transportation Advisory Committee.

The travel demand forecasting model considered:

- ▶ the current system of roadway and transit facilities;
- ▶ current population and employment;
- ▶ current traffic and transit ridership;
- ▶ future land use, population and employment; and
- ▶ future traffic and transit ridership.

## **I(C). Legislative Requirements of the LRTP**

Chapter 339 of the Florida Statutes mandates the formation of a Metropolitan Planning Organization (MPO) ". . . within each urbanized area or group of contiguous urbanized areas. . . ." The Statutes go on to describe the responsibilities of the MPOs. Relative to long range planning, the MPO is required to develop a comprehensive long range plan that considers the area's goals and also considers the implementation of Transportation Systems Management (TSM) measures.

More recent legislation has impacted the long range planning process, as well. This legislation includes the Intermodal Surface Transportation Efficiency Act (ISTEA); the Clean Air Act Amendments of 1990 (CAAA); and the Americans with Disabilities Act (ADA). The nature of each piece of legislation and its impacts upon the Miami Long Range Plan Update are discussed in the following sections.

### **I(C)1. ISTEA -**

Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. The purpose of this legislation was to increase the efficiency of all modes of transportation - particularly those alternatives to the single occupant vehicle. ISTEA also mandated new transportation planning requirements for the Metropolitan Planning Organizations (MPOs) and for the various state Departments of Transportation.

Effective November 29, 1993, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) jointly issued revised planning regulations governing the development of (1) statewide transportation plans and programs and (2) transportation plans and programs for urbanized areas. The subject plan, the *Metro-Dade Long Range Transportation Plan Update to the Year 2015*, is subject to these new regulations.

One of the new planning requirements under ISTEA is commonly referred to as the "15 factors" or the "15 planning elements." Section 134(f) of Title 23, U.S.C., and Federal Transit Act Section 8(f) (49 U.S.C. app. 1607 (f)) both list 15 factors that must be considered as part of the planning process for all metropolitan areas.

These 15 factors are considered in this Plan Update. They were integrated into the development of the Goals and Objectives of the Long Range Plan Update. The Goals and Objectives were, in turn, used to develop evaluation criteria, that were used to evaluate the various plan alternatives, and to eventually adopt a finalized Plan. The 15 factors are listed in this report under Section II.(A) Goals and Objectives. Their relationship to the Goals and Objectives, and to the Long Range Plan Update is also discussed in that Section.

#### **I(C)2. The Clean Air Act Amendments (CAAA) of 1990**

The Clean Air Act Amendments (CAAA) of 1990, for the first time mandated a fiscally-constrained Long Range Transportation Plan. The need for financial feasibility was reiterated in ISTEA. The need to develop a plan that could reasonably be expected to be paid for was mandated in the CAAA so that when projections of air quality were developed based upon the plan, there was some assurance that most of the projects that contributed to attainment of air quality standards would actually be constructed.

In order to remain eligible for federal transportation funding, a region must demonstrate that the highway and transit projects included in the plan will help attain and maintain federal air quality standards. The air quality impacts of the plan must be evaluated via computer modeling to demonstrate "conformity" with federal air quality standards. *Projects must have a strong likelihood of being funded to be factored into the conformity equation.* The results of this air quality modeling for the subject plan are included in Appendix 1.

The CAAA provides conformity standards for Long Range Plans that are to be adhered to until new State Implementation Plans (SIPs) can be prepared and approved. The MUATS 2015 must meet these interim standards, which state:

- that the plan must be consistent with the most recent estimates of mobile source emissions,
- that the plan must provide for the expeditious implementation of transportation control measures in the applicable implementation plan, and
- that with respect to ozone and carbon monoxide non-attainment areas, the plan must contribute to annual emissions reductions.

### **I(C)3. Americans with Disabilities Act -**

The American With Disabilities Act (ADA), essentially a civil rights act for the disabled, calls on public transit systems to make their services more fully accessible; as well as to underwrite a parallel network, or paratransit services, for those riders whose physical or mental condition prevents them from using regular fixed-route service. The most significant barrier to implementing the paratransit provisions of the ADA is lack of funding, particularly for operating and maintenance costs. In order to maximize the use of limited resources, the Metro-Dade MPO and transit operators will focus on improving coordination between federal social service programs that fund paratransit services and transit operators who provide these services. The MPO also encourages the use of state-of-the-art technology for paratransit services, funding promising demonstration projects, and promoting regional coordination of ADA and non-ADA paratransit services.

Each transit operator is required to annually update its "Paratransit Service Plan," which estimates necessary levels of service and establishes milestones toward full compliance with ADA by 1997. The MPO is required to review these plans and certify that they conform with the Long Range Plan.

#### **I(C)4. The Public Involvement Process -**

Under ISTEA the metropolitan transportation planning process must include a public involvement process that meets the following requirements:

- ◆ The process shall be proactive rather than reactive;
- ◆ Have a minimum public comment period of 45 days prior to the adoption of the proposed public involvement process;
- ◆ Provide timely and reasonable access to technical and policy information used in the development of plans;
- ◆ Provide adequate public notice of public involvement activities;
- ◆ Allow a 30 day comment period for public review and comments of transportation related plans, among them: the Transportation Improvement Program (TIP) and the Long-Range Transportation Plan (LRTP);
- ◆ Render explicit consideration and response to public input;
- ◆ Consider the needs of minorities and low-income people;
- ◆ Coordinate with the statewide public involvement process wherever possible or needed; and
- ◆ Be consistent with Title VI of the Civil Rights Act of 1964, and the Americans with Disabilities Act (ADA) of 1990, as amended.

The Metro-Dade MPO is meeting its public involvement requirements. In February 1995, the required Public Involvement Process document was published. All necessary public input was received and considered in the development of the document. The tenets of the Public Involvement

# III. The Long Range Plan

Process document have been followed with reference to the development of the Year 2015 Long Range Transportation Plan Update.

Specific information regarding public meetings/hearings held as part of the Plan Update process and in adherence to the Public Involvement Process document are contained in Appendix III of this report.

## **II. The Long Range Transportation Plan -**

Section II of this report documents the methodology by which the Long Range Transportation Plan was developed.

### **II(A) Goals and Objectives-**

The Goals and Objectives statements constitute a primary component of the Plan. As such, the Goal and Objectives are intended to guide the development of the Plan, and related transportation planning activities, and must be consistent with community expressed desires regarding transportation issues. In addition, these statements reflect consistency with the 15 factors identified in the Federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

The Goal and Objectives of the Year 2015 Long Range Transportation Plan Update were adopted by MPO Resolution #8-94 on March 17, 1994. The adopted Goal and Objectives were as follows:

**GOAL: PROVIDE FOR A SAFE, EFFICIENT, ECONOMICAL, ATTRACTIVE AND INTEGRATED MULTIMODAL TRANSPORTATION SYSTEM THAT OFFERS CONVENIENT, ACCESSIBLE AND AFFORDABLE MOBILITY TO ALL PEOPLE AND FOR ALL GOODS, CONSERVES ENERGY, AND PROTECTS BOTH THE NATURAL AND SOCIAL ENVIRONMENT.**



## OBJECTIVES

### MULTIMODAL TRANSPORTATION SYSTEM DEVELOPMENT

Plan for the provision of transportation services and facilities to serve the needs of the population in the metropolitan area, in accord with the federal and state transportation planning process requirements.

Develop an integrated multimodal transportation system that emphasizes people movement by facilitating the transfer between modes, and the connectivity of the transportation network within and outside the metropolitan area.

Preserve rights-of-way in corridors anticipated to be heavily traveled in the future.

To consider the effect of transportation policies on land use development for both the short and long range.

### TRAFFIC FLOW/MOBILITY

Preserve existing highway and transit facilities by improving efficiency and safety.

Achieve the operating levels-of-service standards adopted in the Comprehensive Development Master Plan and in the Florida Intrastate Highway System Plan.

Plan for maximum utilization of existing transportation capacity, relieve congestion and prevent congestion from occurring where it does not yet occur.

### SOCIAL

Plan and develop a transportation system that preserves the social integrity of urban communities.

## ENVIRONMENTAL

Plan for a transportation system that gives due consideration to air quality and environmentally sensitive areas, and conserves energy and natural resources and that is consistent with applicable federal, state, and local energy conservation program goals and objectives.

Plan for transportation projects that enhance the quality of the environment.

## ECONOMIC

Define a sound funding base utilizing public and private sources that will assure operation and maintenance of existing facilities and services and timely implementation of new projects and services.

Provide for and enhance the efficient movement of freight.

ISTEA specifies fifteen factors that must be considered in the metropolitan transportation planning process. It was assured that these would be included in the current Plan Update effort by integrating the fifteen factors into the above Goal and Objectives. The Objective covering each ISTEA factor is shown following that factor in the list below.

8(1) System Preservation/Efficiency - Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently (Objective 5);

(2) Energy Conservation - Consistency of transportation planning with applicable Federal, state, and local energy conservation programs, goals and objectives (Objective 1);

(3) Congestion Relief - The need to relieve congestion and prevent congestion from occurring where it does not yet occur (Objective 7);

- (4) Land Use - The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provision of all applicable short- and long-term development plans (Objective 4);
- (5) Enhancements - The programming of expenditures on transportation enhancement activities as required in Section 133 (Objective 1);
- (6) Consider All Projects - The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded (Objective 11);
- (7) Intermodal Access - International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas monuments and historical sites, and military installations, (Objectives 2 and 10);
- (8) Connectivity - The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area (Objective 2);
- (9) Management Systems - The transportation needs identified through use of the management systems required by Section 303 of this title (Objective 6);
- (10) Right-of-Way Preservation - Preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way which may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss (Objective 3);
- (11) Freight Movement - Methods to enhance the efficient movement of freight (Objective 12);

(12) Life-Cycle Costs - The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement (Objective 1);

(13) Economic/Environmental Effects - The overall social, economic, energy, and environmental effects of transportation decisions (Objectives 7,8, and 9);

(14) Transit Improvement - Methods to expand and enhance transit services and to increase the use of such services (Objective 2); and

(15) Transit Security - Capital investment that would result in increased security in transit systems (Objective 4).

## **II(B) Background -**

Long Range Transportation Plans have been prepared and updated over the years to reflect the travel characteristics that are associated with changes in the socio-economic conditions of the Miami Urbanized Area. A brief review of the previous Update (to the Year 2010), historic changes between 1980 and 1990, and potential changes that are forecasted to occur through the Year 2015, are described below.

### **II(B)1. The Previous Plan -**

The Year 2010 Long Range Transportation Plan was prepared in 1990. The Plan was based upon population and travel demand forecasts through the Year 2010. The following are highlights of those twenty year forecasts and of the 2010 Plan as documented in the Executive Summary:

- Projected increase in travel (1991-2010): 30 to 45%;
- Over 200 major highway capacity improvement projects with an estimated cost of about \$4.1 billion were proposed;
- \$11.4 billion in transit spending proposed, including over 60 miles of new rail transit in 6 corridors and additional bus and rail rolling stock;
- Projected increase in transit share was from 5% in 1990 to approximately 11% by the Year 2010;
- Revenue shortfalls were projected for highways, with a \$400 million deficit projected within just the first 10 year period;
- No funding for transit needs was identified, other than for capital projects for which funding had already been secured - such as the Metromover Extension; and
- Several short-term strategies were identified to mitigate urban traffic congestion.

**II(B)2. Historic Changes (1980 to 1990) and Potential Changes (1990 to 2015) -**

The following table illustrates the historic (1980 to 1990) and potential (through 2015) changes in socio-economic characteristics for the Miami Urbanized Area.

CHARACTERISTICS		1980 (Census)	1990 (Census)	1990 (Model)	2015 (prjctns)
1	Population	1.626 M	1.937 M	1.902 M	2.647 M
2	Employment	.743 M	.902 M	1.105 M	1.341 M
3	Occupied Dwelling	609,800	692,400	691,500	882,200
4	School Enrollment	411,100	427,200	435,400	695,400
5	Modal Split (Transit %)	6.6	5.9	N/A	8.0
6	Average Travel Times (Work Trips) (minutes)	23.7	24.8	N/A	20.0
7	Zero auto-ownership (%)	19	N/A	N/A	15
8	1 auto (%)	45	N/A	N/A	36
9	2+ autos (%)	36	N/A	N/A	49
10	Median household income (\$)	15,571	26,909	N/A	N/A
11	Persons/Occupied Dwelling	2.67	2.80	N/A	3.00

The development of the transportation infrastructure is an integral part of the overall economic development of Miami. This is well illustrated in the document Metro-Miami Marketplace: Destination 2001, published April 1, 1995, by the Transportation and Strategic Infrastructure Planning and Development Committee of the Metropolitan Dade County Board of County Commissioners.

The document explores Miami's potential as an international trade center, and then outlines a strategy that would help Miami meet this potential. The strategy includes many transportation elements, as the committee felt that the transportation system was vital to Miami's success in competing in the world market. Recommendations of the Select Committee are listed below. Those elements that are also components of the Long Range Plan Update to the Year 2015 are italicized.

RECOMMENDATIONS OF  
THE SELECT COMMITTEE OF  
METRO-MIAMI MARKETPLACE: DESTINATION 2001

**AIRPORT**

- Develop a new Miami International Airport strategic plan:
- Based upon a unit-terminal approach which best meets the needs of passengers and future demand requirements, and can be implemented in phases without an appearance of perpetual construction.
- *To integrate terminal development plans with those of the Airport Intermodal Center, providing for "traveler-friendly" links between terminals and the Airport Intermodal Center.*

**EAST-WEST RAIL/INTERMODAL CENTER**

- *Provide "seamless" service to rail passengers between Florida International University and the downtown, and if feasible to Miami Beach.*
- *Terminate the East-West rail line South of Florida International University, to best serve riders from the County's fastest growing neighborhoods and to minimize development impacts on Florida International University. Route the line to best serve the needs of commuters.*
- *Between the university and the airport, route the East-West rail line in the southern SR 836 right-of-way.*
- Bring the line underground as it enters and travels through the airport. Provide underground station stops at the cargo facilities, other major employment centers and at terminals. *(The Long Range Transportation Plan does not address specific design issues, however, the Plan does provide for East-West/MIC interface.)*
- Elevate the line as it emerges from the airport and travels toward the Airport Intermodal Center.

- Depress the line again after it crosses the Miami River and enters downtown Miami. *(The Long Range Transportation Plan does not address specific design issues.)*
- *Turn the rail north to terminate underground at a "linear" station parallel to Biscayne Boulevard, and approximately between North 6th and 7th Streets.*
- Provide continuous service or a rail link between the downtown, across the MacArthur Causeway and to Miami Beach. *(Needs Plan only.)*
- Run Miami Beach transit North along Washington Avenue, past the convention center, and then further North in a "loop" to serve the middle beach area. *(The Long Range Transportation Plan does not address specific design issues.)*

## SEAPORT AND DOWNTOWN

- The planned Maritime Park Expansion is an excellent use of the waterfront. It should be well integrated with the downtown; interconnected plazas and parks are preferable to vast open green spaces.
- The placement of artificial boundaries, such as bridges, elevated transit and highway access ramps, must be rethought as they are "choking" the CBD and preventing profitable expansion into potential growth neighborhoods. *(The Long Range Transportation Plan does not address specific design issues.)*
- Alternatives to movement of cargo by truck must be implemented, including unimpeded 24-hour rail access to the Port, the "trenching" of truck and train access routes and/or shallow draft barge system.
- The Miami River's potential to catalyze a downtown residential zone and to be used as a recreational and urban transport waterway must be realized.

## TOURISM

- *The East-West line must address visitors' needs for safety and convenience by providing seamless transport between MIA and the Port and the Miami Beach Convention Center.*



- The results of the Florida Highway Signage study must be implemented, incorporating internationally recognized travel symbols.
- Legislators must pass the second part of a comprehensive ground transportation reform package.
- Legislators must pass a resolution calling for increased Federal funding for additional Customs, Agriculture and Immigration agents at MIA.
- The County, in coordination with the City of Miami Beach, should provide incentives for a second convention center hotel.
- A two-pronged approach to modernizing existing attractions and developing new ones needs to be taken. Public officials must provide financial incentives for private companies to accomplish these improvements.

#### **WORLD TRADE CENTER**

- There is "substantial" and "immediate" market potential (demand) in Miami for a full-service World Trade Center, and development should begin as soon as possible.
- A mid-rise campus which provides an urban, waterfront location convenient to MIA and the Port is recommended.

The graphics in Appendix IV illustrate some of the past and projected changes in the socio-economic characteristics of the area.

#### **II(C) The Plan Development Process -**

The following sections summarize the steps through which the Cost Feasible Plan was developed.

## **II(C)1. The E+C Scenario -**

The Existing plus Committed (E+C) network is simply an update of the network developed through the procedures explained in "Technical Report 2: Model Validation" for the Year 2015 Long Range Transportation Plan. Once the network is updated, the future year (Year 2015) socio-economic data is run on it so that projected deficiencies can be identified.

The Base Year (1990) model developed during validation is updated during the development of the E+C network. Very simply, the E+C network consists of the 1990 network plus all of the transportation facilities constructed since 1990 plus all of the committed transportation projects. "Committed" projects consist of those construction committed in the Transportation Improvements Program (TIP), the five-year work program of the FDOT and other public transportation agencies building/operating transportation facilities in the Miami urbanized area.

Again, after the E+C network is constructed, the Year 2015 socio-economic data is run on it to identify projected deficiencies. These deficiencies will be "remedied" through proposed new transportation facilities during the development of the Needs Plan.

## **II(C)2. Financial Resources/Cost Analysis -**

Introduction: This section of the report explains the method by which cost estimates for the projects in the Needs Plan were generated. Cost estimates for the Needs Plan projects are necessary in developing a Cost Feasible Plan. When costs are applied to the Needs Plan projects, and these are compared to the available Financial Resources, that portion of the Needs Plan that can be funded - and is, thus, Cost Feasible - can be determined. The Financial Resources Plan for the Long Range Transportation Plan to the Year 2015 is documented under separate cover.

Cost Estimates were developed for the capital costs of new highway and transit projects, as well as for the operating and maintenance (O&M) costs for these new projects. Additionally, the O&M costs associated with existing facilities were calculated, as these would also need to be subtracted from the available financial resources.

Costs were extracted from existing reports/work programs where available and translated into 1995 dollars. All costs and all revenues were developed in terms of 1995 dollars. Where costs for a project were not yet developed, these were calculated using unit costs derived from the costs for existing, similar facilities.

### **Capital Costs - Transit**

**New/Replacement Buses:** The following methodology was used to approximate the total monies that will be needed to fund capital bus purchases through the Year 2015. Per the model (FSUTMS), it was determined that the Metro-Dade Transit Authority (MDTA) system would need 850 buses in the Year 2015 to operate the Cost Feasible Plan bus transit system. FSUTMS includes "spares" in its calculations of the number of buses necessary to operate a system.

According to the draft 1995 MDTA Transit Development Program (TDP), there were 643 buses, including spares. Assumptions were made that the average "lifespan" of a bus was twelve years (this is the FTA standard lifespan figure) and that new/replacement buses would cost approximately \$250,000/each.

**Total Buses** - The total capital bus funds needed through the Year 2015 can, thus, be calculated as follows:

	\$284,250,000 (new/replacement buses - 2001-2015)
+	\$ 67,500,000 (replacement buses programmed in TIP - 1996-2000)
	-----
	\$351,750,000 (capital cost for bus fleet 1996-2015)

The following transit corridors and facilities are included in the Needs Plan for the Miami-Dade Long Range Transportation Plan Year 2015 Update. Unless otherwise indicated, the corridors were tentatively modeled and priced as Metrorail (pending Major Investment Studies), relative to the technology for implementing them.

**Kendall Corridor:** Dadeland north to SW 147 Avenue (\$615.5) - The source for cost information about this corridor was the "Dade County Transit Corridors Transitional Analysis", developed for the Dade County Metropolitan Planning Organization by Parsons Brinckerhoff Quade & Douglas, Inc., March 17, 1993.

