SOUTHEAST REGIONAL PLANNING MODEL VI
2000 and 2030 Models

TECHNICAL REPORT 1

Data Compilation and Review

Submitted To:
Florida Department of Transportation - District IV

Submitted by:
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In association with:
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January 2008

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1. INTRODUCTION

The Southeast Regional Planning Model (SERPM) is a multimodal travel demand model containing the three urban areas of Southeast Florida – Palm Beach, Broward and Miami-Dade Counties. In this report, the terms urban and county models are used interchangeably. This technical report discusses the data development and update process for version 6 of SERPM (SERPM-VI or SERPM6). It is the latest version and uses Cube-Voyager (CV) and TRNBUILD as the new FSUTMS modeling platform for highway and transit travel estimation.

The scope of services written in July 2005 envisioned that there would be some departures from the plan as the Consultants, Department and Citilabs learn more about the evolving CV software, and Citilabs enhances the software. Important objectives of SERPM6 scope were to enhance the model network so that travel speeds on both highway and transit networks are accurately represented, and consistent speeds are used in every step. The model base year was 2000 and 2030 was the horizon year. A time-of-day (TOD) modeling process was developed to better replicate the variations of travel behavior, traffic congestion, traffic operations and transit operations throughout the day. It was envisioned that the Consultant would perform the following efforts as part of model development:

- Collect and review model data
- Develop highway and transit networks to suit CV modeling process (Voyager and PT)
- Refine travel time estimation process
- Implement a new capacity calculation process
- Model intersection delays (at a minimum, incorporate freeway and ramp intersection delays)
- Develop a TOD model
- Calibrate and validate the model

The Scope of Services specifies the continuation of the Southeast Florida Regional Transportation Planning Travel Characteristics Study to update the Southeast Florida Regional Planning Model and produce the sixth version, SERPM6.

SERPM6 includes "true" time of day modeling, with a peak and off-peak period modeled for all three main trip purposes (HBW, HBNW and NHB). SERPM6 implements varying levels of time-of-day modeling for distribution, transit paths and skimming, mode choice and assignments. To evaluate the period model, period specific traffic counts also were assembled and entered into the network database. The three periods, totaling 24 hours, which are modeled in SERPM6, are:

1. **AM-Peak Period (6:30-9:30 am)**
2. **PM-Peak Period (3:30-6:30 pm)**
3. **Off-peak Period (9:30 am – 3:30 pm, 6:30 pm – 6:30 am)**

SERPM6 included many improvements that were implemented in earlier versions of SERPM. Both 2000 and 2030 MPO models were used to develop the 2000 and 2030 SERPM6 models. Many of the improvements implemented in the MPO models were also carried into the regional model. The regional model has 4,050 internal zones of which 115 are "dummy" zones. These dummy zones provide room for expansion. The dummy zones were numbered as 1567-1600 (34 zones), 2503-2550 (48 zones) and 4017-4050 (33 zones) in Palm Beach, Broward and Miami-Dade counties, respectively. With the external stations there are 4,134 zones. **Table 2-1** of **Chapter 2** summarizes zone and node number ranges.

1.1 Report Organization

SERPM6 builds on the recent updates of the MPO models as well as SERPM-V. Several computer programs were used to assist the data development and the model updates.

This report is the first of three technical reports and presents the review and development of socioeconomic data, highway network data and transit network data. This report contains nine chapters and nine appendices.

- Chapter 1, **INTRODUCTION**, contains an overview of this technical report and a short summary of model enhancements of recent SERPM versions including SERPM6.

- Chapter 2, **HIGHWAY NETWORK DEVELOPMENT**, discusses the development of the regional highway networks process. It also discusses several highway network related data.

- Chapter 3, **TRANSIT NETWORK DEVELOPMENT**, discusses the development of the regional transit networks and data for use in model validation. It also discusses the associated merging programs.

- Chapter 4, **TRIP GENERATION PROCESS, DATA AND RATES**, summarizes the trip generation process, the various production and attraction data, and their rates

- Chapter 5, **EXTERNAL TRIP DATA**, discusses the external trips for use in the regional model.

- Chapter 6, **TRANSIT DATA**, summarizes the transit ridership data and presents the summary statistics of analysis recent on-board South Florida transit survey, mode choice targets, and other transit model data (PCWALK, fares, speed and station data).

- Chapter 7, **OTHER DATA DEVELOPMENT AND REVIEW**, discusses the time-of-day factors for the development of the TOD models. The temporal distributions of the recent household travel survey and 15-minute interval traffic counts were summarized for use in TOD model.

- Chapter 8, **SUMMARY AND CONCLUSION**, summarizes the data development and update.

- Chapter 9, **LIST OF REFERENCES**, provides list of references on SERPM, other Florida and national references referenced in technical reports of SERPM6.

- Appendices A and B (**CV Flowcharts and Scripts**) is a compilation of all CV flowcharts and scripts that were used to develop the initial development of 2000 and 2030 highway /transportation networks, respectively.

- Appendix C (**Transit Merge Program**) lists the FORTRAN source codes that were used to develop the initial regional transit networks.

- Appendix D (**Transit Line Parameter Summary**) presents the tables of key parameters of 2000 and 2030 transit systems.

- Appendix E (**Transit Ridership and Station Data**) presents the summary on 2000 transit ridership by routes and 2000 and 2030 station data.

- Appendix F (**Selected Results of Transit On-Board Survey**) is a compilation of selected results from an analysis of the 1999 Southeast Florida Transit On-Board These results were used to develop the transit targets for model validation.

- Appendix G (**Mode Choice Transit Target Trips**) summarizes the key inputs to develop the targets for the mode choice model. It also presents the target trips that were used in mode choice validation.

- Appendix H (**Time-of-day Model Factors**) presents the temporal distribution of survey trips and traffic counts. These results were used to derive the transit time-of-day model factors.

- Appendix I (**ARCVIEW BASED PCWALK ROUTINE**) describes the process for developing the percentage walk (PCWALK) file that is used by the transit model.

1.2 Model Enhancement Summary

The development of the 2000 and 2030 Southeast Regional Planning Models represents a new generation of modeling techniques applied to the urban models for Palm Beach, Broward and Miami-Dade Counties. SERPM6 is outgrowth of SERPM5, as modified to respond to issues raised by the Federal Transit Administration. The transit model also contains some new elements resulting from conversations with the FTA throughout the model development process.

SERPM6 is a time-of-day model, is implemented in the Cube/Voyager (CV) platform and uses floating point matrices. Separate distributions are made for peak and off-peak periods. The transit part of the model estimates peak and off-peak travel. Later, for highway assignments, the trip tables are further partitioned into AM peak period, off-peak and PM-peak period travel.

It includes many of the improvements that were implemented in earlier versions of SERPM. Both 2000 and 2030 MPO models were used to develop the 2000 and 2030 SERPM6 models. Many of the improvements that were implemented in the recent MPO models were also carried into the regional model. Following is a list of the improvements that were implemented in SERPM6:

- SERPM6 includes a new process to estimate the free-flow speeds based on posted speed limits and signalization data. The lookup tables for speeds are completely eliminated.
- The new capacity estimator process emulates the capacities published in the Florida Quality and Level of Service Manual, which is based on the *2000 Highway Capacity Manual*.
- SERPM6 uses the lifestyle trip generation process. A regional version of this model was developed for SERPM5 and numerous revisions were made to fit into the CV process and to read the area types estimated dynamically through CV scripts. Separate production structures were used for the work and non-work purposes.
- The trip generation model implements (1) revised trip attraction rates based on area types and employment categories; and, (2) revised trip attraction rates calibrated from the 1999 Southeast Florida Travel Characteristics Survey.
- The SERPM6 trip generation model has 11 trip purposes. The Non-Home-Based purpose was divided into Non-Home-Based Work (NHBW) and Non-Home-Based Other (NHBO) purposes. An airport purpose was added.

- The regional trip generation routine separates the zero auto household trips from trips by households with autos. Households with and without autos have different distribution patterns.
- The trip generation process employs time-of-day factors to estimate the peak and off-peak trips by purpose. The initial time-of-day diurnal factors were developed from the 1999 South Florida travel characteristics surveys.
- It implements a new truck model with a structure similar to the one recommended in the Quick Response Freight Manual (QRFM). The truck model includes three truck purposes (four-tired, Single Unit and Combination), treating trucks as a separate mode from generation through assignment.
- It treats internal-external trips as internal trips and improves the modeling of these trips by eliminating the internal-external purpose.
- It includes school trips as a separate trip purpose and uses a refined methodology for school trip distribution.
- The final trip tables were distributed twice; once with free-flow skims and once with congested skims for the peak and off-peak period distribution. Multiple feedback distributions were used for simulation of peak period distribution and for equilibrium of speeds in the peak period pre-assignment.
- Trips for households with autos were distributed using highway skims, while zero-auto households were distributed with transit skims.
- It implements an automated turning routine that manages the traditional turn penalties and prohibitors and generates new penalty records for right, through and left turns.
- SERPM6 implements a logit model to separate the non-motorized trips from the motorized trips. The motorized trips are then used in the analysis of highways and transit. Thus, the number of highway and transit (motorized) trips is sensitive to "walkability" characteristics of the TAZs.
- It implements a policy sensitive highway-only model by restricting the mode-choice set to the auto modes for peak period pre-assignments.
- It develops new transit period models to estimate transit ridership for the peak and off-peak periods.
- It implements three periods (AM peak, PM peak and off-peak) highway models with delays expected at freeway and ramp merges explicitly evaluated.
- SERPM6 implements the facility specific volume-delay functions that were originally used in SERPM4. Separate CONFAC factors were used for each period model. These factors are also facility specific for peak-hour to peak-period ratios. The UROAD factors are used to estimate LOS-E capacity from LOS-C capacity.
- It generates an external truck trip table that is used in a separate truck assignment. The external vehicle trip tables also are subdivided into drive-alone and shared-ride for the High Occupancy Vehicle (HOV) assignment.
- The toll model parameters and data were rigorously examined for the highway assignments.
- For the regional model, the MPO's employment data were indexed to a common data source (Florida Department of Labor and Economic Security - FDLES).
- It incorporates an HOV model, where access to the HOV links is controlled using access links.
- The model explicitly evaluates delays that are expected to occur at freeway-ramp merges.

- The revised SERPM5 and SERPM6's "Grouped/Incremental" mode structure has significantly fewer constants to validate. User has the option to use expanded geographical constants that provide user more control of over origin-destination of transit trips, if necessary.
- Some of SERPM5 user-written programs were converted to Voyager programs.

The SERPM6 transit model includes many improvements over the previous SERPM5 edition. Revisions were made to follow good transit modeling practice and the latest FTA New Starts requirements. The changes made to the mode choice programs revolved mainly around the changes made to the transit network, path and assignment steps. However, some of the changes to the current version of the model are comprehensive rather than "piece-meal" adjustments. Some notable changes to the transit model are as follows:

- Reviewing and modifying transit networks, including…
    - Maintaining a single transit route file for peak and off-peak periods in PT format,
    - Restructuring the mode definitions, and
    - Separating out the rail platform of the fixed-guideway systems (Tri-Rail and Metrorail) from the bus platform on the street layer to take into account the time it take to move up the escalator ("escalator time") from the street to the rail platform (microcoding);
- Reviewing and adjusting auto-to-transit speed curves;
- Reviewing transit paths, including…
    - Revising the AUTOCON program to put station times and the the time equivalent of cost in the auto connectors,
    - Building walk and transfer non-transit connectors using PT in FSUTMS-Voyager,
    - Modifying transit path parameters ("favorable/unfavorable" run time factors, maximum run time, number of transfer, and transit path "cliffs", etc.), and
    - Building transit paths and skims with TRNBUILD;
- Revising the mode choice module, including…
    - Modifying trip distribution process for zero-auto households slightly,
    - Revising the mode choice and non-motorized programs according to the changes in the model structure;
- In transit assignment,
    - Developing a new user-written program to summarize the transit assignment results and
    - Performing time-of-day transit assignment; and
- The model implements Tri-Rail fares based on the number of fare zones traveled.

2. HIGHWAY NETWORK DEVELOPMENT

The procedure used to develop the SERPM6 2000 and 2030 highway networks was very different from the process used in earlier SERPM models. The following sections describe the new Cube-Voyager (CV) based process that was to develop the SERPM6 highway network.

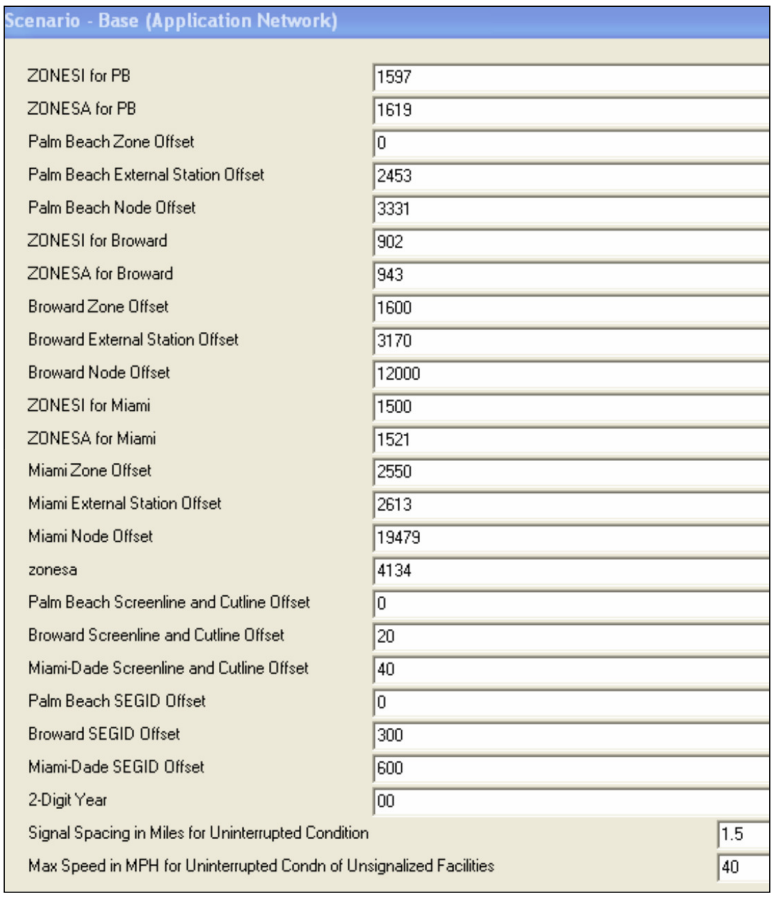
2.1 Regional Highway Network Development

The complete methodology and the tasks performed to build the 2000 and 2030 highway network are described below. The SERPM6 highway network is a multi-modal transportation network. It includes the fixed guide-way transit systems as well as the optional links of transit systems that are not used in the highway network. A special facility type code (FTC2 of 69) was used to designate these transit-only links.

2.1.1 Year 2000 Initial Network Development and Traffic Count

The CV flowcharts and scripts that were used to develop the initial 2000 highway network are shown in **Appendix A**. The process used many CV keys (see **Figure A-1**), whiche are described further in **Figure 2-1**.

Figure 2-1: **Description CV Keys of Initial 2000 Highway Network Development Catalog**
Southeast Regional Planning Model VI



Scenario - Base (Application Network)

ZONESI for PB	1597
ZONESA for PB	1619
Palm Beach Zone Offset	0
Palm Beach External Station Offset	2453
Palm Beach Node Offset	3331
ZONESI for Broward	902
ZONESA for Broward	943
Broward Zone Offset	1600
Broward External Station Offset	3170
Broward Node Offset	12000
ZONESI for Miami	1500
ZONESA for Miami	1521
Miami Zone Offset	2550
Miami External Station Offset	2613
Miami Node Offset	19479
zonesa	4134
Palm Beach Screenline and Cutline Offset	0
Broward Screenline and Cutline Offset	20
Miami-Dade Screenline and Cutline Offset	40
Palm Beach SEGID Offset	0
Broward SEGID Offset	300
Miami-Dade SEGID Offset	600
2-Digit Year	00
Signal Spacing in Miles for Uninterrupted Condition	1.5
Max Speed in MPH for Uninterrupted Condn of Unsignalized Facilities	40

The regional 2000 network was built from the three MPO's 2000 networks. The networks of Palm Beach (PB) and Broward (BO) were in CV format, whereas the Miami-Dade network was a Tranplan-based network. CV scripts (see **Figures A-1** and **A-2** of Appendix A) were used to combine and renumber the three MPO networks. The process also merged the separately processed time-of-day traffic counts (PBTODMGZ2.DBF, BOTODMGZ2.DBF and MITODMGZ2R.DBF) to the regional networks. For the Miami-Dade network, the process also attached the posted speeds and signal-related data. The CV process used a "master" network. This master network was manually edited to define the links that are to be dropped (for replication) and new weld links that are to be added. The process also generates a regional SEGID file and use of it was dropped in model application. Interested readers should study scripts shown in **Figure A-2** for further details for the development of initial regional SERPM6 2000 network. Once the temporary regional network was created, the rest of the network cleanup was performed manually using Viper. The finalized urban and regional zone and node correspondence is shown in **Table 2-1**.

2.1.2 Year 2030 Initial Network Development

The CV flowcharts and scripts that were used to develop the initial 2030 highway network are shown in **Appendix B**. The process used many CV keys (see **Figure B-1**), which are described further in **Figure 2-2**.

Figure 2-2: **Description CV Keys of Initial 2030 Highway Network Development Catalog**
Southeast Regional Planning Model VI

Scenario - Base (Application Network)

ZONESI for PB	1597
ZONESA for PB	1619
Palm Beach Zone Offset	0
Palm Beach External Station Offset	2453
Palm Beach Node Offset	3331
ZONESI for Broward	902
ZONESA for Broward	943
Broward Zone Offset	1600
Broward External Station Offset	3170
Broward Node Offset	12000
ZONESI for Miami	1500
ZONESA for Miami	1521
Miami Zone Offset	2550
Miami External Station Offset	2613
Miami Node Offset	19479
zonesa	4134
Palm Beach Screenline and Cutline Offset	0
Broward Screenline and Cutline Offset	20
Miami-Dade Screenline and Cutline Offset	40
Palm Beach SEGID Offset	0
Broward SEGID Offset	300
Miami-Dade SEGID Offset	600
Last 2-Digit of Model Year	30
Signal Spacing in Miles for Uninterrupted Condition	1.5
Max Speed in MPH for Uninterrupted Condn of Unsignalized Facilities	40

The regional 2030 network was built from the three MPO's 2030 networks. The networks of Palm Beach (PB) and Broward (BO) were in CV format, whereas the Miami-Dade network was a Tranplan-based network. CV scripts (see **Figures B-1** and B**-2** of Appendix A) were used to combine and renumber the three MPO networks. For the Miami-Dade network, the process also attached the posted speeds and signal-related data. The CV process used a "master" network. This master network was manually edited to define the links that are to be dropped (for replication) and new weld links that are to be added. The process also generates a regional SEGID file and use of it was dropped in the model application. Interested readers should consult scripts shown in **Figure B-2** for further details for the development of initial regional SERPM6 2030 network. Once the temporary regional network was created, the rest of the network cleanup was performed manually using Viper.

2.2 Highway Network Review

The SERPM6 highway network uses revised facility and area type classifications. These new classifications are required to incorporate the new processes initial model speeds and capacities. The new area type coding is an enhancement and the users are not required to code any area type other than CBD area types. The area type codes are now based on zonal properties that are either calculated or read from the TAZ attributes.

The model script places a revised "dynamic" area type on the networks. The area types shown on TAZ layer DBF file (see SERPM6.DBF) are for display purposes. The process extracts the existing area types (AT2_OLD or AT1_OLD) from the network primarily to identify CBD areas. It then calculates the activity density based area types for all the non-CBD areas using following equation.

ADEN(I) = [POP(I) + B * EMP(I) / AREA(I) = PDEN(I) + B * EDEN(I)

Where,

ADEN(I)	= activity density in zone I
POP(I)	= population in zone I
EMP(I)	= total employment in zone I
AREA(I)	= total "usable" area of zone I in acres
PDEN(I)	= population density in zone I
EMP(I)	= employment density in zone I
B	= regional population to employment ratio

Three types of exception areas (water, parks, and roadway right-of-way) were excluded to define the "usable" areas in the density calculation. The new area type for each of the links is based on zonal activity densities of TAZs with an influence area of one mile from the link middle point. The population and employment of all TAZs within one mile of radius are accumulated to define this new density based area types. All these calculations are done in Cube-Voyager scripts. Users do not need to code any area types other than the CBD area that is determined from the existing area types. The new density based area types (SATx) of SERPM6 model are shown in **Table 2-2.** The new area type activity density ranges were determined through statistical analysis and comparison of attractions of the new and old area types. **Tables 2-3** and **2-4** presents the summary results of this analysis and comparisons of attractions both regional and county levels. The density ranges were selected to be similar to the old area types and their attractions and distribution. The obvious advantage of this process is that the links area type will be changes automatically when the zonal data changes in future years.

Table 2-1: **Summary Correspondence between Urban and Regional Zone and Node Numbers**
Southeast Regional Planning Model VI

TAZ/Node	County	MPO Model Low		MPO Model High	REGIONAL Model Low		REGIONAL Model High	Offset	Extra Regional Dummy
	Palm Beach (PB)	1	-	1566	1	-	1566	0	
INTERNAL	Broward (BO)	1	-	902	1601	-	2502	1600	
TAZ	Miami-Dade (MD)	1	-	1466	2551	-	4016	2550	
	PB	1567	-	1597	1567	-	1597	0	1598-1600
DUMMY	BO	NONE			2503	-	2550	0	
TAZ	MD	1467	-	1500	4017	-	4050	2550	
	PB	1598	-	1619	4051	-	4072	2453	
EXTERNAL	BO	903	-	943	4073	-	4113	3170	
TAZ	MD	1501	-	1521	4114	-	4134	2613	
NODES-2000	PB	1667	-	9038	4998	-	12369	3331	
Network [*]	BO	1001	-	7976	13001	-	19976	12000	
	MD	1522	-	9925	21001	-	29404	19479	
NODES-2030	PB	1667	-	9177	4998	-	12508	3331	
Network [*]	BO	1001	-	8057	13001	-	20057	12000	
	MD	1522	-	10077	21001	-	29556	19479	

[*] Additional regional nodes (numbers >= 30,000) were added to network after initial network development process.

Table 2-2: **Density Based Area Type Description**
Southeast Regional Planning Model VI

Area Type (SATx)	DESCRIPTION	ADEN/Acre Range
SAT1 (Existing AT1-CBD)	**CBD**	**Existing CBD (not variable)**
SAT2 (Comparable to AT2-Fringe)	**High Density (non-CBD)**	**More than 49.6**
SAT3 (Comparable to AT4-OBD)	**Medium Density (non-CBD)**	**>22.9 & <=49.6**
SAT4 (Comparable to AT3-Residential)	**Low Density (non-CBD)**	**>3.1 & <=22.9**
SAT5 (Comparable to AT5-Rural)	**Very Low Density (non-CBD)**	**>=0 & <=3.1**

After the initial networks were built, they were refined to use new facility types. The new facility type definition were developed as part of the new capacity calculation process. **Table 2-5** presents the revised facility types (FTC1 and FTC2).

The network was reviewed extensively and numerous edits and updates were made during the model validation process. The "preliminary" 2000 network was evaluated with respect to facility type and area type coding, as well as zone centroid locations and centroid connectors. The signal locations were coded on the highway network along with coding "Signalized Segments". Staff from individual counties provided the necessary signal location information. The 2000 network includes an improvement in specifying the initial free-flow speed. The initial free-flow speeds are based on posted speed and signal data. **Section 2.3** of **Technical Report 2** and **Section 2.1.2** of Technical Report 3 have detailed description of this process.

The SERPM6 model incorporates a flexible method of handling of HOV (high occupancy vehicle) lanes not by restricting the modes allowed to use the HOV lanes, but restricting the modes that can use the ramps that access HOV lanes for the model period. The model allows a mix of SOV (Single Occupancy Vehicle) and HOV external-external trips to model the external HOV trips. In the SERPM6 model external-internal trips are simulated like internal-internal trips. The HOV and SOV tables are assigned to the network using the HOV option of the equilibrium assignment program.

In the SERPM6 model networks, the HOV facility types (**see Table 2-5**) were defined as follows:

- FTC2 81-82: These are the main HOV facility types. The HOV links are coded as parallel facilities to the respective general-purpose links.
- FTC2 83: Ramps connecting general-purpose lanes and HOV lanes, restricting to the HOV trip table during AM and PM peak hours.
- FTC2 84: Ramps connecting general-purpose lanes and HOV lanes, restricting to the HOV trip table during AM peak hours only.
- FTC2 85: Ramps connecting general-purpose lanes and HOV lanes, restricting to the HOV trip table during PM peak hours only.

- FTC2 86: Ramps connecting general-purpose lanes and HOV lanes, restricting to the HOV trip table during the entire 24-hour day.

Using this procedure, it is possible to control the HOV alternative completely through network coding without modifying the scripts. The highway network consists of general use links, toll links, and restricted-use facilities, which are limited to high occupancy vehicles.

The capacities of the network are determined from adjustment attributes and lookup tables. The capacity lookup tables were developed from "Table 4-7 of the Florida LOS Handbook." The CAPCAL sub-module (see **Figure F-5 of TR3**) shows capacity calculation steps. **Table 2-6** summarizes the LOS-E capacities that are read as LOOKUP capacity tables. The attributes for the lookup capacity depend on facility type and those are number of lanes, interchange spacing, signal densities and area types. The capacities are then further adjusted based on certain roadway attributes. **Figures 2-3 and 2-4** display the capacity adjustment logic.

Numerous plots were made at early stages of this study to review and update of the following attributes: facility type, are type and number of lanes. Numerous changes were made to the HOV facilities of the Miami-Dade portion of the regional model to make them consistent with the SERPM coding. TCARDS entries were added for the Miami-Dade portion to include the HOV egress and ingress penalties.

Screenlines and cutlines are groups of roadways that travel in the same direction, and carry traffic considered significant within the study area. The following characteristics were considered during the review (addition/deletion) of screenline and cutline locations:

- Availability of traffic counts
- Representation of travel patterns
- Minimized duplication of patterns.

The screenline and cutlines, as shown in **Figures 2-5 and 2-6**, provide detailed coverage of all major regional and local travel movements.

Numerous plots were made to display key network attributes (facility and number of lanes) along with model volumes and counts and their ratios of SERPM6 networks. Problems with facility types and number of lanes were investigated through using VIPER and the color-coded plots. Numerous changes were made to the networks based on the review of these plots.

Based on an earlier review of the Miami portion of the regional network, a number of changes were made to the HOV coding to implement HOV modeling adopted in the SERPM. HOV penalty cards were also developed for the Miami portion of the regional network.