The costs given in this document for the 7.5 mile corridor are as follows:

Engineering:	\$ 61.1M
Right-of-way:	\$ 31.9M
Construction:	\$381.6M
	-----
Total	\$474.6M

The western terminus, per the above referenced report was 137th Avenue, and per the Needs Plan is 147th Avenue. Additional costs to account for this difference were calculated by obtaining a cost per mile for the original segment length of 7.5 miles, and applying them to the new length of 8.4 miles. Additionally, these 1992 costs were converted to 1995 dollars by increasing them by five percent per year, as follows:

Engineering:	$\$ 61.1M/7.5 \text{ mi.} = 8.1M \times 8.4 \text{ mi.} = (((\$68.0M \times 1.05) \times 1.05) \times 1.05) = \$78.7/mi.$
Right-of-way:	$\$ 31.9M/7.5 \text{ mi.} = 4.3M \times 8.4 \text{ mi.} = (((\$36.1M \times 1.05) \times 1.05) \times 1.05) = \$41.8/mi$
Construction:	$\$381.6M/7.5 \text{ mi.} = 50.9M \times 8.4 \text{ mi.} = (((\$427.6M \times 1.05) \times 1.05) \times 1.05) = \$495/mi$
	-----
Total	$\$474.6M/7.5 \text{ mi.} = 63.3M \times 8.4 \text{ mi.} = (((\$531.7M \times 1.05) \times 1.05) \times 1.05) = \$615.5$

**North Corridor: Broward County Line to MIC (\$493)** - An Alternatives Analysis is currently underway for this corridor. The following costs were developed using the "Program of Inter-related Projects", prepared by the Metro-Dade Transit Authority, January, 1994.

Engineering:	\$ 39.7M
Right-of-way:	\$ 18.9M
Construction:	\$515.6M
	-----
Total	\$574.2M

For the "Program of Inter-related Projects" the above costs were factored up to represent 1998 dollars. As all highway and transit costs used in developing the Cost Feasible Plan should be in 1995 dollars, these 1998 dollars were converted to 1995 dollars by decreasing them by five percent per year, as follows:

Engineering:	$((($39.7M \times .95) \times .95) \times .95) = \$ 34.7/mi.$
Right-of-way:	$((($18.9M \times .95) \times .95) \times .95) = \$ 16.2/mi$
Construction:	$((($515.6M \times .95) \times .95) \times .95) = \$442.1/mi$
	-----
<b>Total</b>	$((($574.2M \times .95) \times .95) \times .95) = \mathbf{\$493}$

**South Dixie Highway Corridor: Cutler Ridge to Homestead (\$35.6)** - Unlike the majority of the transit projects for which costs are being developed, this project is not proposed to be a Metrorail project, but a *busway*. The source for cost information about this corridor was the "Dade County Transit Corridors Transitional Analysis", developed for the Dade County Metropolitan Planning Organization by Parsons Brinckerhoff Quade & Douglas, Inc., March 17, 1993.

Engineering:	\$ 4.3M
Right-of-way:	\$ 1.0M
Construction:	\$25.4M
	-----
Total	\$30.7M

Additionally, these 1992 costs were converted to 1995 dollars by increasing them by five percent per year, as follows:

Engineering:	$(((\$ 4.3M \times 1.05) \times 1.05) \times 1.05) = \$ 5.0/mi.$
Right-of-way:	$(((\$ 1.0M \times 1.05) \times 1.05) \times 1.05) = \$ 1.2/mi$
Construction:	$(((\$25.4M \times 1.05) \times 1.05) \times 1.05) = \$ 29.4/mi$
-----	
<b>Total</b>	$(((\$30.7M \times 1.05) \times 1.05) \times 1.05) = \$ 35.6$

**SR 826 Corridor: Golden Glades to A1A, and SR 826 Corridor : NW 74 Street to Golden Glades, and SR 826 Corridor: Dadeland to NW 74th Street (\$1,384.6)** - Total, projected costs for these segments of the SR826 corridor are being combined, as only a "correct order of magnitude" is needed with regard to these costs. None of the SR826 segments appear in any of the various draft Cost Feasible Plan scenarios.

The source for cost information about this corridor was the "Dade County Transit Corridors Transitional Analysis", developed for the Dade County Metropolitan Planning Organization by Parsons Brinckerhoff Quade & Douglas, Inc., March 17, 1993.

The costs for the 27 mile corridor are as follows:

Engineering:	\$167.4M
Right-of-way:	\$ 32.4M
Construction:	\$996.3M
	-----
Total	\$1198.8M

Additionally, these 1992 costs were converted to 1995 dollars by increasing them by five percent per year, as follows:

Engineering:	$(((\$167.4\text{M} \times 1.05) \times 1.05) \times 1.05) = \$193.8/\text{mi}.$
Right-of-way:	$(((\$32.4\text{M} \times 1.05) \times 1.05) \times 1.05) = \$37.5/\text{mi}$
Construction:	$(((\$996.3\text{M} \times 1.05) \times 1.05) \times 1.05) = \$1153.3/\text{mi}$
-----	
<b>Total</b>	$(((\$1198.8\text{M} \times 1.05) \times 1.05) \times 1.05) = \mathbf{\$1384.6}$

**East/West Corridor/SR 836 Corridor (\$500 million)** - The Major Investment Study/Draft Environmental Impact Statement for the East-West Multi-modal Corridor contains capital cost estimates for several different development scenarios for this corridor. However, Minimal Operating segment (MOS) A - Palmetto to Seaport is the scenario that reflects that portion of the proposed corridor that will probably be developed first, and that is included in the draft Year 2015 Cost Feasible Plan. According to the report, the capital cost of MOS A is \$1,313 million (95 dollars).

As with the Miami Intermodal Center (MIC), the entire cost of the project is *not* expected to be drawn from the sources included in the Financial Resources component of the Long Range Plan. The sum that MPO staff working on the Year 2015 Long Range Plan Update and FDOT staff to the East-West project have agreed should be devoted to the project from so-called Long Range Plan Revenues is **\$500 million** (95 dollars).

The report proposes that the additional funds not coming from the Long Range Plan Revenues will be available from the following five other sources:

- 1 - Federal Transit Administration (FTA) Section 3 discretionary funds,
- 2 - Dedicated toll receipts from the Dade County Expressway Authority,

- 3 - Capitalization of revenue streams (issuance of revenue-backed bonds),
- 4 - Special Airport-Seaport transit fare of \$4.25 (for *operating* expenses), and
- 5 - 1/2 SR 836 toll surcharge revenues (operating and capital expenses).

**MIC (\$300)** - Per the Administrative Draft Major Investment Study/Environmental Impact Statement (MIS/DEIS), July, 1995, page S-40, "For the purposes of the financial analysis, the highest and lowest packages of build options and a mid-range combination have been selected for testing. . . . Adjusting for inflation increases the cost of the high package to \$2.26 billion, the low package to \$1.66 billion and the mid-range scenario to \$1.88 billion in year-of-expenditure dollars. . . . The largest component of the project build packages is the SR 836/SR 112 Interconnector, representing about one-third of the total project cost."

The report goes on to say that only a percentage of this cost is expected to come from what is being termed "MPO Long Range Revenue." In working with FDOT personnel and consultants for the MIC project to calculate needed MPO Long Range Revenues, and through the translation of the aforementioned "year-of-expenditure dollars" into 1995 dollars, **the sum of \$300 million was calculated to be the share of MIC funds to be derived from Long Range Plan revenues.**

### O & M - Transit Costs

Operating and Maintenance (O&M) costs for transit have been calculated for the transit components of both the Needs and Cost Feasible Plans. These components include:



**Table XXX: O&M - Transit Costs**

<b>Needs Plan (Transit Components)</b>	<b>Cost Feasible Plan (Transit Components)</b>
Buses: Existing 643 and replacement until the Year 2015	Buses: Existing 643 and replacement until the Year 2015
Buses: Expansion from 643 to 1250	Buses: Expansion from 643 to 850
Metro-mover O&M of existing system through the Year 2015	Metro-mover O&M of existing system through the Year 2015
Miami Intermodal Center (MIC) - Construction complete and O&M costs begin in Year 2003	Miami Intermodal Center (MIC) - Construction complete and O&M costs begin in Year 2003
North Corridor	North Corridor
East/West Corridor (Seaport to Palmetto)	East/West Corridor (Seaport to Palmetto)
East/West Corridor (Seaport to FIU)	N/A
East/West Corridor (Downtown to Miami Beach)	N/A
US 1: Downtown to Broward CL	N/A
Kendall Corridor	N/A
SR826: Dadeland to NW 74 St	N/A
SW 42/37 Ave: MIC to Douglas Rd. Sta.	N/A

**East/West Corridor/SR 836 Corridor:** Information contained in the Major Investment Study/Draft Environmental Impact Statement for the East-West Multi-modal Corridor shows O&M costs beginning to be incurred for the facility in the year 2009.

	2009	2010	2011	2012	2013	2014	2015	Total
<b>O&amp;M Costs in current year dollars per East/West DEIS</b>	56	58	60	62	64	66.2	66.6	432
<b>O&amp;M costs in 95 dollars</b>	35	35	35	35	34.5	34.4	33.5	240.72

Per the aforementioned report, these expenses are expected to be met via passenger fares; a proposed Airport-Seaport service premium fare of \$4.25 (part of which would go toward capital expenses, as discussed above); and SR836 toll surcharge (its use would convert from capital to O&M expenses in about 2005). Additional innovative sources might include: highway congestion pricing; use of a portion of the Local Option Gas Tax; downtown parking surcharge; Miami Beach Convention Center bonding authority; State educational mobility enhancement funds for FIU extension; and/or State right-of-way bonds.

**MIC:** Per the Administrative Draft Major Investment Study/Environmental Impact Statement (MIS/DEIS), July, 1995, page S-44, "The operations and maintenance requirements for the proposed MIC project alternatives differ from a conventional transportation project in two respects. First, the "tenant" modes will bear the expense of operations and maintenance of their own stations and facilities, representing about 80 percent of the MIC's total operating expenses. . . . Second, the MIC is primarily a facility and thus the burden of operations and maintenance is generally much lower than for a fixed guideway system."

Page 47 of the document goes on to explain that, "The total cost of operating the MIC project alternatives is approximately \$18 million (1995 dollars) per year. However, only about \$3.6 million of this total is attributable directly to the MIC as an independent entity. The \$3.6 million estimate includes the cost of operating 23,200 sq. m. (250,000 sq. ft.) of "common area" space and the 2,800-

stall parking structure. The balance of the outlays is borne directly by, or is chargeable to a tenant mode. . . . The revenue streams identified for the MIC construction program and operations do not compete with those utilized to support MDTA transit services." The report shows O&M outlays beginning in the year 2003.

O&M Costs - Needs Plan (millions of 1995 dollars)

Needs Plan (Transit Components)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
<b>Buses: Existing 643 and replacement until the Year 2015</b>	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$121.4	\$1,821.0
<b>Buses: Expansion from 643 to 1250 @ 40/yr w/last 7 in 2015</b>	\$7.6	\$15.2	\$22.8	\$30.4	\$38.0	\$45.6	\$53.2	\$60.8	\$68.4	\$76.0	\$83.6	\$91.2	\$98.8	\$106.4	\$107.7	\$905.7
<b>Para-transit Operating and Maintenance</b>	\$15.0	\$15.1	\$15.3	\$15.4	\$15.6	\$15.7	\$15.9	\$16.0	\$16.2	\$16.3	\$16.5	\$16.6	\$16.8	\$16.9	\$17.1	\$240.4
<b>S. Dixie Hwy. Busway</b>	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$30.0
<b>Palmetto (Rail) Extension</b>	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$2.6	\$39.0
<b>Metro-mover O&amp;M of existing system through the Year 2015</b>	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$20.6	\$309.0
<b>Miami Intermodal Center (MIC) - Construction complete and O&amp;M costs begin in Year 2003</b>	N/A	N/A	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$3.6	\$46.8
<b>O&amp;M for existing Metrorail thru 2015</b>	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$51.0	\$765.0
<b>North Corridor</b>	N/A	N/A	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$29.2	\$204.4

<b>East/West Corridor (Seaport to Palmetto)</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$245.0
<b>East/West Corridor (Palmetto to FIU)</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$12.1	\$12.1	\$12.1	\$12.1	\$12.1	\$12.1	\$12.1	\$84.7
<b>East/West Corridor (Dwntwn to Miami Beach)</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$26.5	\$26.5	\$26.5	\$26.5	\$26.5	\$26.5	\$26.5	\$185.5
<b>US 1: Dwntwn to Broward CL</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$32.3	\$32.3	\$32.3	\$32.3	\$32.3	\$32.3	\$32.3	\$226.1
<b>Kendall Corridor</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$18.1	\$18.1	\$18.1	\$18.1	\$18.1	\$18.1	\$18.1	\$126.7
<b>SR826: Dadeland to NW 74 St</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$27.7	\$27.7	\$27.7	\$27.7	\$27.7	\$27.7	\$27.7	\$193.9
<b>SW 42/37 Ave: MIC to Douglas Rd. Sta.</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$12.1	\$12.1	\$12.1	\$12.1	\$12.1	\$12.1	\$12.1	\$84.7
<b>Total</b>	\$200.6	\$227.9	\$268.5	\$276.2	\$284.0	\$291.7	\$299.5	\$307.2	\$478.8	\$486.5	\$494.3	\$502.0	\$509.8	\$517.5	\$519.0	\$5,507.9

**O&M Costs - Cost Feasible Plan (millions of 1995 dollars)**

<b>Cost Feasible Plan (Transit Components)</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
<b>Buses: Existing 643 and replacement until the Year 2015</b>	121.4	121.4	121	121.4	121.4	121	121	121	121	121	121	121	121	121	121	1821
<b>Buses: Expansion from 643 to 850</b>	2.6	5.3	7.9	10.6	13.2	15.8	19	21.1	23.8	26.4	29	32	33	37	39	315.2
<b>Para-transit Operating and Maintenance</b>	15	15.14	15.28	15.42	15.56	15.71	15.86	16.01	16.16	16.31	16.46	16.61	16.77	16.93	17.09	240.4
<b>S. Dixie Hwy. Busway</b>	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30
<b>Palmetto (Rail) Extension</b>	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	39
<b>Metro-mover O&amp;M of existing system through the Year 2015</b>	20.6	20.6	21	20.6	20.6	20.6	21	20.6	20.6	20.6	20.6	21	21	20.6	21	309
<b>Miami Intermodal Center (MIC) - Construction complete and O&amp;M costs begin in Year 2003</b>	N/A	N/A	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	46.8
<b>O&amp;M for existing Metrorail thru 2015</b>	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	765
<b>North Corridor</b>	N/A	N/A	29	29.2	29.2	29.2	29	29.2	29.2	29.2	29.2	29	29	29.2	29	379.6
<b>East/West Corridor (Seaport to Palmetto)</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	35	35	35	35	245
<b>Total</b>	215.2	218	254	256.4	259.2	262	265	268	305	308	311	314	316	319	322	4191

**LONG RANGE TRANSPORTATION PLAN UPDATE  
YEARS 2001-2015**

**HIGHWAY OPERATING AND MAINTENANCE COST AND REVENUE SUMMARY**

COSTS

	<u>Needs Plan</u>		<u>Cost Feasible Plan</u>	
	<u>STATE</u>	<u>LOCAL</u>	<u>STATE</u>	<u>LOCAL</u>
<i>Existing System</i>	\$ 735M	\$ 668M	\$ 735M	\$668M
<i>Expansion</i>	\$ 155M	\$ 312M	\$ 118M	\$226M
<b>Total Costs</b>	<b>\$ 890M</b>	<b>\$ 980M</b>	<b>\$ 853M</b>	<b>\$ 894M</b>

REVENUES

	<u>Needs Plan</u>		<u>Cost Feasible Plan</u>	
	<u>STATE</u>	<u>LOCAL</u>	<u>STATE</u>	<u>LOCAL</u>
<i>(for) Existing System</i>	\$ 735M	\$ 668M	\$ 735M	\$ 668M
<i>(for) Expansion</i>	\$ 155M	\$ 450M	\$ 118M	\$ 450M
<b>Total Revenues</b>	<b>\$ 890M</b>	<b>\$ 1,118M</b>	<b>\$ 853M</b>	<b>\$1,118M</b>

### **II(C)3. The Recommended Needs Plan**

The Recommended Needs Plan was developed to depict all the transportation improvements that would be needed through the year 2015. The Needs Plan was developed to show needs only, regardless of project costs.

The map on the following page depicts the Recommended Needs Plan projects. The list of projects shown is in addition to those improvements already approved in the County's five-year Transportation Improvement Program (TIP). The list on the page following the map, describes the proposed projects. Only a portion of the Recommended Needs Plan projects can be constructed by the Year 2015 under current revenue estimates, additional resources would be needed to implement the Needs Plan in its entirety.

### **II(C)4. The Recommended Cost Feasible Plan**

A requirement of the MPO's Transportation Plan, as directed by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, is that the Plan be financially-constrained. To comply with this mandate, a Financial Resources report was produced. The Financial Resources technical memorandum assessed the financial resources which may be available to Dade County for funding transportation improvements during the Plan period. This assessment of resources served as a guide, or "budget" by which projects could be assessed for affordability.

The first step in deriving a Cost Feasible Plan from the Needs Plan involved developing a methodology with which to rank the Needs Plan projects. Once these projects were ranked, their costs would be considered relative to their order, and draft Cost Feasible scenarios could be developed.



The projects were ranked by the Steering Committee members based upon five evaluation criteria (See Table 4-1). These evaluation criteria were based upon the Goal and Objectives that had been developed for the Year 2015 Long Range Transportation Plan Update; the Goal and Objectives had, in turn, been developed based upon the Intermodal Surface Transportation Efficiency Act (ISTEA) 15 factors. The Goal and Objectives, ISTEA and the 15 factors are discussed further in Section I(C) of this document.

**Table 4-1 - EVALUATION CRITERIA**

	Negative Impact	No Impact	Positive Impact	Weight
Promotes Multi-modal Transportation System Development	-10 to -1	0	1 to 10	25
Improves Mobility	-10 to -1	0	1 to 10	28
Preserves Social Integrity of Communities	-10 to -1	0	1 to 10	17
Improves Environmental Quality of Community	-10 to -1	0	1 to 10	16
Encourages Economic Development	-10 to -1	0	1 to 10	14
<b>Total</b>				100

As Table 4-1 shows, each of the projects was to be ranked within a range of -10 to +10 relative to each criterion. Zero was to represent a neutral score, while -10 represented the worst possible score, and +10, the best. As the table shows, cost was not to be considered at this point in ranking the projects.

Steering Committee members were given some questions to answer for themselves in developing a score for each project. The Committee developed these questions so as not to overlook some important aspect, or impact, of a project during the complex scoring process. These questions were:

- ▶ *Is this the type of transportation system improvement we, as a community, want to promote?* Does this project add capacity to an existing highway or transit facility? Is this a new roadway or transit facility? Does this project discourage low occupant vehicles using congested facilities? Does this project promote any intermodal access? Does this project improve access in general?
  
- ▶ *What area is impacted positively and negatively by the project?* Consider site, neighborhood, corridor, city or Countywide impacts. Generally, the larger the geographic area of impact, the greater the impact of the score you assign.
  
- ▶ *Does this project promote the economic development of the community?* Will the project promote the movement of goods and services? Will the project spawn new industries or promote the redevelopment of economically depressed areas?
  
- ▶ *Is the project underway?* If resources have already been allocated to this project, the amount of time and money invested reduces the marginal cost of implementing the project.

Each of these factors was *not* given equal weight. The Steering Committee members were asked to assign a weight to each criterion based upon what they considered to be its relative importance. These weights were averaged, and are depicted in the last column of Table4-1.

### WHY SUBJECTIVE RANKING?

It seems curious after developing a detailed transportation model to then subjectively rank the projects. After all, model parameters are based upon careful research of socio-economic data, local travel characteristics, and traffic count data. To subjectively rank the projects after the Needs Plan model runs, and before running the various Cost Feasible Scenarios, does not seem to be the most technically sophisticated method by which to develop the Cost Feasible Plan.

The alternative would seem to be testing each of the proposed transportation projects for its relative merits (estimated traffic volumes, transit ridership, etc.) using the model that was so carefully developed. This, however, cannot be feasibly undertaken.

To truly evaluate each project, it would have to be modeled with and without each of the other projects. This is because, for example, an individual roadway's projected traffic volume could not really be understood without seeing the impact of proposed parallel facilities on its performance.

The logistics of testing projects in this manner become, thus, prohibitive. There were ninety-two projects in the Needs Plan. Using the model to evaluate each of these projects with and without each other projects would require a number of model runs represented by the mathematical formula:  $92!+1$  or,  $(92 * 91 * 90 * 89 \dots 3 * 2 * 1) + 1$  or  $1.24^{142}$ .

For this reason, subjective means are used to develop a manageable number of alternatives (Scenarios 1 through 5 in the case of the Metro-Dade 2015 Plan Update). Then, the model can be run to test these alternatives, and to derive quantifiable data that can be used to compare scenarios, allowing planners and policy makers to choose the most optimum plan from a manageable number of alternatives.

Using the -10 to 10 parameters, the individual Steering Committee members scored each project relative to each criterion. Then each of the scores for the five criteria was weighted and added together to determine each Committee members' score for each project.

Finally, the members' scores were aggregated in two different ways. First, all of the weighted scores were averaged and arranged in order from those with the highest points to those with the lowest.

The second methodology was to again determine each member's score for each project and place them in rank order. A number - from 1 to 92 - was then assigned to each project to represent its *rank*. Then the *ranks* given by each member - rather than the actual scores - were averaged.

The results of both of these systems were presented to the Steering Committee members, who determined that the latter method was the more accurate. Averaging the member's ranks, rather than their actual scores, was felt to offset relative differences in scoring. (For example, one member who felt construction of a project was favorable might assign it a 10, while another who favored the project to the same magnitude might assign it a 1, just because of personality differences.)

The ranked projects are depicted below in Table 4-2. Thus ranked, the Cost Feasible projects still had to be selected from the Needs Plan. The optimal way to do this seemed to be to merely assign the appropriate cost to each of the ranked projects, and then begin subtracting the costs of each project in rank order from the available financial resources until all of the resources were exhausted (More information about financial resources and costs is available in Sections II.C(4) and II.C(3), respectively, of this report.)

**Table 4-2 - RECOMMENDED NEEDS PLAN IN STEERING COMMITTEE PRIORITY ORDER**

<b>Project</b>	<b>Proposed Improvement</b>
R-826: SR-874 to I-75	add one HOV lane (each direction)
SR-836 Corridor: MIC -to -Port	premium transit
o. Dixie Hwy: Cutler Ridge to Homestead	busway extension
R-836 Corridor: FIU- to- MIC	premium transit
SR-826: NW 158 St to GGI	add one HOV lane (each direction)
S-1/Biscayne Blvd: Downtown to Broward C. L.	premium transit
SR-836 Corridor: SR-826-to- LeJeune	add one HOV lane (each direction)
Kendall Corridor: Dadeland North to SW 147 Ave	premium transit
.E.F.T.: SR-836 to NW 41 St	4 to 6 lanes
SR-836 Corridor: Downtown -to- Miami Beach	light rail or hybrid
SR-836 Corridor: SR-826-to- HEFT	add one HOV lane (each direction)
.E.F.T.: SW 40 St to SW 8 St	6 to 8 lanes
North Corridor: County line to MIC	premium transit
R-874: HEFT to SR-826	4/6 lanes to 8 lanes (3+1HOV each direction.)
.E.F.T.: SW 88 St to SW 40 St	6 to 8 lanes
SR-826: Dadeland to NW 74 St	premium transit
NW 97 Ave: Fountainbleau (NW 7 St) to NW 25 St	2 to 4 lanes & bridge
MIC/MIA	MIC facility, MIC-MIA "peplemover"
Perimeter Rd: NW 20 St to NW 72 Ave	2 to 4 lanes
W 25 St: SR-826 to NW 69 Ave	4 to 6 lanes
.E.F.T.: SW 137 Ave to Quail Roost Dr	4 to 6 lanes
NW 97 Ave: NW 25 St to NW 41 St	2 to 4 lanes
.E.F.T.: NW 41 St to I-75	4 to 6 lanes
W 42/37 Avenue: MIC to Douglas Rd Sta.	premium transit
Interconnector: SR-836 to SR 112	new 4 lane
W 87 Ave: NW 36 St to NW 58 St	4 to 6 lanes
NW 87 Ave: NW 58 St to Okeechobee Rd	new 4 lane
SR-874: HEFT to SW 137 Ave (SW 147 Ave)	new 6-lane expressway extension with arterial step-down to SW 147 Ave
NW 12 St: NW 110 Ave to NW 107 Ave	new 4 lane
SR-112: I-95 to Okeechobee Rd	add one HOV lane (each direction)
W 12 St: NW 104 Ave to NW 97 Ave	new 4 lane
Port of Miami Tunnel	construct tunnel
R-826: NW 74 St to Golden Glades	premium transit
W 12 St: NW 110 Ave to NW 122nd Ave	2 to 4 lanes
NW 12 St: NW 122 Ave to NW 137Ave	2 to 4 lanes and new 4 lanes
3-lane HOV Interconnector	add one HOV lane (each direction)
W 137th Ave: SW 8th St to SW 26th St	2 and 4 to 6 lanes

<b>Project</b>	<b>Proposed Improvement</b>
SW 137 Ave: NW 12th St to SW 8th St	2 and 4 lanes to 6 lanes
SW 8 St: SW 127 Ave to SW 152 Ave	4 to 6 lanes
NW 74 St: NW 57 Ave to SR-826	4 to 6 lanes
NW/SW 107 Ave: NW 41 St to SW 8 St	4 to 6 lanes
SW 57 Ave: Okeechobee Rd to NW 138 St	4 to 6 lanes
NW 74 St: SR-826 to HEFT	new 6-lane road, interchange
NW 25 St: NW 107 Ave to NW 112 Ave	2 to 4 lanes
SW 58 St: NW 97 Ave to NW 107 Ave	2 to 4 lanes
NW 97 Ave: NW 58 St to NW 90 St	2 to 4 lanes and new 4-lane road
SW 137 Ave: US-1 to HEFT	2 to 4 lanes
SR-836: HEFT to NW 137 Ave	new 6-lane expressway extension
NW 107 Ave: NW 106 St to NW 41 St.	make 4 lanes
I.E.F.T.: I-75 to FL Turnpike	4 to 6 lanes
SR-826: Golden Glades to A1A	premium transit
SW 117 Ave: US-1 to SW 152 St	2 to 4 lanes
Wrome Ave: SW 8 St to US-1	2 to 4 lanes
SW 112 Ave: HARB to HEFT along SW 112 Ave	make 6 lane road
SW 112 Ave: US-1 to Moody Dr	4 to 6 lanes
SW 120 St: SW 137 Ave to SW 117 Ave	4 to 6 lanes
NW 183 St: I-75 to NW 2 Ave (US-441)	4 to 6 lanes
SW 184 St.: SW 157 Ave to SW 127 Ave	2 to 4 lanes
Okeechobee Road: SR-112 to SR-826	make 6-lane arterial
SW 137 Ave: SW 184 St to US-1	make 4 lanes
US-1: SW 344 St to SW 211 St (SW 112 Ave)	4 to 6 lanes
SW 97 Ave: SW 72 St to SW 40 St	2 to 4 lanes
NE 183 St: NE 6 Ave to US-1	4 to 6 lanes
SW 127 Ave: SW 120 St to SW 144 St	new 4 lanes
Franko Rd: SW 184 St to Old Cutler Rd	2 to 4 lanes
NW 36/41 St.: NW 42 Ave to HEFT	Smart Street Concept
Wrome Ave: SW 8 St to Okeechobee Rd	2 to 4 lanes
I-95 Ramps/Distributor: I-95 to Biscayne Blvd	interchange improvements
SW 200 St: US-1 to Quail Roost Dr	2 to 4 lanes
SW 104 St: SW 152 Ave to SW 167 Ave	4-lane road
SW 87 Ave: SW 168 St to SW 216 St	2 to 4 lanes
NW 170 St: NW 77 Ave to NW 87 Ave	2 to 4 lanes
SW 157 Ave: SW 184 St to SW 216 St	new 2 lane
SW 147 Ave: SW 8 St to SW 26 St	new 2 lane
SW 157 Ave: SW 88 St to SW 104 St	2 to 4 lanes
SW 157 Ave: SW 56 St to SW 72 St	new 2 lane
SW 167 Ave: SW 88 St to SW 104 St	new 2 lane
SW 157 Ave: SW 42 St to SW 56 St	new 2 lane
SW 72 St: SW 154 Ave to SW 167 Ave	new 2 lane

<b>Project</b>	<b>Proposed Improvement</b>
SW 42 St: SW 147 Ave to SW 157 Ave	new 2 lane
SW 167 Ave: SW 56 St to SW 88 St	new 2 lane
SW 152 Ave: US-1 to SW 312 St	2 to 4 lanes
SW 56 St: SW 57 Ave to SW 67 Ave	new 2 lane
SW 90 St: NW 107 Ave to NW 87 Ave	new 2 lane
SW 107 Ave: SW 40 St to SW 24 St	4 to 6 lanes
SW 56 St: SW 152 Ave to SW 157 Ave	new 2 lane
LeJeune Road: SR-112 to NW 103 St	5 to 6 lanes
SW 77 Ave: SW 104 St to SW 152 St	2 to 4 lanes
SW 27 Ave: NW 103 St to s/o NW 74 St	4 to 6 lanes
SW 82 Ave: NW 7th St to NW 12th St	new 4 lane
NW 7 St: NW 77 Ave to NW 82nd Ave	new 4 lane
Central Parkway: Golden Glades to SR-112	6-lane Parkway (private enterprise)

**Total number of projects in Needs Plan = 92**

Table 4-3 below depicts Scenario 1, wherein the projects’ costs were subtracted from the available financial resources in rank order until the funds were exhausted. Note that Homestead Extension of Florida’s Turnpike (HEFT) projects were considered automatically “in” as the certainty of them being built by the Year 2015 is good and, more importantly, because their proposed revenue sources were not included in the aggregate financial resources, and thus should not have been subtracted from it. These projects are denoted by a “☆” in the table.

Some projects that got into Scenario 1 were actually ranked lower than others that did not. This is because if there were not enough remaining funds to finance a project, it was omitted and those funds were expended on the next highest ranked project. This process was continued down the priority list until all financial resources had been exhausted.

**Table 4-3 - COST FEASIBLE PLAN - SCENARIO 1**

	<b>Project Proposal</b>	<b>Proposed Improvement</b>
	MIC -to -Port	premium transit
	So. Dixie Hwy: Cutler Ridge to Homestead	busway extension
	SR-826: SR-874 to I-75	add one HOV lane (each direction)
	SR-836 Corridor: FIU- to- MIC	premium transit
	US-1/Biscayne Blvd: Downtown to Brow. C. L.	premium transit
	SR-826: NW 158 St to GGI	add one HOV lane (each direction)
	SR-836 Corridor: SR-826-to- LeJeune	add HOV lane
	Kendall Corridor: Dadeland N to SW 147 Ave	premium transit
	Downtown -to- Miami Beach	light rail or hybrid
☆	H.E.F.T.: SR-836 to NW 41 St	4 to 6 lanes
	SR-836 Corridor: SR-826-to- HEFT	add HOV lane
☆	H.E.F.T.: SW 40 St to SW 8 St	6 to 8 lanes
	SR-874: HEFT to SR-826	4 & 6 lanes to 8 lanes (make 3+1HOV
	eac. direction.)	
☆	H.E.F.T.: SW 88 St to SW 40 St	6 to 8 lanes
	MIC/MIA	MIC facility, MIC-MIA "peplemover"
	NW 97 Ave: Fountainbleau to NW 25 St	2 to 4 lanes & bridge
	NW 25 St: SR-826 to NW 69 Ave	4 to 6 lanes
	Perimeter Rd: NW 20 St to NW 72 Ave	2 to 4 lanes
☆	H.E.F.T.: SW 137 Ave to Quail Roost Dr	4 to 6 lanes
	SW 42/37 Avenue: MIC to Douglas Rd Sta.	premium transit
☆	H.E.F.T.: NW 41 St to I-75	4 to 6 lanes
	NW 97 Ave: NW 25 St to NW 41 St	2 to 4 lanes
	NW 87 Ave: NW 36 St to NW 58 St	4 to 6 lanes
	NW 87 Ave: NW 58 St to Okeechobee Rd	new 4 lane
	SR-874: HEFT to SW 137 Ave (SW 147 Ave)	new 6-lane expressway extension with
		arterial step-down to SW 147 Ave.
	SR-112: I-95 to Okeechobee Rd	add 2 HOV lanes
	Port of Miami Tunnel	construct tunnel
	NW 12 St: NW 110 Ave to NW 107 Ave	new 4 lane
	NW 12 St: NW 104 Ave to NW 97 Ave	new 4 lane
	NW 12 St: NW 110 Ave to NW 137Ave	2 to 4 lanes and new 4 lanes
	SW 137 Ave: NW 12th St. to SW. 8th Street	2 and 4 lanes to 6 lanes
	NW 74 Street: NW 57 Ave to SR-826	4 to 6 lanes
	SW 8 Street: SW 127 Ave to SW 152 Ave	4 to 6 lanes
	NW/SW 107 Avenue: NW 41 St to SW 8 St.	4 to 6 lanes
	NW 25 St: NW 107 Ave to NW 112 Ave	2 to 4 lanes

☆ - Florida Turnpike funded.

The computer model representing this alternative was run, and evaluation criteria representative of the Goal and Objectives were used to compile the results. A table depicting the results can be found in Appendix A.

A second alternative, Scenario 2, was developed shortly after the development of Scenario 1 to remedy some of the problems with the former, that had quickly become apparent. These problems included: prohibitive Vehicle Delay (See Scenario 1 Evaluation in Appendix A); a relatively small number of highway projects; and the division of the East/West group of projects.

Regarding this last problem, neither the Interconnector nor the Interconnector HOV lanes, made it into Scenario 1. All indications from the research undertaken by the East/West Team show that the neither SR836 Corridor Rail projects, nor the Miami Intermodal Center (MIC), work optimally without the Interconnector. The East/West team's assumptions are borne out in analyzing the model output from the various Scenarios, as found in Appendix A. For the considerably higher proportion of revenues spent in Scenario 1 for transit projects, the returns in terms of ridership are not proportionately high in Scenario 1, presumably because of the absence of the Interconnector.

To remedy this situation, a second Scenario was developed, in which the East/West "package" would remain intact. These projects consisted of the SR836 projects (MIC to Port and Palmetto to MIC); the MIC/MIA; and the Interconnector with HOV lanes. The remainder of revenues would be spent on highway facilities. The decision was made to include these projects in Scenario 2 for three reasons:

- (1) The Committee members had ranked components of the East/West project very high. The MIC to Port and the Palmetto to MIC segments of the SR836 Corridor were ranked #1 and #4, respectively.



- (2) The decision was made to complete the Scenario by adding highway - rather than additional transit - projects in rank order, as additional highway projects were determined to be necessary to combat excessive vehicle delay that could otherwise be expected, based upon the results of the Scenario 1 model run.

**Table 4-4 - COST FEASIBLE PLAN - SCENARIO 2**

<b>Project</b>	<b>Proposed Improvement</b>
MIC -to -Port	premium transit
SR-826: SR-874 to I-75	add one HOV lane (each direction)
SR-836 Corridor: FIU- to- MIC	premium transit
SR-826: NW 158 St to GGI	add one HOV lane (each direction)
SR-836 Corridor: SR-826-to- LeJeune	add HOV lane
☆ H.E.F.T.: SR-836 to NW 41 St	4 to 6 lanes
SR-836 Corridor: SR-826-to- HEFT	add HOV lane
☆ H.E.F.T.: SW 40 St to SW 8 St	6 to 8 lanes
SR-874: HEFT to SR-826	4 & 6 lanes to 8 lanes (make 3+1HOV each direction.)
☆ H.E.F.T.: SW 88 St to SW 40 St	6 to 8 lanes
MIC/MIA	MIC facility, MIC-MIA "peplemover"
NW 97 Ave: Fountainbleau (NW 7 St) to NW 25 St	2 to 4 lanes & bridge
NW 25 St: SR-826 to NW 69 Ave	4 to 6 lanes
Perimeter Rd: NW 20 St to NW 72 Ave	2 to 4 lanes
☆ H.E.F.T.: SW 137 Ave to Quail Roost Dr	4 to 6 lanes
☆ H.E.F.T.: NW 41 St to I-75	4 to 6 lanes
NW 97 Ave: NW 25 St to NW 41 St	2 to 4 lanes
NW 87 Ave: NW 36 St to NW 58 St	4 to 6 lanes
2-lane HOV Interconnector	add HOV lane
NW 87 Ave: NW 58 St to Okeechobee Rd	new 4 lane
SR-874: HEFT to SW 137 Ave (SW 147 Ave)	new 6-lane expressway extension with arterial step-down to SW 147 Ave.
SR-112: I-95 to Okeechobee Rd	add 2 HOV lanes
Port of Miami Tunnel	construct tunnel
NW 12 St: NW 110 Ave to NW 107 Ave	new 4 lane
Interconnector	4-lane
NW 12 St: NW 104 Ave to NW 97 Ave	new 4 lane
NW 12th St. (Project 93 Split by Some Respondents)	2 to 4 lanes
NW 12 St: NW 110 Ave to NW 137Ave	2 to 4 lanes and new 4 lanes
137th Avenue: SW 8th St. to SW 26th St.	2 and 4 to 6 lanes

<b>Project</b>	<b>Proposed Improvement</b>
I-95 Ramps/ Downtown Distributor: I-95 to Biscayne Blvd	interchange improvements
SW 87 Ave: SW 168 St to SW 216 St	2 to 4 lanes
SW 104 St: SW 152 Ave to SW 167 Ave	2 to 4 lanes and new 4-lane road (157 to 162 : 2 to 4 162 to 167 : new 4)
SW 200 St: US-1 to Quail Roost Dr	2 to 4 lanes
SW 157 Ave: SW 184 St to SW 216 St	new 2 lane
SW 157 Ave: SW 88 St to SW 104 St	2 to 4 lanes
SW 147 Ave: SW 8 St to SW 26 St	new 4-lane
NW 170 St: NW 77 Ave to NW 87 Ave	2 to 4 lanes
SW 157 Ave: SW 56 St to SW 72 St	new 4 lane
SW 167 Ave: SW 88 St to SW 104 St	new 2 lane
SW 42 St: SW 147 Ave to SW 157 Ave	new 2 lane
SW 157 Ave: SW 42 St to SW 56 St	new 2 lane
SW 167 Ave: SW 56 St to SW 88 St	new 2 lane
SW 152 St: US-1 to Old Cutler Rd	2 to 4 lanes
SW 72 St: SW 154 Ave to SW 167 Ave	new 2 lane
Central Parkway: Golden Glades to SR-112	6-lane Central Parkway
SW 152 Ave: US-1 to SW 312 St	2 to 4 lanes
NW 90 St: NW 107 Ave to NW 87 Ave	new 4 lane
SW 56 St: SW 157 Ave to SW 167 Ave	new 2 lane
SW 27 Ave: So Bayshore to US-1	2 to 4 lanes
LeJeune Road: SR-112 to NW 103 St	5 to 6 lanes
SW 107 Ave: SW 40 St to SW 24 St	4 to 6 lanes
SW 56 St: SW 152 Ave to SW 157 Ave	new 4 lane
SW 77 Ave: SW 104 St to SW 152 St	2 to 4 lanes
Gratigny Parkway: at NW 47 Ave	interchange
NW 27 Ave: NW 103 St to s/o NW 74 St	4 to 6 lanes

☆ - Florida Turnpike funded projects

Scenario 2 was run, and the model output parameters assembled in the Scenario 2 evaluation table (Appendix A). At this point, the results of both scenarios 1 and 2 were presented at the March 23, 1995, meeting of the Steering Committee. Based upon the Committee's analysis, the following observations/recommendations were made and were included in the meeting minutes.