As part of model validation efforts, consistency of the TAZ structure and that of highway network was checked by overlaying the two layers in VIPER. The TIGER street network was used to check the centroid connectors. In the regional model, the interfaces of Palm Beach, Broward and Miami-Dade Counties were examined in detail. The following link/node characteristics were also reviewed:

- Posted Speed Limits (see **Figure 2-7**)
- Signal Controlled Section (SEGID>0, see **Figure 2-8**)
- Signal Locations (SIGLOC=1, see **Figure 2-9**)
- 24-Hour Traffic Count Locations (COUNT>0, see **Figure 2-10**)

Table 2-3: **An Analysis of Activity Density Based Area Type Definition**
Southeast Regional Planning Model VI

Activity Density Definition:

$$ADEN(l) = [POP(l) + B * EMP(l)]/AREA(l)$$
$$= PDEN(l) + B * EDEN(l)$$

where,

ADEN(l) = activity density in zone l
POP(l) = population in zone l
EMP(l) = total employment in zone l
AREA(l) = total area of zone in acres

PDEN(l) = population density in zone l
EDEN(l) = employment density in zone l
B = Regional poulation to employment ratio
[2.0958 - Year 2000 & 2.20205 -Year 2030]

A. Frequency Distribution of ADEN by OLD Area Types :

Percentiles	ALL ATs	CBD	Fringe	Residential	OBD	Rural	All non-CBD
1	0.03	15.29	12.58	0.11	1.75		0.03
2	0.14	15.94	12.58	0.32	3.39		0.12
3	0.34	17.03	12.61	0.60	4.01		0.31
4	0.58	18.02	12.74	0.84	4.73		0.55
5	***0.80***	***18.25***	***12.87***	***1.07***	***5.01***		***0.76***
10	2.53	24.27	15.55	2.52	8.58		2.34
15	4.52	27.65	16.25	4.18	10.25	0.03	4.22
20	6.18	29.06	16.90	5.66	11.42	0.05	5.86
25	**7.87**	**29.99**	**18.36**	**7.06**	**12.61**	**0.08**	**7.56**
30	9.16	31.47	19.69	8.19	13.61	0.10	8.85
35	10.35	33.06	22.00	9.20	14.81	0.21	10.02
40	11.33	33.81	24.37	10.21	15.95	0.33	11.01
45	12.41	36.03	26.75	11.11	16.83	0.43	11.93
50	**13.32**	**37.54**	**32.04**	**11.88**	**17.93**	**0.56**	**12.90**
55	14.34	58.42	33.44	12.85	18.90	0.71	13.91
60	15.42	72.49	33.93	13.74	20.35	1.24	14.86
65	16.62	110.07	34.64	14.58	21.68	1.58	16.02
70	18.00	126.08	35.51	15.61	23.49	1.91	17.21
75	**19.77**	**136.34**	**35.89**	**16.75**	**25.83**	**3.04**	**18.66**
80	22.07	146.87	38.54	18.34	28.39	3.91	20.71
85	25.53	153.16	40.42	20.46	33.42	5.74	23.36
90	30.79	159.88	116.19	23.64	40.74	8.72	27.35
95	***42.19***	***178.83***	***147.87***	***28.73***	***51.14***	***15.24***	***35.32***
96	48.10	191.67	150.12	31.11	54.50	16.10	37.76
97	61.41	202.52	152.37	33.71	60.18	16.74	43.93
98	77.84	210.00	152.87	36.73	66.24	17.03	49.86
99	138.04	240.31	152.87	48.68	69.76	20.49	65.28

Table 2-3 (Continued)

B. Year 2000 Activity Density Per Acre (SADEN_00) for TAZs of 1-mile distance - Selected Statistics

Old Area Type	No of TAZs (n)	Mean	25th Percentile	Median (50th percentile)	75th percentile	Std. Error of Mean	L95 - LL of 95% CI	U95 - UL of 95% CI	% of TAZs	% of non-CBD TAZs
AT1-CBD	158	**77.94**	29.99	**37.54**	136.34	4.74	68.65	87.23	4.0%	
AT2-Fringe	35	**38.95**	18.36	**32.04**	35.89	6.11	26.98	50.91	0.9%	0.9%
AT3-Residential	2,729	**13.16**	5.40	**10.79**	16.62	0.19	12.78	13.54	69.4%	72.3%
AT4-OBD	863	**21.40**	12.61	**17.93**	25.83	0.47	20.47	22.33	21.9%	22.9%
AT5-Rural	149	**2.59**	0.08	**0.56**	3.04	0.36	1.87	3.30	3.8%	3.9%
ALL ATs	3,934	**17.40**	7.87	**13.32**	19.77	0.34	16.74	18.06	100.0%	
ALL non-CBDs	3,776	**14.86**	7.56	**12.90**	18.66	0.20	14.47	15.26	96.0%	100.0%

C. Density Based Area Type (SAT) Definition:

TYPE	DESCRIPTION	ADEN/Acre Range
SAT1 (Existing AT1-CBD)	**CBD**	**Existing CBD**
SAT2 (Comparable to AT2-Fringe)	**High Density (non-CBD)**	**More than 49.6**
SAT3 (Comparable to AT4-OBD)	**Medium Density (non-CBD)**	**>22.9 & <=49.6**
SAT4 (Comparable to AT3-Residential)	**Low Density (non-CBD)**	**>3.1 & <=22.9**
SAT5 (Comparable to AT5-Rural)	**Very Low Density (non-CBD)**	**>=0 & <=3.1**

Table 2-4: **Comparison of Attraction Based on Area Type**
Southeast Regional Planning Model VI

0-a. ALL Counties - Summary based on Revised AT

Rev. Density-Based AT	No of TAZs	Percent TAZs	Revised Attractions		Old Attractions	
			Totals	Percent	Totals	Percent
1. CBD	158	4.0%	801,295	4.78%	853,792	5.09%
2. Non-CBD HIGH Den	136	3.5%	1,667,310	9.95%	1,119,928	6.68%
3. Non-CBD MED Den	827	21.0%	4,401,310	26.25%	5,162,272	30.80%
4. Non-CBD LOW Den	2,424	61.6%	9,536,586	56.89%	9,243,827	55.16%
5. Non-CBD Very-LOW Den	389	9.9%	357,909	2.13%	379,626	2.27%
TOTAL	3,934	100.0%	16,764,410	100.00%	16,759,445	100.00%

0-b. ALL Counties - Summary based on Old AT

Current/Old MPO Model AT	No of TAZs	Percent TAZs	Revised Attractions		Old Attractions	
			Totals	Percent	Totals	Percent
1. CBD	158	4.0%	801,295	4.78%	853,792	5.09%
2. Fringe	35	0.9%	146,170	0.87%	204,904	1.22%
3. Residential	2,729	69.4%	9,062,982	54.06%	9,633,636	57.48%
4. OBD	863	21.9%	6,609,983	39.43%	5,919,343	35.32%
5, Rural	149	3.8%	143,980	0.86%	147,770	0.88%
TOTAL	3,934	100.0%	16,764,410	100.00%	16,759,445	100.00%

Table 2-4 (Continued)

1-a. Palm Beach County - Summary based on Revised AT

Rev. Density-Based AT	No of TAZs	Percent TAZs	Revised Attractions		Old Attractions	
			Totals	Percent	Totals	Percent
1. CBD	70	4.5%	139,786	3.51%	146,333	3.67%
2. Non-CBD HIGH Den	2	0.1%	15,671	0.39%	10,721	0.27%
3. Non-CBD MED Den	133	8.5%	462,421	11.59%	562,906	14.10%
4. Non-CBD LOW Den	1,143	73.0%	3,211,042	80.51%	3,099,501	77.65%
5. Non-CBD Very-LOW Den	218	13.9%	159,230	3.99%	172,405	4.32%
TOTAL	1,566	100.0%	3,988,150	100.00%	3,991,866	100.00%

1-b. Palm Beach County - Summary based on Old AT

Current/Old MPO Model AT	No of TAZs	Percent TAZs	Revised Attractions		Old Attractions	
			Totals	Percent	Totals	Percent
1. CBD	70	4.5%	139,786	3.51%	146,333	3.67%
2. Fringe	23	1.5%	88,682	2.22%	135,776	3.40%
3. Residential	1,234	78.8%	2,719,992	68.20%	2,819,083	70.62%
4. OBD	215	13.7%	1,013,154	25.40%	863,516	21.63%
5. Rural	24	1.5%	26,536	0.67%	27,158	0.68%
TOTAL	1,566	100.0%	3,988,150	100.00%	3,991,866	100.00%

Table 2-4 (Continued)

2-a. Broward County - Summary based on Revised AT

Rev. Density-Based AT	No of TAZs	Percent TAZs	Revised Attractions			Old Attractions	
			Totals	Percent		Totals	Percent
1. CBD	11	1.2%	195,151	3.26%		199,583	3.28%
2. Non-CBD HIGH Den	1	0.1%	2,678	0.04%		2,760	0.05%
3. Non-CBD MED Den	196	21.7%	1,382,653	23.11%		1,625,616	26.73%
4. Non-CBD LOW Den	649	72.0%	4,340,867	72.54%		4,188,645	68.87%
5. Non-CBD Very-LOW Den	45	5.0%	62,779	1.05%		65,414	1.08%
TOTAL	902	100.0%	5,984,128	100.00%		6,082,018	100.00%

2-b. Broward County - Summary based on Old AT

Current/Old MPO Model AT	No of TAZs	Percent TAZs	Revised Attractions			Old Attractions	
			Totals	Percent		Totals	Percent
1. CBD	11	1.2%	195,151	3.26%		199,583	3.28%
2. Fringe	8	0.9%	31,349	0.52%		42,632	0.70%
3. Residential	637	70.6%	3,646,105	60.93%		3,861,599	63.49%
4. OBD	246	27.3%	2,111,523	35.29%		1,978,204	32.53%
5, Rural	-						
TOTAL	902	100.0%	5,984,128	100.00%		6,082,018	100.00%

Table 2-4 (Continued)

3-a. Miami-Dade County - Summary based on Revised AT

Rev. Density-Based AT	No of TAZs	Percent TAZs	Revised Attractions		Old Attractions	
			Totals	Percent	Totals	Percent
1. CBD	77	5.3%	466,358	6.87%	507,876	7.60%
2. Non-CBD HIGH Den	133	9.1%	1,648,961	24.28%	1,106,447	16.55%
3. Non-CBD MED Den	498	34.0%	2,556,236	37.64%	2,973,750	44.48%
4. Non-CBD LOW Den	632	43.1%	1,984,677	29.22%	1,955,681	29.25%
5. Non-CBD Very-LOW Den	126	8.6%	135,900	2.00%	141,807	2.12%
TOTAL	1,466	100.0%	6,792,132	100.00%	6,685,561	100.00%

3-b. Miami-Dade County - Summary based on Old AT

Current/Old MPO Model AT	No of TAZs	Percent TAZs	Revised Attractions		Old Attractions	
			Totals	Percent	Totals	Percent
1. CBD	77	5.3%	466,358	6.87%	507,876	7.60%
2. Fringe	4	0.3%	26,139	0.38%	26,496	0.40%
3. Residential	858	58.5%	2,696,885	39.71%	2,952,954	44.17%
4. OBD	402	27.4%	3,485,306	51.31%	3,077,623	46.03%
5, Rural	125	8.5%	117,444	1.73%	120,612	1.80%
TOTAL	1,466	100.0%	6,792,132	100.00%	6,685,561	100.00%

Table 2-5: **Facility Type Description**
Southeast Regional Planning Model VI

FTC1:	MAJOR Classification	FTC2:	MINOR Classification
10	FREEWAYS	11	Freeway Segments
20	UNINTERRUPTED ROADWAYS	21	Uninterrupted Segments
40	HI-SPEED (Arterials)	41	>= 35 MPH
50	CENTROID CONNECTORS	51	Internal
		52	External
60	LOW SPEED (Collectors)	61	< 35 MPH
70	RAMPS	71	On
		72	Loop On
		73	Off
		74	Loop Off
		75	Freeway-to-Freeway (included in FRWY)
80	HOV	81	Freeway Segments
		82	Uninterrupted Segments
		83	AM and PM Peak Only Ramps
		84	AM Peak Only Ramps
		85	PM Peak Only Ramps
		86	All Day Ramp
90	TOLL	91	Freeway Segments
		92	Uninterrupted Segments
		93	On
		94	Off
		95	Toll Plaza

NOTE:

1. Posted Speed and Signal Spacing determine the "Uninterrupted" designation for Non-Toll and Non-HOV facilities.
2. Toll and HOV facilities are considered to be freeway segments.
3. CDs, Expressways, and Parkways are considered Uninterrupted regardless of posted speed.

- Time-of-Day Traffic Count Locations (CNT_XXPRD>0, where XX=AM,PM & OF; **see Figure 2-11**)
- 24-Hour Truck Count Locations (TRKCNT_SUCOMB>0, see **Figure 2-12**)
- Highway Sections of observed Speed Study (TDSECID>0, see **Figure 2-13**)
- Facility Type
- Number of Lanes
- Centroid Connections and Locations
- Added Network Detail for Micro-Station Coding
- Link Prohibitors
- Toll Facilities
- HOV Facilities

Table 2-6: **Summary of LOS-E Capacities in Passenger-cars-per-hour-per-lane by Roadway Functional Type**
Southeast Regional Planning Model VI

FUNCTIONAL TYPES (for Capacity Lookup purposes)	**LOOKUP TABLE USED**	**LANES** per direction	**Interhchange Spacing >= 2 miles apart**	**Interhchange Spacing < 2 miles apart**		**(see Note)**
FREEWAYS (includes Parkways, Expressways, Toll and HOV freeway sections and, Freeway-to-Freeway ramps)	*FRWYPCE.DAT*	**1**	1,900	1,950		*1-lane section used for Freeway-to-Freeway ramps if needed.*
		2	1,990	2,050		
		3	2,090	2,110		
		4	2,140	2,110		
		5	2,170	2,160		
		6	2,180	2,170		

UNINTERRUPTED ROADWAYS (includes arterials with signal spacing > 1.5 and posted speed > 40 for Signalized, OR posted speed > 40 for Unsignalized)	**LOOKUP TABLE USED**	**LANES** per direction	**All**		**(see Note)**
	HWYPCE.DAT	**1**	1,310		
		2	1,850		
		3	1,850		

INTERRUPTED ROADWAYS, ARTERIALS (arterials with posted speed >= 35)	**LOOKUP TABLE USED**	**LANES** per direction	**Signal Density >0.00 to 1.99 per mile**	**Signal Density 2.00 to 4.50 per mile**	**Signal Density > 4.50 per mile AND NOT within CBD (and Major City/County Roadways)**	**Signal Density > 4.50 per mile AND WITHIN CBD**	**Other Signalized Roadways**	**(see Note)**
	ARTPCE.DAT	**1**	900	860	820	820	660	
		2	900	910	870	870	660	
		3	900	910	870	870	660	
		4	900	880	840	840	660	

LOW SPEED ROADWAYS, COLLECTORS (posted speed < 35)	**LOOKUP TABLE USED**	**LANES** per direction	**CBD & Non-CBD High-Density**	**Non-CBD Low-Density**	**Non-CBD Medium-Density**	**Non-CBD Very Low-Density**		**(see Note)**
	LOWPCE.DAT	**1**	630	750	630	760		
		2	650	750	650	760		
		3	650	750	650	760		
		4	650	750	650	760		

Table 2-6 (Continued)

FUNCTIONAL TYPES (for Capacity Lookup purposes)		LOOKUP TABLE USED	LANES per direction	CBD	Non-CBD Low-Density	Non-CBD Medium-Density	Non-CBD High-Density	Non-CBD Very Low-Density	(see Note)
RAMPS	ON	*ONPCE.DAT*	1	1,927	1,927	1,927	1,927	1,512	*Capacities for ramps are also not shown in Table 4-7. These capacities, which are already high, have been adopted from the previous lookup table.*
			2	1,927	1,927	1,927	1,927	1,512	
	LOOP ON	*LONPCE.DAT*	1	774	835	835	892	892	
			2	774	835	835	892	892	
	OFF	*OFFPCE.DAT*	1	1,927	1,927	1,927	1,927	1,512	
			2	1,927	1,927	1,927	1,927	1,512	
	LOOP OFF	*LOFFPCE.DAT*	1	892	892	835	892	892	
			2	892	892	835	892	892	
	TOLL ON	*TONPCE.DAT*	1	1,927	1,927	1,927	1,927	1,512	
			2	1,927	1,927	1,927	1,927	1,512	
	TOLL OFF	*TOFFPCE.DAT*	1	1,927	1,927	1,927	1,927	1,512	
			2	1,927	1,927	1,927	1,927	1,512	
	HOV PEAKS ONLY (slip ramps)	*n/a*	1	4,000	4,000	4,000	4,000	4,000	*These high capacities have been adopted from the previous model and are not part of the Capacity Calculator.*
	HOV ALL DAY (slip ramps)	*n/a*	1	4,000	4,000	4,000	4,000	4,000	
CENTROID CONNECTORS	INTERNAL CENTROID CONNECTORS	*n/a*	1	10,000	10,000	10,000	10,000	10,000	*Centroid connectors are given high capacities and are not part of the Capacity Calculator.*
	EXTERNAL CENTROID CONNECTORS	*n/a*	1	10,000	10,000	10,000	10,000	10,000	

Note: All capacities are LOS E in PCEs as adapted from Table 4-7 of the Florida LOS Handbook, unless otherwise noted. In cases where number of lanes in each driection are more than the maximum in the lookup table, the capacity from the maximum number of lanes is used, assuming CBD area type.

Figure 2-3: **Capacity Adjustment Logic for Arterials and Collectors**
Southeast Regional Planning Model VI

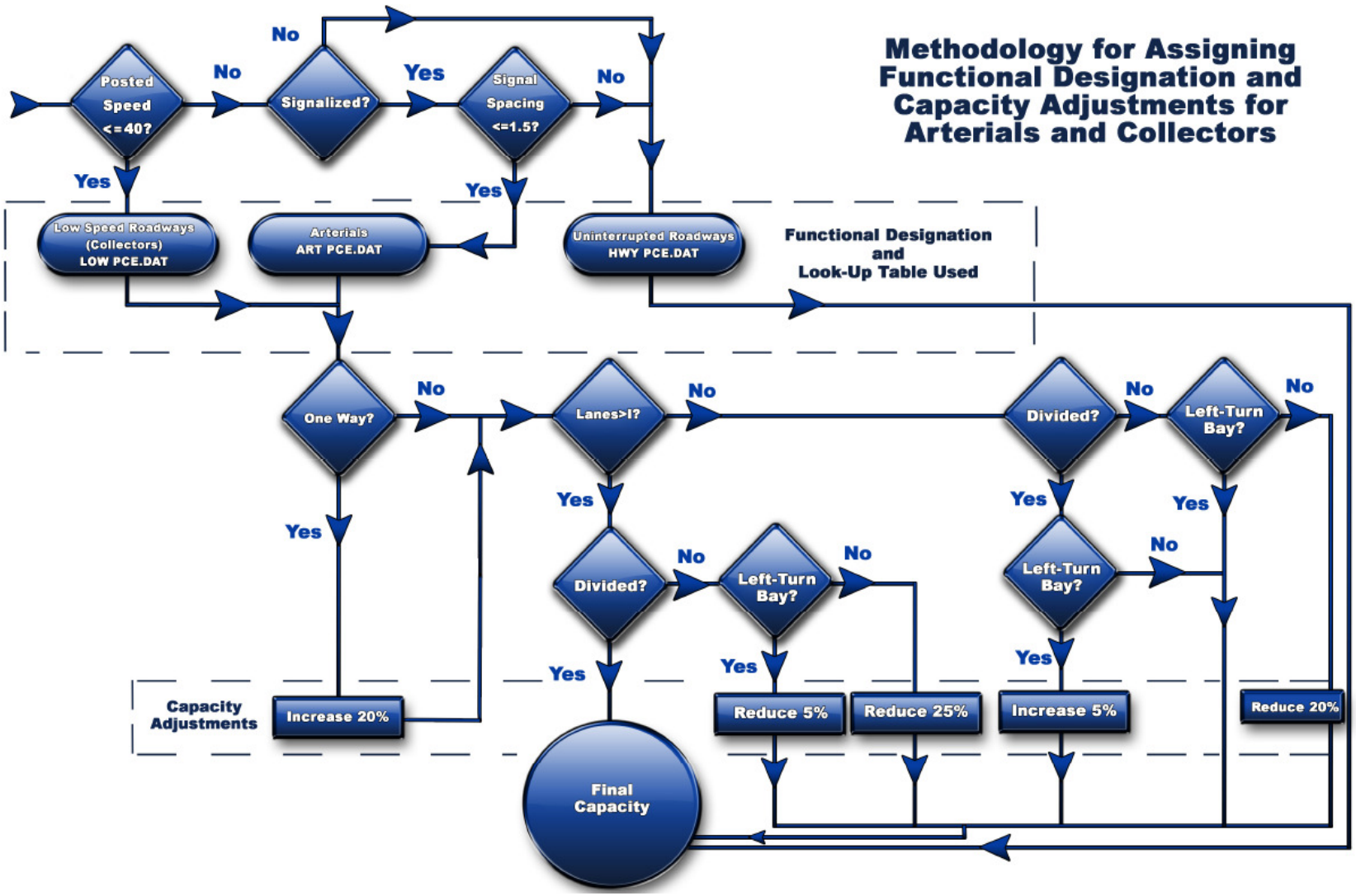
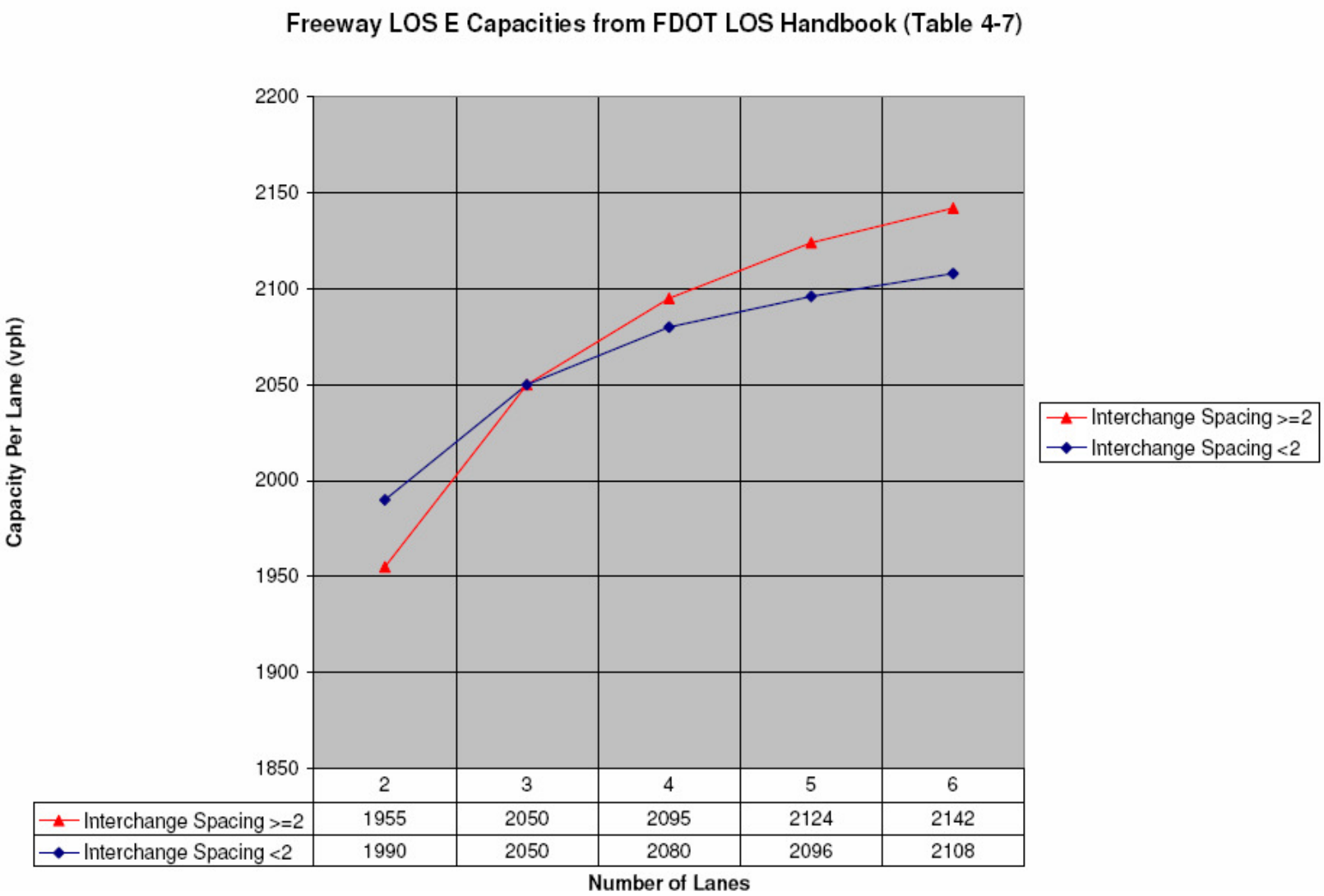
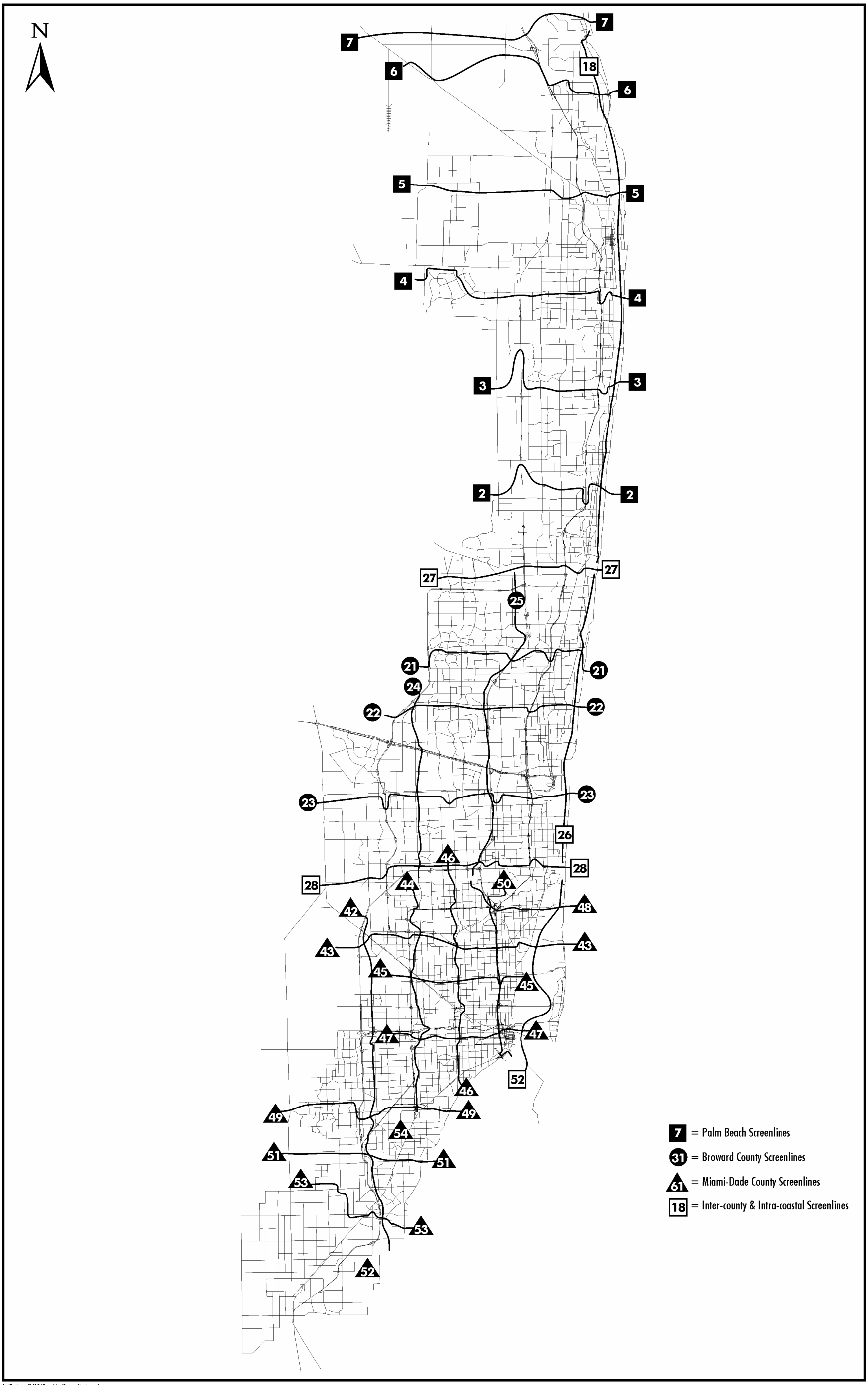


Figure 2-4: **Capacity Adjustment Logics for Freeways**
Southeast Regional Planning Model VI



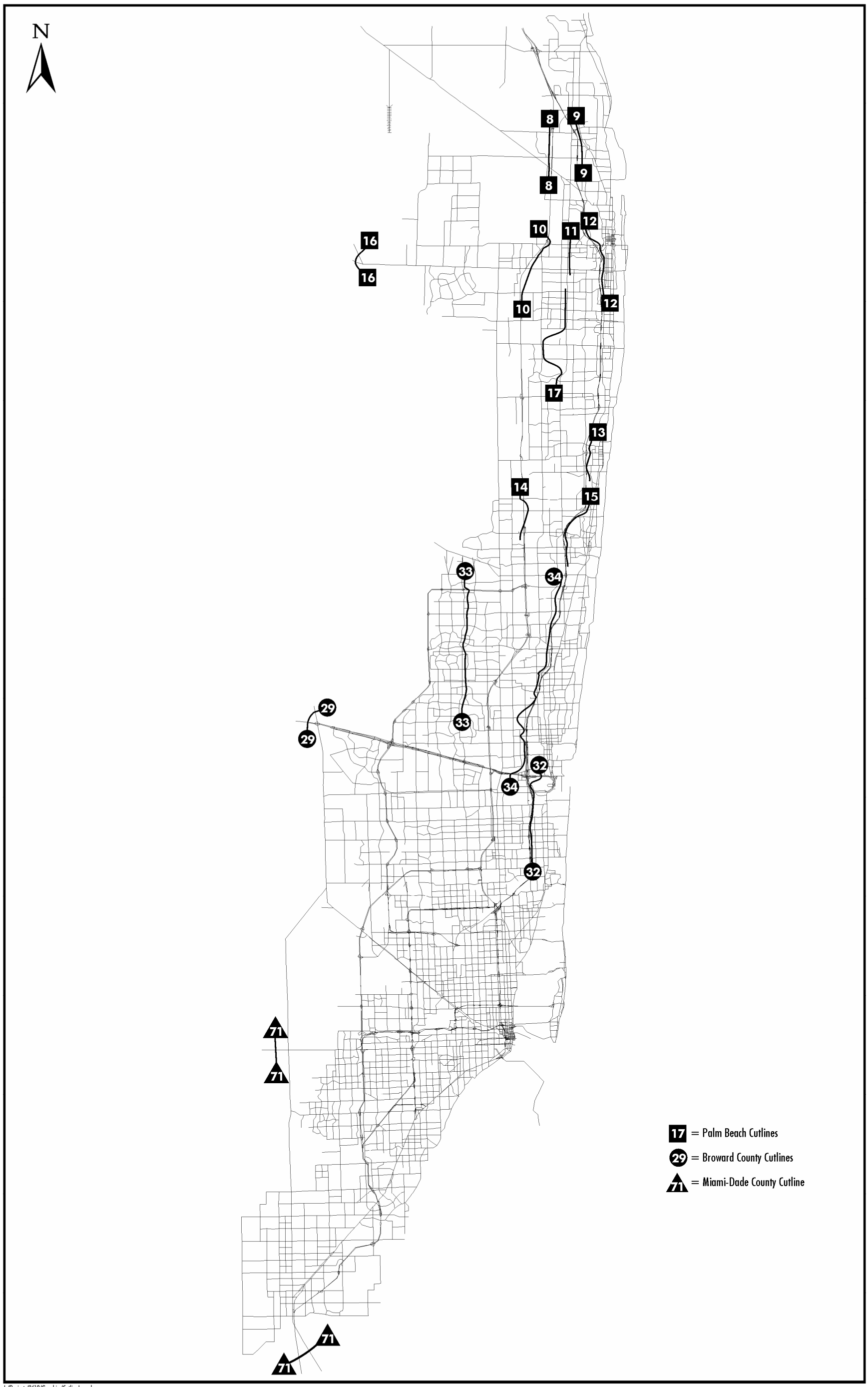
	2	3	4	5	6
Interchange Spacing >=2	1955	2050	2095	2124	2142
Interchange Spacing <2	1990	2050	2080	2096	2108