- ▶ Through the comparison between the two scenarios, Scenario 2 appeared more favorable.
- ▶ Committee agreement was reached that a third scenario be developed that would also include limited transit projects.
- ▶ It was suggested that there be some set-aside for bicycle/pedestrian, enhancement and greenways projects. Steering Committee agreement was later reached that 1-1/2% be taken off the top of net revenues for these purposes.
- ▶ Steering Committee recommendations were made to change the Cost Feasible Plan alternatives, as follows:
  - Redefine the SR 112 Extension project to the "smart-street" concept, and rename it as NW 36/41 Street.
  - Delete the SW 56 Street project.
  - Delete the Gratiigny Parkway/NW 47 Avenue interchange.
  - Delete the SW 27 Avenue project.

- ▶ At the end of the meeting, the Steering Committee suggested that the following steps be taken to build a Scenario 3:
  - Subtract 1-1/2% from net revenue for Enhancements/Non-Motorized/Greenways project proposals.
  - Include the East-West Corridor transit project component.
  - Possibly include the North Corridor.
  - Include the South Dixie Busway extension to Homestead/Florida City, but only if the other, above, changes can be made to the alternative, with enough money left over to finance the South Dixie project.

Since the inclusion of the North Corridor transit project was left as a “possibility” (contingent upon ascertaining whether there would be enough financing for it), it was decided to develop *two* more scenarios. Scenario 3 would include all of the changes enumerated above except the North Corridor. Scenario 4 would include the North Corridor, and would exclude those lowest priority projects that could not be financed once the North Corridor had been allocated its share of the revenues.

A final assumption, based upon recommendations from Metro-Dade Transit Authority (MDTA) Steering Committee members, was that some Section Three (Discretionary) funds could probably be assumed in financing the North Corridor. MDTA staff informed the committee that the old matching formulas were gone, but that the combined State and local shares of the project could be expected to be approximately 20%. Thus, in the development of Scenario 4, revenues in the amount of 20% of the estimated cost of the North Corridor were allocated for this project. As

explained above, this resulted in the twenty-five lowest priority highway projects being dropped from the list.

Scenarios 3 and 4 were run, and the results compiled in the Evaluation tables (in Appendix A). The results were presented to the Steering Committee at the regular meeting, held on April 18, 1995. The following decisions were made regarding the draft scenarios:

- ▶ The Steering Committee agreed to remove the Coral Reef Drive widening project from the *Needs Plan*.
- ▶ Steering Committee members agreed to delete the SR836/NW 97 Avenue interchange project from both the Needs and Cost Feasible Plans.
- ▶ Steering Committee members agreed to retain the Central Parkway project in the Needs Plan and to delete it from the Cost Feasible Alternative scenarios.
- ▶ The Committee agreed that the North Corridor and many of the lowest priority highway projects did not need to be mutually exclusive (Previously in Scenario 4, the last 25 highway projects had to be deleted in order to “afford” the North Corridor.) The Committee agreed that many of the small, lower priority projects would be constructed to provide access to developer projects. Developers could therefore be expected to construct, or the finance construction, of many of these projects. The “developer projects” were marked as such on the new list of projects, and the North Corridor was left intact.
- ▶ Because the East/West projects are known to work more efficiently as a group, rather than individually, the group elected to retain the tenth ranked Downtown to

Miami Beach segment of the SR836 corridor. At the same time the Port Tunnel, ranked thirty-two and previously included in both Scenarios 3 and 4, was recommended for deletion from the new scenario that the Committee was developing, as it had historically been funded with federal demonstration dollars, which are now being discontinued. The Downtown to Miami Beach Corridor was substituted for the Port Tunnel, as the costs of the two were very similar (around \$300 million, each).

- ▶ In a (6-2) vote, the Committee agreed to retain the SR874 Extension to SW 137/147 Avenue in the Needs Plan, but not in the Cost Feasible Plan.
  
- ▶ Anticipated new and replacement buses should be included in the list. Funding for these had previously been subtracted from revenues, but the buses had not been ranked, nor shown on the lists, as they were viewed as a “given” component of maintaining bus service.

The aforementioned comments were synthesized into a Scenario 5. A list of Scenario 5 projects is found below:

**Table 4-4 - COST FEASIBLE PLAN - SCENARIO 5**

Project(s)	Proposed Improvement
Bicycle/Pedestrian/Greenway projects	to be determined / implemented
Transportation Demand Management (TDM)	to be determined / implemented
SR-826: SR-874 to I-75	add one HOV lane (each direction)
SR-836 Corridor: MIC -to -Port	premium transit
So. Dixie Hwy: Cutler Ridge to Homestead	busway extension
SR-836 Corridor: FIU- to- MIC	premium transit
SR-826: NW 158 St to GGI	add one HOV lane (each direction)
SR-836 Corridor: SR-826-to- LeJeune	add one HOV lane (each direction)
☆ H.E.F.T.: SR-836 to NW 41 St	4 to 6 lanes
SR-836 Corridor: Downtown -to- Miami Beach	light rail or hybrid

☆	SR-836 Corridor: SR-826-to- HEFT H.E.F.T.: SW 40 St to SW 8 St North Corridor: County line to MIC SR-874: HEFT to SR-826	add one HOV lane (each direction) 6 to 8 lanes premium transit 4/6 lanes to 8 lanes (3+1HOV each direction.)
☆	H.E.F.T.: SW 88 St to SW 40 St NW 97 Ave: Fountainbleau to NW 25 St MIC/MIA Perimeter Rd: NW 20 St to NW 72 Ave NW 25 St: SR-826 to NW 69 Ave	6 to 8 lanes 2 to 4 lanes & bridge MIC facility, MIC-MIA "peplemover" 2 to 4 lanes 4 to 6 lanes
☆	H.E.F.T.: SW 137 Ave to Quail Roost Dr NW 97 Ave: NW 25 St to NW 41 St	4 to 6 lanes 2 to 4 lanes
☆	H.E.F.T.: NW 41 St to I-75 Interconnector: SR-836 to SR 112 NW 87 Ave: NW 36 St to NW 58 St NW 87 Ave: NW 58 St to Okeechobee Rd NW 12 St: NW 110 Ave to NW 107 Ave SR-112: I-95 to Okeechobee Rd NW 12 St: NW 104 Ave to NW 97 Ave NW 12 St: NW 110 Ave to NW 122nd Ave NW 12 St: NW 122 Ave to NW 137Ave 2-lane HOV Interconnector SW 137th Ave: SW 8th St to SW 26th St SW 137 Ave: NW 12th St to SW. 8th St SW 8 St: SW 127 Ave to SW 152 Ave NW 74 St: NW 57 Ave to SR-826 NW/SW 107 Ave: NW 41 St to SW 8 St NW 57 Ave: Okeechobee Rd to NW 138 St NW 74 St: SR-826 to HEFT NW 25 St: NW 107 Ave to NW 112 Ave NW 58 St: NW 97 Ave to NW 107 Ave NW 97 Ave: NW 58 St to NW 90 St SW 137 Ave: US-1 to HEFT SR-836: HEFT to NW 137 Ave NW 107 Ave: NW 106 St to NW 41 St.	4 to 6 lanes new 4 lane 4 to 6 lanes new 4 lane new 4 lane add one HOV lane (each direction) new 4 lane 2 to 4 lanes 2 to 4 lanes and new 4 lanes add one HOV lane (each direction) 2 and 4 to 6 lanes 2 and 4 lanes to 6 lanes 4 to 6 lanes 4 to 6 lanes 4 to 6 lanes 4 to 6 lanes 4 to 6 lanes new 6-lane road, interchange 2 to 4 lanes 2 to 4 lanes 2 to 4 lanes and new 4-lane road 2 to 4 lanes new 6-lane expressway extension make 4 lanes
☆	H.E.F.T.: I-75 to FL Turnpike SW 117 Ave: US-1 to SW 152 St Krome Ave: SW 8 St to US-1 SW 112 Ave: HARB to HEFT/ SW 112 Ave SW 112 Ave: US-1 to Moody Dr SW 120 St: SW 137 Ave to SW 117 Ave NW 183 St: I-75 to NW 2 Ave (US-441) SW 184 St: SW 157 Ave to SW 127 Ave Okeechobee Road: SR-112 to SR-826 SW 137 Ave: SW 184 St to US-1 US-1: SW 344 St to SW 211 St (SW 112 Ave) SW 97 Ave: SW 72 St to SW 40 St SW 127 Ave: SW 120 St to SW 144 St	4 to 6 lanes 2 to 4 lanes 2 to 4 lanes make 6 lane road 4 to 6 lanes 4 to 6 lanes 4 to 6 lanes 2 to 4 lanes make 6-lane arterial make 4 lanes 4 to 6 lanes 2 to 4 lanes new 4 lanes



	NW 36/41 St.: NW 42 Ave to HEFT	Smart Street Concept
	Krome Ave: SW 8 St to Okeechobee Rd	2 to 4 lanes
○	SW 104 St: SW 152 Ave to SW 167 Ave	4-lane road
○	SW 157 Ave: SW 184 St to SW 216 St	new 2 lane
○	SW 147 Ave: SW 8 St to SW 26 St	new 2 lane
○	SW 157 Ave: SW 56 St to SW 72 St	new 2 lane
○	SW 167 Ave: SW 88 St to SW 104 St	new 2 lane
○	SW 157 Ave: SW 42 St to SW 56 St	new 2 lane
○	SW 72 St: SW 154 Ave to SW 167 Ave	new 2 lane
○	SW 42 St: SW 147 Ave to SW 157 Ave	new 2 lane
○	SW 167 Ave: SW 56 St to SW 88 St	new 2 lane
○	SW 56 St: SW 57 Ave to SW 67 Ave	new 2 lane
○	NW 90 St: NW 107 Ave to NW 87 Ave	new 2 lane
○	SW 56 St: SW 152 Ave to SW 157 Ave	new 2 lane
○	NW 82 Ave: NW 7th St to NW 12th St	new 4 lane
	NW 7 St: NW 77 Ave to NW 82nd Ave	new 4 lane
	400 new, and 500 replacement, buses	

**LEGEND**

- ☆ Turnpike funded
- private / developer funded

**II(D) Highlights of the Plan -**

The following sections describe some of the significant aspects of the Miami model compared to other models, and of this update compared to previous efforts. The chief difference between this Plan and previous updates is the cost feasibility requirement, as discussed under Section II(C)2, above.

**II(D)1. Significant Transportation Model Efforts -**

The Florida Standard Urban Model Structure (FSUTMS) is an adaptation of TRANPLAN travel demand software, wherein certain defaults have been set to Florida-specific parameters. TRANPLAN, and consequently, FSUTMS, incorporate a four-step modeling process, following the steps of (1) trip generation, (2) trip distribution, (3) modal split, and (4) traffic assignment.

The Miami model includes conventional components for calculating the above described steps *except* for the modal split step. The modal choice procedures have been amended for the Miami model because traditional methodologies could not replicate the sophistication of Miami's transit system. The type of modal choice procedure used in this update of the Miami model is called the "Nested Logit Model."

To provide background to understanding the Nested Logit Model, it is important to understand traditional modal split procedures within FSUTMS. Within the traditional framework, there are choices among alternative structures with which to model transit services, as follows:

- **No transit.** Where transit is non-existent, or negligible, the modeling of it can simply be skipped.
- **Single-Purpose/Single-Period (SPSP).** This is for use in areas with one type of transit for which schedules do not vary much between peak and non-peak periods of the day.
- **Single-Purpose/Multi-Period (SPMP).** Like SPSP, this type of model cannot accurately reflect the various modes available in Miami. SPMP is, however, a bit more sophisticated, in that it can distinguish between peak and non-peak periods for transit service.
- **Multi-Purpose/Multi-Period (MPMP).** MPMP techniques represent the most sophisticated transit modeling capabilities available within traditional FSUTMS. It is "Multi-Purpose" in that all transit modes *and access modes* can be accommodated. It is "Multi-Period" as both peak and non-peak service are considered.

None of the above traditional FSUTMS techniques for modeling modal choice procedures was used in this update because a version of the Miami model using the Nested Logit Model had already been developed for the Miami area, and its results were deemed more reasonable than those yielded from any of the above described traditional treatments.

The Miami Nested Logit model was first developed and adopted for the Transitional Study. It was further refined for use in modeling the East-West (SR836) transit corridor. The Nested Logit Model used for the East-West corridor was subsequently adapted for use in the current effort - the Long Range Plan Update to the Year 2015.

The Nested Logit model differs from the most sophisticated of the traditional models - the MPMP. The chief difference is that the Nested Logit model allows the hypothetical "user" of the transportation system whose behavior is being modeled to make travel decisions at all of the points where he would, in reality, make such decisions. Conversely, the traditional FSUTMS modal split modeling structures lock him into a course of action once his first travel decision has been made.

For example, if a user decides to walk to the bus stop, and ride an express bus downtown for work, he then has the *option* of either taking transit (i.e., Metromover) to work to complete his journey, or of walking. With the Nested Logit model, this option, and the factors that would go into the user's decision in making the choice between the two options are modeled. In the MPMP model, they are not. Once the user makes a decision about how to begin his trip in the MPMP model, his choices for the rest of the journey are set, as the model has a straight line course of events that must be followed once an initial choice is made.

Choice in the Nested Logit model is, on the other hand, *nested*, and hence the name. There are decision points in the Nested Logit model at every point where a decision would be made in

reality. These decision points are illustrated on the next page. A detailed description of the modal split component of the Miami FSUTMS model can be found in Technical Report 2 - Model Validation.

#### **II(D)2. Issues Faced in the Plan -**

There are two special issues faced by this Year 2015 Long Range Transportation Plan Update. First, this Long Range Plan, for the first time, has to be cost feasible. A second requirement is that the Plan has to meet stringent air quality standards.

The Plan's adherence to air quality standards is mandated by the Clean Air Act Amendments (CAAA), and is explained in depth in the addendum to this report, the Long Range Transportation Plan to the Year 2015 Air Quality Conformity Determination.

Interestingly, the mandate that the Long Range Plan be cost feasible is a requirement of the CAAA. It is also a requirement of ISTEA. The CAAA requires cost feasibility because the U.S. Environmental Protection Agency (USEPA) wants some assurance when reviewing the aforementioned report that the projects modeled stand a good chance of actually being constructed. The air quality modeling would be relatively meaningless if the included projects were not likely to be constructed because of revenue shortfalls. So, in order to assure the most accurate air quality projections possible, the CAAA requires that financial resources be forecasted and that these forecasts include only funding sources that are already in place, or are very likely to be put in place. Then, only those projects deemed cost feasible when their projected costs are compared to these funding projections can be included in the Long Range Plan.

**II(D)3-5. Transit Mode Share, Accidents, Speeds -**

	Base Year - 1990	Needs Plan - 2015	Cost Feasible - 2015
Transit Mode Share	3.17	4.21	3.11
Accidents (daily)	300	461	465
Congested Speeds (mph)	31.0	28.9	28.1

Transit share, that proportion of daily person trips utilizing transit; average daily accidents; and congested speeds, are all model outputs that reveal various aspects of the models' efficiencies. As expected, the 2015 Needs Plan network results in a greater transit share than does the Cost Feasible Plan, wherein the mode share is very close to that of the Base Year system. This was anticipated because several major rail transit projects went unfunded when the Cost Feasible Plan, a subset of the Needs Plan, was developed.

The number of daily accidents grew from 300 in the Base Year model to 461 and 465 in the Needs and Cost Feasible Plans, respectively. This increase is to be expected, as the population and the total vehicle miles of travel increase between the Years 1990 and 2015. The slightly higher number of accidents in the Cost Feasible Plan relative to the Needs Plan is probably a result of there being relatively fewer lane miles of freeway in the Cost Feasible Plan, forcing more trips onto the arterial facilities where accidents are statistically more likely to occur.

Like the mode share and accident parameters, the congested speeds derived by the model depict logical differentiation among the three scenarios - the Base Year, the Needs Plan, and the Cost Feasible Plan. As the population and total vehicle miles of travel increase through the Year 2015, the congested speeds decrease, ostensibly because of the *increase* in congestion. It is likewise reasonable that the average congested speeds derived by the Cost Feasible model are slightly lower

# III. Program of Recommended Projects

than those of the Needs Plan, because there are relatively fewer lane miles of roadway to accommodate an equal number of trips.

In summation, the above parameters reveal that the models are yielding reasonable results, relative to one another. They also indicate that in deriving the Cost Feasible Plan as a subset of the Needs Plan, the overall efficiency of the proposed transportation system was not severely damaged.

#### **II(D)6. Air Quality -**

Air quality, like transit share, accidents, and speeds, discussed above, is another parameter that the model outputs as a means of evaluating the relative efficiency and desirability of the various proposed transportation systems. The Air Quality Conformity Determination Report (Appendix 1) produced for the Year 2015 Long Range Plan Update in October 1995, compares air quality, relative to the presence of various emissions, for the Base Year versus the Horizon Year of 2015. Interim Years are evaluated as well. The report compares the Oxides of Nitrogen (NOx) and Volatile Organic Compounds (VOC) emissions for the subject years.

#### **III. Program of Recommended Projects -**

- **PRIORITY 1** -- Priority projects to be constructed and opened to service by the Year 2000 or shortly thereafter. Includes those projects needed to respond to the most pressing and current urban travel problems. Funds for most of these improvements are already programmed in the MPO's Transportation Improvement Program.

- PRIORITY 2 -- Improvements where project development efforts should commence before 2000, with construction of the project to take place between 2000 and 2005.
- PRIORITY 3 -- Improvements to be completed between the Years 2005 and 2010. Project development activities would need to commence before the Year 2005.
- PRIORITY 4 -- Improvements to be made in the latter part of the Plan horizon and completed by the Year 2015.
- Dates mentioned are for illustration purposes. Actual dates of construction are subject to availability of adequate funding and other relevant considerations and may be advanced or postponed due to these considerations. The construction sequence of projects will nevertheless follow the indicated priority scheme.



Priority I Projects  
(Years 1995 to 2000)

(Refer to Appendix XXX for Priority I projects. The listing is based on items indicated in the current and approved Transportation Improvement Program.)

## Metro-Dade Transportation Plan to the Year 2015



Project*	Description
<b>North</b>	
N◆ New & Replacement buses (Also in Priorities III, IV) <sup>5</sup>	
N◆ SR836 Corridor: Seaport to Palmetto (Also in Priorities III, IV) <sup>2</sup>	premium transit
N◆ SR112: I-95 to Okeechobee Rd. (6113862) <sup>6</sup>	add one HOV lane (each direction)
N◆ North Corridor Transit <sup>3</sup>	premium transit
N◆ Bicycle/Pedestrian/Greenways (Also in Priorities III, IV) <sup>1</sup>	
N◆ SR 836/I395/I95 Major Interchange Improvement	
N◆ Golden Glades Multimodal Terminal <sup>7</sup>	
N◆ I-95 Intelligent Corridor System <sup>7</sup>	
N◆ I-195 Intelligent Corridor System <sup>7</sup>	
N◆ NW 57 Ave: Okeechobee Rd. to NW 138 St. (6114118) <sup>6</sup>	4 to 6 lanes
<b>Northwest</b>	
NW◆ NW 87 Ave: NW 36 St. to NW 58 St.	4 to 6 lanes
NW◆ New & Replacement buses (Also in Priorities III, IV) <sup>5</sup>	
NW◆ SR836 Corridor: Seaport to Palmetto (Also in Priorities III, IV) <sup>2</sup>	premium transit
NW◆ NW 57 Ave: Okeechobee Rd. to NW 138 St. (6114118) <sup>6</sup>	4 to 6 lanes
NW◆ Bicycle/Pedestrian/Greenways (Also in Priorities III, IV) <sup>1</sup>	
NW◆ NW 74 St: NW 57 Ave. to SR826 (6114162) <sup>6</sup>	4 to 6 lanes
NW◆ SR826: SR874 to I-75 (Also in Priority III and IV) <sup>5</sup>	add one HOV lane (each direction)
NW◆ SW 8 St: SW 127 Ave to SW 152 Ave (6113881) <sup>6</sup>	4 to 6 lanes
NW◆ NW 12 St: NW 110 Ave. to NW 107 Ave.	new 4 lanes

\*\* Pending CDMP Amendment

\* Refer to page 20 for notes.