Figure 2-5: **Screenline Locations**
Southeast Regional Planning Model VI



L:/Projects/3612/Graphics/ScreenlineLoc.cdr

Figure 2-6: **Cutline Locations**
Southeast Regional Planning Model VI



I:/Projects/3612/Graphics/CutlineLoc.cdr

Figure 2-7: **Posted Speed Limits of Network Links**
Southeast Regional Planning Model VI

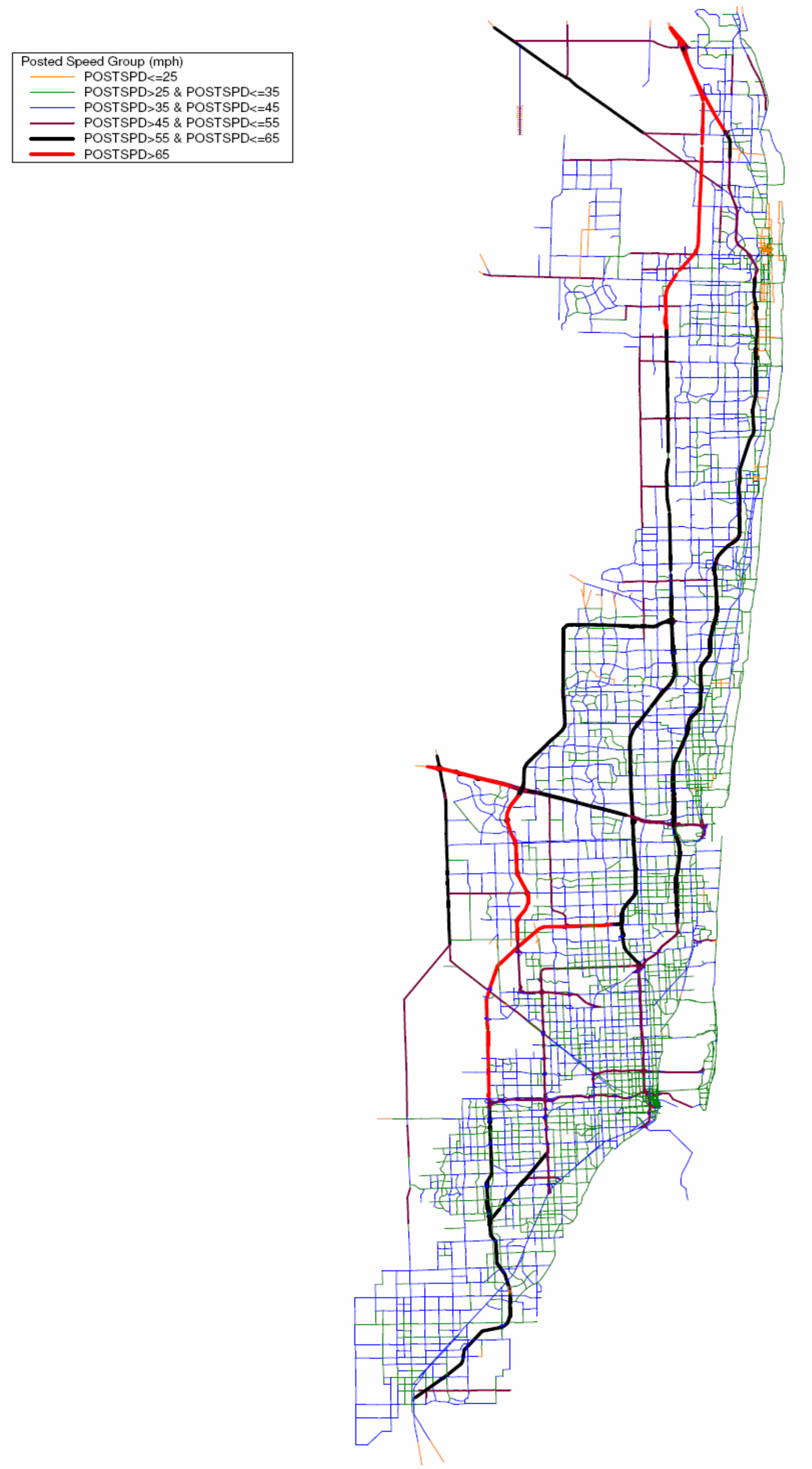


Figure 2-8: **Signal Controlled Section (SEGID) of Network Links**
Southeast Regional Planning Model VI

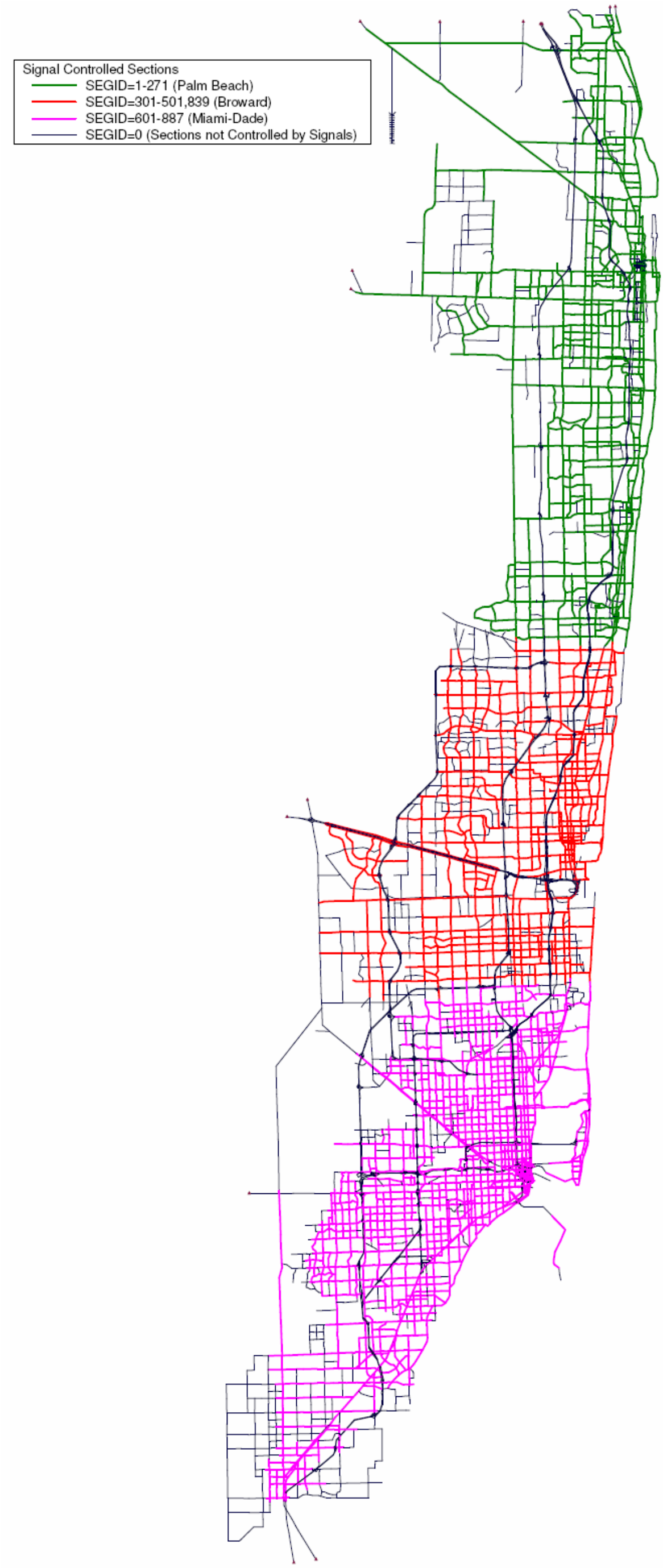


Figure 2-9: **Signal Locations**
Southeast Regional Planning Model VI

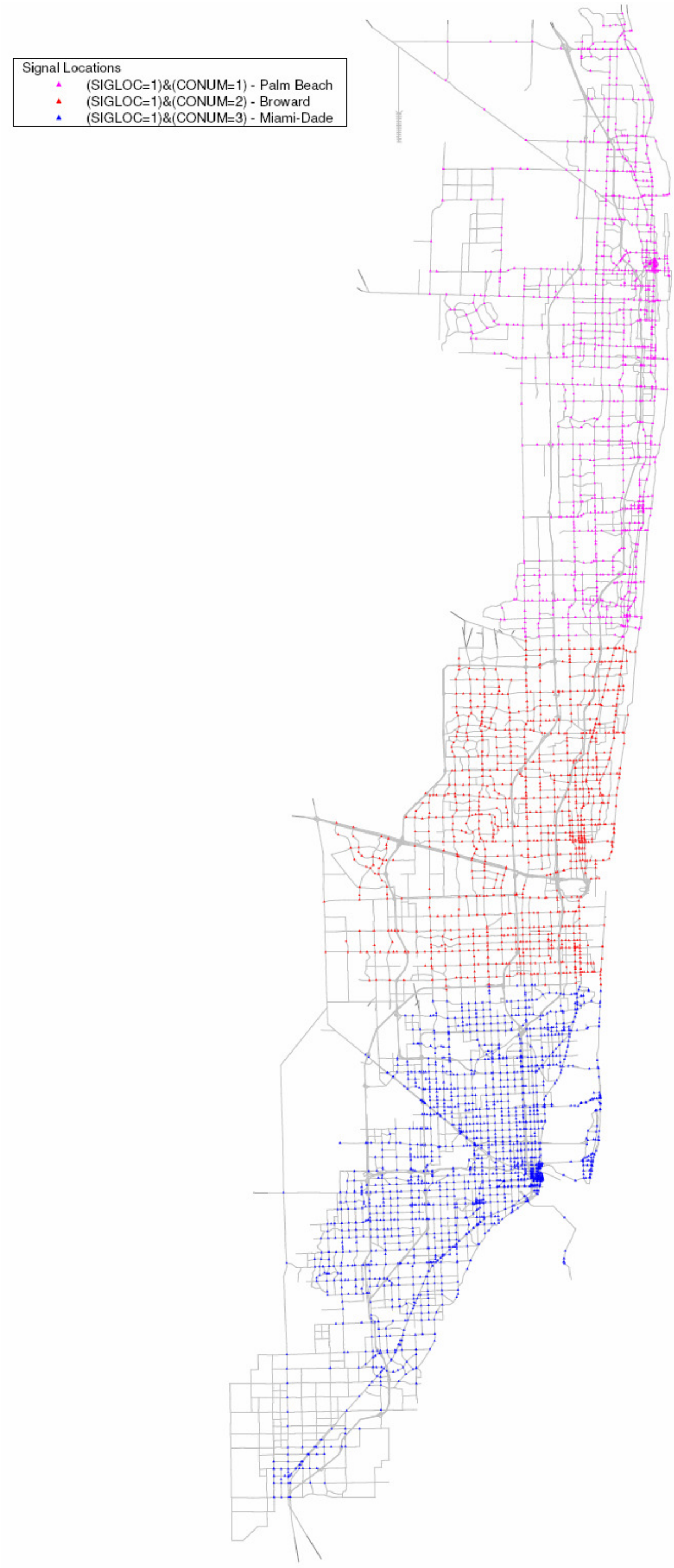


Figure 2-10: **24-Hour Traffic Count Locations**
Southeast Regional Planning Model VI

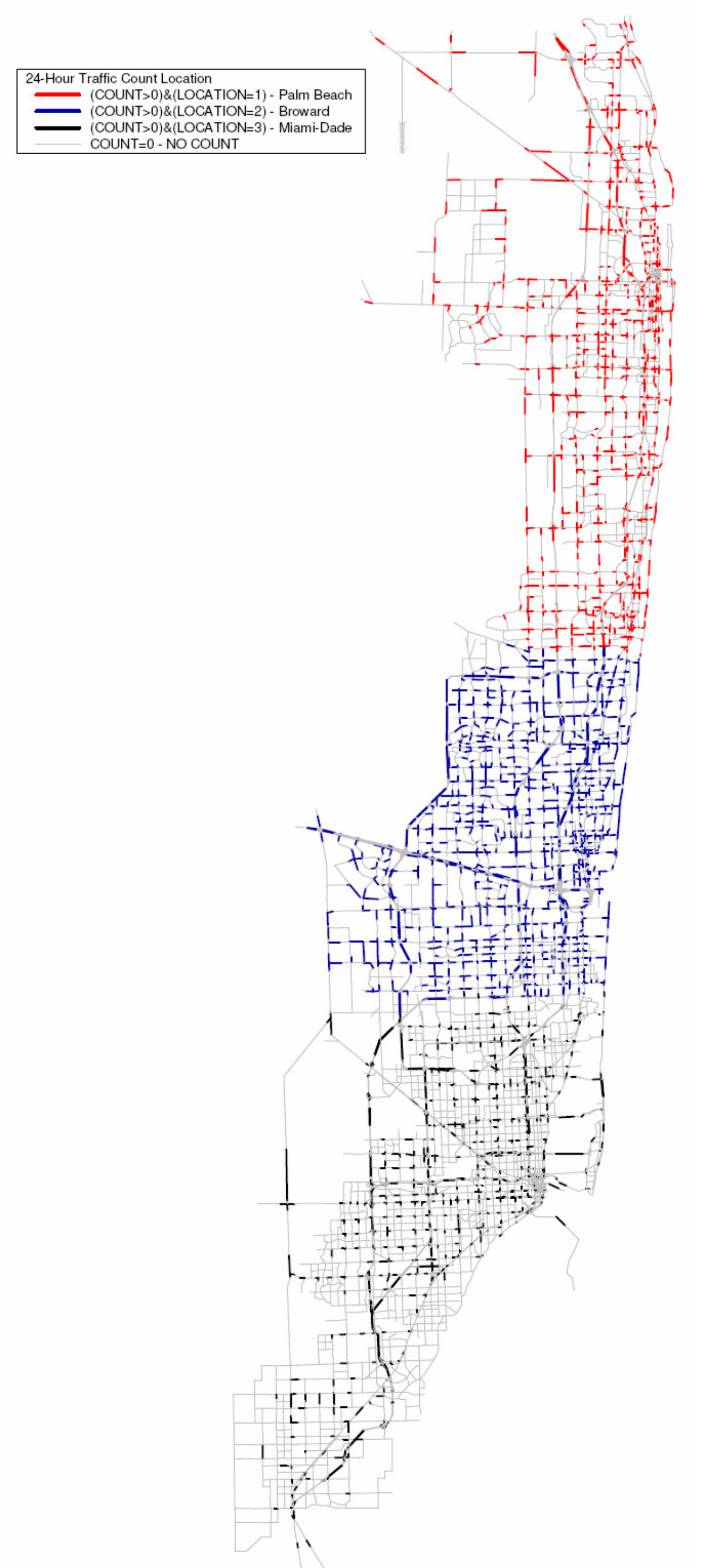


Figure 2-11: **Time-of-Day Traffic Count Locations**
Southeast Regional Planning Model VI

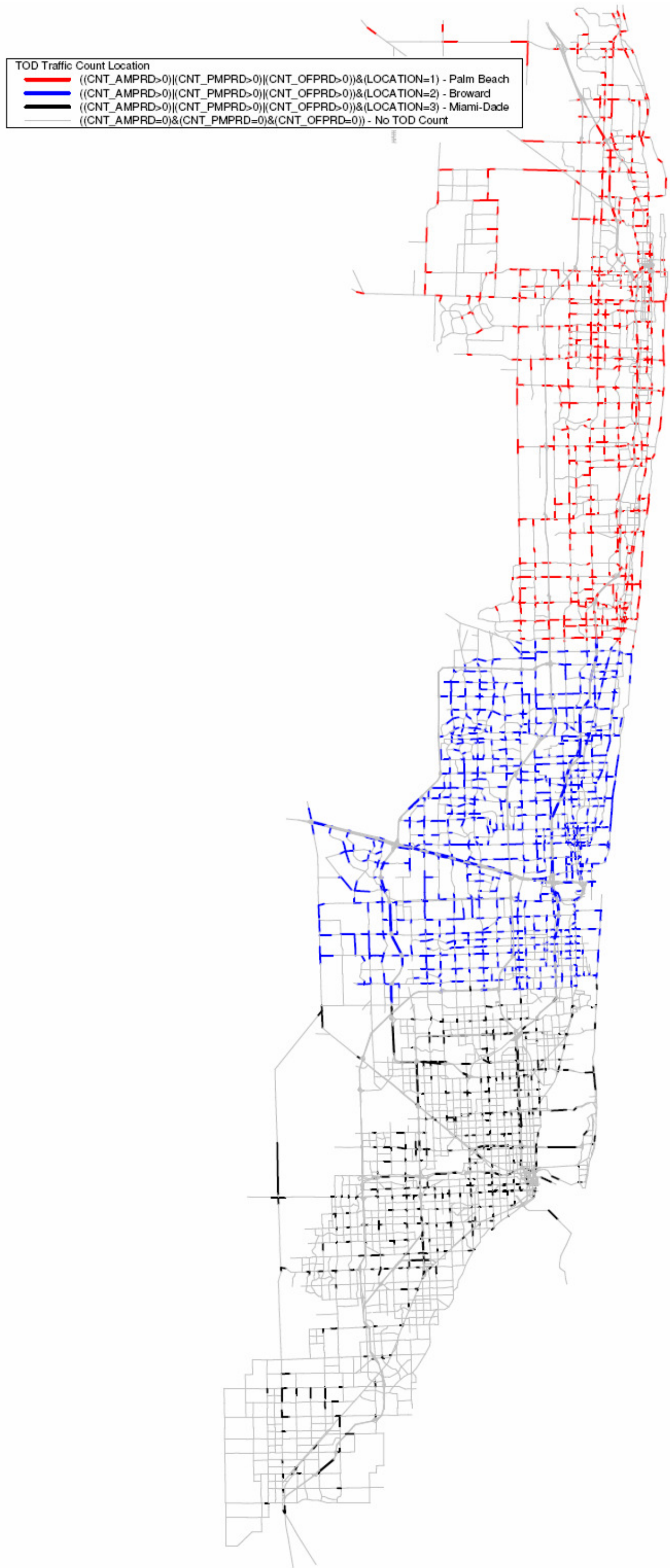


Figure 2-12: **24-Hour Truck Count Locations**
Southeast Regional Planning Model VI

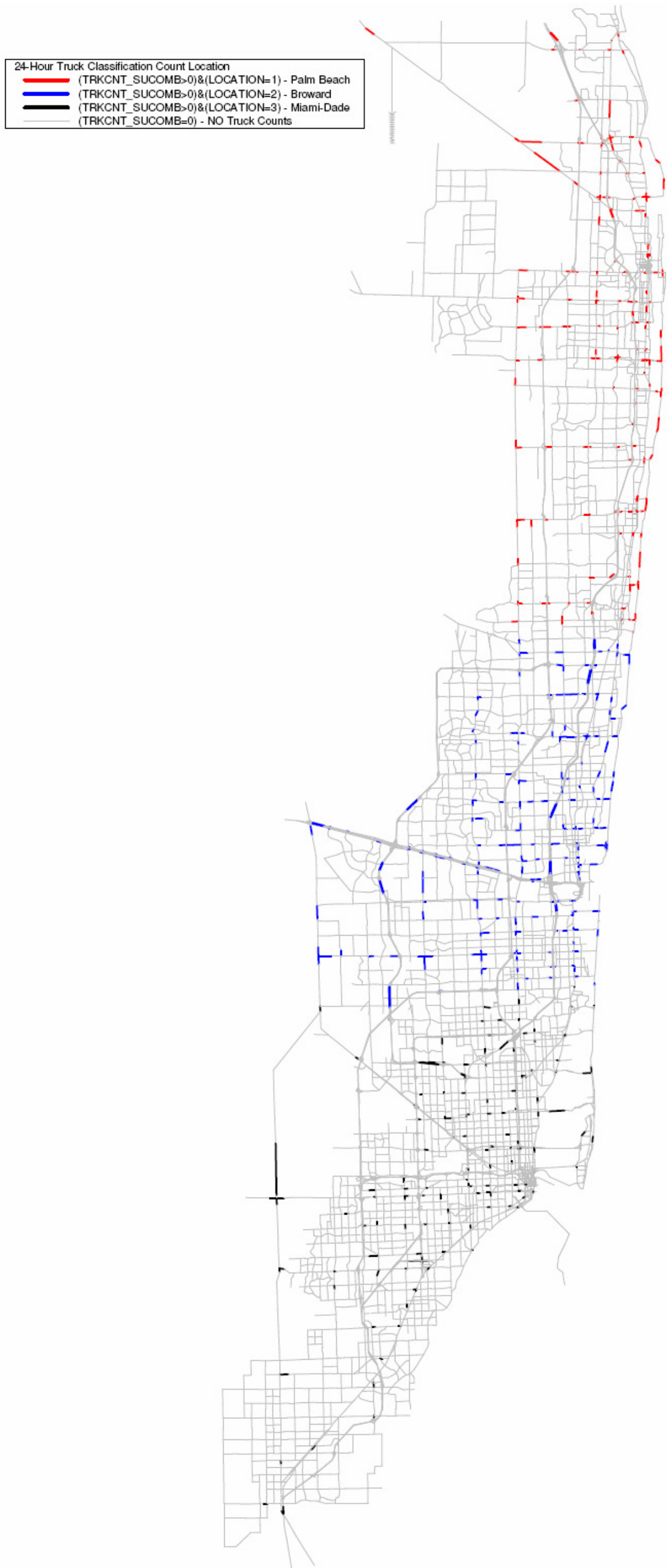
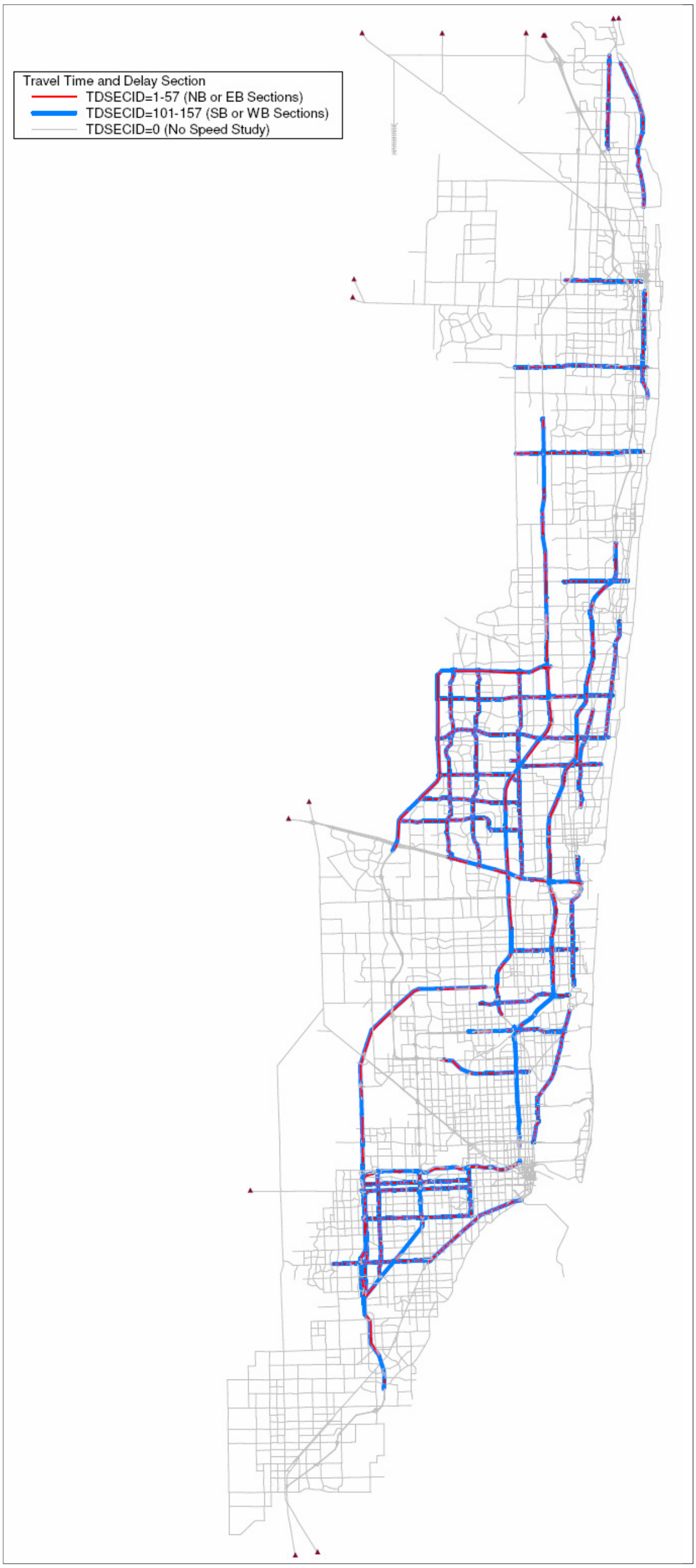


Figure 2-13: **Highway Sections of Observed Speed Study**
Southeast Regional Planning Model VI



In order to compare the 2000 and 2030 model VMT statistics, it is necessary to know the changes in the lane-miles between these models. A summary of the lane miles and system miles by the facility types were made for the whole region and each of the counties separately. **Table 2-7** presents these summaries along with changes and percent changes between the 2000 and 2030 SERPM6 networks.

There are 13,666 and 16,498 lane-miles of roadway for the 2000 and 2030 SERPM6 networks, respectively. High Speed Arterials (FTC2=41) have the most lane miles (8,957 in 2000 and 10,143 in 2030).

For the SERPM region, there are 21% and 9% increase in lane-miles and system-miles between 2000 and 2030, respectively. By facility type, the percent changes in lane-miles vary from 13% (High Speed Arterials) to 170% (HOV facility). Among the counties, percent changes in lane-miles and system-miles are higher in Palm Beach County (36% - lane-miles, 15% - system-miles) and lowest in Broward County (12% - lane-miles and 2% - system-miles). These statistics reflect the coding conventions that were used in each county as well as the planned improvements.

2.3 Traffic Count Data Summary

Counts were obtained from FDOT. These counts were then used to calculate the Annual Average Daily Traffic (AADT). For the purpose of this validation effort, AADT counts (not the peak-season counts) were used. Raw counts were adjusted for the number of axles and the seasonal adjustment factors. FDOT routinely makes classification counts at designated locations. The FDOT staff provided the seasonal and axle adjustment factors. These factors were applied to the raw counts to derive the AADT.

Freeway counts were provided by FDOT as AADTs. The counts were obtained from FDOT's Florida Traffic Information compact-disk. The counts were reviewed for reasonableness and edited as necessary. The traffic count data are needed for model validation. Care was taken to ensure that enough count data are available for model validation**. Tables 2-8 to 2-10** present a summary of the links by the facility and area types with traffic counts for the whole region as well for each of the three constituent counties. Both 24-hour and period traffic counts that are available for model validation are summarized in **Table-2-8**.

For the whole SERPM region, 18.5 percent of links have traffic counts for 24-hours and 15.25 percent for each period of model. Table 2-6 also presents the number of links that has traffic counts as well as the total number of links. The information in **Table 2-8** is valuable for judging the model statistics by facility and area type among the counties by the variation of the percentage of links with traffic counts.

There are traffic counts on only a few ramp links. They account for less than 1 percent of the TOD and 5 percent of the 24-hour counts. For other facility types, the percentage of links with traffic counts varies from 10.34% (low speed collectors) to 24.68% (uninterrupted roadways). For the area types, the percentage of links having traffic counts varies from 8.21% (CBD) to 21.60 (Low Density Non-CBD).

There are significant differences in the percentages between the counties (Palm Beach – 22.6%, Broward – 29.81% and Miami-Dade –10.1 %) of links with traffic counts. **Table 2-8** also presents the counts availability by the facility and area types for each three counties. **Figure 2-10** presents the locations of 24-hour traffic counts. This figure shows that Broward and Palm Beach have higher percentages of links with traffic counts compared to Miami-Dade.

Table 2-7: **Comparison of Lane-Miles and System-Miles of 2030 and 2000 Networks by Facility Type**
Southeast Regional Planning Model VI

0. ALL Counties

Facility Type	Year 2000 Model				Year 2030 Model				Growth (2030/2000)	
	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	System Miles
1. Freeway (11)	1,225	9.0%	362	8.4%	1,420	8.6%	366	7.8%	1.16	1.01
2. Uninterrupted Roadways (21)	319	2.3%	117	2.7%	570	3.5%	123	2.6%	1.79	1.05
4. High Speed Arterials (41)	8,957	65.5%	2,394	55.5%	10,143	61.5%	2,485	52.7%	1.13	1.04
6. Low Speed Collectors (61)	2,096	15.3%	838	19.4%	2,624	15.9%	935	19.8%	1.25	1.12
7. Ramps (71-75, 93,94)	285	2.1%	216	5.0%	367	2.2%	263	5.6%	1.29	1.22
8. HOV (81-84)	93	0.7%	93	2.2%	251	1.5%	228	4.8%	2.70	2.45
9. Toll Facility (91-92)	692	5.1%	291	6.7%	1,123	6.8%	316	6.7%	1.62	1.09
ALL Facility:	13,666	100.0%	4,311	100.0%	16,498	100.0%	4,715	100.0%	1.21	1.09

1. Palm Beach County

Facility Type	Year 2000 Model				Year 2030 Model				Growth (2030/2000)	
	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	System Miles
1. Freeway (11)	275	7.3%	92	7.5%	362	7.0%	92	6.5%	1.32	1.00
2. Uninterrupted Roadways (21)	236	6.3%	83	6.8%	449	8.7%	85	6.0%	1.90	1.03
4. High Speed Arterials (41)	2,674	70.9%	747	61.1%	3,264	63.5%	798	56.6%	1.22	1.07
6. Low Speed Collectors (61)	345	9.1%	156	12.8%	581	11.3%	198	14.0%	1.69	1.27
7. Ramps (71-75, 93,94)	49	1.3%	44	3.6%	75	1.5%	63	4.5%	1.53	1.43
8. HOV (81-84)	16	0.4%	16	1.3%	91	1.8%	91	6.4%	5.80	5.80
9. Toll Facility (91-92)	176	4.7%	85	7.0%	317	6.2%	83	5.9%	1.81	0.98
ALL Facility:	3,771	100.0%	1,222	100.0%	5,139	100.0%	1,410	100.0%	1.36	1.15

Table 2-7 (Continued)

2. Broward County

Facility Type	Year 2000 Model				Year 2030 Model				Growth (2030/2000)	
	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	System Miles
1. Freeway (11)	439	9.8%	120	9.2%	504	10.0%	121	9.1%	1.15	1.00
2. Uninterrupted Roadways (21)	73	1.6%	32	2.5%	111	2.2%	36	2.7%	1.53	1.12
4. High Speed Arterials (41)	3,011	67.0%	706	54.2%	3,303	65.6%	717	54.1%	1.10	1.02
6. Low Speed Collectors (61)	552	12.3%	223	17.1%	600	11.9%	225	16.9%	1.09	1.01
7. Ramps (71-75, 93,94)	88	2.0%	61	4.7%	89	1.8%	63	4.7%	1.01	1.04
8. HOV (81-84)	51	1.1%	51	3.9%	51	1.0%	51	3.8%	1.00	1.00
9. Toll Facility (91-92)	277	6.2%	110	8.4%	375	7.4%	113	8.5%	1.35	1.03
ALL Facility:	4,492	100.0%	1,303	100.0%	5,032	100.0%	1,325	100.0%	1.12	1.02

3. Miami-Dade County

Facility Type	Year 2000 Model				Year 2030 Model				Growth (2030/2000)	
	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	% Lane Miles	System Miles	% System Miles	Lane Miles	System Miles
1. Freeway (11)	511	9.5%	150	8.4%	554	8.8%	153	7.7%	1.08	1.02
2. Uninterrupted Roadways (21)	10	0.2%	2	0.1%	10	0.2%	2	0.1%	1.00	1.00
4. High Speed Arterials (41)	3,271	60.5%	942	52.7%	3,576	56.5%	970	49.0%	1.09	1.03
6. Low Speed Collectors (61)	1,200	22.2%	459	25.7%	1,443	22.8%	512	25.9%	1.20	1.11
7. Ramps (71-75, 93,94)	148	2.7%	112	6.2%	203	3.2%	137	6.9%	1.37	1.23
8. HOV (81-84)	26	0.5%	26	1.5%	109	1.7%	86	4.4%	4.14	3.26
9. Toll Facility (91-92)	239	4.4%	96	5.4%	432	6.8%	120	6.1%	1.81	1.25
ALL Facility:	5,404	100.0%	1,787	100.0%	6,327	100.0%	1,979	100.0%	1.17	1.11

Note: Statistics for Palm Beach, Broward and Miami-Dade Counties are generated from SERPM6 runs.

Table 2-8: **2000 Highway Network Total Links and Links with Traffic Counts by Facility and Area Types**
Southeast Regional Planning Model VI

0. ALL Counties - 24-Hour Traffic Counts

Facility Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts	Area Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts
1. Freeway (11)	362.3	991	24.32	241	1. CBD	76.9	901	8.21	74
2. Uninterrupted Roadways (21)	116.6	231	24.68	57	2. NonCBD HiDen	187.5	1,069	10.20	109
4. High Speed Arterials (41)	2,394.3	8,928	23.22	2,073	3. NonCBDMedDen	1,052.0	4,859	17.31	841
6. Low Speed Collectors (61)	838.0	3,585	10.32	370	4. NonCBDLowDen	2,422.4	8,247	21.60	1,781
7. Ramps (71-75, 93,94)	216.3	1,677	4.65	78	5. NonCBD VeryLowDen	572.4	1,112	17.27	192
8. HOV (81-84)	92.9	260	23.08	60					
9. Toll Facility (91-92)	290.8	516	22.87	118	**TOTAL**	**4,311.2**	**16,188**	**18.51**	**2,996**

0T. ALL Counties - TOD Traffic Counts

Facility Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts	Area Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts
1. Freeway (11)	362.3	991	17.56	174	1. CBD	76.9	901	6.05	55
2. Uninterrupted Roadways (21)	116.6	231	22.08	51	2. NonCBD HiDen	187.5	1,069	7.76	83
4. High Speed Arterials (41)	2,394.3	8,928	20.79	1,856	3. NonCBDMedDen	1,052.0	4,859	13.83	672
6. Low Speed Collectors (61)	838.0	3,585	8.84	317	4. NonCBDLowDen	2,422.4	8,247	18.50	1,526
7. Ramps (71-75, 93,94)	216.3	1,677	0.12	2	5. NonCBD VeryLowDen	572.4	1,112	12.05	134
8. HOV (81-84)	92.9	260	23.08	60					
9. Toll Facility (91-92)	290.8	516	1.74	9	**TOTAL**	**4,311.2**	**16,188**	**15.25**	**2,469**

Table 2-8 (Continued)

1. Palm Beach County -24-Hour Traffic Counts

Facility Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts	Area Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts
1. Freeway (11)	91.7	214	27.10	58	1. CBD	21.1	261	13.41	35
2. Uninterrupted Roadways (21)	82.6	132	22.73	30	2. NonCBD HiDen	12.3	101	16.83	17
4. High Speed Arterials (41)	746.6	2,773	27.23	755	3. NonCBDMedDen	115.5	552	25.54	141
6. Low Speed Collectors (61)	155.8	875	12.11	106	4. NonCBDLowDen	819.1	2,938	23.69	696
7. Ramps (71-75, 93,94)	44.4	193			5. NonCBD VeryLowDen	253.8	498	18.88	94
8. HOV (81-84)	15.6	40	25.00	10					
9. Toll Facility (91-92)	85.1	123	19.51	24	**TOTAL**	**1,221.7**	**4,350**	**22.60**	**983**

2. Broward County - 24-Hour Traffic Counts

Facility Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts	Area Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts
1. Freeway (11)	120.2	311	23.79	74	1. CBD	6.7	58	25.86	15
2. Uninterrupted Roadways (21)	32.4	88	28.41	25	2. NonCBD HiDen	6.6	38	34.21	13
4. High Speed Arterials (41)	705.9	2,257	37.00	835	3. NonCBDMedDen	267.7	1,037	31.82	330
6. Low Speed Collectors (61)	223.0	744	28.90	215	4. NonCBDLowDen	928.2	2,837	29.50	837
7. Ramps (71-75, 93,94)	60.6	415			5. NonCBD VeryLowDen	93.5	179	23.46	42
8. HOV (81-84)	50.9	130	29.23	38					
9. Toll Facility (91-92)	109.5	204	24.51	50	**TOTAL**	**1,302.7**	**4,149**	**29.81**	**1,237**

3. Miami-Dade County - 24-Hour Traffic Counts

Facility Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts	Area Type	Total System Miles	No. of Links	Links % with Counts	No. of Links with Counts
1. Freeway (11)	150.3	466	23.39	109	1. CBD	49.2	582	4.12	24
2. Uninterrupted Roadways (21)	1.7	11	18.18	2	2. NonCBD HiDen	168.5	930	8.49	79
4. High Speed Arterials (41)	941.7	3,898	12.39	483	3. NonCBDMedDen	669.1	3,272	11.31	370
6. Low Speed Collectors (61)	459.2	1,966	2.49	49	4. NonCBDLowDen	675.2	2,472	10.03	248
7. Ramps (71-75, 93,94)	111.6	1,071	7.28	78	5. NonCBD VeryLowDen	225.1	435	12.87	56
8. HOV (81-84)	26.4	90	13.33	12					
9. Toll Facility (91-92)	96.2	189	23.28	44	**TOTAL**	**1,787.1**	**7,691**	**10.10**	**777**

Table 2-9: **2000 Highway Network Directional Links and Lane-Miles with Traffic Counts by Posted Speed Group and Facility Type**
Southeast Regional Planning Model VI

A. Number of Directional Links

	Posted Speed (in mph) Group						
Facility Type	**<25**	**25-35**	**35-45**	**45-55**	**55-65**	**>65**	**TOTAL**
1. Freeway (11)		2		545	365	84	**996**
2. Uninterrupted Roadways (21)			151	190	57		**398**
4. High Speed Arterials (41)	11	6,654	10,215	515	47		**17,442**
6. Low Speed Collectors (61)	809	4,824	1,178	10			**6,821**
7. Ramps (71-75, 93,94)	16	40	1,015	584	55		**1,710**
8. HOV (81-82)				90	170		**260**
9. Toll Facility (91-92)		13	9	18	355	121	**516**
TOTAL	**836**	**11,533**	**12,568**	**1,952**	**1,049**	**205**	**28,143**

B. Number of Directional Links with Counts

	Posted Speed (in mph) Group						
Facility Type	**<25**	**25-35**	**35-45**	**45-55**	**55-65**	**>65**	**TOTAL**
1. Freeway (11)				128	84	30	**242**
2. Uninterrupted Roadways (21)			38	52	10		**100**
4. High Speed Arterials (41)		1,291	2,625	147	14		**4,077**
6. Low Speed Collectors (61)	82	599	38				**719**
7. Ramps (71-75, 93,94)			67	11			**78**
8. HOV (81-82)				12	48		**60**
9. Toll Facility (91-92)			1	6	80	31	**118**
TOTAL	**82**	**1,890**	**2,769**	**356**	**236**	**61**	**5,394**

C. Percentage of Directional Links with Counts

	Posted Speed (in mph) Group						
Facility Type	**<25**	**25-35**	**35-45**	**45-55**	**55-65**	**>65**	**TOTAL**
1. Freeway (11)				23.5%	23.0%	35.7%	**24.3%**
2. Uninterrupted Roadways (21)			25.2%	27.4%	17.5%		**25.1%**
4. High Speed Arterials (41)		19.4%	25.7%	28.5%	29.8%		**23.4%**
6. Low Speed Collectors (61)	10.1%	12.4%	3.2%				**10.5%**
7. Ramps (71-75, 93,94)			6.6%	1.9%			**4.6%**
8. HOV (81-82)				13.3%	28.2%		**23.1%**
9. Toll Facility (91-92)			11.1%	33.3%	22.5%	25.6%	**22.9%**
TOTAL	**9.8%**	**16.4%**	**22.0%**	**18.2%**	**22.5%**	**29.8%**	**19.2%**

D. Lane-Miles

	Posted Speed (in mph) Group						
Facility Type	**<25**	**25-35**	**35-45**	**45-55**	**55-65**	**>65**	**TOTAL**
1. Freeway (11)		2		589	442	192	**1,225**
2. Uninterrupted Roadways (21)			76	189	54		**319**
4. High Speed Arterials (41)	6	2,573	5,855	466	56		**8,956**
6. Low Speed Collectors (61)	156	1,451	483	7			**2,097**
7. Ramps (71-75, 93,94)	2	9	138	123	13		**285**
8. HOV (81-82)				26	67		**93**
9. Toll Facility (91-92)		2	3	15	500	172	**692**
TOTAL	**164**	**4,037**	**6,554**	**1,415**	**1,132**	**364**	**13,666**

E. Lane-Miles with Counts

	Posted Speed (in mph) Group						
Facility Type	**<25**	**25-35**	**35-45**	**45-55**	**55-65**	**>65**	**TOTAL**
1. Freeway (11)				228	179	81	**488**
2. Uninterrupted Roadways (21)			21	57	11		**89**
4. High Speed Arterials (41)		632	1,810	160	19		**2,621**
6. Low Speed Collectors (61)	25	233	19				**277**
7. Ramps (71-75, 93,94)			12	4			**16**
8. HOV (81-82)				7	28		**34**
9. Toll Facility (91-92)			1	6	208	62	**278**
TOTAL	**25**	**864**	**1,863**	**462**	**446**	**143**	**3,803**

F. Percentage of Lane-Miles with Counts

	Posted Speed (in mph) Group						
Facility Type	**<25**	**25-35**	**35-45**	**45-55**	**55-65**	**>65**	**TOTAL**
1. Freeway (11)				38.8%	40.5%	42.0%	**39.9%**
2. Uninterrupted Roadways (21)			28.0%	29.9%	20.5%		**27.9%**
4. High Speed Arterials (41)		24.5%	30.9%	34.4%	34.6%		**29.3%**
6. Low Speed Collectors (61)	15.9%	16.0%	4.0%				**13.2%**
7. Ramps (71-75, 93,94)			8.7%	3.4%			**5.7%**
8. HOV (81-82)				24.6%	41.5%		**36.7%**
9. Toll Facility (91-92)			28.3%	42.4%	41.7%	36.3%	**40.2%**
TOTAL	**15.2%**	**21.4%**	**28.4%**	**32.7%**	**39.4%**	**39.3%**	**27.8%**

The count statistics in this table are not weighted. To determine the "true" exposure of traffic counts, a weighted summary of link miles with traffic counts was made. **Table 2-9 and 2-10** presents this summary.

In order to assess the extent of traffic counts that exists posted speeds and cycle length classifications, several cross-tabulations of the network were made through CV scripts. The speed groupings are less than 25, 25-35, 35-45, 45-55, 55-65 and more than 65 mph. The cycle length groupings are less than 45, 45-60, 60-90, 90-120 and more than 120 seconds. **Table 2-9** presents the summary of links and lane-miles for the posted speed groups and facility type combination that have traffic counts. Of the total of 13,666 lane-miles, 3,803 lane-miles have traffic counts (27.8%). This is much higher than the 19.2% of directional link counts. Almost 40% of freeway lane-miles have traffic counts compared to 24.3% directional link counts. These summary tables are important for assessing the volume/count ratios by speed group and facility type.

Table 2-10 presents the summary of links and lane-miles for the cycle length groups and facility type combination that have traffic counts. Of the total of 9,470 lane-miles of signalized controlled facilities, 2,660 lane-miles have traffic counts (28.1%). This is much higher than the 21.8% of directional links with counts. Uninterrupted roadways and high-speed arterials have a higher percentage of links with traffic counts compared to low speed collectors. Summaries from this table are important for assessing the volume/count ratios by the cycle length groups and facility types.

2.4 Observed Speed Data Summary

Speed validation is not very common in Florida. Most models are validated only to traffic counts. This section discusses period-specific observed speeds.

For the SERPM6 validation, several recent speed and delay studies that were conducted by different agencies in the Southeast Florida regions were assembled. The observed speed study sections were coded onto the highway network (see TDSECID link attribute). The speed studies were directional. The northbound and eastbound sections were assigned TDSECID codes 1-57. The southbound and westbound sections were assigned 101-157 codes. **Figure 2-13** depicts these sections; they represent approximately 2,117 directional miles of roadways. **Table 2-11** summarizes the period-specific observed speeds. These were aggregated by facility type and period and are shown in **Table 10-11**.

Table 2-10: **2000 Highway Network Directional Links and Lane-Miles with Traffic Counts by Cycle Length Group and Facility Type**
Southeast Regional Planning Model VI

A. Number of Directional Links

	Signal Cycle Length (in secs) Group					
Facility Type	**<45**	**45-60**	**60-90**	**90-120**	**>120**	**TOTAL**
2. Uninterrupted Roadways (21)			83	276		**359**
4. High Speed Arterials (41)	18	1,575	13,542	326		**15,461**
6. Low Speed Collectors (61)	24	3,245	811	24		**4,104**
7. Ramps (71-75, 93,94)		7	46			**53**
9. Toll Facility (91-92)			4			**4**
TOTAL	**42**	**4,827**	**14,486**	**626**		**19,981**

B. Number of Directional Links with Counts

	Signal Cycle Length (in secs) Group					
Facility Type	**<45**	**45-60**	**60-90**	**90-120**	**>120**	**TOTAL**
2. Uninterrupted Roadways (21)			19	79		**98**
4. High Speed Arterials (41)	6	376	3,299	100		**3,781**
6. Low Speed Collectors (61)	8	329	122	10		**469**
7. Ramps (71-75, 93,94)						
9. Toll Facility (91-92)						
TOTAL	**14**	**705**	**3,440**	**189**		**4,348**

C. Percentage of Directional Links with Counts

	Signal Cycle Length (in secs) Group					
Facility Type	**<45**	**45-60**	**60-90**	**90-120**	**>120**	**TOTAL**
2. Uninterrupted Roadways (21)			22.9%	28.6%		**27.3%**
4. High Speed Arterials (41)	33.3%	23.9%	24.4%	30.7%		**24.5%**
6. Low Speed Collectors (61)	33.3%	10.1%	15.0%	41.7%		**11.4%**
7. Ramps (71-75, 93,94)						
9. Toll Facility (91-92)						
TOTAL	**33.3%**	**14.6%**	**23.7%**	**30.2%**		**21.8%**

D. Lane-Miles

	Signal Cycle Length (in secs) Group					
Facility Type	**<45**	**45-60**	**60-90**	**90-120**	**>120**	**TOTAL**
2. Uninterrupted Roadways (21)			90	211		**302**
4. High Speed Arterials (41)	12	671	7,082	233		**7,999**
6. Low Speed Collectors (61)	6	876	274	6		**1,162**
7. Ramps (71-75, 93,94)		1	6			**7**
9. Toll Facility (91-92)			1			**1**
TOTAL	**19**	**1,548**	**7,453**	**450**		**9,470**

E. Lane-Miles with Counts

	Signal Cycle Length (in secs) Group					
Facility Type	**<45**	**45-60**	**60-90**	**90-120**	**>120**	**TOTAL**
2. Uninterrupted Roadways (21)			21	65		**86**
4. High Speed Arterials (41)	5	184	2,140	90		**2,419**
6. Low Speed Collectors (61)	2	106	46	2		**156**
7. Ramps (71-75, 93,94)						
9. Toll Facility (91-92)						
TOTAL	**7**	**290**	**2,206**	**157**		**2,660**

F. Percentage of Lane-Miles with Counts

	Signal Cycle Length (in secs) Group					
Facility Type	**<45**	**45-60**	**60-90**	**90-120**	**>120**	**TOTAL**
2. Uninterrupted Roadways (21)			23.0%	30.8%		**28.5%**
4. High Speed Arterials (41)	38.9%	27.4%	30.2%	38.5%		**30.2%**
6. Low Speed Collectors (61)	29.3%	12.1%	16.6%	39.2%		**13.4%**
7. Ramps (71-75, 93,94)						
9. Toll Facility (91-92)						
TOTAL	**35.6%**	**18.7%**	**29.6%**	**34.9%**		**28.1%**

Table 2-11: **Travel Time and Delay Sections and Their Observed Speeds**
Southeast Regional Planning Model VI

A1. Sections 1-22:

		AM Period					MIDDAY Period				
Section (NB or EB)	Normal Speed (mph)	Length (ft)	Length (mile)	Travel Time (sec)	Avg Speed (mph)	Total Delay (sec)	Length (ft)	Length (mile)	Travel Time (sec)	Avg Speed (mph)	Total Delay (sec)
	(S1)		(S2A)		(S3)			(S2B)		(S4)	
1- US 1 Miami - NB	45	42,667	8.08	1,701	17.1	1045.7	42,640	8.08	1,212	24.0	557
2- US 1 Miami - NB	45	52,942	10.03	1,401	25.8	589.7	52,887	10.02	1,592	22.6	778
3- Kendall Dr - EB	45	37,108	7.03	1,803	14.0	1231.2	37,091	7.02	1,234	20.5	663
4- SR 826 - EB	50	37,898	7.18	1,355	19.1	841.2	37,849	7.17	891	29.0	461
5- SR 854 - EB	40	33,897	6.42	1,080	21.4	501.7	33,908	6.42	1,024	22.6	457
6- Gratigny - EB	45	34,828	6.60	786	30.2	291.7	34,833	6.60	682	34.8	208
7- SR 836 - EB	55	58,503	11.08	1,375	29.0	649.8	58,435	11.07	993	40.1	283
8- US 1 Broward - NB	35	42,895	8.12	1,163	25.1	386.5	42,900	8.13	1,157	25.3	456
9- SR 811/Dixie - NB	40	38,648	7.32	1,215	21.7	561.8	38,567	7.30	1,192	22.1	537
10- Sample Rd - EB	45	36,107	6.84	1,199	20.5	652	36,086	6.83	898	27.4	359
11- Atlantic Blvd - EB	45	35,187	6.66	1,307	18.4	769.8	35,327	6.69	922	26.1	388
12- Cypress Creek - EB	45	35,663	6.75	1,253	19.4	716.5	35,680	6.76	923	26.4	403
13- I 595 - EB	60	52,053	9.86	944	37.6	359.5	52,035	9.86	572	62.1	36
14- Hollywood Blvd - EB	40	24,815	4.70	926	18.3	495.8	24,768	4.69	917	18.4	488
15- SR 811 - NB	45	34,733	6.58	596	39.8	87.7	34,712	6.57	601	39.4	103
16- Okeechobee Blvd - EB	45	28,366	5.37	844	22.9	413.3	28,322	5.36	588	32.8	157
17- Yamato Rd - EB	45						24,290	4.60	632	26.2	267
18- Boyton Beach Blvd - EB	45	49,077	9.29	1,090	30.7	372.7	49,041	9.29	1,319	25.4	589
19- Lake Worth Rd - EB	45	49,251	9.33	1,307	25.7	564	49,240	9.33	1,210	27.7	481
20- US 1 BO/PB - NB	45	45,082	8.54	1,114	27.6	438.4	45,070	8.54	961	32.0	284
21- US 1 Palm Beach - NB	35	40,890	7.74	977	28.5	207.2	40,874	7.74	927	30.1	173
22- US 1 Palm Beach - NB	40	57,911	10.97	1,137	34.7	189	57,888	10.96	1,240	31.8	365
Totals (NB or EB) [*]	**43.7**		**164.49**		**25.84**			**169.02**		**30.2**	

Table 2-11 (Continued)

A2. Sections 101-122:

		AM Period					MIDDAY Period				
Section (SB or WB)	Normal Speed (mph)	Length (ft)	Length (mile)	Travel Time (sec)	Avg Speed (mph)	Total Delay (sec)	Length (ft)	Length (mile)	Travel Time (sec)	Avg Speed (mph)	Total Delay (sec)
	(S1)		(S2A)		(S3)			(S2B)		(S4)	
101- US 1 Miami - SB	45	42,652	8.08	1,110	26.2	456.8	42,667	8.08	1,126	25.8	472
102- US 1 Miami - SB	45	52,955	10.03	2,156	16.7	1343.8	52,944	10.03	1,791	20.2	977
103- Kendall Dr - WB	45	37,057	7.02	1,045	24.2	481.8	37,028	7.01	978	25.8	409
1044- SR 826 - WB	50	39,088	7.40	868	30.7	359	39,075	7.40	885	30.1	381
105- SR 854 - WB	40	33,650	6.37	881	26.0	312.8	33,682	6.38	787	29.2	233
106- Gratigny - WB	45	34,680	6.57	695	34.0	213	34,653	6.56	650	36.3	171
107- SR 836 - WB	55	59,294	11.23	822	49.2	144.7	59,173	11.21	778	51.9	82
108- US 1 Broward - SB	40	42,974	8.14	1,189	24.6	489.6	42,837	8.11	1,068	27.3	376
109- SR 811/Dixie - SB	40	38,687	7.33	1,337	19.7	694.5	38,684	7.33	1,185	22.3	538
110- Sample Rd - WB	45	36,071	6.83	1,061	23.2	517.3	36,071	6.83	904	27.2	368
111- Atlantic Blvd - WB	45	35,365	6.70	968	24.9	435	35,329	6.69	825	29.2	300
112- Cypress Creek - WB	45	35,620	6.75	1,032	23.5	506	35,571	6.74	834	29.1	321
113- I 595 - WB	60	51,717	9.79	577	61.1	26.5	51,768	9.80	526	67.0	2
114- Hollywood Blvd - WB	40	24,790	4.70	856	19.8	428.8	24,663	4.67	916	18.4	491
115- SR 811 - SB	45	34,780	6.59	678	35.0	168.6	34,814	6.59	608	39.1	110
116- Okeechobee Blvd - WB	45	28,333	5.37	638	30.3	217.7	28,337	5.37	541	35.7	126
117- Yamato Rd - WB	45						24,363	4.61	649	25.6	295
118- Boyton Beach Blvd - WB	45	49,008	9.28	1,073	31.2	349.7	48,295	9.15	1,229	26.8	515
119- Lake Worth Rd - WB	45	49,153	9.31	1,306	25.7	562.7	49,121	9.30	1,219	27.5	498
120- US 1 BO/PB - SB	45	45,102	8.54	1,078	28.5	400.5	45,127	8.55	1,141	27.0	459
121- US 1 Palm Beach - SB	35	40,898	7.75	975	28.6	226	40,879	7.74	967	28.8	238
122- US 1 Palm Beach - SB	40	57,941	10.97	1,173	33.7	243.5	57,935	10.97	1,252	31.6	315
Totals (SB or WB) [*]	**44.0**		**164.74**		**30.32**			**169.13**		**31.9**	

[*] Weighted Survey Speed. Weights are based on Section Length.

Table 2-11 (Continued)

B. Sections 31-40 & 131-140:

Section (NB or EB)	AM Peak Period Avg. Travel Time (min:sec)	AM Peak Period Avg. Travel Time (min)	AM Peak Period Avg Est. Speed (mph)	Off-Peak Period Avg. Travel Time (min:sec)	Off-Peak Period Avg. Travel Time (min)	Off-Peak Period Avg Est. Speed (mph)	PM Peak Period Avg. Travel Time (min:sec)	PM Peak Period Avg. Travel Time (min)	PM Peak Period Avg Est. Speed (mph)
			(S3)			(S4)			(S5)
31- Turnpike NB (I-595 to Sawgrass Expressway)	14:32.5	14.53	65.5	15:19.0	15.32	62.1	15:01.0	15.02	63.4
32- Sawgrass NB/EB (I-595 to Turnpike)	28:40.0	28.67	46.1	20:36.0	20.60	64.1	20:54.0	20.90	63.2
33- Atlantic/SR-814 EB (Sawgrass to US-441)	14:04.0	14.07	25.8	14:50.0	14.83	24.4	14:10.0	14.17	25.6
34- Commercial/SR-870 EB (Sawgrass to US-441)	15:41.0	15.68	23.0	13:43.0	13.72	26.2	15:08.0	15.13	23.8
35- Oakland/SR-816 EB (Sawgrass to US-441)	19:47.0	19.78	22.0	17:01.0	17.02	25.5	17:26.0	17.43	24.9
36- Sample/SR-834 EB (Sawgrass to US-441)	16:37.0	16.62	21.5	15:18.0	15.30	23.3	14:39.0	14.65	24.4
37- Sunrise/SR-838 EB (Sawgrass to US-441)	28:32.0	28.53	19.8	19:11.0	19.18	29.5	19:27.0	19.45	29.1
38- Coral Ridge/Nob Hill NB (I-595 to Sawgrass)	33:38.0	33.63	25.1	30:27.0	30.45	27.8	30:05.0	30.08	28.1
39- University/SR-817 NB (I-595 to Sawgrass)	34:29.0	34.48	25.2	36:52.0	36.87	23.6	36:52.0	36.87	23.6
40- US-441/SR-7 NB (I-595 to Sawgrass)	39:41.0	39.68	22.7	31:29.0	31.48	28.6	36:32.0	36.53	24.6
Totals (NB or EB)		245.68	28.4		214.77	32.4		220.23	31.6

Section (SB or WB)	AM Peak Period Avg. Travel Time (min:sec)	AM Peak Period Avg. Travel Time (min)	AM Peak Period Avg Est. Speed (mph)	Off-Peak Period Avg. Travel Time (min:sec)	Off-Peak Period Avg. Travel Time (min)	Off-Peak Period Avg Est. Speed (mph)	PM Peak Period Avg. Travel Time (min:sec)	PM Peak Period Avg. Travel Time (min)	PM Peak Period Avg Est. Speed (mph)
			(S3)			(S4)			(S5)
131- Turnpike SB (Sawgrass Expressway to I-595)	14:34.5	14.57	66.9	15:06.0	15.10	64.6	14:52.5	14.87	65.6
132- Sawgrass SB/WB (Turnpike to I-595)	30:18.0	30.30	43.8	20:41.0	20.68	64.1	21:28.0	21.47	61.8
133- Atlantic/SR-814 WB (US-441 to Sawgrass)	10:47.0	10.78	33.6	13:09.0	13.15	27.6	12:19.0	12.32	29.4
134- Commercial/SR-870 WB (US-441 to Sawgras	13:31.0	13.52	26.6	13:37.0	13.62	26.4	14:09.0	14.15	25.4
135- Oakland/SR-816 WB (US-441 to Sawgrass)	16:26.0	16.43	26.4	16:04.0	16.07	27.0	16:53.0	16.88	25.7
136- Sample/SR-834 WB (US-441 to Sawgrass)	11:46.0	11.77	30.3	15:45.0	15.75	22.7	13:59.0	13.98	25.5
137- Sunrise/SR-838 WB (US-441 to Sawgrass)	21:05.0	21.08	26.8	25:24.0	25.40	22.3	23:17.0	23.28	24.3
138- Coral Ridge/Nob Hill SB (Sawgrass to I-595)	33:37.0	33.62	25.1	33:51.0	33.85	25.0	31:25.0	31.42	26.9
139- University/SR-817 SB (Sawgrass to I-595)	36:35.0	36.58	23.7	36:28.0	36.47	23.8	39:01.0	39.02	22.3
140- US-441/SR-7 SB (Sawgrass to I-595)	36:13.0	36.22	24.9	34:19.0	34.32	26.2	43:32.0	43.53	20.7
Totals (SB or WB)		224.87	31.1		224.40	31.2		230.92	30.3

Table 2-11 (Continued)