## Metro-Dade Transportation Plan to the Year 2015



	NW◆ NW 25 St: NW 79 Ave to NW 67 Ave (6123194) (study limits are NW 87 to 67 Aves)	4 to 6 lanes (+ interchange improvements)
	NW◆ NW 97 Ave: NW 25 St. to NW 41 St.	2 to 4 lanes
<b>West</b>		
	W◆ New & Replacement buses (Also in Priorities III, IV) <sup>5</sup>	
	W◆ SR826: SR874 to I-75 (Also in Priority III and IV) <sup>5</sup>	add one HOV lane (each direction)
	W◆ SW 8 St: SW 127 Ave to SW 152 Ave (6113881) <sup>6</sup>	4 to 6 lanes
	W◆ Bicycle/Pedestrian/Greenways (Also in Priorities III, IV) <sup>1</sup>	
<b>Central/Beach</b>		
	C/B◆ New & Replacement buses (Also in Priorities III, IV) <sup>5</sup>	
	C/B◆ NW 57 Ave: Okeechobee Rd. to NW 138 St. (6114118) <sup>6</sup>	4 to 6 lanes
	C/B◆ SR 836/I395/I95 Major Interchange Improvement	
	C/B◆ I-195 Intelligent Corridor System <sup>7</sup>	
	C/B◆ Bicycle/Pedestrian/Greenways (Also in Priorities III, IV) <sup>1</sup>	
	C/B◆ Perimeter Rd: NW 20 St to NW 72 Ave	2 to 4 lanes
	C/B◆ I-95 Intelligent Corridor System <sup>7</sup>	
	C/B◆ SR836 Corridor: Seaport to Palmetto (Also in Priorities III, IV) <sup>2</sup>	premium transit
	C/B◆ NW 74 St: NW 57 Ave. to SR826 (6114162) <sup>6</sup>	4 to 6 lanes
	C/B◆ MIC (Also in Priority III) <sup>4</sup>	Miami Intermodal Center
	C/B◆ Interconnector: SR 836 to SR112 (Also in Priority III) <sup>4</sup>	new 4 lane & 2 HOV lanes
<b>South</b>		
	S◆ New & Replacement buses (Also in Priorities III, IV) <sup>5</sup>	
	S◆ South Dixie busway	premium transit
	S◆ Bicycle/Pedestrian/Greenways (Also in Priorities III, IV) <sup>1</sup>	

\*\* Pending CDMP Amendment

\* Refer to page 20 for notes.

## Metro-Dade Transportation Plan to the Year 2015



	Project	Description
<b>North</b>		
N◆	New & Replacement buses (Also in Priorities II, IV) <sup>5</sup> and bus facilities	
N◆	SR836 Corridor: Seaport to Palmetto (Also in Priorities II, IV) <sup>2</sup>	premium transit
N◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, IV) <sup>1</sup>	
<b>Northwest</b>		
NW◆	NW 25 St: NW 107 Ave. to NW 112 Ave.	2 to 4 lanes
NW◆	New & Replacement buses (Also in Priorities II, IV) <sup>5</sup> and bus facilities	
NW◆	NW 74 St: SR826 to HEFT	new 6-lane road
NW◆	SR826: SR874 to I-75 (Also in Priority II and IV) <sup>5</sup>	Add one HOV lane (each direction)
NW◆	NW 87 Ave: NW 58 St. to Okeechobee Rd.	new 4 lane
NW◆	NW 97 Ave: NW 58 St. to NW 90 St.	2 to 4 lanes and new 4 lane
NW◆	SR836 Corridor: Seaport to Palmetto (Also in Priorities II, IV) <sup>2</sup>	premium transit
NW◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, IV) <sup>1</sup>	
NW◆	SW 137 Ave: NW 12 St to SW 8 St.	2 to 6 lanes
NW◆	NW 12 St: NW 122 Ave. to NW 137 Ave.	2 to 4 lanes and new 4 lane
NW◆	NW 12 St: NW 110 Ave. to NW 122 Ave.	2 to 4 lanes
NW◆	SR836 Corridor: SR826 to HEFT <sup>2</sup>	add one HOV lane (each direction)

\*\* Pending CDMP Amendment

\* Refer to page 20 for notes.

## Metro-Dade Transportation Plan to the Year 2015



West		
W◆	SR826: SR874 to I-75 (Also in Priority II and IV) <sup>5</sup>	Add one HOV lane (each direction)
W◆	New & Replacement buses (Also in Priorities II, IV) <sup>5</sup> and bus facilities	
W◆	SR874: HEFT to SR826 (6113823) <sup>6</sup>	4 & 6 lanes to 8 lanes (make 3 + 1 HOV each direction)
W◆	SW 137 Ave: SW 8 St. to SW 26 St.	4 to 6 lanes
W◆	SW 137 Ave: NW 12 St to SW 8 St.	2 to 6 lanes
W◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, IV) <sup>1</sup>	
Central/Beach		
C/B◆	MIC (Also in Priority II) <sup>4</sup>	Miami Intermodal Center
C/B◆	SR836 Corridor: Seaport to Palmetto (Also in Priorities II, IV) <sup>2</sup>	premium transit
C/B◆	I-395 Intelligent Corridor System <sup>7</sup>	
C/B◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, IV) <sup>1</sup>	
C/B◆	Interconnector: SR 836 to SR112 (Also in Priority II) <sup>4</sup>	new 4 lane & 2 HOV lanes
C/B◆	SR836 Corridor: SR826 to LeJeune <sup>2</sup>	add one HOV lane (each direction)
C/B◆	New & Replacement buses (Also in Priorities II, IV) <sup>5</sup> and bus facilities	
South		
S◆	SW 137 Ave: US 1 to HEFT	2 to 4 lanes
S◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, IV) <sup>1</sup>	
S◆	SW 112 Ave: Homestead Air Reserve Base to HEFT along SW 112 Ave.	widen to 6 lanes throughout
S◆	New & Replacement buses (Also in Priorities II, IV) <sup>5</sup> and bus facilities	

\*\* Pending CDMP Amendment

\* Refer to page 20 for notes.

## Metro-Dade Transportation Plan to the Year 2015



	Project	Description
<b>North</b>		
N◆	New & Replacement buses (Also in Priorities II, III) <sup>5</sup> and bus facilities	
N◆	SR836 Corridor: Seaport to Palmetto (Also in Priorities II, III) <sup>2</sup>	premium transit
N◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, III) <sup>1</sup>	
N◆	I-95 Multimodal Master Plan Improvements <sup>7</sup>	
N◆	I-95 Downtown Distributor Ramps <sup>7</sup>	
<b>Northwest</b>		
NW◆	New & Replacement buses (Also in Priorities II, III) <sup>5</sup> and bus facilities	
NW◆	Krome Ave: SW 8 St to Okeechobee**	2 to 4 lanes
NW◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, III) <sup>1</sup>	
NW◆	SR826: SR874 to I-75 (Also in Priority II and III) <sup>5</sup>	Add one HOV lane (each direction)
NW◆	I-75 Intelligent Corridor System <sup>7</sup>	
NW◆	NW 183 St: I-75 to NW 57 Ave	4 to 6 lanes
NW◆	SR836 Corridor: Seaport to Palmetto (Also in Priorities II, III) <sup>2</sup>	premium transit
NW◆	NW 36/41 St: NW 42 Ave. to HEFT	Express Street (grade separations, ITS, etc.)
NW◆	NW 58 St: NW 97 Ave. to NW 117 Ave.	2 to 4 lanes
NW◆	NW/SW 107 Ave: NW 41 St. to SW 8 St. (6113948)	4 to 6 lanes
NW◆	NW 107 Ave: NW 106 St. to NW 41 St.	widen to 4 lanes
NW◆	SR836: HEFT to NW 137 Ave. (6113860)	new 6 lane expressway extension

\*\* Pending CDMP Amendment

\* Refer to page 20 for notes.

## Metro-Dade Transportation Plan to the Year 2015



West		
W◆	Krome Ave: SW 8 St. to US1 (6113791)** <sup>6</sup>	2 to 4 lanes
W◆	New & Replacement buses (Also in Priorities II, III) <sup>5</sup> and bus facilities	
W◆	SR826: SR874 to I-75 (Also in priority II and III) <sup>5</sup>	Add one HOV lane (each direction)
W◆	SW 97 Ave: SW 72 St to SW 40 St	2 to 4 lanes
W◆	NW/SW 107 Ave: NW 41 St. to SW 8 St. (6113948)	4 to 6 lanes
W◆	SW 127 Ave: SW 120 St to SW 144 St	new 4 lanes
W◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, III) <sup>1</sup>	
Central/Beach		
C/B◆	SR836 Corridor: Seaport to Palmetto (Also in Priorities II, III) <sup>2</sup>	premium transit
C/B◆	I-95 Downtown Distributor Ramps <sup>7</sup>	
C/B◆	New & Replacement buses (Also in Priorities II, III) <sup>5</sup> and bus facilities	
C/B◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, III) <sup>1</sup>	
C/B◆	NW 183 St: NE 6 Ave to US 1 (6114260) <sup>6</sup>	4 to 6 lanes
C/B◆	I-95 Multimodal Master Plan Improvements <sup>7</sup>	
C/B◆	Okeechobee Rd: SR112 to SR826	widen to 6 lanes
South		
S◆	Krome Ave: SW 8 St. to US1 (6113791)** <sup>6</sup>	2 to 4 lanes
S◆	SW 184 St: SW 157 Ave to SW 147 Ave	2 to 4 lanes
S◆	SW 112 Ave: US 1 to Moody Dr.	4 to 6 lanes
S◆	Franjo Rd: SW 184 St to Old Cutler	2 to 4 lanes
S◆	Bicycle/Pedestrian/Greenways (Also in Priorities II, III) <sup>1</sup>	
S◆	SW 137 Ave: SW 184 St to US1	widen to 4 lanes
S◆	New & Replacement buses (Also in Priorities II, III) <sup>5</sup> and bus facilities	

\*\* Pending CDMP Amendment

\* Refer to page 20 for notes.

## Metro-Dade Transportation Plan to the Year 2015



<b>Unfunded Element of Needs Plan (Priority IV)</b>		
<b>North</b>		
N◆	US 1: Downtown to Broward County Line	premium transit <sup>8</sup>
N◆	SR826: NW 158 St. to GGI (6113880) <sup>6</sup>	add one HOV lane (each direction)
N◆	LeJeune Rd: SR112 to NW 103 St.	5 to 6 lanes
N◆	Central Parkway	New 6-lane parkway (assumed public sector costs for interchanges)
N◆	SR826	Intelligent Corridor System (ICS)
N◆	SR112	Intelligent Corridor System (ICS)
<b>Northwest</b>		
NW◆	SR836	Intelligent Corridor System (ICS)
NW◆	SR836 Corridor: Palmetto to FIU	premium transit
NW◆	SR826	Intelligent Corridor System (ICS)
NW◆	SR826: NW 158 St. to GGI (6113880) <sup>6</sup>	add one HOV lane (each direction)
NW◆	SR826: Dadeland to NW 74 St	premium transit <sup>8</sup>
NW◆	NW 170 St: NW 77 Ave. to NW 87 Ave.	2 to 4 lanes
<b>West</b>		
W◆	SW 77 Ave: SW 104 St. to SW 152 St.	2 to 4 lanes
W◆	Kendall Corridor: Dadeland North to SW 147 Ave	premium transit <sup>8</sup>
W◆	SR 985/SW 107 Ave: SW 40 St to SW 24 St (6113770) <sup>6</sup>	4 to 6 lanes
W◆	SW 120 St: SW 137 Ave to SW 117 Ave	4 to 6 lanes
W◆	SR874: HEFT to SW 137 Ave	new 6-lane expressway extension with arterial step-down to SW 147 Ave
W◆	SR836 Corridor: Palmetto to FIU	premium transit
W◆	SW 157 Ave: SW 88 St. to SW 104 St.	2 to 4 lanes
W◆	SR826: Dadeland to NW 74 St	premium transit <sup>8</sup>
W◆	SR874	Intelligent Corridor System (ICS)

\* Refer to page 20 for notes.



## Metro-Dade Transportation Plan to the Year 2015



<b>Unfunded Element of Needs Plan (Priority IV)</b>		
W◆	SR826	Intelligent Corridor System (ICS)
Central/Beach		
C/B◆	Port Tunnel	
C/B◆	SR836 Corridor: Downtown to Miami Beach	premium transit <sup>8</sup>
C/B◆	LeJeune Rd: SR112 to NW 103 St.	5 to 6 lanes
C/B◆	SW 42/37 Ave: MIC to Douglas Rd. Sta.	premium transit <sup>8</sup>
C/B◆	SR836	Intelligent Corridor System (ICS)
C/B◆	US 1: Downtown to Broward County Line	premium transit <sup>8</sup>
C/B◆	I-395 Reconstruction (I-95 to MacArthur) <sup>7</sup>	
South		
S◆	SW 152 Ave: US1 to SW 312 St.	2 to 4 lanes
S◆	SW 87 Ave: SW 168 St. to SW 216 St.	2 to 4 lanes
S◆	SW 200 St: US1 to Quail Roost Dr.	2 to 4 lanes

\* Refer to page 20 for notes.

## **Metro-Dade Transportation Plan to the Year 2015**

### **Notes:**

<sup>1</sup>The Bicycle/Pedestrian/Greenways funds are estimated to consist of 1.5% of projected non-interstate highway revenues to the plan period. One-third of these funds are programmed in each of the three priority categories (II-IV) in which the Long Range Plan projects are grouped.

<sup>2</sup>The various components of the East/West (SR836) projects are programmed such that the total amount programmed represents the "LRTP funds" requested by the East/West Project Team. Additional revenues from private and other sources are a part of the East-West Project Financial Plan.

<sup>3</sup>The "Cost to the Long Range Plan" for the North Corridor represents 30% of the total project costs. The remaining 70% is assumed to be provided via Section 3 Federal Discretionary funding.

<sup>4</sup>The Interconnector and the Miami Intermodal Center (MIC) are being studied by a project team that published a July 1995 Draft Environmental Impact Statement (DEIS). The MIC Team has requested the equivalent of \$300 million (1995 dollars) from "LRTP funds".

<sup>5</sup>One third of the new and replacement buses that are anticipated to be needed are programmed in each of priorities II through IV. Also, for the project on SR826, adding HOV from SR874 to I-75, one-half of the funds are programmed in Priority II and one-half in Priority III.

<sup>6</sup>The "Cost to the Long Range Plan" for these projects is shown less the amounts already programmed in the current TIP.

<sup>7</sup>The interstate project costs are equal to the Interstate funds available through the year 2015 as calculated by FDOT - Central Office. To derive Year 2015 Interstate funding, 75% of the Central Office Year 2020 projections were utilized. Central Office had reported these funds in 1993 dollars. For the purpose of this report, these were inflated to 1995 dollars. Thus, both Interstate capital costs and Interstate funding are approximately equal to \$240.7 million.

<sup>8</sup>The highest level of urban transit technology was assumed to develop cost estimates. Future studies will determine the most feasible technology and its cost.

# Long Range Transportation Plan Update (to the Year 2015)

## Projects on the Turnpike System

*(in Dade County, on the Homestead Extension of Florida's Turnpike (HEFT); listed from north to south)*

- HEFT: I-75 to Florida Turnpike (mainline)      widen from 4 to 6 lanes
- HEFT: NW 41 Street to I-75      widen from 4 to 6 lanes
- HEFT: at NW 74 Street      construct interchange
- HEFT: SR-836 to NW 41 Street      widen from 4 to 6 lanes
- HEFT: SR-836 to SR-874      add one HOV lane each direction
- HEFT: Quail Roost Drive to Biscayne Drive      widen from 4 to 6 lanes

### Notes:

1. These projects are listed from north to south for descriptive purposes only. This order does not suggest an implementation schedule. The Turnpike District is continuing a Master Plan and other long range planning efforts to phase projects, including those listed above, on the Turnpike system.
2. These projects are assumed to be funded by the Turnpike, for purposes of developing the Cost Feasible Plan. Costs for these projects have not been subtracted from Dade County's Long Range Transportation Plan revenue stream. While further assessment will be done on this list of projects, they are considered to be needed and funded Priority II projects in this Plan.
3. The Turnpike District has reviewed, and concurs with, this list of project proposals. The Turnpike District has provided additional clarification that these projects will include, wherever possible, the addition of electronic toll traffic management (ETTM) and other high-tech components as Intelligent Transportation System (ITS) elements.

## *Roadway Projects Assumed to be Funded by Developer/Private Sector*

(These projects are assumed to be completed using private sector funds, which are not a part of the Cost Feasible Plan revenue stream)

- NW 7 Street: NW 77 Ave. to NW 82 Ave.      new 4 lane road
- SW 42 Street: SW 147 Ave. to SW 157 Ave.      new 2 lane road
- SW 56 Street: SW 152 Ave. to SW 157 Ave.      new 4 lane road
- SW 56 Street: SW 157 Ave. to SW 167 Ave.      new 2 lane road
- SW 72 Street: SW 154 Ave. to SW 167 Ave.      new 2 lane road
- NW 82 Avenue: NW 7 St. to NW 12 St.      new 4 lane road
- NW 90 Street: NW 107 Ave. to NW 87 Ave.      new 2 lane road
- SW 104 Street: SW 152 Ave. to SW 167 Ave.      widen from 2 to 4 lanes and new 4 lane road  
(new 4 lane from SW 157 to 162 Aves.)
- SW 147 Avenue: SW 8 St. to SW 26 St.      new 4 lane road
- SW 157 Avenue: SW 42 St. to SW 56 St.      new 2 lane road
- SW 157 Avenue: SW 56 St. to SW 72 St.      new 4 lane road
- SW 157 Avenue: SW 184 St. to SW 216 St.      new 2 lane road
- SW 167 Avenue: SW 56 St. to SW 88 St.      new 2 lane road
- SW 167 Avenue: SW 88 St. to SW 104 St.      new 2 lane road
- Central Parkway      6 lane parkway

# IV. Relationship of Plan to Other Studies

#### **IV. Relationship of the Plan to Other Studies and Efforts -**

The Long Range Plan Update to the Year 2015 is not a Plan that is meant to exist in isolation from the Region's other transportation planning efforts. On the contrary, the Long Range Plan and its various components must be integrated with other impacted plans, for any to realize its full potential. Below, is a discussion of other plans, and their relationships to the Long Range Plan.

##### **A. Bicycle/Pedestrian Plan -**

The Metro-Dade Bicycle Facilities Plan was developed by the Miami Urbanized Area Metropolitan Planning Organization's Bicycle/Pedestrian Program staff and Enhancement Coordinator. The purpose of the report is to encourage bicycle riding as a viable mode of transportation.

The Bicycle Plan and the Long Range Plan are very compatible, in that the Long Range Plan has set aside money for the bikeways recommended in the Bicycle Plan (See Section III of this document.). Further harmony exists between the two Plans because of the fact that both help to satisfy the same pieces of legislation. The Intermodal Surface Transportation Efficiency Act (ISTEA) and the Clean Air Act Amendments (CAAA) are cited in the Executive Summary of the Bicycle Plan as having ". . . renewed incentive for planning agencies to emphasize bicycling and walking as significant components of the transportation mix."

Both Plans also further the area's Congestion Management System (CMS), as the Federal Regulations mandating the CMS call for it to incorporate the encouragement of bicycling facilities. The Long Range Plan's relationship to the area's CMS is discussed in Section IV(B)1., below.

The Bicycle Plan provides for the inclusion of the bicycle mode in the plans for the Miami Intermodal Center and the East-West transit corridor. Both these projects are included in, and partially financed through, the Long Range Plan.

## **B. Management Systems -**

The Intermodal Surface Transportation Efficiency Act (ISTEA) requires each state, in conjunction with the MPOs, to develop and implement the following management systems:

- congestion,
- intermodal transportation facilities and systems,
- public transportation facilities and equipment,
- highway pavement,
- bridges, and
- highway safety.

These management systems must include information and strategies to improve the performance of the existing and future facilities. They should establish a link between the needs identified through the management systems and the available financing. The results of the six management systems should be integrated into the regional planning and programming processes. The former three systems, those for congestion, intermodal transportation, and public transportation, lend themselves more to integration with the Long Range Plan. While the more operational latter three systems, highway pavement, bridges, and highway safety, will be integrated into the State's shorter term programming functions.