C. Sections 41-47 & 141-147:

	Peak Direction						Off-Peak Direction					
Section NB/EB	Distance (mile) (S2A)	AM or PM	Peak HOUR Travel Time (min)	Peak PERIOD Travel Time (min)	Peak HOUR Speed (mph) (S3A)	Peak PERIOD Speed (mph) (S3B)	Distance (mile) (S2B)	AM or PM	Off-Peak HOUR Travel Time (min)	Off-Peak PERIOD Travel Time (min)	Off-Peak HOUR Speed (mph) (S4A)	Off-Peak PERIOD Speed (mph) (S4B)
41- HEFT to SR-836 NB/EB (Homestead Toll Plaza to SW 107th Ave)	16.90	AM	36.38	27.14	**27.9**	**37.4**	16.90	PM	17.20	16.62	**59.0**	**61.0**
42- HEFT to SR-874 to SR 826 to SR 836 NB/EB (Don Shula Expy to Dolphin Expy)	9.20	AM	25.61	18.51	**21.6**	**29.8**	9.20	PM	10.41	11.97	**53.0**	**46.1**
43- SW 107th Avenue NB (Killiam Pkwy to Dolphin Expy)	7.50	AM	27.79	22.98	**16.2**	**19.6**						
44- SW 117th Avenue NB (SW 120th St to Tamiami Trail)	6.80	AM	26.15	21.22	**15.6**	**19.2**						
45- Bird Road - SW 40th St EB (HEFT to Dolphin Expressway)	10.80	AM	39.42	31.71	**16.4**	**20.4**						
46- Tamiami Trail - SW 8th St to LeJeune Road EB (HEFT to LeJeune Rd)	7.40	AM	25.04	21.73	**17.7**	**20.4**						
47- West Flagler St EB (HEFT to LeJeune Rd)	7.90	AM	31.74	26.79	**14.9**	**17.7**						
Totals (NB or EB)	66.50		212.12	170.06	**18.8**	**23.5**	26.10		27.61	28.59	**56.7**	**54.8**

	Peak Direction						Off-Peak Direction					
Section SB/WB	Distance (mile) (S2A)	AM or PM	Peak HOUR Travel Time (min)	Peak PERIOD Travel Time (min)	Peak HOUR Speed (mph) (S5A)	Peak PERIOD Speed (mph) (S5B)	Distance (mile) (S2B)	AM or PM	Off-Peak HOUR Travel Time (min)	Off-Peak PERIOD Travel Time (min)	Off-Peak HOUR Speed (mph) (S4A)	Off-Peak PERIOD Speed (mph) (S4B)
141- SR-836 to HEFT SB/WB (SW 107th Ave to Homestead Toll Plaza)	16.90	PM	25.42	23.26	**39.9**	**43.6**	16.90	AM	18.14	18.20	**55.9**	**55.7**
142- HEFT to SR-874 to SR 826 to SR 836 SB/WB (Dolphin Expy to Don Shula Expy)	9.20	PM	20.64	17.62	**26.7**	**31.3**	9.20	AM	13.87	15.88	**39.8**	**34.8**
143- SW 107th Avenue SB (Dolphin Expy to Killiam Pkwy)	7.50	PM	29.97	27.89	**15.0**	**16.1**						
144- SW 117th Avenue SB (Tamiami Trail to SW 120th St)	7.20	PM	24.19	23.42	**17.9**	**18.4**						
145- Bird Road - SW 40th St WB (Dolphin Expressway to HEFT)	10.70	PM	26.59	28.45	**24.1**	**22.6**						
146- Tamiami Trail - SW 8th St to LeJeune Road WB (LeJeune Rd to HEFT)	7.30	PM	30.40	26.10	**14.4**	**16.8**						
147- West Flagler St WB (LeJeune Rd to HEFT)	7.90	PM	28.76	26.79	**16.5**	**17.7**						
Totals (SB or WB)	66.70		185.96	173.52	**21.5**	**23.1**	26.10		32.01	34.08	**48.9**	**45.9**

Table 2-11 (Continued)

D. Sections 48-57 & 148-157:

Turnpike and I-95/SR9 Survey Speed Data					
Section (NB or EB)	GP or HOV Lanes	AM Speed (mph)	AM Average Speed (mph) (S3)	PM Speed (mph)	PM Average Speed (mph) (S5)
48- TPK: Deerfield to Lantana - NB		64.0	64.0	67.0	67.0
49- TPK: Golden Glades to I-595 - NB		63.0	63.0	69.0	69.0
50- TPK: Okeechobee to Miramar - NB/EB		67.0	67.0	66.0	66.0
51- TPK: Dolphin/SR-836 to Okeechobee - NB		47.0	47.0	56.0	56.0
52- I95: Commercial Blvd to Linton Blvd - NB	GP	58.6,58.8,66.4	61.3	53.5,57.7,69.9	60.4
53- I95: Commercial Blvd to Linton Blvd - NB	HOV	63.1,66.6,65.2	65.0	64.6,69.4,56.0	63.3
54- I95: Golden Glades to Commercial Blvd - NB	GP	67.2,62.2,61.4,58.1	62.2	59.5,64.8,60.0,46.5	57.7
55- I95: Golden Glades to Commercial Blvd - NB	HOV	67.4,67.9,67.2,56.5	64.8	61.1,65.8,59.6,54.8	60.3
56- I95: SR-112/Airport Expy to Golden Glades - NB	GP	64.2,61.9	63.1	32.0,31.0	31.5
57- I95: SR-112/Airport Expy to Golden Glades - NB	HOV	68.4,64.9	66.7	36.6,38.9	37.8
Totals (NB or EB) [*]			63.2		59.3

Turnpike and I-95/SR9 Survey Speed Data					
Section (SB or WB)	GP or HOV Lanes	AM Speed (mph)	AM Average Speed (mph) (S3)	PM Speed (mph)	PM Average Speed (mph) (S5)
148- TPK: Lantana to Deerfield - SB		66.0	66.0	66.0	66.0
149- TPK: I-595 to Golden Glades - SB		69.0	69.0	69.0	69.0
150- TPK: Miramar to Okeechobee - SB/WB		69.0	69.0	70.0	70.0
151- TPK: Okeechobee to Dolphin/SR-836 SB		58.0	58.0	46.0	46.0
152- I95: Linton Blvd to Commercial Blvd - SB	GP	67.1,57.5,52.0	58.9	63.1,51.7,57.0	57.3
153- I95: Linton Blvd to Commercial Blvd - SB	HOV	67.9,63.1,57.5	62.8	61.2,49.7,58.2	56.4
154- I95: Commercial Blvd to Golden Glades - SB	GP	65.4,66.9,67.3,65.3	66.2	54.2,39.5,60.1,59.7	53.4
155- I95: Commercial Blvd to Golden Glades - SB	HOV	69.4,69.4,76.8,74.5	72.5	60.9,51.4,56.1,61.8	57.6
156- I95: Golden Glades to SR-112/Airport Expy - SB	GP	19.7,19.7	19.7	56.2,60.5	58.4
157- I95: Golden Glades to SR-112/Airport Expy - SB	HOV	44.6,35.5	40.1	55.7,62.6	59.2
Totals (SB or WB) [*]			61.6		59.6

[*] Weighted Survey Speed. Weights are based on Model Section Distance.

3. TRANSIT NETWORK DEVELOPMENT

Like the highway networks, regional transit networks were developed from the urban model transit networks. The model development team decided to convert the new model to the FSUTMS-Voyager software and utilize its advanced features in the model development process. For transit, the team proposed to use Voyager's PUBLIC TRANSPORT (henceforth called PT in the document) module. PT was designed as a multi-path path-builder, meaning that it can internally evaluate different path and sub-modal trade-offs. The initial regional transit networks (one for peak and another for off-peak) were developed in PT format. Later, these two networks were combined into one regional transit network with separate headways for peak and off-peak periods.

3.1 Regional Initial Transit Network Development

The initial process used to develop the SERPM6 transit network was very similar to the process adopted for the development of SERPM-V. The transit merging programs were modified to allow mapping of more transit modes and to make line attributes compatible with Cube Voyager's PT format.

The transit merge program (TMERGES6) was used to develop the 2000 and 2030 regional transit networks. **Appendix C** provides a listing of this program. It uses urban area transit files and the correspondence tables between urban and regional zones and nodes.

To create the input files for TMERGE, the urban area transit files were transformed by concatenating and renaming the files. **Table 3-1** presents this naming convention. Tri-Rail shuttle buses were coded as a separate company (mode 12) in the Palm Beach and Broward models so they could be treated differently than the other local buses.

The TMERGE programs were revised to incorporate the mappings of the urban and regional transit modes shown in **Table 3-2**, and to read the STATDATA file with its current format for all three counties. **It should be noted that the STATDATA file data are included in the highway network and written by the CV for use CV's transit modeling steps directly**. Thus, STATDATA is an output file, not an input. For 2030 transit networks, more transit modes were used in Palm Beach and Broward Counties in comparison to the 2000 transit networks.

The only input files which should be in the current directory are TMERGE.SYN and xx_EQ.CSV, where urban area=xx. All other input files should be in the appropriate "xxINET" subdirectory. This is required as the SERPM output filenames and the input filenames for each urban area could be identical for many of these data sets. All filename and subdirectory locations are specified in the TMERGE.SYN input file. Annotated TMEGRE.SYN files are shown in **Figure 3-1**. **Table 3-3** presents a complete list of input and output files.

The Operator/C of the output TROUTE file is the transit fare company and it is defined based on SERPM5-RevTran model as follows:

- OPERATOR/C=1 => Palm Beach Buses (Local Buses)
- OPERATOR/C=2 => Tri Rail Shuttle Buses
- OPERATOR/C=3 => Broward Local Buses
- OPERATOR/C=4 => Metro-Dade Buses (Local Buses)
- OPERATOR/C=5 => Palm Beach & Broward Express Buses
- OPERATOR/C=6 => Miami-Dade Express Buses
- OPERATOR/C=7 => Palm Beach & Broward Rail
- OPERATOR/C=8 => Metrorail
- OPERATOR/C=9 => Metro-mover
- OPERATOR/C=10 => TRI-RAIL

Table 3-1**: Naming Convention for Input Files to TMERGES6 Program**

Southeast Regional Planning Model VI

Urban Area	Urban Area Input File →	TMERGEYY Input File Name
Palm Beach	TPARMAM.YYP OPTLNKAM.YYP SDLAYUPD.YYP	Concatenated into: TSYSINAM.YYP
	TPARMMD.YYP OPTLNKMD.YYP SDLAYUPD.YYP	Concatenated into: TSYSINMD.YYP
	STATDATA.YYP →	STATDATA.YYP
	TROUTEAM.YYP →	TROUTEAM.YYP
	TROUTEMD.YYP →	TROUTEMD.YYP
Broward	TPARMAM.YYB OPTLNKAM.YYB SDLAYUPD.YYB	Concatenated into: TSYSINAM.YYB
	TPARMMD.YYB OPTLNKMD.YYB SDLAYUPD.YYB	Concatenated into: TSYSINMD.YYB
	STATDATA.YYB →	STATDATA.YYB
	TROUTEAM.YYB →	TROUTEAM.YYB
	TROUTEMD.YYB →	TROUTEMD.YYB
Miami-Dade	LINK46AM.YYA LINK5AM.YYA LINK7AM.YYA LINK8AM.YYA SIDEAM.YYA	Concatenated into: OPTLNKAM.YYA
	LINK46MD.YYA LINK5MD.YYA LINK7MD.YYA LINK8MD.YYA SIDEMD.YYA	Concatenated into: OPTLNKMD.YYA
	STATDATA.YYA →	STATDATA.YYA
	MODE4AM.YYA MODE5AM.YYA MODE6AM.YYA MODE7AM.YYA MODE8AM.YYA BUSWAYAM.YYA	Concatenated into: TROUTEAM.YYA
	MODE4MD.YYA MODE5MD.YYA MODE6MD.YYA MODE7MD.YYA MODE8MD.YYA BUSWAYMD.YYA	Concatenated into: TROUTEMD.YYA

Table 3-2: **Urban and Regional (Initial) Transit Modes Mapping**
Southeast Regional Planning Model VI

(a) Year 2000 Mapping:

Urban Area	Mode Name	Urban Mode	Regional Mode
Palm Beach	Local Bus	4	4
	Tri-Rail	8	8
	Local Bus (Tri-Rail Feeder)	12	12
Broward	Local Bus	4	4
	Express Bus	6	**4**
	Tri-Rail	8	8
	Local Bus (Tri-Rail Feeder)	12	12
Miami-Dade	Local Bus	4	5
	Metro-Rail	5	7
	Express Bus	6	**5**
	Tri-Rail	7	8
	Metro-mover (DPM)	8	**9**

(b) Year 2030 Mapping:

Urban Area	Mode Name	Urban Mode	Regional Mode
Palm Beach	Local Bus	4	4
	Express Bus	6	**4**
	Rail	7	7
	Tri-Rail	8	8
	Local Bus (Tri-Rail Feeder)	12	12
Broward	Local Bus	4	4
	Express Bus	6	**4**
	Rail	7	7
	Tri-Rail	8	8
	Local Bus (Tri-Rail Feeder)	12	12
Miami-Dade	Local Bus	4	5
	Metro-Rail	5	7
	Express Bus	6	**5**
	Tri-Rail	7	8
	Metro-mover (DPM)	8	**9**

Figure 3-1: **Listing of TMERGE.SYN Files**
Southeast Regional Planning Model VI

(a) Year 2000:

```
00R                     YRALT information for the regional model
PB_EQ.CSV               Node Correspondence Table - Palm Beach
BO_EQ.CSV               Node Correspondence Table - Broward
MI_EQ.CSV               Node Correspondence Table - Miami-Dade
pbinet\TROUTEAM.00P     TROUTEAM file for Palm Beach
boinet\TROUTEAM.00B     TROUTEAM file for Broward
miinet\TROUTEAM.00A     TROUTEAM file for Miami-Dade
pbinet\TROUTEMD.00P     TROUTEMD file for Palm Beach
boinet\TROUTEMD.00B     TROUTEMD file for Broward
miinet\TROUTEMD.00A     TROUTEMD file for Miami-Dade
pbinet\STATDATA.00P     STATDATA file for Palm Beach
boinet\STATDATA.00B     STATDATA file for Broward
miinet\STATDATA.00A     STATDATA file for Miami-Dade
```

(b) Year 2030:

```
30R                     YRALT information for the regional model
PB_EQ.CSV               Node Correspondence Table - Palm Beach
BO_EQ.CSV               Node Correspondence Table - Broward
MI_EQ.CSV               Node Correspondence Table - Miami-Dade
pbinet\TROUTEAM.30C     TROUTEAM file for Palm Beach
boinet\TROUTEAM.30B     TROUTEAM file for Broward
miinet\TROUTEAM.30A     TROUTEAM file for Miami-Dade
pbinet\TROUTEMD.30C     TROUTEMD file for Palm Beach
boinet\TROUTEMD.30B     TROUTEMD file for Broward
miinet\TROUTEMD.30A     TROUTEMD file for Miami-Dade
pbinet\STATDATA.30C     STATDATA file for Palm Beach
boinet\STATDATA.30B     STATDATA file for Broward
miinet\STATDATA.30A     STATDATA file for Miami-Dade
```

Table 3-3: **Input and Output Files of TMERGES6 Program**
Southeast Regional Planning Model VI

Input Files (1)	Description
TMERGE.SYN	SERPM "yralt" input file information
xx_EQ.CSV	Node Correspondance tables for urban area xx (where, xx=PB, BO and MI)
TROUTEAM.yya	TROUTEAM files for each urban area
TROUTEMD.yya	TROUTEMD files for each urban area
STATDATA.yya	STATDATA file for each urban area
Output Files (1)	**Description**
TROUTEAM.yyr	Regional WALKNETS file for year=yy, alt=r
TROUTEMD.yyr	Regional WALKNETS file for year=yy, alt=r
STATDATA.yyr	Regional WALKNETS file for year=yy, alt=r

(1) "yy" stands for year (for example, 00 for 2000 and 30 for 2030)
"a" stands for Alternate of the MPO models (P or C for Palm Beach, B for Broward and A for Miami-Dade)
"r" stands for alternate of the regional model (R is used for the regional model)

Note: The only input files which should be in the current directory are TMERGE.SYN and xx_EQ.CSV.
All other input files should be in the appropriate xxINET subdirectory, where xx=urban area.
All filename subdirectory locations are specified in the TMERGE.SYN file.

The output TROUTE file specifies four user-defined LINE attributes and those are:

- USERA1 = OLD MPO Route Group (RG)
- USERA2 = MPO Mode
- USERA3 = MPO Line Number
- USERA4 = S5REV Special Company Codes

The USERA4 (S5REV) Special Company codes are defined as follows:

- 1 - (Palm Beach Local Bus) [Regional Mode 4 & 12]
- 2 - (Broward Local Bus) [Regional Mode 4 & 12]
- 3 - (Miami-Dade Local Bus) [Regional Mode 5]
- 5 - (Miami-Dade [Regional Mode 7-Rail & 9-Mover]
- 6 - (Tri-Rail) [Regional Mode 8]
- 11 - (PB-Express Bus [Regional Mode 4-PR]
- 12 - (BO-Express Bus [Regional Mode 4-PR]
- 13 - (MD-Express Bus [Regional Mode 5-PR]
- 21 - (PB-Limited Stop Bus [Regional Mode 4-SS]
- 22 - (BO-Limited Stop Bus [Regional Mode 4-SS]
- 23 - (MD-Limited Stop Bus [Regional Mode 5-SS]
- 31 - (PB-BRT/LRT [Regional Mode 6-BL]
- 32 - (BO-BRT/LRT [Regional Mode 6-BL]
- 33 - (MD-BRT/LRT [Regional Mode 6-BL]

The Tri-Rail system was manually revised to provide proper connections at the county boundaries. The initial regional STATDATA file was manually revised to incorporate the Tri-Rail Fare zones and was then properly coded in the highway network.

3.2 Further Adjustment to Regional Transit Network

With the successful run of the TMERGE program and the manual adjustments to some transit lines, LINES of two TROUTE files were manually merged to a single TROUTE file with separate period specific HEADWAY attributes (HDWY(1) – peak period and HDWY(2) – off-peak period). The initial mode number generated by the TMERGES6 program were also modified for express bus, new/project, and limited stop bus modes.

It should be noted that PT is used to maintain the transit networks and generate walk access and transfer connectors. The remaining transit modeling steps (path & assignment) use network and connectors in TRNBUILD format. The mode numbers for each line are converted to the TRNBUILD set by the PT2TRNB program during the model run. All path building, skimming and assignment reports follow the TRNBUILD mode set. PT2TRNB reads in the walk, drive and sidewalk connector files as well as the bus line file from the list in the CONTROL.MAS file. It outputs new files using the TRNBUILD mode set.

3.2.1 Mode

The PT mode numbers generally reflect previous SERPM models. Three new modes were added to assist analysis for New/Small Starts studies. Modes 10 and 11 are reserved for a "new mode" (i.e., a new transit mode that is built between the base and horizon years) and a "project mode" (i.e., the mode under analysis, perhaps for a "new start" project), respectively. Limited-stop buses were assigned to Mode 13. Tri-Rail shuttle buses were coded as a separate mode so they could be assigned fares different from the other transit buses.

A second set of mode numbers was developed for TRNBUILD. While PT (like Tranplan) can use the OPERATOR feature to differentiate transit fares, TRNBUILD relies on the mode numbers themselves. Consequently, the TRNBUILD mode system has a separate mode for each county and transit mode combination. Mode definitions between the two systems were kept identical to the extent possible. Both sets are detailed in **Table 3-4**.

Table 3-4: **Transit Mode Listing**
Southeast Regional Planning Model VI

No	PT Mode (applicable county)	TRNBUILD Mode (applicable county)
1	Walk Access	Walk Access
2	Drive Access	Drive Access
3	Sidewalk/Transfer connector	Sidewalk/Transfer connector
4	Bus (Palm Beach & Broward)	Bus (Palm Beach)
5	Bus (Miami-Dade)	Bus (Dade)
6	Express Bus (all)	Express Bus (Broward)
7	Metrorail	Metrorail
8	Tri-Rail	Tri-Rail
9	Metromover	Metromover
10	New Mode (all)	New Mode (Broward)
11	Project Mode (all)	Project Mode (all)
12	Tri-Rail Shuttle (all)	Tri-Rail Shuttle (all)
13	Limited Stop Bus (all)	Limited Stop Bus (Miami-Dade)
14	n/a	Bus (Broward)
15	n/a	Express Bus (Miami-Dade)
16	n/a	Express Bus (Palm Beach)
17	n/a	New Mode (Miami-Dade)
18	n/a	Limited Stop Bus (Broward)
19	n/a	Limited Stop Bus (Palm Beach)
20	n/a	New Mode (Palm Beach)

It should be noted that the PT mode number definitions should be used in transit network coding .

3.2.2 Operators

Operators, the equivalent of companies in FSUTMS-Tranplan, provide and maintain the transit service. Each operator is given a specific identifier, which is used in the route file to identify the operator of each line. During early model development, it was decided to assign an operator number for each operator and service type to assist in fare computations. This became unnecessary when TRNBUILD was introduced. The operator codes used in the SERPM6 are listed in **Table 3-5**.

Table 3-5: **Transit Operator Listing**
Southeast Regional Planning Model VI

Operator Number	Operator & Type of Service
1	PalmTran local bus
2	Tri-Rail Shuttle buses
3	BCT local bus
4	MDT local bus
5	BCT express bus
6	MDT express bus
7	New mode
8	Metrorail
9	Metromover
10	Tri-Rail
11	Palm Beach Express

3.2.3 Transit Line Attributes

The INET transit line files from the Palm Beach, Broward and Miami-Dade models were converted to PT format. Many of the PT data fields are similar to the INET data fields in the MPO models. A table describing the field names is shown in **Table 3-6**.

Table 3-6: **Transit Line Field Description**
Southeast Regional Planning Model VI

Field Name	Field Description
MODE	PT mode number
NAME	10-12 character identifier, follows MxLyyyzz format where x=MPO mode number, yyy = line number from MPO transit line file (TRANPLAN) and zz=MPO code and inbound/outbound indicator
ONEWAY	If true, route operates in coded direction only. If false, route operates in both directions.
LONGNAME	40-character identifier, generally follows ID field from MPO transit line file
XYSPEED	Default speed if link does not appear in the highway network
USERA1	MPO's Tranplan Based Model Route Group Number (Not used by CV model)
USERA2	MPO's Tranplan Based Model Network Mode Number (Not used by the CV model)
USERA3	MPO's Tranplan Based Model Line Number (not used by the CV model)
USERA4	SERPM5 Special Company Code (not used by the CV model)
HEADWAY[x]	Service frequency, where 1=AM peak, 2=midday, 3=PM peak
OPERATOR	Transit service operator for the route
N	Node string; stops are positive, non-stops are negative

Only one transit route file is necessary in PT because headways for up to five time periods can be coded. The PM peak frequencies have been coded in period 3, but are not used in SERPM6.

An example of a route coded in PT-format is shown in the **Figure 3-2**. This line represents the Tri-Rail, which is coded as mode 8. The AM and PM period headways on this line are 30 minutes, and the midday headway is 60 minutes.

Figure 3-2: **An Example Transit Line (Tri-Rail) Coding**
Southeast Regional Planning Model VI

```
;; TRI-RAIL
LINE MODE= 8,NAME=M8L1S6,ONEWAY=F,
  LONGNAME='TRI-RAIL MANGONIA-MIA',
       XYSPEED= 35,
       USERA2=  8,
       USERA3=  1,
       USERA4=  6,
       HEADWAY[1]= 30.0, HEADWAY[2]= 60.0, HEADWAY[3]= 30.0,
       OPERATOR= 10,
 N=  30500, 30501,-30502, 30503, 30504, 30505, 30506,-30507,-30508,
     30509, 30510, 30511, 30512, 30513, 30514, 30515,-30516,-30517,
     30518, 30519, 30520, 30521, 30522
```

Several efforts were undertaken during model development to clean up transit coding. The largest effort was removing the two-way coding of buses in Miami-Dade County. These buses operate differently in inbound and outbound directions on one-way streets, but were coded such that the outbound direction traversed an inbound one-way street. This technique was used in the past to avoid the FSUTMS-Tranplan limit on the number of transit lines. In SERPM6 separate lines were coded for inbound and outbound directions.

The key transit LINE parameters (NAME, MODE, OPERATOR, ONEWAY, HDWY[1], HDWY[2], LONGNAME) of the year 2000 and 2030 transit TROUTE files are summarized in **Tables D-1** and **D-2** of **Appendix D**, respectively. Users should find these summary tables very useful for review and for any adjustments of transit line parameters.

4. TRIP GENERATION PROCESS, DATA AND RATES

This chapter describes the trip generation process, the various production and attraction data, and trip rates. Most of these data were developed directly from the 2000 and 2030 MPO models.

4.1 Trip Generation Process

The SERPM6 model implements the regional lifestyle-based trip generation process that was developed earlier in the SERPM5 model. This model produces daily trips for the following eleven trip purposes:

1. Home-based Work (HBW) person trips
2. Home-based Shopping (HBShop/HBSHP) person trips
3. Home-based Social-Recreation (HBSocRec/HBSCR) person trips
4. Home-based School (HBSchool/HBSCH) person trips [It includes only private schools and colleges and universities]
5. Home-based Other (HBO) person trips
6. Non-home-based Work (NHBW) person trips
7. Non-home-based Other (NHBO) person trips
8. Airport (AIRPORT) person trips
9. Truck – 4-Tiered Commercial vehicle trips
10. Truck – Single Unit Commercial vehicle trips
11. Truck – Combinations Commercial vehicle trips

The regional model is a combination of five programs that run in succession. They are:

1. RZDATA2 – Regional Employment Indexing Program
2. ULSTGENM3 - Urban Area Lifestyle Trip Generation Model
3. COMBLSM – Trip Generation Integration Program
4. RBALM2 – Regional Balancing and Special Generation Program
5. ZAP2 – Zero Auto Household Trip Production Program

The regional model allows use of each urban area's trip production and attraction rates as well as other parameters specified in GRATEBXX.SYN files (where, "xx" stands for two-digit urban code, PB = Palm Beach, BO = Broward and MI = Miami-Dade). The model also uses urban zonal data to produce the productions and attractions. The regional model uses two control files (S6GEN.CTL and COMBLS.CTL) to map the urban and regional TAZs and data.

The input directory should contain two control files (S6GEN.CTL and COMBLS.CTL) and PROFILE.MAS. Each of the three input subdirectories (PBIN, BOIN and MIIN) contains seven input files. The zone numbers used in the trip generation input files of these input folders are the MPO zone numbers. **Figures 4-1 and 4-2** depict the directories and input/output files of the SERPM6 trip generation process. Following is a list of the input files of the XXIN (where, XX=PB-Palm Beach, BO-Broward, and MI-Miami-Dade) folder.

- GRATESXX.SYN: Trip Production Rate, Attraction Rate and Household Stratification Curve File.
- STP60XX.SYN: Year 2000 Census Special Tabulation (STP60) File.
- SCHOOL.{YEAR}{ALT}: Year 20YY SCHOOL file.
- ZDATA1B.{YEAR}{ALT}: Year 20YY zonal production data file.
- ZDATA2.{YEAR}{ALT}: Year 20YY zonal attraction data file.
- ZDATA3B.{YEAR}{ALT}: Year 20YY airport and special generator file.
- ZDATA4B.{YEAR}{ALT}: Year 20YY internal-external production/attraction file.

Figure 4-1: **Trip Generation Directories and Input Files for 2000 Model Run**
Southeast Regional Planning Model VI

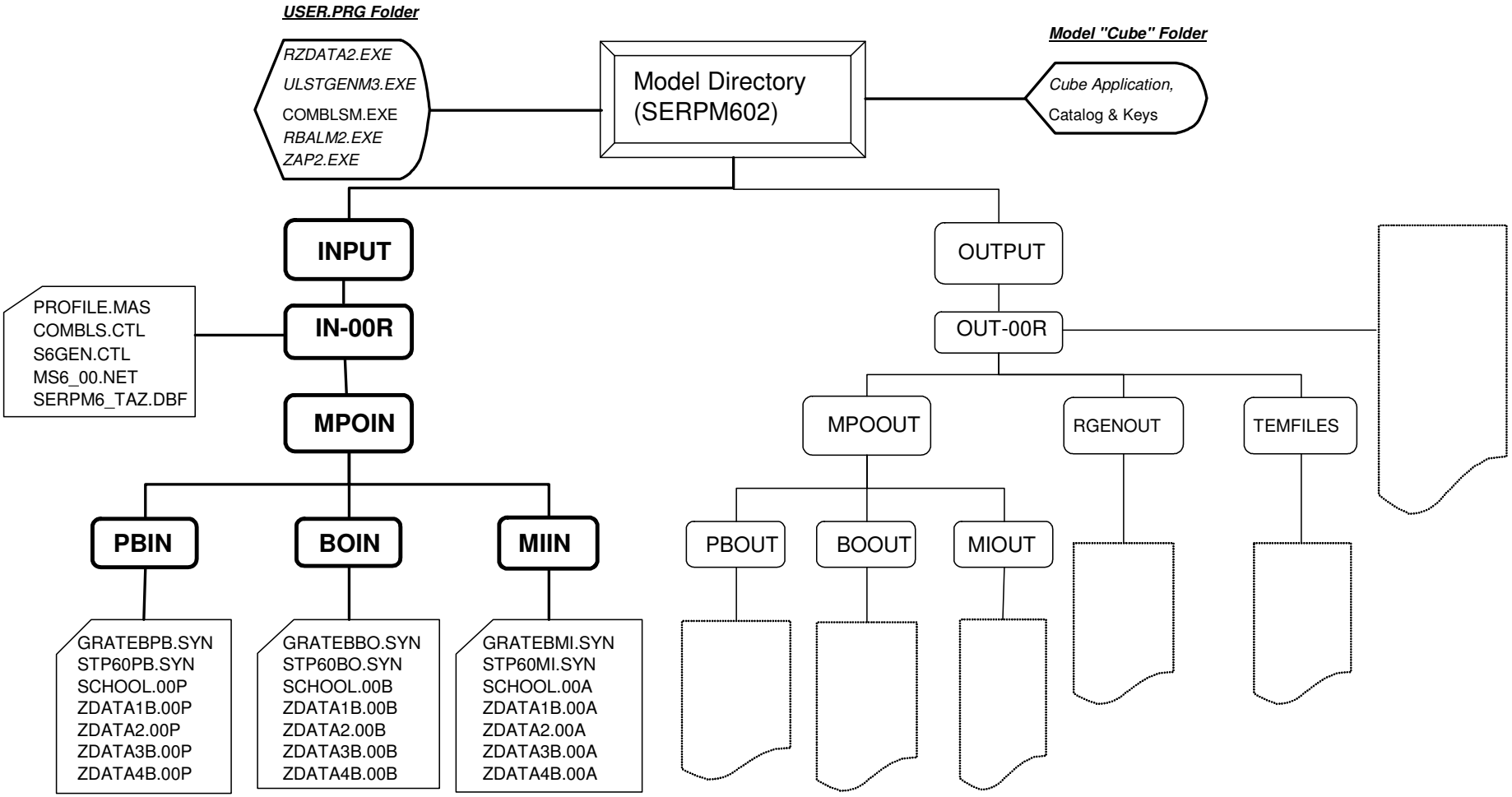
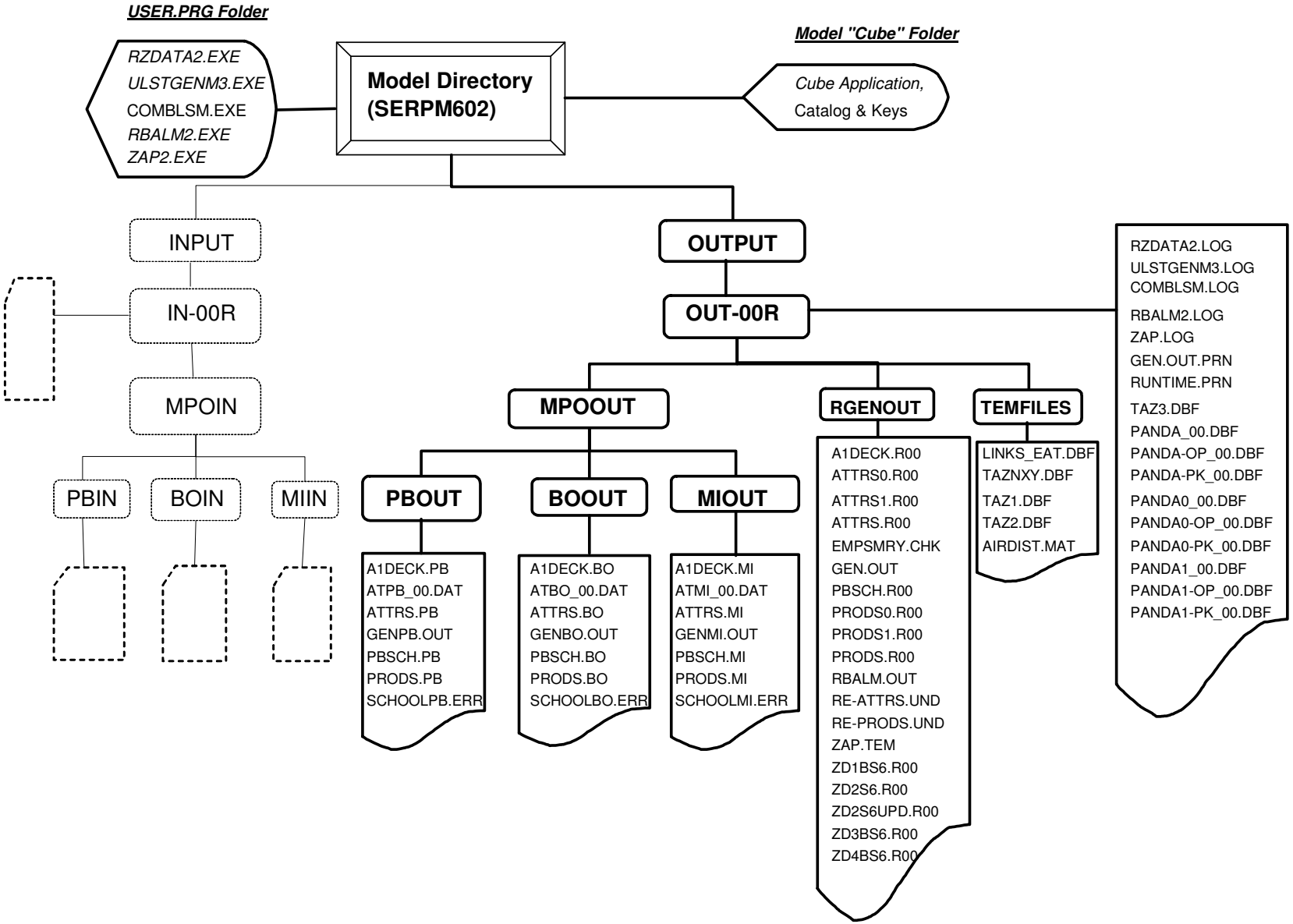


Figure 4-2: **Trip Generation Directories and Output Files for 2000 Model Run**
Southeast Regional Planning Model VI



The trip generation routine then estimates the number of households in each cell of the cross-classification matrices. The ULSTGENM3 routine reports the number of households in each of the cross-classification cells. The HBW and NHBW productions use the work classification structure, which uses the stratification variables presence/absence of children, number of HH workers and number of HH autos. The other purposes (HBShop, HBSocRec, HBSchool-non-public, HBOther and NHBO) productions use the non-work structure, which uses the stratification variables presence/absence of children, number of persons and number of HH autos. The other production and attraction models use a regression model. The production and attraction rates, as well as the stratification curves, are entered in GRATEBXX.SYN (XX=PB, BO and MI) files. The regional model implements county specific trip generation rates. Beside standard {ALT}{YEAR} output file extension, the trip generation module generates several output files with extensions of XX (PB, BO and MI), ERR, CHK, and UND.

The modified lifestyle trip generation routine implements three truck purposes (4-tired, Single Unit and Combinations) treating trucks as a separate mode from generation through assignment. Airport enplanement-related person trips generated at the major (international) airports (Palm Beach International Airport – PBIA, Ft. Lauderdale/Hollywood International Airport – FLL and Miami International Airport - MIA) are handled separately in the SERPM trip generation model. For modeling purposes, all trips are produced at the airport. This revised model includes a modified IE process that eliminates IE as a separate trip purpose.

The NHBW and NHBO trip purposes are new in the SERPM5 and SERPM6. The control totals for the NHBW and NHBO trips are calculated using cross-classification trip production rates. Like other home-based trip purposes, NHBW and NHBO trips are generated for each travel zone. However, these values cannot be used for NHBW (or NHBO) productions and attractions because, by definition, NHBW (or NHBO) trips are not related to zonal household characteristics. The zonal level trips were summed to derive the control total values for the study area. The control total value is then allocated to zones in proportion to the modified NHBW and NHBO regression equation trip ends. Thus, the NHBW and NHBO regression equations are used to allocate the control total value. This process produces more accurate control totals for the NHB trips based on the travel survey data.

4.2 Production Data

The production data is used to estimate the number of trips produced by each TAZ. **Table B-22** of **Technical Report 3** presents the format of the ZDATA1B file. Thus, ZDATA1B is an output file, not an input. The ZDATA1B data provides TAZ level household characteristic data. **This input file is written from the TAZ database (SERPM6.DBF) file. So, the users should modify SERPM6.DBF to modify zonal production data.**

The MPO ZDATA1B files are used by the regional lifestyle program. The ZDATA1B file allows the user to specify a 2000 model TAZ to use as a seed matrix for the disaggregation of the TAZ by persons, autos, workers and the presence of children. If a TAZ has changed greatly in character since 2000, it may be appropriate to specify another TAZ as the reference zone. Specification of a reference zone can have large effects on the number of trip productions generated by a TAZ.

The lifestyle model treats school enrollment differently than the standard FSUTMS GEN model. In the standard model, school enrollment is identified as an aggregate for each TAZ. School-related trip generation information is vital for the lifestyle trip generation model in all South Florida models. The lifestyle model deals with student enrollment and access to each school by type (elementary, middle, high and college) for both public and private categories. The enrollment and TAZ allocation for schools is entered in the SCHOOL.YYA file. The format for this file is presented in **Table B-20** of **Technical**

Report 3. Public and private schools are treated differently. In public schools, each school limits its enrollment to a district. All TAZs within the school enrollment district are defined as the production zones. It should be noted that the student trips are dealt with using a distribution based on enrollment to each facility from known TAZ sources. Therefore, the school file assigns each origin TAZ to a destination TAZ where the school is located.

Private schools, however, are not bound by districts. Consequently, they attract trips from all TAZs in the study area as determined by the gravity model. Universities and colleges are also treated as private schools.

4.3 Attraction Data

Attraction data is used by the trip generation model to calculate the trips attracted to TAZs. The 2000 ZDATA2 employment at place of work file was provided by the MPO. The format of the ZDATA2 is presented in **Table B-23 Technical Report 3**.

The parking cost data in the ZDATA2 file is used by the mode choice model. The short-term parking cost, which is used in home-based non-work trip and non-home based mode choice calculations, and long-term parking cost, which is used in home-based work mode choice calculations, represent three and nine hour average parking costs respectively. The SERPM6 model uses more elaborate trip attraction rates, which vary by employment type and area type [**Reference 25**].

A summary of all production and attraction data files that were used in the 2000 model validation as well as 2030 models is shown in **Table 4-1**. Summaries of population, households, vehicles and household workers are presented for both "with" and "without" children categories. Both 2000 and 2030 models use only the "all" hotel/motel occupied units, because data on the number of hotels/motels by type were not developed by the MPOs. School enrollments by categories are summarized.

Employment data summarized from the MPO files, and those gathered from FDLES are shown in this table. They are presented by the FSUTMS employment categories: Industrial, Commercial and Service. To show the reasonableness of the production and attraction data, several indices of socioeconomic data used by the trip generation program were summarized by county and region for both 2000 and 2030. Those indices are:

- Household (HH) Size
- Vehicles/HH Ratio
- Vehicles/Capita Ratio
- Workers/HH Ratio
- Employment/Population Ratio
- Service/Total Employment Ratio

The percent changes in year 2030 socioeconomic data with respect to 2000 data are also shown in **Table 4-1**. The growth rates show a reasonable pattern in all three counties. These summary results of the socioeconomic data were presented to the technical advisory committee at early stages of regional model validation. It was decided that all data are suitable for use in 2000 and 2030 SERPM6 models.

Table 4-1: **Production and Attraction Socioeconomic Data Summary**
Southeast Regional Planning Model VI

Data Item		Year 2000				Year 2030			
		Palm Beach	Broward	Miami-Dade	Region	Palm Beach	Broward	Miami-Dade	Region
Population	Without Children	596,433	755,178	1,113,178	2,464,789	968,127	1,120,660	1,516,390	3,605,177
	With Children	490,207	846,740	1,091,535	2,428,482	786,698	1,262,456	1,632,901	3,682,055
	ALL	**1,086,640**	**1,601,918**	**2,204,713**	**4,893,271**	**1,754,825**	**2,383,116**	**3,149,291**	**7,287,232**
Households (HH)	Without Children	342,972	439,409	510,646	1,293,027	514,019	626,484	692,759	1,833,262
	With Children	126,423	214,790	263,693	604,906	188,934	304,861	392,131	885,926
	ALL	**469,395**	**654,199**	**774,339**	**1,897,933**	**702,953**	**931,345**	**1,084,890**	**2,719,188**
Population/HH (HH Size)	Without Children	1.74	1.72	2.18	1.91	1.88	1.79	2.19	1.97
	With Children	3.88	3.94	4.14	4.01	4.16	4.14	4.16	4.16
	ALL	**2.31**	**2.45**	**2.85**	**2.58**	**2.50**	**2.56**	**2.90**	**2.68**
Number of Vehicles	Without Children	481,602	608,052	*719,757*	1,809,411	783,749	866,222	*966,717*	2,616,688
	With Children	236,125	416,992	*585,596*	1,238,713	378,349	587,857	*876,353*	1,842,559
	ALL	**717,727**	**1,025,044**	***1,305,353***	**3,048,124**	**1,162,098**	**1,454,079**	***1,843,070***	**4,459,247**
Vehicles/HH	Without Children	1.404	1.384	1.410	1.399	1.525	1.383	1.395	1.427
	With Children	1.868	1.941	2.221	2.048	2.003	1.928	2.235	2.080
	ALL	**1.529**	**1.567**	**1.686**	**1.606**	**1.653**	**1.561**	**1.699**	**1.640**
Vehicles/Capita	Without Children	0.807	0.805	0.647	0.734	0.810	0.773	0.638	0.726
	With Children	0.482	0.492	0.536	0.510	0.481	0.466	0.537	0.500
	ALL	**0.661**	**0.640**	**0.592**	**0.623**	**0.662**	**0.610**	**0.585**	**0.612**
Number of HH Workers	Without Children	273,166	408,672	638,727	1,320,565	440,728	589,979	889,437	1,920,144
	With Children	200,230	375,421	459,827	1,035,478	319,901	528,536	692,851	1,541,288
	ALL	**473,396**	**784,093**	**1,098,554**	**2,356,043**	**760,629**	**1,118,515**	**1,582,288**	**3,461,432**
Workers/HH	Without Children	0.796	0.930	1.251	1.021	0.857	0.942	1.284	1.047
	With Children	1.584	1.748	1.744	1.712	1.693	1.734	1.767	1.740
	ALL	1.009	**1.199**	1.419	1.241	1.082	**1.201**	1.458	1.273
Occupied Hotel/Motel Rooms	**ALL H/M Types**	**16,131**	**29,189**	**41,368**	**86,688**	**21,558**	**34,509**	**55,386**	**111,453**
Daily Airport Enplanements		**PBIA**	**FLL**	**MIA**	**Total**	**PBIA**	**FLL**	**MIA**	**Total**
		8,035	**21,000**	**40,000**	**69,035**	**15,563**	**40,677**	**68,640**	**124,880**

Table 4-1 (Continued)

Data Item		Year 2000				Year 2030			
		Palm Beach	Broward	Miami-Dade	Region	Palm Beach	Broward	Miami-Dade	Region
School Enrollment	Public-Grade	65,459	115,158	173,278	353,895	57,661	166,404	228,759	452,824
	Public-Middle	33,113	50,857	80,555	164,525	30,168	75,045	112,215	217,428
	Public-High	39,823	58,151	102,468	200,442	37,155	84,831	131,141	253,127
	ALL Public	**138,395**	**224,166**	**356,301**	**718,862**	**124,984**	**326,280**	**472,115**	**923,379**
	Non-Public	**66,752**	**152,642**	**191,004**	**410,398**	**175,406**	**221,336**	**273,883**	**670,625**
	ALL	**205,147**	**376,808**	**547,305**	**1,129,260**	**300,390**	**547,616**	**745,998**	**1,594,004**
Employment (MPO Files)	Industrial	76,635	104,909	122,920	304,464	129,717	132,882	120,800	383,399
	Commercial	141,438	204,345	313,675	659,458	211,100	303,471	498,220	1,012,791
	Service	280,769	342,106	746,692	1,369,567	429,591	508,063	971,217	1,908,871
	Total	**498,842**	**651,360**	**1,183,287**	**2,333,489**	**770,408**	**944,416**	**1,590,237**	**3,305,061**
Total Employment per Population		**0.459**	**0.407**	**0.537**	**0.477**	**0.439**	**0.396**	**0.505**	**0.454**
Service to Total Employment Ratio		**0.563**	**0.525**	**0.631**	**0.587**	**0.558**	**0.538**	**0.611**	**0.578**
Control Employment	Industrial	78,385	84,752	118,109	281,246	132,736	107,362	116,042	356,140
	Commercial	117,609	183,757	254,352	555,718	175,618	272,838	404,059	852,515
	Service	284,893	375,833	608,039	1,268,765	436,002	558,361	790,572	1,784,935
	Total	**480,887**	**644,342**	**980,500**	**2,105,729**	**744,356**	**938,561**	**1,310,673**	**2,993,590**
Total (control) Emp. per Population		**0.443**	**0.402**	**0.445**	**0.430**	**0.424**	**0.394**	**0.416**	**0.411**
Control - Service to Total Emp Ratio		**0.592**	**0.583**	**0.620**	**0.603**	**0.586**	**0.595**	**0.603**	**0.596**
Control Factor (Control/MPO Figures)	Industrial	1.023	0.808	0.961	0.924	1.023	0.808	0.961	0.929
	Commercial	0.832	0.899	0.811	0.843	0.832	0.899	0.811	0.842
	Service	1.015	1.099	0.814	0.926	1.015	1.099	0.814	0.935
	Total	**0.964**	**0.989**	**0.829**	**0.902**	**0.966**	**0.994**	**0.824**	**0.906**

Table 4-1 (Continued)

Data Item		Percent Growth in Year 2030 to 2000 SE Data			
		Palm Beach	Broward	Miami-Dade	Region
Population	Without Children	62.3%	48.4%	36.2%	46.3%
	With Children	60.5%	49.1%	49.6%	51.6%
	ALL	**61.5%**	**48.8%**	**42.8%**	**48.9%**
Households (HH)	Without Children	49.9%	42.6%	35.7%	41.8%
	With Children	49.4%	41.9%	48.7%	46.5%
	ALL	**49.8%**	**42.4%**	**40.1%**	**43.3%**
Number of Vehicles	Without Children	62.7%	42.5%	34.3%	44.6%
	With Children	60.2%	41.0%	49.7%	48.7%
	ALL	**61.9%**	**41.9%**	**41.2%**	**46.3%**
Number of HH Workers	Without Children	61.3%	44.4%	39.3%	45.4%
	With Children	59.8%	40.8%	50.7%	48.8%
	ALL	**60.7%**	**42.7%**	**44.0%**	**46.9%**
Occupied Hotel/Motel Rooms	**ALL H/M Types**	**33.6%**	**18.2%**	**33.9%**	**28.6%**
School Enrollment	Public-Grade	-11.9%	44.5%	32.0%	28.0%
	Public-Middle	-8.9%	47.6%	39.3%	32.2%
	Public-High	-6.7%	45.9%	28.0%	26.3%
	ALL Public	**-9.7%**	**45.6%**	**32.5%**	**28.5%**
	Non-Public	**162.8%**	**45.0%**	**43.4%**	**63.4%**
	ALL	**46.4%**	**45.3%**	**36.3%**	**41.2%**
Employment (MPO Files)	Industrial	69.3%	26.7%	-1.7%	25.9%
	Commercial	49.3%	48.5%	58.8%	53.6%
	Service	53.0%	48.5%	30.1%	39.4%
	Total	**54.4%**	**45.0%**	**34.4%**	**41.6%**
Employment (Control Figures)	Industrial	69.3%	26.7%	-1.8%	26.6%
	Commercial	49.3%	48.5%	58.9%	53.4%
	Service	53.0%	48.6%	30.0%	40.7%
	Total	**54.8%**	**45.7%**	**33.7%**	**42.2%**
Daily Airport Enplanements		PBIA	FLL	MIA	Total
		93.7%	**93.7%**	**71.6%**	**80.9%**

4.4 Special Generators

Special generators are TAZs with land uses that exhibit trip generation characteristics that differ significantly from the averages represented by standard trip production or attraction rates. Generally, parks, airports, colleges and universities, and shopping centers are candidates for special generators. All special generators used in the MPO models were carried into the regional model.

Airports were treated separately in the 1999 and 2000 Palm Beach and Broward model update. Because of their large traffic generation, the Project Review Committee (PRC) requested the development of an "airport model." Similar to the "school model," the airport model not only generates trips but also determines the likely attraction zones.

The airport model relies on the number of daily enplanements. For the Palm Beach and Broward models, the enplanements figures used in MPO model were directly used in the regional model. For the Miami International Airport, enplanement data listed in FAA documents were used. The enplanement data is entered in the ZDATA3B file. **Table B-24** of **Technical Report 3** presents the format of the ZDATA3B file.

The special generators used in the MPO files were used in the regional model. A few changes were made to the Miami-Dade special generator files to delete the special generator records of the Miami International Airport (because of the addition of the airport purpose), and formatting changes due to the addition of trip purposes.

4.5 Production and Attraction Rates

The SERPM6 model includes trip rates that were originally derived from the 1999 South Florida travel surveys [**Reference 24**]. Rates for the hotel-motel trips were derived from the visitor surveys. Airport trip rates were derived from the Airport surveys. References 24 and 25 have documented both hotel-motel and airport trip rates. All of these rates are entered into GRATEBXX.SYN (XX=PB, BO and MI) for use in lifestyle trip generation program.

In model validation, the calibrated rates were adjusted to produce reasonable results. The validation of the trip generation model started with the validated 1999 Miami-Dade County rates from SERPM5 and the 2000 validated rates from Palm Beach and Broward counties. The rates were further modified so that model produces reasonable results both in the trip generation module and in the context of overall model stream. The rates were modified so that model generated volumes reasonably replicate the observed counts. Adequate comments are provided in the GRATEBXX.SYN files so that the data are easily understood. A summary of the validated production rates for Palm Beach, Broward and Miami-Dade counties are shown in **Tables 4-2, 4-3 and 4-4** respectively. The attraction rates were summarized in **Tables 4-5, 4-6 and 4-7** for these three counties.

4.6 Household Stratification Curves

Stratification curves are needed to distribute the aggregate zonal level data to the discrete classes used in the trip production matrices. Data from a Census special tabulation were used to develop stratification models. **Tables 4-8, 4-9 and 4-10** present the stratification models for Palm Beach, Broward and Miami-Dade Counties, respectively.

Table 4-2: **Validated Cross-Classified Trip Production Rates for Palm Beach County**
Southeast Regional Planning Model VI

(1) Home-Based Work (HBWork)

CHILDREN	VEHICLE	WORKER		
		0 Worker	1 Worker	2+ Workers
Without Children	0 vehicle		0.360	2.637
	1 vehicle		**0.617**	**2.895**
	2 vehicles		**1.392**	**3.748**
	3+ vehicles		3.204	**5.557**
With Children	0 vehicle		1.544	3.897
	1 vehicle		**1.799**	**4.153**
	2 vehicles		**2.650**	**5.006**
	3+ vehicles		4.461	**6.818**
All Hotel & Motel Types:		0.396		

(2) Home-Based Shopping (HBShop)

CHILDREN	VEHICLE	PERSON			
		1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.043	0.475	0.979	1.527
	1 vehicle	**0.136**	**0.571**	1.074	1.621
	2 vehicles	0.259	**0.827**	**1.331**	1.879
	3+ vehicles	0.979	**1.546**	**2.047**	**2.598**
With Children	0 vehicle		1.248	1.754	2.303
	1 vehicle		1.344	1.847	**2.396**
	2 vehicles		1.600	**2.105**	**2.651**
	3+ vehicles		2.319	2.822	**3.372**
All Hotel & Motel Types:		0.600			

(3) Home-Based Social-Recreation (HBSocRec)

CHILDREN	VEHICLE	PERSON			
		1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.051	0.086	0.192	0.784
	1 vehicle	**0.100**	**0.301**	0.476	1.068
	2 vehicles	0.217	**0.561**	**0.735**	1.324
	3+ vehicles	0.356	**0.697**	**0.875**	**1.463**
With Children	0 vehicle		0.672	0.844	1.439
	1 vehicle		0.958	1.131	**1.722**
	2 vehicles		1.214	**1.389**	**1.982**
	3+ vehicles		1.355	1.527	**2.118**
All Hotel & Motel Types:		4.915			

(4) Home-Based School (HBSchool)

CHILDREN	VEHICLE	PERSON			
		1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.056	0.074	0.107	1.086
	1 vehicle	**0.086**	**0.104**	0.510	1.458
	2 vehicles	0.337	**0.355**	**0.855**	1.805
	3+ vehicles	0.669	**0.687**	**1.219**	**2.169**
With Children	0 vehicle		0.481	0.991	2.144
	1 vehicle		0.750	1.324	**2.274**
	2 vehicles		1.098	**1.672**	**2.622**
	3+ vehicles		1.462	2.036	**2.986**

(5) Home-Based Other (HBOther)

CHILDREN	VEHICLE	PERSON			
		1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.099	0.530	2.010	3.142
	1 vehicle	**0.159**	**0.679**	2.162	3.293
	2 vehicles	0.199	**1.126**	**2.608**	3.740
	3+ vehicles	1.668	**2.614**	**4.096**	**5.227**
With Children	0 vehicle		2.605	4.086	5.221
	1 vehicle		2.758	4.237	**5.367**
	2 vehicles		3.202	**4.685**	**5.815**
	3+ vehicles		4.690	6.172	**7.304**
All Hotel & Motel Types:		0.391			

(6) Non-Home-Based-Work (NHBW) Origin/Destination Controls

CHILDREN	VEHICLE	WORKER		
		0 Worker	1 Worker	2+ Workers
Without Children	0 vehicle		0.242	0.966
	1 vehicle		**0.281**	**1.113**
	2 vehicles		**0.530**	**1.432**
	3+ vehicles		1.143	**2.045**
With Children	0 vehicle		0.709	1.609
	1 vehicle		**0.860**	**1.759**
	2 vehicles		**1.175**	**2.076**
	3+ vehicles		1.789	**2.690**
All Hotel & Motel Types:		0.237		

(7) Non-Home-Based-Other (NHBO) Origin/Destination Controls

CHILDREN	VEHICLE	PERSON			
		1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.260	0.482	1.056	1.668
	1 vehicle	**0.463**	**0.946**	1.527	2.137
	2 vehicles	0.625	**1.203**	**1.786**	2.394
	3+ vehicles	1.190	**1.770**	**2.346**	**2.957**
With Children	0 vehicle		1.498	2.078	2.687
	1 vehicle		1.967	2.546	**3.157**
	2 vehicles		2.224	**2.804**	**3.415**
	3+ vehicles		2.788	3.366	**3.978**
All Hotel & Motel Types:		1.600			

(8) Airport Trip Purpose

Trips per Enplanement = 3.316

(9-11) Three Truck (4-tired, SU & COMB) Purposes:

Truck production rates are same as their attraction rates.

Table 4-3: **Validated Cross-Classified Trip Production Rates for Broward County**
Southeast Regional Planning Model VI

(1) Home-Based Work (HBWork)

		WORKER		
CHILDREN	VEHICLE	0 Worker	1 Worker	2+ Workers
Without Children	0 vehicle		0.605	2.172
	1 vehicle		**0.638**	**2.212**
	2 vehicles		**1.151**	**2.828**
	3+ vehicles		2.308	**3.982**
With Children	0 vehicle		1.392	3.070
	1 vehicle		**1.432**	**3.110**
	2 vehicles		**2.046**	**3.722**
	3+ vehicles		3.205	**4.880**
All Hotel & Motel Types:		0.396		

(2) Home-Based Shopping (HBShop)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.077	0.474	0.505	1.355
	1 vehicle	**0.118**	**0.512**	0.548	1.396
	2 vehicles	**0.212**	**0.723**	**0.755**	1.607
	3+ vehicles	0.845	**1.353**	**1.385**	**2.235**
With Children	0 vehicle		0.864	0.895	1.749
	1 vehicle		**0.908**	**0.936**	**1.789**
	2 vehicles		1.115	**1.148**	**1.996**
	3+ vehicles		1.744	1.774	**2.627**
All Hotel & Motel Types:		0.600			

(3) Home-Based Social-Recreation (HBSocRec)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.007	0.071	0.352	1.010
	1 vehicle	**0.029**	**0.095**	0.388	1.049
	2 vehicles	**0.198**	**0.454**	**0.751**	1.408
	3+ vehicles	0.403	**0.664**	**0.957**	**1.615**
With Children	0 vehicle		0.620	0.915	1.576
	1 vehicle		**0.655**	**0.949**	**1.611**
	2 vehicles		1.016	**1.310**	**1.970**
	3+ vehicles		1.225	1.518	**2.176**
All Hotel & Motel Types:		4.915			

(4) Home-Based School (HBSchool)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.062	0.084	0.145	1.430
	1 vehicle	**0.090**	**0.133**	0.224	1.536
	2 vehicles	**0.105**	**0.140**	**0.384**	1.841
	3+ vehicles	0.211	**0.345**	**0.940**	**2.397**
With Children	0 vehicle		0.719	1.334	2.791
	1 vehicle		**0.819**	**1.433**	**2.890**
	2 vehicles		1.123	**1.737**	**3.195**
	3+ vehicles		1.680	2.294	**3.751**

(5) Home-Based Other (HBOther)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.246	0.397	0.669	2.122
	1 vehicle	**0.302**	**0.853**	1.209	2.662
	2 vehicles	**0.380**	**1.435**	**1.792**	3.243
	3+ vehicles	0.897	**2.183**	**2.541**	**3.992**
With Children	0 vehicle		1.859	2.220	3.672
	1 vehicle		**2.401**	**2.759**	**4.209**
	2 vehicles		2.986	**3.339**	**4.794**
	3+ vehicles		3.733	4.089	**5.538**
All Hotel & Motel Types:		0.391			

(6) Non-Home-Based-Work (NHBW) Origin/Destination Controls

		WORKER		
CHILDREN	VEHICLE	0 Worker	1 Worker	2+ Workers
Without Children	0 vehicle		0.224	0.792
	1 vehicle		**0.293**	**1.012**
	2 vehicles		**0.580**	**1.383**
	3+ vehicles		0.959	**1.765**
With Children	0 vehicle		0.522	1.328
	1 vehicle		**0.744**	**1.549**
	2 vehicles		**1.118**	**1.922**
	3+ vehicles		1.499	**2.304**
All Hotel & Motel Types:		0.237		

(7) Non-Home-Based-Other (NHBO) Origin/Destination Controls

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.055	0.101	1.010	1.810
	1 vehicle	**0.143**	**0.447**	1.407	2.208
	2 vehicles	**0.267**	**0.754**	**1.713**	2.513
	3+ vehicles	1.021	**1.506**	**2.466**	**3.266**
With Children	0 vehicle		1.098	2.057	2.859
	1 vehicle		**1.496**	**2.455**	**3.255**
	2 vehicles		1.800	**2.759**	**3.558**
	3+ vehicles		2.555	3.514	**4.316**
All Hotel & Motel Types:		1.600			

(8) Airport Trip Purpose

Trips per Enplanement = 2.831

(9-11) Three Truck (4-tired, SU & COMB) Purposes:

Truck production rates are same as their attraction rates.