### **1. Congestion Management System -**

The Intermodal Surface Transportation Efficiency Act calls for the development and implementation of a Congestion Management System (CMS). The purpose of the CMS is to (1) identify candidate corridors for capital and/or management actions and prioritize management improvements, and to (2) identify cost-effective travel demand reduction and operational actions to manage new and existing facilities so that traffic congestion is reduced, and the mobility of persons and goods is enhanced.

The Metro-Dade MPO has initiated efforts to develop such a system to address congestion. Currently, the Metro-Dade MPO is in the process of developing a more detailed CMS as required by ISTEA. Although this effort is not complete, the basic conceptual elements of the system have been identified. The CMS will identify candidate corridors from the Long Range Plan for management and highway or transit capital improvement actions. Capital improvement corridors will then be pursued in the long-range planning process. Management actions will be pursued as part of the CMS activities. Because the Miami region is an air quality Maintenance area, management actions also must accompany all capital investment projects, including single occupant vehicle capacity projects.

The tenets of the interim Congestion Management System were employed in the development of the list of projects that would comprise the Needs Plan component of the 2015 Long Range Plan Update. Solutions to congestion were examined through a structured process of identifying existing and projected congestion; assessing the potential travel demand management programs and/or highway efficiency improvements to alleviate the congestion; and finally considering capital improvements.

TMAs as Components of the Congestion Management System - The document, Investigation of Alternative TMAs, was prepared for the Metro-Dade MPO by Barton-Ashman associates, Inc., in October, 1994. It was a component of the MPO's Continuing Development of TMAs project., which was, in turn, a component of the county's Congestion Management Plan. The Plan advocated the implementation of TMAs wherever feasible, and this report explored the feasibility of "alternative" TMAs.

Alternative TMAs are those which are not solely employer-based, but are instead based around hospitals, airports, universities, neighborhoods/housing developments, and/or citizen's groups or associations. The report looks at several such alternative TMAs around the country to discern the characteristics of a successful - as opposed to an unsuccessful - alternative TMA.



The successful TMAs were found to be those that possessed some, but not necessarily all of the following characteristics:

#### 1 - MISSION

- There must be definite transportation needs addressable by a TMA.
- The TMA's program must meet those needs.
- The program should need TMA assistance to achieve implementation.
- Several major employers must be located in the TMA service area.

#### 2 - SUPPORT

- Employers must adopt and support the TMA's mission.
- The TMA must have credibility with the public sector (transportation).
- The TMA must have both public and private sector support.
- The TMA should represent private sector interests.
- TMA leadership must be entrepreneurial.

#### 3 - ACCOMPLISHMENT

- An annual monitoring program should evaluate TMA accomplishments toward goals.
- TMA should show early trip reduction success.
- Continuation should be dependent on accomplishments.

### 2. **Intermodal Management System -**

The objectives of the Intermodal Management System (IMS) is to: integrate transportation facilities and systems; improve coordination in planning and implementation of air and surface transportation systems; and to identify cost-effective capital and/or management acts and prioritize improvements; in order to assure that connections and transitions between modes for both passenger and freight service are as seamless as possible. An additional objective of the IMS is plan a philosophy which

encourages intermodal considerations by the various public and private partners. Planning for interchange facilities involve considerations of both space and time. Separate modal facilities need to be located in close proximity to facilitate the transfers of passengers and goods. Service planning between modes also needs to take into consideration the arrival and departure times of various modes.

Many projects have been adopted into this Plan that incorporate the objectives of the IMS. This Plan considers the intermodal transportation needs by considering projects that: afford convenient and efficient connections among modes, provide opportunities for mode choice, facilitate intermodal connections, and resolve transportation demand by investing in high-quality transportation service by a single or combination of modes. IMS components include the: identification of intermodal facilities, Identification of performance measures, system monitoring, system efficiency evaluation, and strategy and action identification.

The Miami Intermodal Center (MIC) is the chief intermodal facility included in the Long Range Plan Update. With a proposed location adjacent to the Miami International Airport, the MIC is slated to facilitate intermodal transfers among air, rail, port, bus, and taxi/jitney patrons. An extension of Miami's Metrorail system, specifically the East/West (SR 836) corridor, is slated to be constructed in such as alignment that it will interface with the facility. A more lengthy discussion of this rail corridor and of the MIC can be found in Section IV.D. East-West Multimodal Corridor Study, below.

### **3. Public Transportation Management System -**

The purpose of the Public Transit Facilities Management System (PTMS) is to organize information to facilitate the identification and implementation of strategies to provide public transit services, facilities, equipment, and rolling stock in a cost-effective manner, and to maintain transit assets in a serviceable condition. The PTMS provides system-wide estimates of the effects of investment decisions on the condition of the transportation system.

The PTMS supports statewide and metropolitan planning and programming by identifying transit capital needs. Development of the PTMS is a collaborative effort between FDOT, the Metro-Dade MPO, and transit operators to define system goals and objectives which best meet community needs. The PTMS includes the: identification of condition measures, data collection and system monitoring, identification and evaluation of proposed strategies and projects, and the implementation of strategies and projects.

### **C. Intelligent Corridor System -**

In 1994, the Florida Department of Transportation (FDOT), Districts 4 and 6, published the Southeast Florida Intelligent Corridor System (ICS) report. Like the Long Range Plan, this ICS report furthers the tenets of the Intermodal Surface Transportation Efficiency Act (ISTEA), in that it acknowledges the fact that road-building alone will not solve urban transportation problems. The ICS report suggests mitigating congestion through the following measures:

- Manage Traffic on Freeways,
- Manage traffic on Surface Streets,
- Provide Pre-Trip Traveler Information,
- Provide En route Traveler Information,
- Provide priority Treatment to HOV and Transit Vehicles,
- Encourage Mode Shift, and
- Improve Incident Management.

The Long Range Plan will work in concert with the ICS Plan to accomplish these goals. The first, "Manage Traffic on Freeways," will be partially accomplished with some of the interstate funds planned for ICS projects (on I-95 and I-395). These are included in the Long Range Plan, and are shown in Section III of this report.

The ICS goal of "Providing Priority Treatment to HOV and Transit Vehicles" is furthered by the Long Range Plan. Many of the projects illustrated in Section III of this report entail the addition of HOV (High Occupancy Vehicle) lanes. The goal of "Encouraging Mode Shift" is also fostered by the Long Range Plan. again, Section III of this report shows several new transit projects, including the Miami Intermodal Center (MIC) and the East-West (SR 836) Transit Corridor, as described below in Section IV(D) of this report.

#### **D. East-West Multimodal Corridor Study -**

The East/West Corridor is defined as beginning at Florida International University (FIU) and extending along SR 836, through downtown Miami and the Port of Miami, with the other terminus being the Miami Beach Convention Center. In July 1995, FDOT personnel responsible for the East/West project and their consultants published a draft "Major Investment Study/Draft Environmental Impact Statement" (MIS/DEIS) relative to the corridor. This document was considered, and incorporated to the greatest extent possible, into the draft Long Range Transportation Plan to the Year 2015.

In addition to Purpose and Need statements and Environmental analyses, the document contains chapters on the various Alternatives Considered and on Financial implications of the corridor. It is these two latter chapters that were incorporated into the update. Relative to Alternatives Considered, the study found that the Minimum Operable Segment (MOS) was that portion of the corridor extending from FIU to the Palmetto Expressway via the Miami Intermodal Center (MIC), and including the construction of the Interconnector highway project.

The results of the study were that, with some innovative new sources, the construction of the MOS could be funded and O&M expenses could be covered. The study proposed levels of funding for both capital and O&M expenses that could reasonably be expected from the various sources along with the years in which they would be needed. Funds expected from what the study termed the

"Long Range Plan Revenues" for both types of expenses were set aside from Long Range Plan funds in the amounts requested. Thus, rendering the two plans compatible. Detailed information regarding the magnitude of the proposed funding is contained in this report in Sections II (C) 3. Capital - Transit Costs and II (C) 3. O&M - Transit Costs.

Integral to the successful operation of the East/West Multimodal Corridor is the MIC. In July 1995, FDOT and their consultants also published a draft "Major Investment Study/Draft Environmental Impact Statement" (MIS/DEIS) for this facility. Like the East/West report, this study described the monies that would be needed to finance the capital and O&M costs associated with the facility. And like the East/West report, the amount of funding expected to be derived from so-called "Long Range Plan Revenues" for capital and O&M costs is included in the study. The Long Range Plan reflects these sums, described in more detail in Sections II (C) 3. Capital - Transit Costs and II (C) 3, O&M - Transit Costs, in this report.

#### **E. Interstate Master Plans -**

At the time of the completion of the Long Range Transportation Plan Update to the Year 2015, the Southeast Florida Multimodal Transportation Corridor Study was underway, having been initiated earlier in 1995. The Corridor Study encompasses I-95, I-595, I195, and the South Florida Rail Corridor. The purpose of the study is to develop a phased program of improvements projects for these corridors through the Year 2020. As with the Long Range Plan, the requirements of the Clean Air act amendments (CAAA) and the Intermodal Surface Transportation Efficiency Act (ISTEA) will be incorporated into the Corridor Study.

The Corridor Study, like the Long range Plan, has a multi-modal emphasis. Once the Year 2020 capacity needs are determined for the aforementioned facilities, a series of Conceptual Mobility Enhancement alternatives (CMEAs) will be developed. These will consider such multi-modal options as high occupancy vehicle (HOV) lanes, intellignet transportation system technology, ramp

metering, increased Tri-Rail service, additional park n' ride lots, improved bus service, and land use modifications - in addition to the more traditional roadway and interchange improvements.

Because transportation improvements must have (1) MPO Board approval and (2) be a part of the Long Range Plan in order to be included in the FDOT work Program, and subsequently constructed, the final alternatives selected as a result of the Corridor Study will be submitted for MPO Board approval. An extensive public involvement process is also planned.

#### **F. High Speed Rail Plan -**

In 1995, as the Long Range Plan was being finalized, the FDOT was receiving bids for the development of a High Speed Rail link among major Florida Cities. Prior to the letting of bids, the market for such a system had been studied extensively, with various scenarios for connecting cities being examined for their viability.

The Florida High Speed and Intercity Rail Market and Ridership Study was finalized in July 1993. It provided ridership projections among various groups of cities. A Tampa-Orlando-Miami Corridor was generally favored by the report. The main Miami High Speed Rail station was anticipated to be at the proposed Miami Intermodal Center (MIC) adjacent to the Miami International Airport.

The construction and partial funding of the MIC are included in this Long Range Transportation Plan. The MIC is discussed further in Section IV.(D), above. While the MIC is included in the Long Range Plan, High Speed Rail was not modeled as part of this effort. That is because it would not be especially useful to model High Speed Rail as part of a one county model, as there would be no significant intra-county travel, and the modeling of the inter-county travel has already been accomplished as part of the Florida High Speed and Intercity Rail Market and Ridership Study as described above.

Though High Speed Rail is not modeled, per se, in conjunction with the development of the Long Range Plan, the two Plans are compatible and related. They are related in that both include the MIC, and they are compatible in that both further the tenets of the Intermodal Surface Transportation Efficiency Act (ISTEA).

Included in ISTEA are the National High-Speed Ground Transportation Programs. A magnetic levitation program is authorized at a sum of \$725 million under the Act. These funds will be directed toward the development of one prototype project, nationwide. A separate \$50 million high speed ground transportation demonstration program will fund selected projects that include new technologies related to high speed rail or maglev projects already under construction or in operation.

# Appendices



# Appendices

# Appendix I

## Air Quality Conformity Determination Report

## AIR QUALITY CONFORMITY DETERMINATION

### **2015 Metro-Dade Transportation Plan - Long Range Element**

This report documents the conformity determination for the proposed Year 2015 Metro-Dade Transportation Plan - Long Range Element (LRTP) in fulfillment of the requirements of the 1990 Federal Clean Air Act Amendments. This Conformity Determination Report documents that implementation of the projects listed in the Metro-Dade County 2015 LRTP will contribute to emissions reductions compared to the emissions from the 1990 Base Year network in the analysis years of 1997, 2000, 2005 and 2015.

Furthermore, this report documents that the 2015 LRTP is in conformance with the emissions budgets contained in the State Implementation Plan (SIP) and the requirements of the Clean Air Act Amendment (CAAA). To illustrate this conformity determination, a brief synopsis of results are presented for the Emission Budget Test and the Conformity of the Year 2015 Long Range Transportation Plan.

The Long Range Plan Update to the Year 2015 is tentatively scheduled for adoption at the November 9, 1995 Metropolitan Planning Organization (MPO) Governing Board Meeting. The contents of the Plan meet the requirements of 51.404 of the transportation conformity regulation. The Plan is consistent with the Intermodal Surface Transportation Efficiency Act (ISTEA) in that the "Fifteen Factors" are incorporated into the Goals and Objectives of the LRTP, and hence the Evaluation criteria, that were used in the project selection process.

The Plan is also consistent with 23 CFR Part 450, Subpart C in that is financially constrained. The financial resources component of the Plan indicates that \$3.125 billion can reasonably be expected to be available to fund it; while the implementation of the Plan is projected to cost \$3.113 billion.

On April 25, 1995, the U.S. Environmental Protection Agency (USEPA) redesignated the Southeast Florida Airshed (Made up of Dade, Broward and Palm Beach Counties) from moderate non-attainment for the pollutant ozone to attainment status. The Florida Department of Environmental Protection (FDEP) submitted the redesignation request and maintenance plan for the SE Florida Airshed on November 8, 1993, as an amendment to the SIP. *On November 6, 1996 the Florida Department of Environmental Resources (FDER) will hold a public hearing to introduce a technical amendment to the SIP for revised emissions budgets for the SE Florida Airshed.* These adjusted emissions budgets are the caps used here to demonstrate conformity of the 2015 LRP with the requirements of the CAAA.

Conformity of the Year 2015 Long Range Plan

Emissions resulting from the implementation of the year 2015 Long Range Transportation Plan were compared to the emission budgets established by the redesignation request maintenance plan. Implementation of the 2015 LRTP will result in emissions which fall below the emissions budget set for the analysis years of 1997, 2005 and 2015.

**Air Quality Conformity for Long Range Plan to the Year 2015**

(tons per day)

Ozone Precursor	1990	1997		2000		2005		2015	
	Baseline	Action	Budget	Action	Budget	Action	Budget	Action	Budget
VOC	156.60	81.89	148.77	76.84	148.77	78.37	148.77	81.42	148.77
NOx	117.70	99.11	111.82	94.04	111.82	99.68	111.82	110.96	111.82

To establish conformity, the Metropolitan Planning Organization (MPO) has followed the Florida Department of Transportation Directive No. 525-010-014-e "District Review of Conformity Determinations by Metropolitan Planning Organizations in Nonattainment and Maintenance Areas" of October 19, 1995. This directive supplements USEPA's transportation conformity regulation (40 CFR Part 51) and was prepared by the FDOT Office of Policy Planning. The FDOT Directive addresses the transportation and air quality planning methodology to be employed by the State's

urban areas using the Florida Standard Urban Transportation Model Structure (FSUTMS) and the Mobile Emissions Series Models to assess the status of air quality compliance efforts.

# Appendix II

Adopted 1996 TIP Projects  
(Priority I Projects)

**Approved 1996  
Transportation Improvement Program Projects  
(over \$500,000)**

<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
54	6112815	SW 8 ST/ SR90/ US-41	FROM SR 826/ PALMETTO EXPY TO SW 57 AVE	P.D.&E. STUDY
54	6113187	SW 8 ST/ SR90/ US-41	FROM SW 57 AVE TO SW 42 AVE	P.D.&E. STUDY
54	6113188	SW 8 ST/ SR90/ US-41	FROM SW 42 AVE TO SW 27 AVE	P.D.&E. STUDY
54	6113212	PALMETTO EXPY/ AUX LN	FROM N OF SUNSET DR SW 72 TO SW 32 ST	MULTI-LANE RECONSTRUCTION(8 LANES)
54	6113289	SR 826/ PALMETTO EXPY	FROM 2000FT S. OF NW 25 ST TO 2000FT OF NW 25 ST	INTERCHANGE (MAJOR)
54	6113290	SR 826/ PLAMETTO EXPY	SO OF NW 103 ST TO SOUTH OF NW 122 ST	MULTI-LANE RECONSTRUCTION (8 LANES)
55	6113371	SR 5/ US-1/ BISC. BLVD.	FROM NE 163 ST TO MIAMI GARDENS DRIVE	MULTI-LANE RECONSTRUCTION (8 LANES)
55	6113372	SR 5/ US-1/ BISC. BLVD.	FROM SR 860/MIAMI GARDENS DR TO SR 856/ WM LEHMAN CSWY	MULTI-LANE RECONSTRUCTION (8 LANES)
55	6113533	SR 5/ US-1	FROM N OF CO. LINE, MP 0.076 TO S OF STR S-18 RD, MP6	MULTI-LANE NEW CONSTRUCTION (4 LANES)
55	6113666	SR 25/ NW 36 ST	FROM NORTH RIVER DRIVE TO NW 17 AVE	MULTI-LANE NEW CONSTRUCTION (5 LANES)
56	6113712	SR 874/ DON SHULA EXPY	FROM SW 137 AVE TO SR 821/ H.E.F.T.	MULTI-LANE NEW CONSTRUCTION ( 6 LANES)
56	6113758	SR 826	FROM SW 2 ST TO S OF NW 25 ST (INCL SR 836 INTERCHANGE)	MULTI-LANE RECONSTRUCTION (10 LANES)
56	6113770	SR 985/ SW 107 AVE	FROM SW 40 ST TO SW 24 ST	P.D.&E. STUDY
56	6113791	SR 997/ KROME AVE	FROM US-1 (FLORIDA CITY) TO SR 90/ TAMLAMI TRAIL	CORRIDOR IMPROVEMENT

**Approved 1996  
Transportation Improvement Program Projects  
(over \$500,000)**

<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
56	6113792	SR 997/ KROME AVE	FROM SR 90/ TAMIAMI TRAIL TO US-27/ OKEECHOBEE RD	CORRIDOR IMPROVEMENT
57	6113823	SR 874/ SO. DADE EXPY	FROM SW 112 ST TO SR 826/ PALMETTO EXPY	ADD THRU LANES (6 LANES)
57	6113825	SR 826/ PALMETTO EXPY	FROM SW 32 ST TO SW 16 ST	MULTI-LANE RECONSTRUCTION (10 LANES)
57	6113826	SR 826/ PALMETTO EXPY	FROM SW 16 ST TO SW 2 ST	MULTI-LANE RECONSTRUCTION (10 LANES)
57	6113827	SR 826/ PALMETTO EXPY	FROM NORTH OF NW 25 ST TO NW 47 ST	MULTI-LANE RECONSTRUCTION (10 LANES)
57	6113828	SR 826/ PALMETTO EXPY	FROM NW 47 ST TO NW 62 ST	MULTI-LANE RECONSTRUCTION (10 LANES)
58	6113829	SR 826/ PALMETTO EXPY	FROM NW 62 ST TO N OF FEC RAILROAD	MULTI-LANE RECONSTRUCTION (10 LANES)
58	6113830	SR 826/ PALMETTO EXPY	FROM N. OF FEC. RAILROAD TO S. OF NW 103 ST	MULTI-LANE RECONSTRUCTION (10 LANES)
58	6113862	SR 112/ AIRPORT EXPY.	FROM OKEECHOBEE ROAD TO SR 9A/ I-95	P.D.& E. STUDY (8 LANES)
58	6113863	SR 5/ US-1	FROM SW 344 ST TO SW 112 AVE	PRELIMINARY ENGINEERING (6 LANES)
58	6113864	SR A1A/ COLLINS AVE	FROM 5 ST/ US-41 TO 26 ST	PRELIMINARY ENGINEERING (6 LANES)
59	6113880	SR 826/ PALMETTO EXPY	FROM NW 154 ST TO GOLDEN GLADES	PRELIMINARY ENGINEERING (8 LANES)
59	6113881	SR 90/ SW 8 ST/ US-41	FROM SW 127 AVE TO 152 AVE	P.D.&E. STUDY
59	6113888	CITY OF MIAMI BEACH	FROM SR A1A CONNECTOR TO BETWEEN 42 AND 43 ST	MULTI-LANE RECONSTRUCTION
60	6113948	NW/SW 107 AVE	FROM SR 836 TO SW 8 ST	MULTI-LANE RECONSTRUCTION



**Approved 1996  
Transportation Improvement Program Projects  
(over \$500,000)**

<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
60	6113949	SR 847/ NW 47 AVE	FROM NW 183 ST TO BROWARD COUNTY LINE	ADD LANES & RECONSTRUCTION (4 LANES)
60	6113959	US-1/ SO. DIXIE HWY	FROM FLORIDA CITY TO S. DADELAND METRORAIL STATION	CORRIDOR IMPROVEMENT
61	6114016	SR 25/ OKEECHOBEE RD.	FROM SR 826/ PALMETTO EXPY TO SR 112/ AIRPORT EXPY	MAJOR FEDERAL (EIS) (6 LANES)
61	6114017	US-1/ SR 5/ BISCAYNE BLVD.	FROM SR 856/ NE 192 ST TO NE 209 ST.	MULTI-LANE RECONSTRUCTION (8 LANES)
62	6114033	SR 5/ US-1	FROM S OF STR S-18, MP 6. TO CARD SND RD, MP.13.78	NEW ROAD CONSTRUCTION - 2 LANES (4 LANES)
63	6114064	SR 860/ MIAMI GARDENS DR	FROM NW 57 AVE TO NW 2 AVE	MULTI-LANE RECONSTRUCTION
64	6114088	SR 907/ ALTON ROAD	FROM 8 ST TO MICHIGAN AVE	MULTI-LANE RECONSTRUCTION
65	6114094	MULTI-MODAL CORRIDOR	FROM FLA. INTERNAT'L UNIVERSITY TO PORT OF MIAMI	P.D.& E. STUDY
65	6114114	MIAMI INTERMODAL	CENTER	P.D. & E. STUDY
65	6114117	SR A1A/ INDIAN CREEK	FROM 59 ST TO 62 ABBOTT AVE	REPLACE GRADE SEPARATION-CONC.
65	6114118	SR 823/ NW 57 AVE	FROM SR 25/ OKEECHOBEE RD TO NW 138 ST	P.D.& E. STUDY (6 LANES)
66	6114153	SR 916/ 138 ST	FROM NW 67 AVE TO 57 AVE	ADD LANES & RECONSTRUCT
66	6114162	SR 934/ NW 74 ST	FROM SR 823 TO SR 826/ PALMETTO EXPY	P.D.& E. STUDY
66	6114164	SR 9A/ I-95	FROM SR 836/ DOLPHIN EXPY TO SR 90/ SW 8 ST	P.D.& E. STUDY

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<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
68	6114260	SR 860/ MIAMI GARDENS DR.	FROM SR 9A/ I-95 TO SR 5/BISCAYNE BLVD.	P.D. & E. STUDY
68	6114264	SR 836 /DOLPHIN EXPY	LE JEUNE RD INTERCHANGE (NB TO WB RAMP)	HWY-TRAFFIC OPS IMPROVEMENT
68	6114265	SR 836 /DOLPHIN EXPY	LE JEUNE RD INTERCHANGE (EB TO NB RAMP)	HWY-TRAFFIC OPS IMPROVEMENT
68	6114266	SR 836 /DOLPHIN EXPY	LE JEUNE RD INTERCHANGE (EB RAMP)	HWY-TRAFFIC OPS IMPROVEMENT
69	6114267	SR 836 /DOLPHIN EXPY	LE JEUNE RD INTERCHANGE (WB EXIT RMP TO LEJ)	HWY-TRAFFIC OPS IMPROVEMENT
69	6114268	SR 836 /DOLPHIN EXPY	NW 27 AVE INTERCHANGE	HWY-TRAFFIC OPS IMPROVEMENT
69	6114269	SR 836 /DOLPHIN EXPY	NW 87 AVE INTERCHANGE	HWY-TRAFFIC OPS IMPROVEMENT
69	6114272	SR A1A /MACARTHUR CSWY	EAST BRIDGE #870077	HWY-TRAFFIC OPS IMPROVEMENT
70	6114274	SR 985 /SW 107 AVE	FROM SW 70 ST TO SW 80 TR (INDIAN HAMMCKS PRK)	BIKE PATH
70	6123165	PORT OF MIAMI TUNNEL	FROM PORT OF MIAMI TO SR 836/ I-395	MISCELLANEOUS STRUCTURE
71	6123194	NW 25 ST	FROM SR 826/ PALMETTO EXPY TO AIRPORT	MISC. RECONSTRUCTION
73	6123249	SW 137 AVE	FROM SR 821/ HEFT TO SW 336 ST	ADD LANES & RECONSTRUCTION (4 LANES)
73	6123258	VA GARDENS MIAMI SPRING BIKEWAY SYSTEM	LUDLAM CANAL PATH	BIKE PATH
73	6123259	CITY OF MIAMI BEACH BICYCLE NETWORK		BIKE PATH
73	6123260	CITY OF MIAMI BEACH	DADE BLVD. BIKE/ PED IMPROVEMENTS	BIKE PATH
74	6123274	BISCAYNE- EVERGLADES	GREENWAYS TRAIL	

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75	6141828	I-95/ SR 9A	FROM US-1/ SR 9A TO BROWARD COUNTY LINE	CORRIDOR IMPROVEMENT
75	6141902	I-395/ SR 836/ I-95	FROM NW 17 AVE TO MACARTHUR CSWY BR.	CORRIDOR IMPROVEMENT
75	6141908	I-195	FROM NW 2 AVE TO SR 5/ BISCAYNE BLVD.	WIDEN BRIDGE
109	6151882	HEFT	FROM TAMiami TO TOLL PLAZA	RELOCATION, RECONSTRUCTION, AND EXPANSION
109	6151891	HEFT	FROM QUAIL ROOST TO SR-874	ADD AUXILIARY LANES
112	6114199	SR 5/ US-1	FROM CARD SOUND ROAD TO SW 304 ST	MULTI-LANE RECONSTRUCTION
112	6113684	SR 826/ PALMETTO EXWY	FROM US-1/ SO. DIXIE HWAY TO N OF SW 72 ST SUNSET	ADD 2 LANES TO EXISTING 4 LANES
112	6113371	SR 5/ US1/ BISCAYNE BLVD	FROM NE 163 ST TO MIAMI GARDENS DRIVE	MULTI-LANE RECONSTRUCTION (8 LANES)
113	6114236	SR 836 /DOLPHIN EXPY	FROM NW 57 AVE TO NW 45 AVE	HIGHWAY-TRAFFIC OPS IMPROVEMENT
193	6123258	CITIES OF MIAMI SPRINGS /VIRGINIA GARDENS	ALONG LUDLAM CANAL	BIKE PATH
117	662279	NW 7 ST	FROM NW 60 COURT TO NW 57 AVE	WIDEN TO 5 LANES
117	662214	NW 12 ST	FROM NW 97 AVE TO NW 87 AVE	ADD 2 LANES AND 4 LANES RAILROAD CROSSING
117	662250	NW 17 AVE	FROM NW 79 ST TO NW 103 ST	WIDEN TO 5 LANES
117	610023	NW 17 AVE	FROM NW 103 ST TO NW 119 ST	WIDEN TO 5 LANES
118	662320	SW 24 ST/ CORAL WAY	FROM SW 87 AVE TO SW 77 AVE	ADD 1 LANE EB & WB, WIDEN BRIDGE
118		SW 24 ST	FROM SW 107 AVE TO SW 87 AVE	4 TO 6 LANES

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<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
118		SW 24 ST	FROM SW 117 AVE TO SW 107 AVE	PE, 4 TO 6 LANES
118		NW 42 AVE	FROM NW 156 ST TO NW 167 ST	RECONSTRUCT 2 LANE DIVIDED ROADWAY
118		NW 62 ST	FROM OKEECHOBEE ROAD TO NW 37 AVE	R/W RECONSTRUCT 4 LANES
119		SW 67 AVE	FROM SW 40 ST TO SW 56 ST	INTERSECTION IMPROVEMENTS AND DRAINAGE
119	662347	NW 72 AVE	FROM NW 74 AVE TO OKEECHOBEE ROAD	R/W 4 LANES AND BRIDGE
119	662358	NW 95 ST	FROM NW 27 AVE TO NW 7 AVE	RECONSTRUCT 4 LANES, ADD TURN LANE
119		SW 97 AVE	FROM SW 72 ST TO SW 40 ST	PE, 2 TO 4 LANES
119		SW 107 AVE	FROM QUAILROOST DRIVE TO SW 160 ST	PE, R/W, 2 TO 4 LANES
119	662410	SW 117 AVE	FROM SW 152 ST TO SW 184 ST	PE, R/W, 2 TO 4 LANES
120	662360	SW 127 AVE	FROM SW 120 ST TO SW 88 ST	R/W, WIDEN TO 5 LANES
120	662211	SW 127 AVE	FROM SW 42 ST TO SW 26 ST	WIDEN TO 5 LANES
120	662283	SW 152 ST	FROM SW 137 AVE TO ZOO ENTRANCE	2 TO 6 LANES, DIVIDED
120	662257	SW 184 ST	FROM US-1 TO FRANJO ROAD	WIDEN TO 5 LANES
120	662257	FRANJO ROAD	FROM SW 184 ST TO US-1	PE, WIDEN TO 3 LANES
120	662311	MIAMI LAKES DRIVE	FROM SR 826 TO NW 57 AVE	2 TO 4 LANES (DIVIDED)
121	662285	MIAMI AVE	FROM N 103 ST TO N 167 ST	PE, 2 TO 5 LANES
127	671104	NW 36/ 41 ST	FROM NW 87 AVE TO NW 77 AVE	4 TO 6 LANES
127	671105	SW 107 AVE	OVER TAMIAMI CANAL	WIDEN BRIDGE/ ADD TURN LANES

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<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
127	610023	SW 72 AVE	FROM SW 40 ST TO SW 48 ST	WIDEN TO 4 LANES
127	610023	SW 72 AVE	FROM SW 48 ST TO SE 56 ST	WIDEN TO 3 LANES
128		SW 109 AVE	FROM TAMIAMI CANAL TO W FLAGLER ST	WIDEN TO 3 LANES
129		SW 117 AVE	FROM SW 40 ST TO SW 8 ST	2 TO 4 LANES
129		NW 97 AVE	BRIDGE OVER SR 836	CONSTRUCT 4-LANE BRIDGE AND APPROACHES
130	671265	SW 40 ST	FROM US-1 TO SW 27 AVE	WIDEN TO 3 LANES AND RESURFACE
130	671204	NW 20 ST	FROM NW 2 AVE TO NE 2 AVE	WIDEN EXISTING 4 LANES AND RESURFACE
130		NE 10 AVE	FROM NE 79 ST TO NE 81 ST	WIDEN 2 TO 4 LANES
130		NE 10 AVE	FROM NE 81 ST TO NE 87 ST	WIDEN TO 3 LANES
131	671203	NW 14 ST	FROM NW 10 AVE TO I-95	WIDEN AND RESURFACE
131	671267	NW 17 AVE	FROM NW 103 ST TO NW 119 ST	2 TO 4 LANES WITH STRIPED MEDIAN
131		SW 47 AVE	FROM SW 8 ST TO FLAGLER ST	WIDEN TO 3 LANES AND RESURFACE
131		TAMIAMI CANAL DR AND TAMIAMI BLVD	FROM SW 8 ST TO FLAGLER ST	WIDEN TO 3 LANES AND RESURFACE
132		E 2 AVE	FROM NE 5 ST TO NE 79 ST	PAVING, WIDENING, DRAINAGE, AND STRIPING
132		W 2 AVE	FROM NW 6 ST TO NW 22 ST	PAVING, WIDENING, DRAINAGE, AND STRIPING
132		W 2 AVE	FROM NW 36 ST TO NW 54 ST	PAVING, WIDENING, DRAINAGE, AND STRIPING
132		W 2 AVE	FROM NW 61 ST TO NW 79 ST	PAVING, WIDENING, DRAINAGE, AND STRIPING
132		MIAMI AVENUE	FROM N 6 ST TO N 36 ST	PAVING, WIDENING, DRAINAGE, AND STRIPING

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<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
132		NE 107 ST	FROM BISCAYNE BLVD TO NE 6 AVE	PAVING, WIDENING, DRAINAGE, AND STRIPING
132		NW 62 ST	FROM NW 37 AVE TO BISCAYNE BLVD.	PAVING, WIDENING, DRAINAGE, AND STRIPING
133	671308	NW 17 AVE	FROM NW 119 ST TO OPA LOCKA BLVD.	WIDEN TO 5 LANES
134	671311	NW 87 AVE	FROM NW 138 ST TO NW 154 ST	BRIDGE OVER I-75 AND APPROACHES
134	671310	NW 87 AVE	FROM NW 154 ST TO NW 186 ST	2 TO 4 LANES
134		GRIFFING BOULEVARD	FROM NW 125 ST TO BISCAYNE BLVD	RESURFACING, WIDENING AND DRAINAGE
134		GRIFFING BOULEVARD	FROM NW 125 ST TO NW 167 ST	RESURFACING, WIDENING AND DRAINAGE
135		NE 12 AVE	FROM NE 151 ST TO NE 167 ST	WIDEN TO 3 LANES
135	371306	NE 15 AVE	FROM NE 159 ST TO MIAMI GARDENS DR	WIDEN TO 3 LANES
135		MIAMI GARDENS DR CONNECTOR	FROM US-1 TO WILLIAM LEHMAN CAUSEWAY	NEW 4-LANE
135	671022	NE 123 ST	FROM WEST DIXIE HIGHWAY TO NE 6 AVE	WIDEN TO 4 LANES AND CLOSURE OF WEST DIXIE HIGHWAY
137	671404	NW 12 ST	FROM NW 127 AVE TO NW 122 AVE	CONSTRUCT 2 LANES
137	671401	SW 26 ST	FROM SW 147 AVE TO SW 137 AVE	CONSTRUCT 2 TO 4 LANES
137	671403	NW 41 ST	FROM NW 142 AVE TO NW 117 AVE	RESURFACE AND RESTRIPE
137	671402	SW 127 AVE	FROM SW 42 ST TO SW 26 ST	CONSTRUCT 2 TO 4 LANES WITH STRIPED MEDIAN
137	671401	SW 147 AVE	FROM SW 26 ST TO SW 34 ST	CONSTRUCT 2 LANES
139	671508	SW 104 ST	FROM HAMMOCKS BLVD S (SW 154 AVE) TO SW 137 AVE	4 TO 6 LANES

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<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
139	671503	SW 127 AVE	FROM SW 88 ST TO SW 42 ST	2 TO 4 LANES WITH STRIPED MEDIAN
139	671509	SW 137 AVE	FROM SW 88 ST TO SW 42 ST	4 TO 6 LANES
139	671510	SW 137 AVE	FROM SW 184 ST TO SW 152 ST	2 TO 6 LANES
139	662274	SW 117 AVE	FROM SW 152 ST TO SW 104 ST	2 TO 4 LANES
140		SW 152 ST	FROM ZOO ENTRANCE TO HEFT	4 TO 6 LANES
140	671511	SW 147 AVE	FROM SW 184 ST TO SW 152 ST	ADD 2 LANES AND RESURFACE
140		SW 184 AVE	FROM SW 147 AVE TO SW 120 AVE	2 TO 4 LANES
140		SW 142 AVE	FROM SW 104 ST TO SW 120 ST	2 TO 4 LANES
142	671601	SW 312 ST	FROM SW 187 AVE TO SW 177 AVE	WIDEN TO 3 LANES
142		SW 312 ST	FROM SW 187 AVE TO SW 177 AVE	WIDEN TO 5 LANES
142		SW 320 ST	FROM SW 187 AVE TO US-1	WIDEN TO 3 LANES
143	671305	SW 328 ST	FROM US-1 TO SW 162 AVE	WIDEN TO 3 LANES
143		SW 328 ST	FROM SW 162 AVE TO SW 152 AVE	WIDEN TO 3 LANES
143	671603	SW 182 AVE	FROM SW 344 ST TO SW 312 ST	WIDEN TO 3 LANES
143		SW 137 AVE	FROM SW 344 ST TO SW 336 ST	2 TO 4 LANES
145	671701	SW 42 AVE BRIDGE	OVER CORAL GABLES CANAL	ADD RIGHT TURN LANE AND BICYCLE LANE
149	671901	NW 87 AVE	FROM NW 122 ST TO NW 138 ST	2 TO 5 LANES
149	671916	NW 62 AVE	FROM NW 91 ST TO NW 105 ST	2 TO 5 LANES

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<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
157		NW 87 AVE	FROM NW 138 ST TO NW 154 ST	2 TO 4 LANES AND BRIDGE CROSSING I-75
157		NW 122 ST	FROM NW 97 AVE TO NW 87 AVE	2 TO 5 LANES
157		NW 7 ST	FROM NW 60 COURT TO NW 57 AVE	WIDEN TO 5 LANES
157		NW 17 AVE	FROM NW 79 ST TO NW 103 ST	WIDEN TO 5 LANES
158		SW 152 ST	FROM SW 137 AVE TO ZOO ENTRANCE	WIDEN TO 6 LANES
158		MIAMI LAKES DR	FROM SR 826 TO NW 57 AVE	WIDEN TO 4 LANES
158		SW 344 ST	FROM SW 152 AVE TO SW 132 AVE	ADD 2 LANES AND RECONSTRUCT 2 LANES
158		SW 344 ST	FROM SW 172 AVE TO SW 167 AVE	ADD 2 LANES AND RECONSTRUCT 2 LANES
158		NW 97 AVE	OVER SR 836	CONSTRUCT 4 LANE BRIDGE AND APPROACHES
158		SOUTHDADE GREENWAYS NETWORK - EVERGLADES TRAIL		BIKEWAYS
159		SOUTHDADE GREENWAYS NETWORK - CARD SOUND ROAD		BIKEWAYS
159		FLAGLER ST	FROM BISCAYNE BLVD TO NW 2 AVE	CONVERT FROM ONE-WAY TO TWO-WAY
182		North Corridor- Fixed Guideway Extension	From Martin Luther King Station to Broward County	Elevated extension of existing Metrorail System
182		East-West Corridor and Multimodal Facility	From Airport to Seaport; from Airport to FIU; from Airport to Miami Beach	Fixed Guideway System
183		Palmetto Extension of Metrorail	Okeechobee Station to Palmetto	Extension of existing Metrorail
184		Replacement of Buses and Purchases of Articulated Buses		Per Fleet Replacement Plan
190		Tri-County Commuter Rail	Station Improvements	



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<b>1996 TIP Pg. No.</b>	<b>WPI</b>	<b>FACILITY</b>	<b>LIMITS</b>	<b>IMPROVEMENT</b>
193		Dade Blvd.	Bike Lane	City of Miami Beach Bicycle Network
193	Metromover - Bayside	Promenade		Pedestrian Promenade
194	South Dade Greenways			
	Phase I	Bike Path		
	Phase II	Bike Path		

# Appendix III

Public Participation Activities

## Public Participation Activities

Public involvement in the development of the Long Range Element of the Year 2015 Transportation Plan was ensured in ways:

The Citizens Transportation Advisory Committee (CTAC) of the MPO was involved from the kick-off of the Plan Update project. Members of the CTAC were invited to the monthly meetings of the Plan Steering Committee. Moreover, the Chairman of the CTAC was appointed as a voting member of the Steering Committee, and was an active participant in the development of the draft Plan. Additionally, the CTAC was kept informed of the status of the Plan and issues related to the Plan and its development over the two years was a routine information item on the CTAC subcommittee and full committee monthly agendas.

Interaction with the media ensured more exposure of the Plan and its development with the general public. Notices on the development of the Plan and of public informational meetings as well as the public hearing for the adoption of the Plan were published in three local newspapers, in English and Spanish, as appropriate. In addition, interviews were conducted by one news radio station, one local television station, and one local newspaper.

Public informational materials were professionally prepared and distributed to neighborhood associations, other agencies and transportation planning committees, as well as the CTAC. During May and June of 1995, public informational meetings were conducted to solicit input on the draft Plan from the general public. Presentation boards, promotional brochures and descriptive information booklets were prepared and distributed so that citizens may browse and follow along with the information as it was presented. Forms were available for citizens to register their comments on the draft Plan, and citizens were encouraged to take the materials and forms home and mail or fax their comments to the MPO. CTAC members actually hosted the community meetings, which were conducted at various locations throughout the county. After the advertised, regularly-scheduled community meetings were concluded, the MPO responded to some special requests from homeowner associations, etc. by conducting customized presentations for their area.