Table 4-4: **Validated Cross-Classified Trip Production Rates for Miami-Dade County**
Southeast Regional Planning Model VI

(1) Home-Based Work (HBWork)

		WORKER		
CHILDREN	VEHICLE	0 Worker	1 Worker	2+ Workers
Without Children	0 vehicle		0.722	2.467
	1 vehicle		**0.738**	**2.499**
	2 vehicles		**1.390**	**3.238**
	3+ vehicles		2.840	**4.688**
With Children	0 vehicle		1.463	3.314
	1 vehicle		**1.491**	**3.343**
	2 vehicles		**2.227**	**4.076**
	3+ vehicles		3.677	**5.527**
All Hotel & Motel Types:		0.396		

(2) Home-Based Shopping (HBShop)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.092	0.216	0.443	0.969
	1 vehicle	**0.111**	**0.239**	0.452	0.992
	2 vehicles	**0.181**	**0.282**	**0.580**	1.118
	3+ vehicles	1.150	**1.315**	**1.681**	**2.222**
With Children	0 vehicle		0.574	0.946	1.473
	1 vehicle		**0.581**	**0.952**	**1.494**
	2 vehicles		0.713	**1.079**	**1.619**
	3+ vehicles		1.815	2.183	**2.723**
All Hotel & Motel Types:		0.600			

(3) Home-Based Social-Recreation (HBSocRec)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.092	0.113	0.123	0.413
	1 vehicle	**0.109**	**0.136**	0.148	0.433
	2 vehicles	**0.147**	**0.211**	**0.306**	0.587
	3+ vehicles	0.272	**0.363**	**0.530**	**0.810**
With Children	0 vehicle		0.228	0.401	0.699
	1 vehicle		**0.277**	**0.441**	**0.722**
	2 vehicles		0.430	**0.599**	**0.879**
	3+ vehicles		0.654	0.816	**1.098**
All Hotel & Motel Types:		4.915			

(4) Home-Based School (HBSchool)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.077	0.098	0.144	1.088
	1 vehicle	**0.086**	**0.105**	0.184	1.110
	2 vehicles	**0.130**	**0.149**	**0.602**	1.391
	3+ vehicles	0.479	**0.852**	**1.091**	**2.196**
With Children	0 vehicle		0.455	0.956	2.079
	1 vehicle		**0.487**	**1.002**	**2.106**
	2 vehicles		0.767	**1.280**	**2.385**
	3+ vehicles		1.573	2.088	**3.194**

(5) Home-Based Other (HBOther)

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.203	0.476	0.926	2.215
	1 vehicle	**0.227**	**0.505**	0.951	2.264
	2 vehicles	**0.376**	**0.775**	**1.434**	2.749
	3+ vehicles	1.336	**1.863**	**2.522**	**3.842**
With Children	0 vehicle		1.451	2.098	3.413
	1 vehicle		**1.483**	**2.140**	**3.455**
	2 vehicles		1.966	**2.627**	**3.942**
	3+ vehicles		3.055	3.716	**5.029**
All Hotel & Motel Types:		0.391			

(6) Non-Home-Based-Work (NHBW) Origin/Destination Controls

		WORKER		
CHILDREN	VEHICLE	0 Worker	1 Worker	2+ Workers
Without Children	0 vehicle		0.138	0.599
	1 vehicle		**0.148**	**0.637**
	2 vehicles		**0.355**	**0.976**
	3+ vehicles		1.095	**1.718**
With Children	0 vehicle		0.401	1.070
	1 vehicle		**0.465**	**1.088**
	2 vehicles		**0.799**	**1.423**
	3+ vehicles		1.543	**2.165**
All Hotel & Motel Types:		0.237		

(7) Non-Home-Based-Other (NHBO) Origin/Destination Controls

		PERSON			
CHILDREN	VEHICLE	1 person	2 persons	3 persons	4+ persons
Without Children	0 vehicle	0.104	0.228	0.366	1.079
	1 vehicle	**0.146**	**0.261**	0.457	1.114
	2 vehicles	**0.299**	**0.496**	**0.853**	1.510
	3+ vehicles	1.088	**1.340**	**1.700**	**2.357**
With Children	0 vehicle		0.919	1.278	1.956
	1 vehicle		**0.998**	**1.355**	**2.017**
	2 vehicles		1.395	**1.752**	**2.412**
	3+ vehicles		2.243	2.061	**3.259**
All Hotel & Motel Types:		1.600			

(8) Airport Trip Purpose

Trips per Enplanement = 2.000

(9-11) Three Truck (4-tired, SU & COMB) Purposes:

Truck production rates are same as their attraction rates.

Table 4-5: **Validated Cross-Classified Trip Attraction Rates for Palm Beach County**
Southeast Regional Planning Model VI

		Socio-Economic Data Categories						
	Area	Employment				School	Occupied	Occupied
Purpose	Type	Industial	Commercial	Service	Total	Enrollment	Dwelling Units	H/M Units
1. HBWork	CBD	1.815	1.815	1.815				
	High Density Non-CBD	1.661	1.661	1.661				
	Medium Density Non-CBD	1.867	1.867	1.867				
	Low Density Non-CBD	1.888	1.888	1.888				
	Very Low Density Non-CBD	1.719	1.572	1.561				
2. HBShop	CBD		1.510	0.050				
	High Density Non-CBD		3.419	0.128				
	Medium Density Non-CBD		2.360	0.379				
	Low Density Non-CBD		4.072	0.481				
	Very Low Density Non-CBD		2.818	0.347				
3. HBSocRec	CBD		0.834	0.250			0.505	0.505
	High Density Non-CBD		1.702	0.824			0.536	0.536
	Medium Density Non-CBD		0.315	0.453			0.315	0.315
	Low Density Non-CBD		0.569	0.804			0.330	0.330
	Very Low Density Non-CBD		0.414	0.555			0.274	0.274
4. HBSchool	ALL					1.850		
5. HBOther	CBD		2.515	0.673			1.025	1.025
	High Density Non-CBD		1.228	3.096			0.282	0.282
	Medium Density Non-CBD		1.109	1.298			0.483	0.483
	Low Density Non-CBD		1.795	2.609			0.397	0.397
	Very Low Density Non-CBD		1.296	1.767			0.340	0.340
6a. NHBWork Origin/Production Allocation	CBD	0.582	0.777	0.841				
	High Density Non-CBD	0.454	0.607	0.656				
	Medium Density Non-CBD	0.570	0.763	0.825				
	Low Density Non-CBD	0.576	0.770	0.833				
	Very Low Density Non-CBD	0.426	0.570	0.617				
6b. NHBWork Destination/Attraction Allocation	CBD	0.139	1.157	0.532			0.325	0.325
	High Density Non-CBD	0.108	2.247	0.921			0.035	0.035
	Medium Density Non-CBD	0.123	0.833	0.452			0.166	0.166
	Low Density Non-CBD	0.158	1.012	0.669			0.109	0.109
	Very Low Density Non-CBD	0.102	0.721	0.450			0.086	0.086
7a. NHBOther Origin/Production Allocation	CBD	0.103	1.673	0.743			0.353	0.353
	High Density Non-CBD	0.141	2.982	1.205			0.507	0.507
	Medium Density Non-CBD	0.149	1.376	0.935			0.317	0.317
	Low Density Non-CBD	0.206	2.103	1.493			0.314	0.314
	Very Low Density Non-CBD	0.133	1.374	0.957			0.235	0.235
7b. NHBOther Destination/Attraction Allocation	CBD	0.185	1.870	0.659			0.493	0.493
	High Density Non-CBD	0.105	3.645	1.415			0.563	0.563
	Medium Density Non-CBD	0.074	1.860	0.759			0.329	0.329
	Low Density Non-CBD	0.168	2.713	1.215			0.293	0.293
	Very Low Density Non-CBD	0.099	1.790	0.789			0.224	0.224
8. Airport	CBD				0.025		0.031	0.618
	High Density Non-CBD				0.014		0.018	0.434
	Medium Density Non-CBD				0.018		0.023	0.546
	Low Density Non-CBD				0.016		0.022	0.515
	Very Low Density Non-CBD				0.011		0.015	0.350
9. Truck - 4-tired Commercial Vehicle	CBD	0.108	0.084	0.046			0.018	
	High Density Non-CBD	0.092	0.072	0.039			0.015	
	Medium Density Non-CBD	0.117	0.091	0.049			0.019	
	Low Density Non-CBD	0.117	0.092	0.049			0.020	
	Very Low Density Non-CBD	0.097	0.075	0.041			0.016	
10. Truck - Single-Unit	CBD	0.690	0.578	0.210			0.172	
	High Density Non-CBD	0.136	0.114	0.042			0.034	
	Medium Density Non-CBD	0.123	0.104	0.039			0.030	
	Low Density Non-CBD	0.256	0.215	0.079			0.063	
	Very Low Density Non-CBD	0.177	0.148	0.056			0.044	
11. Truck - Combinations	CBD	0.240	0.112	0.037			0.037	
	High Density Non-CBD	0.043	0.020	0.007			0.007	
	Medium Density Non-CBD	0.039	0.017	0.006			0.006	
	Low Density Non-CBD	0.133	0.060	0.021			0.019	
	Very Low Density Non-CBD	0.169	0.076	0.025			0.025	

Table 4-6: **Validated Cross-Classified Trip Attraction Rates for Broward County**
Southeast Regional Planning Model VI

		Socio-Economic Data						
	Area	Employment				School	Occupied	Occupied
Purpose	Type	Industial	Commercial	Service	Total	Enrollment	Dwelling Units	H/M Units
1. HBWork	CBD	1.907	1.907	1.907				
	High Density Non-CBD	1.729	1.721	1.729				
	Medium Density Non-CBD	1.914	1.893	1.903				
	Low Density Non-CBD	1.773	1.737	1.747				
	Very Low Density Non-CBD	1.799	1.731	1.796				
2. HBShop	CBD		2.134	0.072				
	High Density Non-CBD		2.209	0.082				
	Medium Density Non-CBD		2.096	0.337				
	Low Density Non-CBD		3.136	0.370				
	Very Low Density Non-CBD		2.725	0.335				
3. HBSocRec	CBD		1.708	0.511			1.035	1.035
	High Density Non-CBD		1.547	0.749			0.488	0.488
	Medium Density Non-CBD		0.393	0.564			0.393	0.393
	Low Density Non-CBD		0.617	0.870			0.359	0.359
	Very Low Density Non-CBD		0.549	0.738			0.363	0.363
4. HBSchool	ALL					1.850		
5. HBOther	CBD		4.209	1.127			1.717	1.717
	High Density Non-CBD		1.006	2.537			0.231	0.231
	Medium Density Non-CBD		1.250	1.461			0.544	0.544
	Low Density Non-CBD		1.753	2.549			0.388	0.388
	Very Low Density Non-CBD		1.521	2.074			0.398	0.398
6a. NHBWork Origin/Production Allocation	CBD	0.993	1.911	1.699				
	High Density Non-CBD	0.322	0.619	0.551				
	Medium Density Non-CBD	0.556	1.069	0.951				
	Low Density Non-CBD	0.486	0.936	0.832				
	Very Low Density Non-CBD	0.463	0.892	0.792				
6b. NHBWork Destination/Attraction Allocation	CBD	0.278	2.328	1.070			0.653	0.653
	High Density Non-CBD	0.098	2.034	0.833			0.031	0.031
	Medium Density Non-CBD	0.152	1.036	0.561			0.208	0.208
	Low Density Non-CBD	0.170	1.091	0.720			0.117	0.117
	Very Low Density Non-CBD	0.150	1.060	0.663			0.126	0.126
7a. NHBOther Origin/Production Allocation	CBD	0.185	2.986	1.329			0.544	0.544
	High Density Non-CBD	0.115	2.435	0.984			0.358	0.358
	Medium Density Non-CBD	0.166	1.545	1.049			0.307	0.307
	Low Density Non-CBD	0.201	2.046	1.453			0.263	0.263
	Very Low Density Non-CBD	0.183	1.899	1.323			0.280	0.280
7b. NHBOther Destination/Attraction Allocation	CBD	0.321	3.230	1.139			0.852	0.852
	High Density Non-CBD	0.084	2.871	1.115			0.444	0.444
	Medium Density Non-CBD	0.080	2.014	0.822			0.356	0.356
	Low Density Non-CBD	0.158	2.546	1.141			0.276	0.276
	Very Low Density Non-CBD	0.133	2.386	1.051			0.299	0.299
8. Airport	CBD				0.065		0.044	0.715
	High Density Non-CBD				0.039		0.024	0.463
	Medium Density Non-CBD				0.049		0.031	0.589
	Low Density Non-CBD				0.037		0.024	0.441
	Very Low Density Non-CBD				0.031		0.019	0.379
9. Truck - 4-tired Commercial Vehicle	CBD	0.125	0.097	0.052			0.021	
	High Density Non-CBD	0.099	0.077	0.042			0.016	
	Medium Density Non-CBD	0.126	0.098	0.053			0.021	
	Low Density Non-CBD	0.115	0.090	0.049			0.019	
	Very Low Density Non-CBD	0.116	0.091	0.050			0.019	
10. Truck - Single-Unit	CBD	0.988	0.828	0.301			0.247	
	High Density Non-CBD	0.532	0.450	0.164			0.134	
	Medium Density Non-CBD	0.126	0.105	0.039			0.033	
	Low Density Non-CBD	0.213	0.178	0.066			0.052	
	Very Low Density Non-CBD	0.523	0.439	0.162			0.131	
11. Truck - Combinations	CBD	0.344	0.160	0.054			0.054	
	High Density Non-CBD	0.171	0.077	0.024			0.024	
	Medium Density Non-CBD	0.039	0.017	0.005			0.005	
	Low Density Non-CBD	0.111	0.050	0.018			0.016	
	Very Low Density Non-CBD	0.497	0.225	0.076			0.073	

Table 4-7: **Validated Cross-Classified Trip Attraction Rates for Miami-Dade County**
Southeast Regional Planning Model VI

		Socio-Economic Data Categories						
	Area	Employment				School	Occupied	Occupied
Purpose	Type	Industial	Commercial	Service	Total	Enrollment	Dwelling Units	H/M Units
1. HBWork	CBD	1.920	1.885	1.884				
	High Density Non-CBD	1.832	1.786	1.785				
	Medium Density Non-CBD	1.902	1.840	1.839				
	Low Density Non-CBD	1.807	1.807	1.807				
	Very Low Density Non-CBD	1.756	1.756	1.756				
2. HBShop	CBD		0.984	0.033				
	High Density Non-CBD		2.909	0.109				
	Medium Density Non-CBD		1.868	0.301				
	Low Density Non-CBD		3.661	0.433				
	Very Low Density Non-CBD		3.718	0.457				
3. HBSocRec	CBD		0.438	0.131			0.266	0.266
	High Density Non-CBD		1.167	0.566			0.369	0.369
	Medium Density Non-CBD		0.201	0.289			0.201	0.201
	Low Density Non-CBD		0.415	0.582			0.239	0.239
	Very Low Density Non-CBD		0.441	0.592			0.292	0.292
4. HBSchool	ALL					1.750		
5. HBOther	CBD		1.643	0.439			0.670	0.670
	High Density Non-CBD		1.049	2.646			0.240	0.240
	Medium Density Non-CBD		0.883	1.032			0.385	0.385
	Low Density Non-CBD		1.620	2.357			0.360	0.360
	Very Low Density Non-CBD		1.716	2.339			0.449	0.449
6a. NHBWork Origin/Production Allocation	CBD	0.307	0.438	0.597				
	High Density Non-CBD	0.313	0.447	0.610				
	Medium Density Non-CBD	0.366	0.523	0.714				
	Low Density Non-CBD	0.420	0.600	0.818				
	Very Low Density Non-CBD	0.507	0.724	0.987				
6b. NHBWork Destination/Attraction Allocation	CBD	0.085	0.711	0.326			0.199	0.199
	High Density Non-CBD	0.086	1.805	0.740			0.029	0.029
	Medium Density Non-CBD	0.091	0.623	0.337			0.125	0.125
	Low Density Non-CBD	0.134	0.859	0.567			0.092	0.092
	Very Low Density Non-CBD	0.140	0.997	0.623			0.119	0.119
7a. NHBOther Origin/Production Allocation	CBD	0.058	0.953	0.424			0.173	0.173
	High Density Non-CBD	0.105	2.221	0.898			0.326	0.326
	Medium Density Non-CBD	0.103	0.954	0.647			0.190	0.190
	Low Density Non-CBD	0.163	1.655	1.174			0.213	0.213
	Very Low Density Non-CBD	0.169	1.763	1.228			0.261	0.261
7b. NHBOther Destination/Attraction Allocation	CBD	0.098	0.987	0.347			0.259	0.259
	High Density Non-CBD	0.072	2.515	0.977			0.388	0.388
	Medium Density Non-CBD	0.047	1.195	0.488			0.211	0.211
	Low Density Non-CBD	0.123	1.979	0.887			0.215	0.215
	Very Low Density Non-CBD	0.117	2.128	0.938			0.265	0.265
8. Airport	CBD				0.035		0.022	0.418
	High Density Non-CBD				0.037		0.023	0.447
	Medium Density Non-CBD				0.042		0.026	0.503
	Low Density Non-CBD				0.048		0.030	0.576
	Very Low Density Non-CBD				0.048		0.030	0.576
9. Truck - 4-tired Commercial Vehicle	CBD	0.120	0.103	0.058			0.020	
	High Density Non-CBD	0.123	0.106	0.059			0.021	
	Medium Density Non-CBD	0.144	0.123	0.069			0.025	
	Low Density Non-CBD	0.166	0.141	0.079			0.028	
	Very Low Density Non-CBD	0.200	0.171	0.095			0.034	
10. Truck - Single-Unit	CBD	0.102	0.094	0.044			0.029	
	High Density Non-CBD	0.226	0.208	0.099			0.063	
	Medium Density Non-CBD	0.195	0.179	0.084			0.055	
	Low Density Non-CBD	0.381	0.351	0.165			0.106	
	Very Low Density Non-CBD	1.191	1.100	0.518			0.333	
11. Truck - Combinations	CBD	0.059	0.029	0.014			0.010	
	High Density Non-CBD	0.130	0.063	0.031			0.024	
	Medium Density Non-CBD	0.110	0.055	0.026			0.020	
	Low Density Non-CBD	0.219	0.106	0.052			0.039	
	Very Low Density Non-CBD	0.682	0.333	0.163			0.123	

Table 4-8: **Household Stratification Models for Palm Beach County**
Southeast Regional Planning Model VI

A. Zonal Household Vehicles of "Without-Children-Households"

X = Average Number of "without-children-household" vehicles - 1.58565

Fraction of households with zero vehicle (C0PH0V):

C0PH0V = 0.035867 -0.125870 * X +0.189301 *X^2 -0.095668 *X^3

Fraction of households with one vehicle (C0PH1V):

C0PH1V = 0.452308 -0.512626 * X -0.183124 *X^2 +0.259758 *X^3

Fraction of households with two vehicles (C0PH2V):

C0PH2V = 0.408338 +0.432315 * X -0.177221 *X^2 -0.223960 *X^3

Fraction of households with three-or-more vehicles (C0PH3+V):

C0PH3+V = 0.099949 +0.244290 * X +0.180072 *X^2

B. Zonal Household Vehicles of "With-Children-Households"

X = Average Number of "with-children-household" vehicles - 1.95135

Fraction of households with zero vehicle (C1PH0V):

C1PH0V = 0.017867 -0.085370 * X +0.065094 *X^2

Fraction of households with one vehicle (C1PH1V):

C1PH1V = 0.191913 -0.393440 * X +0.194766 *X^2

Fraction of households with two vehicles (C1PH2V):

C1PH2V = 0.633600 +0.097488 * X -0.544195 *X^2

Fraction of households with three-or-more vehicles (C1PH3+V):

C1PH3+V = 0.156619 +0.381342 * X +0.284335 *X^2

C. Zonal Household Workers of "Without-Children-Households"

X = Average Number of "without-children-household" workers - 1.01889

Fraction of households with zero worker (C0PH0W):

C0PH0W = 0.325582 -0.481785 * X +0.180162 *X^2

Fraction of households with one worker (C0PH1W):

C0PH1W = 0.380620 +0.074061 * X -0.289445 *X^2

Fraction of households with two workers (C0PH2W):

C0PH2W = 0.255794 +0.307389 * X

Fraction of households with three-or-more workers (C0PH3+W):

C0PH3+W = 0.047026 +0.103363 * X +0.066306 *X^2

D. Zonal Household Workers of "With-Children-Households"

X = Average Number of "with-children-household" workers - 1.61187

Fraction of households with zero worker (C1PH0W):

C1PH0W = 0.043792 -0.155949 * X +0.117310 *X^2

Fraction of households with one worker (C1PH1W):

C1PH1W = 0.387386 -0.552158 * X +0.182364 *X^2

Fraction of households with two workers (C1PH2W):

C1PH2W = 0.471153 +0.506459 * X -0.219727 *X^2 -0.247347 *X^3

Fraction of households with three-or-more workers (C1PH3+W):

C1PH3+W = 0.082128 +0.240231 * X +0.219413 *X^2

E. Zonal Household Persons of "Without-Children-Households"

X = Average Number of "without-children-household" persons - 1.87029

Fraction of households with one person (C0PH1P):

C0PH1P = 0.295856 -0.549442 * X +0.246355 *X^2

Fraction of households with two persons (C0PH2P):

C0PH2P = 0.591943 +0.182330 * X -0.583917 *X^2 -0.168041 *X^3

Fraction of households with three persons (C0PH3P):

C0PH3P = 0.101356 +0.229718 * X -0.044549 *X^2

Fraction of households with four-or-more persons (C0PH4+P):

C0PH4+P = 0.026794 +0.109298 * X +0.122573 *X^2

F. Zonal Household Persons of "With-Children-Households"

X = Average Number of "with-children-household" persons - 3.67155

Fraction of households with one person (C1PH1P):

C1PH1P = 0.000000

Fraction of households with two persons (C1PH2P):

C1PH2P = 0.062271 -0.093534 * X -0.166102 *X^2

Fraction of households with three persons (C1PH3P):

C1PH3P = 0.362059 -0.617573 * X +0.296406 *X^2

Fraction of households with four-or-more persons (C1PH4+P):

C1PH4+P = 0.562322 +0.668370 * X +0.144536 *X^2

Table 4-9: **Household Stratification Models for Broward County**
Southeast Regional Planning Model VI

A. Zonal Household Vehicles of "Without-Children-Households"

X = Average Number of "without-children-household" vehicles - 1.48163

Fraction of households with zero vehicle (C0PH0V):
C0PH0V = 0.072776 -0.174903 * X +0.202600 *X^2 -0.078867 *X^3

Fraction of households with one vehicle (C0PH1V):
C0PH1V = 0.482594 -0.425940 * X -0.242545 *X^2 +0.201796 *X^3

Fraction of households with two vehicles (C0PH2V):
C0PH2V = 0.333415 +0.422258 * X -0.191951 *X^3

Fraction of households with three-or-more vehicles (C0PH3+V):
C0PH3+V = 0.091395 +0.221173 * X +0.153701 *X^2

B. Zonal Household Vehicles of "With-Children-Households"

X = Average Number of "with-children-household" vehicles - 1.87622

Fraction of households with zero vehicle (C1PH0V):
C1PH0V = 0.018540 -0.057316 * X +0.110140 *X^2 -0.072534 *X^3

Fraction of households with one vehicle (C1PH1V):
C1PH1V = 0.269781 -0.532833 * X +0.195506 *X^3

Fraction of households with two vehicles (C1PH2V):
C1PH2V = 0.573846 +0.300282 * X -0.385719 *X^2 -0.201778 *X^3

Fraction of households with three-or-more vehicles (C1PH3+V):
C1PH3+V = 0.150200 +0.343300 * X +0.198200 *X^2

C. Zonal Household Workers of "Without-Children-Households"

X = Average Number of "without-children-household" workers - 1.06366

Fraction of households with zero worker (C0PH0W):
C0PH0W = 0.296204 -0.462422 * X +0.171256 *X^2

Fraction of households with one worker (C0PH1W):
C0PH1W = 0.407592 -0.303007 *X^2 +0.094322 *X^3

Fraction of households with two workers (C0PH2W):
C0PH2W = 0.261694 +0.374844 * X -0.104689 *X^3

Fraction of households with three-or-more workers (C0PH3+W):
C0PH3+W = 0.047641 +0.072716 * X +0.059803 *X^2 +0.050610 *X^3

D. Zonal Household Workers of "With-Children-Households"

X = Average Number of "with-children-household" workers - 1.63649

Fraction of households with zero worker (C1PH0W):
C1PH0W = 0.037779 -0.105925 * X +0.165710 *X^2 -0.078987 *X^3

Fraction of households with one worker (C1PH1W):
C1PH1W = 0.385018 -0.520355 * X +0.195933 *X^3

Fraction of households with two workers (C1PH2W):
C1PH2W = 0.470920 +0.438651 * X -0.200182 *X^2 -0.181715 *X^3

Fraction of households with three-or-more workers (C1PH3+W):
C1PH3+W = 0.090592 +0.245527 * X +0.172362 *X^2

E. Zonal Household Persons of "Without-Children-Households"

X = Average Number of "without-children-household" persons - 1.84769

Fraction of households with one person (C0PH1P):
C0PH1P = 0.341007 -0.540536 * X +0.199598 *X^2

Fraction of households with two persons (C0PH2P):
C0PH2P = 0.529833 +0.198791 * X -0.442505 *X^2 -0.111906 *X^3

Fraction of households with three persons (C0PH3P):
C0PH3P = 0.109413 +0.222457 * X -0.041524 *X^3

Fraction of households with four-or-more persons (C0PH4+P):
C0PH4+P = 0.033020 +0.111846 * X +0.103744 *X^2

F. Zonal Household Persons of "With-Children-Households"

X = Average Number of "with-children-household" persons - 3.69562

Fraction of households with one person (C1PH1P):
C1PH1P = 0.000000

Fraction of households with two persons (C1PH2P):
C1PH2P = 0.060251 -0.093107 * X +0.025287 *X^2 -0.144799 *X^3

Fraction of households with three persons (C1PH3P):
C1PH3P = 0.361326 -0.600386 * X +0.283011 *X^3

Fraction of households with four-or-more persons (C1PH4+P):
C1PH4+P = 0.564017 +0.650724 * X +0.145491 *X^2

Table 4-10: **Household Stratification Models for Miami-Dade County**
Southeast Regional Planning Model VI

A. Zonal Household Vehicles of "Without-Children-Households"

X = Average Number of "without-children-household" vehicles - 1.48183

Fraction of households with zero vehicle (C0PH0V):

C0PH0V = 0.196192 -0.274719 * X +0.180500 *X^2

Fraction of households with one vehicle (C0PH1V):

C0PH1V = 0.465787 -0.294841 * X -0.231180 *X^2 +0.149518 *X^3

Fraction of households with two vehicles (C0PH2V):

C0PH2V = 0.311817 +0.235314 * X

Fraction of households with three-or-more vehicles (C0PH3+V):

C0PH3+V = 0.113374 +0.194682 * X

B. Zonal Household Vehicles of "With-Children-Households"

X = Average Number of "with-children-household" vehicles - 1.48183

Fraction of households with zero vehicle (C1PH0V):

C1PH0V = 0.114192 +0.135369 *X^2 -0.113850 *X^3

Fraction of households with one vehicle (C1PH1V):

C1PH1V = 0.290558 -0.406235 * X +0.164252 *X^3

Fraction of households with two vehicles (C1PH2V):

C1PH2V = 0.487862 +0.139621 * X -0.182361 *X^2

Fraction of households with three-or-more vehicles (C1PH3+V):

C1PH3+V = 0.169422 +0.240908 * X

C. Zonal Household Workers of "Without-Children-Households"

X = Average Number of "without-children-household" workers - 1.15597

Fraction of households with zero worker (C0PH0W):

C0PH0W = 0.267423 -0.388381 * X +0.160925 *X^2

Fraction of households with one worker (C0PH1W):

C0PH1W = 0.418636 -0.099562 * X -0.291896 *X^2 +0.115624 *X^3

Fraction of households with two workers (C0PH2W):

C0PH2W = 0.254228 +0.318221 * X -0.085668 *X^3

Fraction of households with three-or-more workers (C0PH3+W):

C0PH3+W = 0.064525 +0.147267 * X +0.098813 *X^2

D. Zonal Household Workers of "With-Children-Households"

X = Average Number of "with-children-household" workers - 1.61805

Fraction of households with zero worker (C1PH0W):

C1PH0W = 0.069970 -0.151200 * X +0.163823 *X^2 -0.059721 *X^3

Fraction of households with one worker (C1PH1W):

C1PH1W = 0.402778 -0.392128 * X +0.147463 *X^2 -0.146225 *X^3

Fraction of households with two workers (C1PH2W):

C1PH2W = 0.415610 +0.331196 * X -0.143583 *X^2 -0.107199 *X^3

Fraction of households with three-or-more workers (C1PH3+W):

C1PH3+W = 0.110703 +0.232679 * X +0.128870 *X^2

E. Zonal Household Persons of "Without-Children-Households"

X = Average Number of "without-children-household" persons - 2.00123

Fraction of households with one person (C0PH1P):

C0PH1P = 0.312240 -0.440685 * X +0.157273 *X^2

Fraction of households with two persons (C0PH2P):

C0PH2P = 0.498467 +0.047558 * X -0.353977 *X^2 +0.103046 *X^3

Fraction of households with three persons (C0PH3P):

C0PH3P = 0.138754 +0.204881 * X -0.039188 *X^3

Fraction of households with four-or-more persons (C0PH4+P):

C0PH4+P = 0.068102 +0.154930 * X +0.082930 *X^2

F. Zonal Household Persons of "With-Children-Households"

X = Average Number of "with-children-household" persons - 4.03679

Fraction of households with one person (C1PH1P):

C1PH1P = 0.000000

Fraction of households with two persons (C1PH2P):

C1PH2P = 0.058497 -0.076960 * X -0.084200 *X^3

Fraction of households with three persons (C1PH3P):

C1PH3P = 0.293406 -0.469217 * X +0.134022 *X^3

Fraction of households with four-or-more persons (C1PH4+P):

C1PH4+P = 0.648097 +0.546177 * X -0.049822 *X^3

5. EXTERNAL TRIP DATA

External trips have at least one trip end (origin or destination) outside the study area boundary. Trips with both ends outside the area are called external-external (EE) or "through" trips, while trips with only one end within the study area are internal-external or external-internal (IE) trips. This chapter describes the development of the external trips. SERRPM6 has a total of 14 external stations. Each station was coded with a TAZ number between 4051 and 4134. **Figure 5-1** presents the locations of these external stations. All of these stations have a one-to-one correspondence with an MPO model station. The MPO stations at the county boundaries of Palm Beach-Broward and Miami-Dade-Broward were treated as "dummies" in the regional model.