**Dade County MPO**

**Project Schedule for the  
PUBLIC INVOLVEMENT ACTIVITIES  
associated with the Year 2015 Transportation Plan**

**Date:** November 21, 1995

#	Date Out	Sent to:	Comm. In:	Remarks:	Mailed	Faxed	Presented	Picked Up
		<b>COMMITTEES</b>						
1	various	CTAC (33 members)			X		X	
2	various	BPAC (22 members)			X		X	
3	various	TARC (9 members)			X		X	
4	various	TPTAC (13 members)			X		X	
5	various	TPC (18 members)			X		X	
6	various	MPO (13 members)			X		X	
		<b>CITIES</b>						
1	3-10-94 and various subsequent dates	City of North Bay Village			X			
2	"	Town of Medley			X			
3	"	City of Sweetwater			X			
4	"	Indian Creek Village			X			
5	"	City of South Miami			X			

#	Date Out	Sent to:	Comm. In:	Remarks:	Mailed	Faxed	Presented	Picked Up
6	"	City of Miami Springs			X			
7	"	City of Miami			X			
8	"	City of North Miami			X			
9	"	Village of El Portal			X			
10	"	City of Homestead			X			
11	"	Village of Biscayne Park			X			
12	"	Village of Key Biscayne			X			
13	"	City of Miami Beach			X			
14	"	Village of Virginia Gardens			X			
15	"	City of Hialeah Gardens			X			
16	"	Village of Miami Shores			X			
17	"	City of Opa-Locka			X			
18	"	City of Hialeah			X			
		<b>CITIES</b>						
19	3-10-94 and various subsequent dates	City of North Miami Beach			X			
20	"	Town of Golden Beach			X			
21	"	Town of Surfside			X			

#	Date Out	Sent to:	Comm. In:	Remarks:	Mailed	Faxed	Presented	Picked Up
22	"	City of West Miami			X			
23	"	Bal Harbour Village			X			
24	"	Town of Bay Harbour Islands			X			
25	"	City of Coral Gables			X			
26	"	City of Florida City			X			
		<b>COUNTY AGENCIES</b>						
1	various	various		review by county agencies conducted in TPTAC forum				
		<b>STATE AGENCIES</b>						
		<b>FDOT:</b>						
1	various	various		review by FDOT offices conducted in TPTAC forum	X			
		<b>FEDERAL ENTITIES</b>						

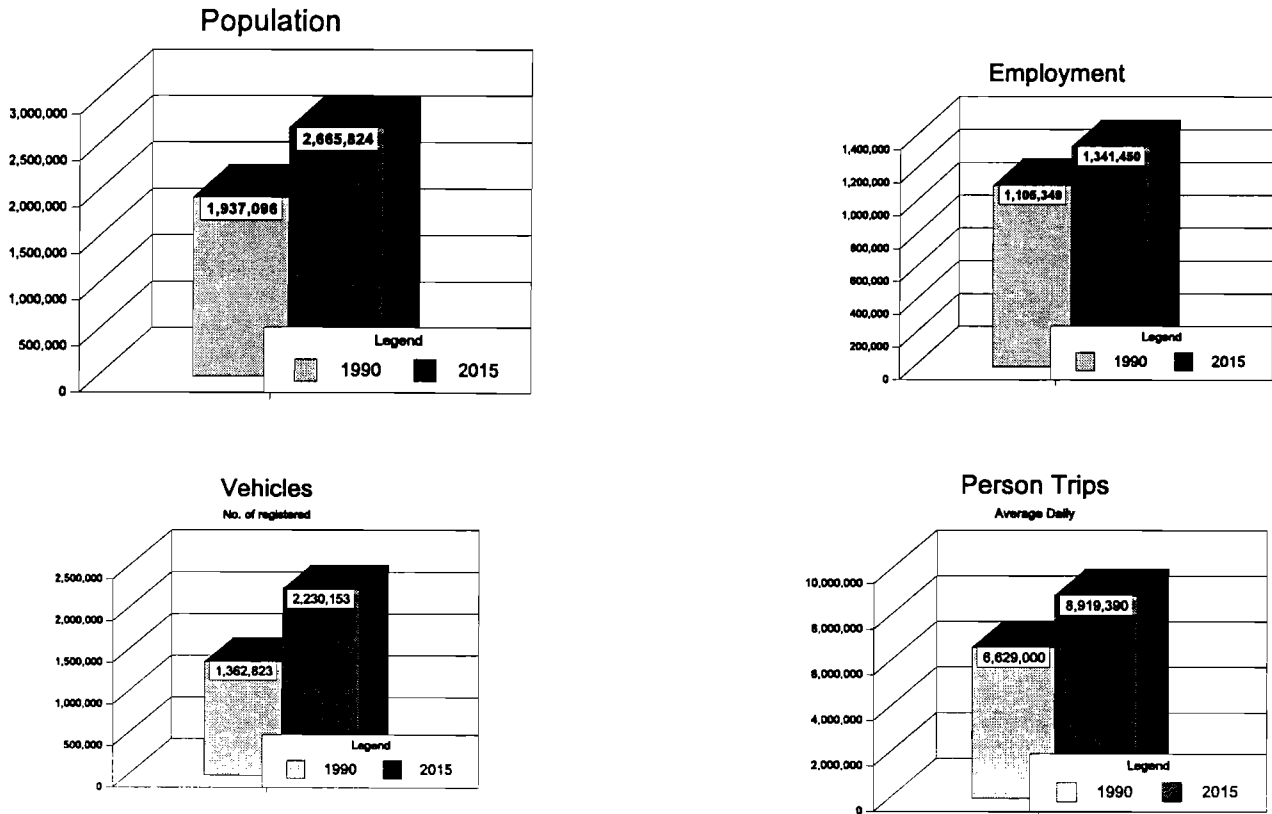
#	Date Out	Sent to:	Comm. In:	Remarks:	Mailed	Faxed	Presented	Picked Up
		<b>FHWA:</b>						
1	3-23-95	Victoria Bernreuter			X		X	
2	various							
		<b>FTA:</b>						
	various	various			X		X	
		<b>MPOs</b>						
1	various	Broward			X			X
2								
		<b>ORGANIZATIONS</b>						
1	various	Greater Miami Cham. of Comm.			X			X
2		Dade Federation of Women			X			
3		NMB Cham. of Comm.			X			
4		Kendall Fed. of Homeowners			X			
5		Redland Citizens Assoc.			X			
6		West Dade Fed. of Homeowners			X			
7	4-4-95	MDTA Paratransit Operations			X			
8	"	MDTA Transit Mobility Planning			X			
9	"	Dade Co. Board of Education			X			
10	"	CHARLEE of Dade Co., Inc.			X			
11	"	Assoc. for Retarded Citizens			X			
12	"	Mount Sinai Medical Center			X			
13	"	Community Council for Jewish Elderly			X			
14	"	Easter Seal Society of Dade			X			
15	"	Action Community Center			X			
16	"	MACtown, Inc.			X			
17	"	North Shore Medical Center			X			

#	Date Out	Sent to:	Comm. In:	Remarks:	Mailed	Faxed	Presented	Picked Up
6	5-25-95	WIOD					Radio Interview	
7	4-23-95	Miami Herald, Neighbors					Advertisement	
8	5-16-95	Community Meeting - NW		Presentation				
9	5-17-95	Community Meeting - Beach		Presentation				
10	5-18-95	Community Meeting - North		Presentation				
11	5-22-95	Community Meeting - Central		Presentation				
12	5-23-95	Community Meeting - SW		Presentation				
13	5-25-95	Community Meeting - West		Presentation				
14	6-10-95	Special Meeting - KFHA		Presentation				
15	6-8-95	Special Meeting - Miami Shores		Presentation				



Figure 1

## Projected Growth



## Background Conditions and Forecasts

Figure 1 illustrates the increases in population, employment, number of registered vehicles and average number of daily person-trips expected to occur in the County between the study base-year of 1990 and the Plan forecast year of 2015. All future socio-economic trends and urban travel levels reflect land-use growth forecasts established for the County's Comprehensive Development Master Plan (CDMP).

The population of the County is expected to increase by 39% during the study period, while the number of registered automobiles will increase by 63% and employment is projected to grow by 21%. Based on these trends, urban trips taken by residents and others in the County is predicted to increase by 35% and the number of daily vehicle miles traveled in the urban area will grow by 36%. These trends and forecasts point to mounting pressure on the transportation system to handle increasing loads of traffic and personal travel.

## Financial Considerations

A major task was undertaken to assess the fiscal implications of the Long Range Element. The twenty-year proposals identify over one hundred major capacity improvements with a price tag of approximately \$6.1 billion. An assessment of the ability of the urban area to build the proposed projects identifies a shortage of approximately half the needed capital funds over the Plan period (\$3 billion), assuming that most revenues for capital improvements will be generated in the future at current levels. Operating and maintaining the transportation system during the Plan period is estimated to cost an additional \$7.4 billion for a total estimated "Needs" Plan cost of \$13.5 billion. In addition, projected funds for the operations and maintenance of the transportation system during the Plan period will not be sufficient to support the improvements identified in the "Needs" Plan. A gap of approximately \$1.7 billion has also been identified in this regard.

A cost feasible plan, estimated to cost \$8.8 billion has been developed to implement the projects identified as priorities in the Plan. these priorities address service demands of major traffic generators and important economic centers in the County such as the Miami International Airport and the Port of Miami. Also, the mobility needs of the many communities in the metropolitan area are addressed.

Transportation funding in Florida is arrived at through a system of taxes and fees at Federal, State and local levels. Distribution of these funds is driven mainly by federal and state statutory formulas, with the exception of some discretionary federal grant programs.

Most highway funding comes from gasoline taxes, motor fees, and other automobile-related "user-fees". Major sources of existing and potential highway funding sources include: Federal Gas Tax, State Motor Fuel Tax, Local Option Gas Tax, Voter Gas Tax, Motor Vehicle Fees, Impact Fees and Tolls.

Transit funding is derived from a host of Federal, State and local programs. For rail and bus projects, funding is mostly sought through Federal and State grants. Transit operating costs are supported largely through local revenue sources.

Major sources of existing and potential transit funding include: FTA Section 3, FTA Section 9, State participation and local funds.

A cost feasibility assessment of the proposed projects identifies revenue shortfalls in all areas, assuming that revenue will be generated in the future at current levels. For highways, in addition to an overall shortage, a deficit of over \$900 million is predicted during the outer years of the Plan period following the implementation of Projects in the higher priority categories.

In the case of transit, the proposed Needs Plan can be partially funded. Since the last major update

of the Transportation Plan, segments of three major transit corridors have progressed through preliminary planning stages and have capital monies identified in the Cost Feasible Plan. In addition to the amount of Federal and State funds that may be allocated for these rapid transit improvements, substantial local funds will need to be raised, as well, to support the operations and maintenance of these projects. In the case of many airport and seaport-related ground transportation improvements, as well as the East-West Multimodal Corridor Improvements and the Miami Intermodal Center, contributions from airport and seaport revenue streams are being proposed.

A new commitment to non-motorized modes of transportation (bicycling, pedestrian) and to projects that enhance the aesthetics of the urban landscape is proposed in the Plan through the reservation of one and one-half percent of all eligible surface transportation capital funds for these types of projects.

Full funding for this Transportation Plan will have to originate from a blend of existing and new revenue sources. Funding sources in place today may not necessarily be available in the future.

**Background Summary on  
Operations and Maintenance Costs and  
Revenues:**

**Transit and Highway**

## Operations and Maintenance

Slightly over 40% of all estimated highway-related costs within the twenty-year Plan period correspond to non-capacity improvements, such as maintenance and safety and other operations-related work. These activities are performed on the existing system to maintain it in good condition. A significant portion of the future travel demand will continue to be served by existing facilities.

The following two tables summarize the operations and maintenance costs and revenue totals for the transit system and highway network.

Highway maintenance costs include ordinary/routine maintenance work such as patching, landscape maintenance, traffic signs and signals maintenance, and bridge maintenance. Highway operations and safety costs include exceptional work such as resurfacing, traffic control devices, safety lighting and signals, guardrails and pavement markings. For the most part, it can be said that highway-related operations and maintenance costs can be covered by anticipated revenues for those purposes.

For the transit system, the same cannot be said. Although the Plan is capital-cost-feasible, the operations and maintenance costs for the transit system will require increases in existing sources and implementation of new, innovative sources. Examples of such sources are being included in the East-West Multimodal Corridor financing strategy. These potential new sources include: toll surcharges, airport-seaport contributions, highway congestion pricing, and private sector participation.

**METRO-DADE LONG RANGE TRANSPORTATION PLAN UPDATE  
YEARS 2001-2015**

**TRANSIT OPERATING AND MAINTENANCE COST AND REVENUE SUMMARY  
(MILLIONS OF 1995 DOLLARS)**

	Needs Plan	Cost Feasible Plan
<b>COSTS</b>		
<i>Existing System</i>	\$3,135	\$3,135
<i>Expansion</i>	2,548	1,034
<b>TOTAL</b>	<b>5,683</b>	<b>4,169</b>
<b>REVENUES</b>		
Farebox Revenue		
<i>Existing System</i>	915	915
<i>Expansion</i>	1,271	531
Federal Section 9 Operating	0	0
State	133	133
Local	1,597	1,597
Other Sources	200	200
<b>TOTAL</b>	<b>4,116</b>	<b>3,376</b>
<b>COSTS - REVENUES</b>	<b>(1,567)</b>	<b>(793)</b>

**METRO-DADE LONG RANGE TRANSPORTATION PLAN UPDATE  
YEARS 2001-2015**

**HIGHWAY OPERATING AND MAINTENANCE  
COST AND REVENUE SUMMARY**

**COSTS**

(Millions of 1995 Dollars)

	<b><u>Needs Plan</u></b>		<b><u>Cost Feasible Plan</u></b>	
	<i><u>STATE</u></i>	<i><u>LOCAL</u></i>	<i><u>STATE</u></i>	<i><u>LOCAL</u></i>
Existing System	\$ 735	\$ 688	\$ 735	\$ 668
Expansion	\$ 155	\$ 312	\$ 118	\$ 226
<b>TOTAL COSTS</b>	<b><u>\$ 890</u></b>	<b><u>\$ 980</u></b>	<b><u>\$ 853</u></b>	<b><u>\$ 894</u></b>

**REVENUES**

	<b><u>Needs Plan</u></b>		<b><u>Cost Feasible Plan</u></b>	
	<i><u>STATE</u></i>	<i><u>LOCAL</u></i>	<i><u>STATE</u></i>	<i><u>LOCAL</u></i>
(for ) Existing System	\$ 735	\$ 688	\$ 735	\$ 668
(for) Expansion	\$ 155	\$ 312	\$ 118	\$ 226
<b>TOTAL REVENUES</b>	<b><u>\$ 890</u></b>	<b><u>\$980</u></b>	<b><u>\$ 853</u></b>	<b><u>\$894</u></b>

**Required Consideration of  
Federal Planning Factors  
and How They are Reflected in this Plan**



## ISTEA 15 FACTORS

1. The preservation of existing transportation facilities and, where practical, ways to meet transportation more efficiently;
2. The consistency of transportation planning with applicable federal, state, and local energy conservation programs, goals, and objectives;
3. The need to relieve congestion and prevent congestion from occurring where it does not yet occur;
4. The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with provisions of all applicable short-term and long-term land use and development plans;
5. The programming of expenditures on transportation enhancements activities as required by federal law;
6. The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such project are publicly funded;
7. Any international border crossing and access to ports, airports, intermodal transportation facilities; major freight distribution routes, national parks, recreation areas, monuments and historic sites and military installations;
8. The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area;
9. The transportation needs identified through use of the management systems required under the Act;
10. The preservation of rights-of-way for construction of future transportation projects, including the identification of unused rights-of-way which may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss;
11. Any available methods to enhance the efficient movement of freight;
12. The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement;
13. The overall social, economic, energy, and environmental effects of transportation decisions;
14. Methods to expand and enhance transit services and to increase the use of such services; and;
15. Capital investments that would result in increased security in transit systems.

## **Cross Reference of Plan Objectives with ISTEA Planning Factors**

### **MULTIMODAL TRANSPORTATION SYSTEM DEVELOPMENT**

- #1. Plan for the provision of transportation services and facilities to serve the needs of the population in the metropolitan planning areas, in accord with federal and state transportation planning process requirements.
- #2. Develop an integrated multimodal transportation system that emphasizes people movement by facilitating the transfer between modes, and the connectivity of the transportation network within and outside the metropolitan area.
- #3. Preserve rights-of-way in corridors anticipated to be heavily traveled in the future.
- #4. Consider the effect of transportation policies on land use development for both the short and longer range.

### **TRAFFIC FLOW/MOBILITY**

- #5. Preserve existing highway and transit facilities by improving efficiency and safety.
- #6. Achieve the operating level-of-service standards adopted in the Comprehensive Development Master Plan and in the Florida Intrastate Highway System Plan.
- #7. Plan for maximum utilization of existing transportation capacity, relieve congestion and prevent congestion from occurring where it does not yet occur.

### **SOCIAL**

- #8. Plan and develop a transportation system that preserves the social integrity of urban communities.

### **ENVIRONMENTAL**

- #9. Plan for a transportation system that gives due consideration to air quality and environmentally sensitive areas, and conserves energy and natural resources and that is consistent with applicable federal, state and local energy conservation program goals and objectives.
- #10. Plan for transportation projects that enhance the quality of the environment.

### **ECONOMIC**

- #11. Define a sound funding base utilizing public and private sources that will assure operation and maintenance of existing facilities and services and timely implementation of new projects and services.
- #12. Provide for and enhance the efficient movement of freight.

**TABLE 1**  
**2015 Metro-Dade Transportation Plan**  
**Cross Reference of Plan Objectives with ISTE A Planning Factors**

<i>Plan Objectives</i>	<b>ISTEA PLANNING FACTORS</b>														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	X	X		X		X		X		X			X		
2			X	X	X	X	X	X	X	X				X	X
3	X	X		X		X				X					
4				X									X		
5		X					X			X		X		X	X
6	X	X	X						X						
7			X						X					X	X
8	X	X	X												
9		X		X					X			X			
10	X	X	X	X		X							X		
11		X		X	X					X		X		X	
12							X				X				

**Metro-Dade Transportation Plan  
(to the Year 2015)**

**Appendix V**

Plan Documentation

**YEAR 2015**

**METRO-DADE TRANSPORTATION PLAN**

**P L A N                    D O C U M E N T A T I O N**

**Technical Reports:**

1. Data Compilation and Review
2. Model Validation
3. Plan Development and Adoption
4. Air Quality Conformity Determination Report

**Technical Memoranda:**

1. Financial Resources Study
2. Development of External Trips
3. Trip Generation Model
4. Trip Distribution Model
5. Validation of Mode Choice and Auto Occupancy Model
6. Validation of the Traffic Assignment Model
7. Model Validation Process
8. Countywide and Individual Summaries
9. Metro-Dade Transportation Plan Update (to the Year 2015)
10. Metro-Dade Transportation Plan Update (to the Year 2015):  
Adoption Document

**M E T R O P O L I T A N            P L A N N I N G            O R G A N I Z A T I O N**

23. Page 35

The text on this page is single-spaced, whereas the remainder of the document seems to be double-spaced.

24. Pages 36 to 38

These tables require more of a left margin to accommodate the binder.

25. Pages 40 to 50

I am not sure of the value of including the narrative which details the development of the various scenarios, iterations, etc. Let us discuss how this should be handled.

26. Page 50

To me, there are at least 4 major highlights to this Plan (in general, and compared to the 2010).

- (1) the fact that this Plan needed to be financially-constrained is a major highlight
- (2) that it needed to pass through air quality conformity
- (3) that it presents 3 cost-feasible transit corridors, as compared to the previous plan
- (4) that significant model-related work was done (HOV modeling, toll modeling, nested logit, jitney, etc.)

Please write this up.

27. Page 69: Relationship of the Plan to Other Studies and Efforts

I several comments from other staff members on this section. Marked-up pages are being faxed to your office under separate cover this afternoon.