This chapter describes the external trips that were used in both 2000 and 2030 SERPM6 models.

5.1 Highway External Trips

The required Internal-External (IE) trip data is presented in file ZDATA4B. It consists of the total number of trips produced and attracted to each external station and the percentages by purpose. **Table B-25** of **Technical Report 3** shows the format of ZDATA4B file.

It should be noted that the standard ZDATA4 file contains internal-external trips, which are modeled as a separate trip purpose. The modified process used in the SERPM model eliminates IE as a separate trip purpose. The IE trips in the modified process are modeled as part of the internal trip purpose. The modified IE process works as follows:

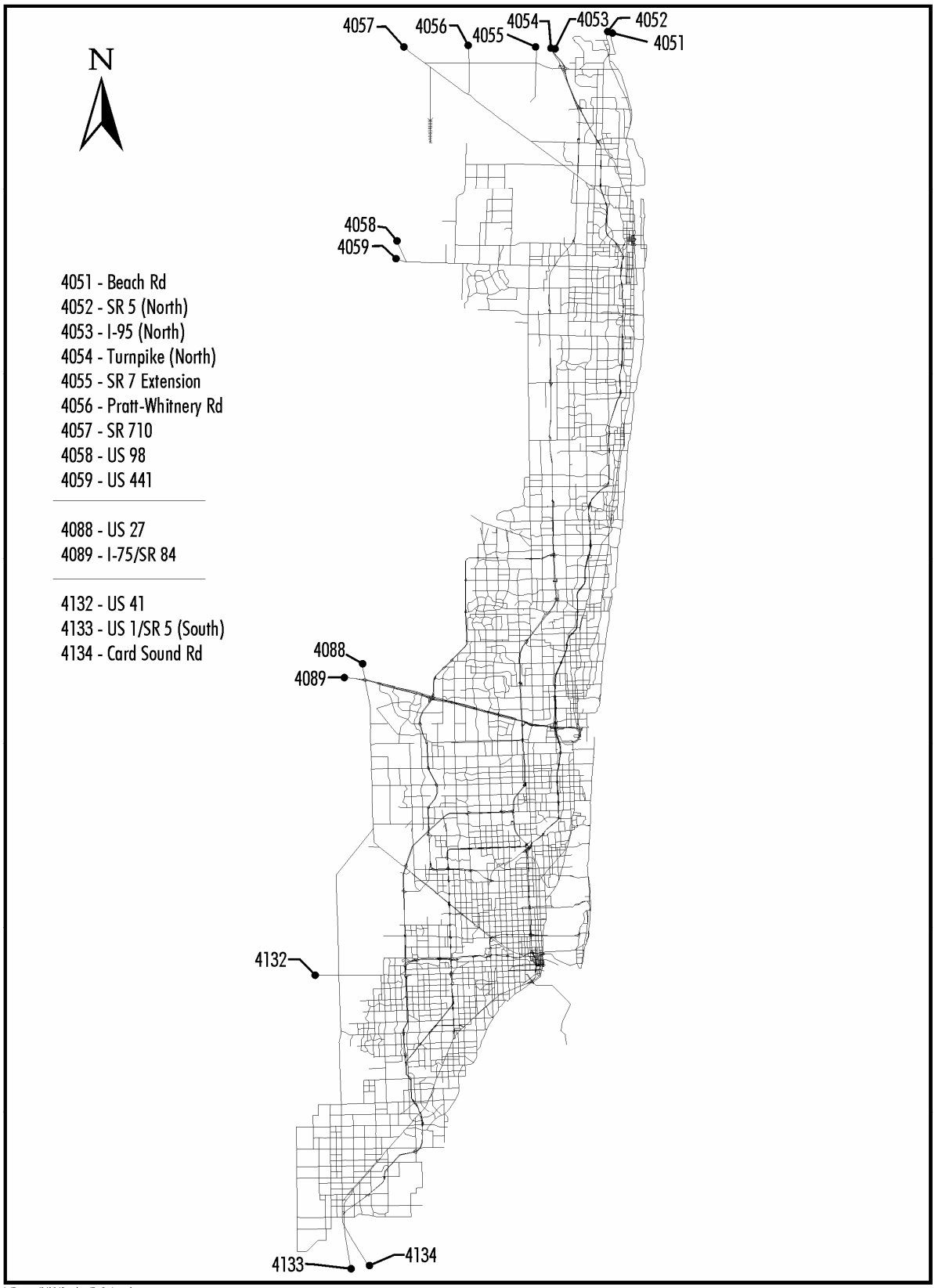
- Total productions and attractions and their percentages by internal trip purposes are entered in the ZDATA4B files. The initial estimates of total productions and attractions should be made from the traffic counts and an estimate of through trips.

- The productions and attractions for each trip purpose are then obtained by multiplying the percentages for each purpose by total trips.

- In the CV script, travel times from all external zones to all external zones are set at zero. In addition, the FAIL[1] in the FF LOOKUP statement prevents IE trips from becoming EE. This has the same effect as specifying K factors of zero in earlier versions of SERPM.

The distribution process determines the number of IE trips (they will be present in the internal trip tables). Because the gravity model ensures the distribution of all productions, but not all attractions, the production ends of the IE trips will be the same as the input value, while the attraction ends could be significantly different from the counts. Thus, some adjustment of the total attractions and/or travel time at external station connectors is needed so that the model produces the desired volumes at the external stations. The travel times on the external connectors represent the average time from the station to a typical destination outside the study area. The trips produced at an external station are assumed to be equal to the attractions (a very standard assumption), which is equal to half the daily volume on that link.

Figure 5-1: **External Station Locations**
Southeast Regional Planning Model VI



I:/Projects/3612/Graphics/ExtStaLoc.cdr

No empirical data were available to derive the 2000 external trip tables. This study relies on recent data to extrapolate the 1999 trip tables. The 2000 traffic counts at each of the SERPM6 external stations are recorded from the 2000 MPO models. Those counts are then compared to the 1999 traffic counts of the SERPM-V model [**References 11-13**]. The 2000 Florida Traffic Information CDROM was also reviewed for to supplement and update the MPO model 2000 traffic counts. **Table 5-2** presents a summary of these counts.

The 2000 through trips are summarized in **Table 5-2**. The zonal interchanges of the external trips are shown in this table. These data are then entered in EETRIPS file. Input trips are represented in balanced origin/destination format. The through trips are then subtracted from the 2000 traffic count data (**Table 5-2**) to compute the IE vehicle trips. The IE trips are included in the ZDATA4B file in terms of person trips. **Table 5-2** presents an estimate of IE person trips by purpose for each of the external station used in the 2000 validated model.

The external station link volumes of the 2000 and 2030 MPO models were used to compute countywide external factors. The county specific factors are then applied to the 2000 through trip table to compute the 2030 through trip tables using "Fratar" model. **Table 5-3** presents the 2030 SERPM6 through trip table interchanges. The factors used to adjust the 2000 trip table are also shown in this table. Similar to the 2000 SERPM6 model, an estimate of the IE external trips for each station was then made.

EE truck trips were estimated using a Fratar model. Based on truck traffic information gathered from the Florida Traffic Information CDROM, PERTRKEXTZ.DBF was developed which describes the percentage of volume at each external station that is truck traffic. These percentages are taken together with the EETAB (Binary output of through vehicle trip table) and input to the CV's FRATAR model function. The result is an estimate of EE truck traffic that was then added to the other internal truck trips to produce a separate truck assignment. Truck trips are also converted into passenger-car-equivalents (PCE) to be in line with the capacity units.

5.2 Truck Traffic Counts

Year 2000 Palm Beach and Broward model truck counts were entered in the highway network database. Truck count data for the Miami-Dade portion from the MPO and FDOT were processed and coded onto highway network. The truck count data were used in truck model validation at the system level to assess the reasonableness of truck percentages by facility and area types. A link-by-link validation of the trucks was not feasible because of the small number of truck traffic counts.

Table 5-1: **Year 2000 External Station Traffic Counts and IE/EE Splits**

Southeast Regional Planning Model VI

Regional External TAZ	MPO External TAZ	Road Name	Links of Traffic Counts	Screenline No	2000 Count	Through Vehicle Trips			IE & EI Vehicle Trips	IE person trips
						Origin	Destination	Total		
4051	1598	Beach Road @ MA CL	5096-6550	7	1,800	**73**	**73**	**146**	**1,654**	**1,069**
4052	1599	SR 5 (North) @ MA CL	5068-5092	7	25,000	**137**	**137**	**274**	**24,726**	**16,146**
4053	1600	I-95 (North) @ MA CL	10098->10102, 10100->10098	7	64,500	**292**	**293**	**585**	**63,915**	**41,752**
4054	1601	Florida Turnpike @ MA CL	9904->9908, 9906->9904	7	27,500	**89**	**89**	**178**	**27,322**	**18,800**
4055	1602	SR 7 Extension @ MA CL	5168-5260	7						
4056	1603	Pratt-Whitney Road (CR 711) @ MA CL	5144-6554	7	3,000	**41**	**40**	**81**	**2,919**	**2,052**
4057	1604	Bee Line Hwy (SR 710) @ Okeechobee CL	5120-6558	7	5,000	**366**	**366**	**732**	**4,268**	**2,824**
4058	1605	Okeechobee Boulevard (US 98)	6904-7610	16						
4059	1606	SR 80/US 441 @ Hendry CL	6912-7610	16	11,200	**89**	**90**	**179**	**11,021**	**7,071**
4088	918	US 27 towards PB County	18292-18293	29	8,300	**733**	**732**	**1,465**	**6,835**	**4,192**
4089	919	I-75/SR 84 towards Collier CL	19400->19402,19401->19400	29	19,100	**350**	**350**	**700**	**18,400**	**11,979**
4132	1519	Tamiami Trail (US 41/SR 90) towards Monroe/Collier CL	24811-27903	71	6,174	**411**	**411**	**822**	**5,352**	**3,606**
4133	1520	US 1/SR 5 South @ Monroe CL	22341-26322	71	17,326	**1,221**	**1,222**	**2,443**	**14,883**	**10,158**
4134	1521	Card Sound Road @ Monroe CL	22340-26325	71	6,040	**910**	**909**	**1,819**	**4,221**	**2,910**
		ALL External Stations:			194,940	**4,712**	**4,712**	**9,424**	**185,516**	**122,559**
				7-Total	126,800	998	998	1,996	124,804	82,643
				16-Total	11,200	89	90	179	11,021	7,071
				29-Total	27,400	1,083	1,082	2,165	25,235	16,171
				71-Total	29,540	2,542	2,542	5,084	24,456	16,674

Symbol Used: MA = Martin, PB = Palm Beach, BO = Broward, CL = County Line

Table 5-2: **Year 2000 Daily Through Vehicle Trip Table**
Southeast Regional Planning Model VI

FROM STATION	TO STATION 4051	4052	4053	4054	4055	4056	4057	4058	4059	4088	4089	4132	4133	4134	Total Origin	Total Destination	Total Through Veh
4051		24	7	2			17			8		4	11		73	73	146
4052	24					1	75		3		15	5	14		137	137	274
4053	7									27	33	48	142	35	292	293	585
4054	2									8	22	12	35	10	89	89	178
4055																	
4056		1					30			7	1	1	1		41	40	81
4057	17	75				29			68	100	23	9	28	17	366	366	732
4058																	
4059		3					68			14	2		2		89	90	179
4088	8		27	8		7	100		15		72	99	295	102	733	732	1,465
4089		15	33	22		2	22		2	72		46	136		350	350	700
4132	4	5	48	12		1	9			99	46			187	411	411	822
4133	11	14	142	35			28		2	295	136			558	1,221	1,222	2,443
4134			36	10			17			102		187	558		910	909	1,819
Total Destination	73	137	293	89		40	366		90	732	350	411	1,222	909	4,712	4,712	9,424

Station	Road Name	Station	Road Name
4051	Beach Road @ MA CL	4058	Okeechobee Boulevard (US 98)
4052	SR 5 (North) @ MA CL	4059	SR 80/Us 441 @ Hendry CL
4053	I-95 (North) @ MA CL	4088	US 27 towards PB County
4054	Florida Turnpike (North) @ MA CL	4089	I-75/SR 84 towards Collier CL
4055	SR 7 Extension @ MA CL	4132	Tamiami Trail (US 41/SR 90)
4056	Pratt-Whitney Road @ MA CL	4133	US 1/SR 5 South @ Monroe CL
4057	Bee Line Hwy (SR 710) @ Okeechobee CL	4134	Card Sound Road @ Monroe CL

Symbol Used:
MA = Martin
BO = Broward
CL = County Line

Table 5-3: **Year 2030 Daily Through Vehicle Trip Table**
Southeast Regional Planning Model VI

FROM STATION	TO STATION 4051	4052	4053	4054	4055	4056	4057	4058	4059	4088	4089	4132	4133	4134	Total Origin	Total Destination	Total Through Veh	2000-2030 Growth Fac.
4051		33	9	3			25			10		7	18		105	105	210	1.44
4052	33					1	108		4		18	8	23		195	195	390	1.42
4053	9									30	38	74	219	46	416	416	832	1.42
4054	3									9	26	19	56	13	126	126	252	1.42
4055																		
4056		1					44			8	2	1	1		57	58	115	1.42
4057	25	108				44			100	126	29	16	48	24	520	520	1,040	1.42
4058																		
4059		4					100			18	2		3		127	127	254	1.42
4088	10		30	9		8	126		18		75	138	414	118	946	946	1,892	1.29
4089		18	38	26		2	29		2	75		66	195		451	451	902	1.29
4132	7	8	74	19		2	16			138	66			299	629	628	1,257	1.53
4133	18	23	219	56		1	48		3	414	195			892	1,869	1,869	3,738	1.53
4134			46	13			24			118		299	892		1,392	1,392	2,784	1.53
Total Destination	105	195	416	126		58	520		127	946	451	628	1,869	1,392	6,833	6,833	13,666	1.45

Station	Road Name	Station	Road Name
4051	Beach Road @ MA CL	4058	Okeechobee Boulevard (US 98)
4052	SR 5 (North) @ MA CL	4059	SR 80/Us 441 @ Hendry CL
4053	I-95 (North) @ MA CL	4088	US 27 towards PB County
4054	Florida Turnpike (North) @ MA CL	4089	I-75/SR 84 towards Collier CL
4055	SR 7 Extension @ MA CL	4132	Tamiami Trail (US 41/SR 90)
4056	Pratt-Whitney Road @ MA CL	4133	US 1/SR 5 South @ Monroe CL
4057	Bee Line Hwy (SR 710) @ Okeechobee CL	4134	Card Sound Road @ Monroe CL

Symbol Used:
MA = Martin
BO = Broward
CL = County Line

6. TRANSIT DATA

The Southeast Florida transit model incorporates the following transit systems: Palm-Tran of Palm Beach County, Broward County Transit (BCT), Broward Community Buses, Metro-Bus, Metrorail and Metromover of Miami-Dade County, Tri-Rail Feeders and Tri-Rail. This chapter presents the transit ridership data that were used in the 2000 validation of the MPO models. Data on the Metrorail and Tri-Rail systems were summarized to derive the targets for the model validation. Selected estimates from the recent South Florida on-board surveys [Reference 25] were used to derive the targets for the transit model validation. **Table G-5** of **Appendix G** provides an overall summary of 2000 transit ridership by mode.

6.1 Transit Ridership

Transit ridership data are essential for the validation of the base year transit model. Weekday transit ridership assembled for the 2000 MPO model validation was used in SERPM-6.

6.1.1 Palm-Tran Transit

Weekday transit ridership was obtained from Palm-Tran. Average monthly/daily weekday ridership was available for the month of October 1999 through September 2000 and December 2000. The monthly ridership data were used to estimate the average daily weekday ridership. **Table E-1** of **Appendix E** presents this route specific summary of Parm Tran transit. There are 34 routes including Tri-Rail feeder buses. Daily ridership of 18,951 was used for these routes.

6.1.2 BCT and Broward Community Buses

Weekday transit ridership was obtained from BCT. Average daily ridership was available for the months of February and March. Some of the ridership data were also available for the month of January. The monthly ridership data were used to estimate the average daily weekday ridership. **Table E-2** of **Appendix E** presents this route specific summary of BCT routes. There are 38 BCT routes with a daily ridership of 91,815. **Table E-2** also presents estimates of weekday ridership for the community buses and the Tri-Rail feeder buses. There are ten community bus routes and nine Tri-Rail feeder bus routes with daily ridership of 1,796 and 752, respectively.

6.1.3 Metro-Dade Transit

The transit ridership by route used in 2000 Miami-Dade model validation is shown in **Table E-3** of **Appendix E**. There are 73 local bus rotes with a total weekday ridership of 216,206. The five express buses have a total ridership of 4,146.

6.1.4 Tri-Rail

Tri-Rail station boarding and alighting information was obtained from the Tri-Rail Planning and Development Department. The station specific boardings and alightings data are summarized in **Table E-4** of **Appendix E**. Averages for 12 months of boardings and alightings were calculated for use in model validation. A total of 7,959 daily riders were used in the 2000 model validation.

6.1.5 Metrorail and Metromover

The station specific observed volumes used in 2000 MPO model validation are used in 2000 SERPM6 model validation. A total of 49,622 and 15,619 daily riders were used to model the Metrorail and Metromover, respectively.

6.2 Transit Survey Analysis and Target Trips

The SPSS package was used to analyze the 1999 Southeast Florida transit on board and household travel characteristics surveys. This analysis provided transit targets for mode choice model validation. The following results were tabulated from the analyses and are shown in several tables of **Appendices F** and **G**.

- Frequency Tabulation of Purpose, Access, and Household Vehicles for Transit Trips by periods and modes (see **Table F-1** of **Appendix F**)

- Frequency Tabulation of Purpose, Transfers, and Household Vehicles for Transit Trips by periods and modes (see **Table F-2** of **Appendix F**)

The tabulations above, listed from surveys and the ridership information from Section 6.1, were used to estimate the mode choice targets for transit validation. Transit targets by mode, access and purposes are presented in Tables G-6 and G-7 of Appendix G for peak and off-peak periods, respectively. These targets were used to calibrate the mode choice model (see Technical Report 2 - Model Calibration and Validation) by comparing the model estimates against the target values. The input information (**Tables G-1** to **G-5** of **Appendix G**) that is used to derive these targets follows here:

- Transit trip purposes distribution by mode (**Table G-1**)
- Transit trip household vehicle distribution by mode (**Table G-1**)
- Transit trip transfer rates by purpose, household vehicles and modes (**Table G-2**)
- Transit trip peak and off-Peak distribution by purpose and modes (**Table G-2**)
- Bus transit trip mode of access distribution by purpose, household vehicles and periods (**Table G-3**)
- Rail transit trip mode of access distribution by purpose, household vehicles and periods (**Table G-4**)
- Year 2000 system wide transit ridership summary by modes (**Table G-5**)

6.3 Station Data

The station data describes permanent park-and-ride and kiss-and-ride locations for rail and express bus stations. For the Tri-Rail stations, it also contains information on the Tri-Rail fare zones. The unloaded highway network node attributes are used to enter all the station related data (see items 3-13 of Table **B-12** of Technical Report 3). **Table G-3** of **Technical Report 3** presents the format for the STATION file, which is an output of the data stored on the nodes of the highway network.

The information about parking availability and other data (node, zone, maximum driving distance, all day and midday parking costs, added PNR and KNR time, etc.) for all Tri-Rail stations and other major transit centers are required to simulate the transit activities. All data used in the 2000 MPO model were reviewed before they were used in the SERPM6 model validation. These data are entered in the node layer of highway network. The station data used in the 2000 and 2030 SERPM6 models are presented in **Tables E-5 and E-6** of **Appendix E**. It should be noted that Tri-Rail fare zone information is not used from STATION file. The fare zone information is coded in the FAREZONE_YYA.DAT file.

6.4 Transit Fares

Transit fares for all operators are coded in 2000 dollars for the base year and 2006 dollars for the future year. The future year fares are scaled to 2000$ in the mode choice model via the INFL1 factor in PROFILE.MAS (see Appendix A of Technical Report 3). The boarding fares for PalmTran, Broward County Transit (BCT) and Miami-Dade Transit/Metrobus (MDT) operators are shown in the **Table 6-1**.

Tri-Rail charges a fare relative to the rail distance traveled. In other words, Tri-Rail fares are dependent on the number of fare zones travelers cross during their trip and are entered in the FAREZONE_YYA.DAT file. The rail service is divided into distinct fare zones. Traveling within a zone is considered to have traveled one zone. There were six such zones in 2000. Five additional zones were developed for 2030 to reflect three planned expansions. Refer to **Table 6-1** for the listing of Tri-Rail zones. The Jupiter line, running between West Palm Beach and Jupiter, and the Scripps line, running between the original Howard Scripps development and Mangonia Park, were assigned unique zones (Zones 7 and 8, respectively). The Florida East Coast (FEC) line was assigned three zones due to its length (Zones 9-11). Its zonal boundaries correspond to the existing boundaries on the main line. Tri-Rail fare based on number of fare zones traveled is shown in **Table 6-1**. Tri-Rail bus shuttles are free.

Both PalmTran and BCT employ different fare systems between 2000 and 2006. In 2000, a "boarding plus transfer" system was used; a boarding fare is charged on the first boarding and a reduced fare is charged for each transfer. PalmTran and BCT also have a reduced fare when transferring between the two systems. By 2006, both systems had eliminated reduced transfer fares. It is likely that customers that transfer regularly utilize one of the unlimited ride passes available. The SERPM6 fare logic assumes that single ride trips receive the general boarding fare while trips that require a transfer receive half of the cost of a daily pass. MDT's "boarding plus transfer" fare system remains the same between the two years except for some modest fare increases. The Metromover fare was eliminated between 2000 and 2006.

SERPM6 uses a scripted, rule-based process to determine transit fares because it was felt that TRNBUILD's fare capabilities were inadequate to capture the complex fare interactions among the different modes and operators. The different fare policies between 2000 and 2006 also make it challenging. This process, while not perfect, should produce the correct fare in most interchanges. The logics is listed in the 18 notes of Table 6-1. The fare is assigned when the interchange first meets the conditions of a rule. On interchanges using many modes and operators, a best-guess assumption of the most common fare is used.

In the SERPM602 model, a key (FARESTRUC) was added to handle the transit fares for years other than 2000 and 2030. The values of this new key for 2000 and 2030 models are set as BASE and FUTURE, respectively. For any interim year model run, the value of this key should be FUTURE. Transit fares for the 2030 model used 2006 transit fares and an INFL1 (Transit fare inflation) parameter from PROFILE.MAS (a value of 0.85), which converts the 2006$ fares to 2000$. If the FARESTRUC key is set to FUTURE, users should not change the value of INFL1 for interim years.

6.5 Transit Speed Curves

The transit model assumes the time for a transit vehicle to traverse a highway link is a linear (usually, segmented/piecewise linear) function of the highway travel time. A series of speed curves, based on the auto speed, define this relationship. Exclusive right-of-way transit lines (Tri-Rail and Metrorail) running times were based on their schedule times. Peak and off-peak files are maintained separately.

Table 6-1: **Transit Boarding and Transfer Fare Summary**

Southeast Regional Planning Model VI

Boarding Fares (see Notes):

	Fare in Cents (a)	
Agency/FareType	**2000 Model**	**2030 Model**
PalmTran	80	125
PalmTran_Pass ©		300
BCT	80	100
BCT_Pass ©		250
Metrobus	125	150
MetroExpress	150	185
MetroRail	125	150
MetroMover	25	0
Tri-Rail	(b)	(b)

Tri-Rail Zone Based Fares (b):

Fare Zones	Fare in Cents (a)	
Traveled	**2000 Model**	**2030 Model**
1	167	200
2	250	300
3	333	400
4	375	450
5	417	500
6	458	550
7	500	600
8	500	600

(a) Fares for 2000 Model are in 2000$ and for 2030 Model in 2006$.
Model application uses an inflation factor of "0.85" to convert 2030's 2006$ to 2000$.
(b) Tri-Rail implements "fare-zone" based fares
© For 2030, BCT and PalmTran do not offer reduced transfer fares as they did in 2000. One would get full fare if a transfer is made.
The model assigns the average value of a 1-way trip based on the pass fare.

Transfer Fares (see Notes):

	Fare in Cents (a)	
Agency/Transfer	**2000 Model**	**2030 Model**
PalmTran_Xfer	25	
BCT_Xfer	25	
Metro_to_BCT	80	15
Metro_Xfer	25	50
Metro_to_Express	50	85

Notes:

The Cube-Voyager script computes fare based on paths. Following logics are implemented to calculate this path based fares:

(1) No transfer fare to Tri-Rail Shuttle, if a ride takes place between Tri-Rail and Tri-Rail Shuttle.

(2) If a ride takes place in Tri-Rail mode, the Tri-Rail zonal fare governs assuming that the Tri-Rail is the dominate mode.

(3) For 2000 PalmTran only ride with transfer, "PalmTran_Xfer" is applied for any transfer in addition to PalmTran boarding fare.

(4a) For 2030 PalmTran only ride with transfer, the average cost of trip based on "PalmTran_pass" governs.

(4b) For 2030 PalmTran only ride without any transfer, the PalmTran boarding fare is applied.

(5) For 2000 BCT only ride with transfer, "BCT_Xfer" is applied for any transfer in addition BCT boarding fare.

(6a) For 2030 BCT only ride with transfer, the average cost of trip based on "BCT_pass" governs.

(6b) For 2030 BCT only ride without any transfer, the BCT boarding fare is applied.

(7) For Metrobus only ride with or without any transfer, "Metro_Xfer" is applied for any transfer in addition to Metrobus boarding fare.

(8) For MetroExpress only ride with or without any transfer, "Metro_Xfer" is applied for any transfer in addition to MetroExpress boarding fare.

(9) For Metrorail only ride, MetroRail boarding fare is used.

(10) For Metromover only ride, MetroMover boarding fare is used.

(11a) For 2000, a ride in PalmTran and BCT with no other transfers, the BCT and PalmTran boarding fares are added.

(11b) For 2000, a ride in PalmTran and BCT with additional transfers, the "BCT_Xfer" is applied to each added transfer in addition to total boarding fares of BCT and PalmTran.

Table 6-1 (Continued)

Notes (continued):

(12) For 2030, a ride in PalmTran and BCT, the average cost of trip based on "PalmTran_pass" governs.
(13) For a ride in BCT and Metrobus only, fare is sum of Metrobus (boarding), "Metro_to_BCT" transfer, and additional transfers using "Metro_Xfer".
(14) For a ride in BCT and Metro Express bus only, fare is sum of MetroExpress (boarding), "Metro_to_BCT" transfer, and additional transfers using "Metro_Xfer".
(15) For a ride in Metrobus and Metro Express bus only, fare is sum of MetroExpress (boarding) and additional transfers using "Metro_Xfer".
(16) For a ride in Metrobus and MetroRail only, fare is sum of MetroRail (boarding) and additional transfers using "Metro_Xfer".
(17) For a ride in Metro Express bus and MetroRail only, fare is sum of MetroExpress (boarding) and additional transfers using "Metro_Xfer".
(18) For riding various flavors of Metro not pointed above (notes 1,2,7-10,13-17), fare is calculated as sum of Metrobus (boarding) and additional transfers using "Metro_Xfer".

Tri-Rail Station Farezones:

2000 Tri-Rail Fare Zones		
Node	**Station**	**FareZone**
30500	Mangonia Park	1
30501	West Palm Beach	1
30503	Lake Worth	1
30504	Boynton Beach	2
30505	Delray Beach	2
30506	Boca Raton	3
30509	Deerfield Beach	3
30510	Pompano Beach	3
30511	Cypress Creek	4
30512	Fort Lauderdale	4
30513	FLL Airport	5
30514	Sheridan	5
30515	Hollywood	5
30518	Golden Glades	6
30519	Opa Locka	6
30520	Tri-Rail	6
30521	Hialeah Market	6
30522	Miami Airport	6

2030 Tri-Rail Fare Zones		
Node	**Station**	**FareZone**
30500	Mangonia Park	1
30501	West Palm Beach	1
30502	Australian	1
30503	Lake Worth	1
30504	Boynton Beach	2
30505	Delray Beach	2
30506	Boca Raton	3
30509	Deerfield Beach	3
30510	Pompano Beach	3
30511	Cypress Creek	4
30512	Fort Lauderdale	4
30513	FLL Airport	5
30514	Sheridan	5
30515	Hollywood	5
30518	Golden Glades	6
30519	Opa Locka	6
30520	Tri-Rail	6
30521	Hialeah Market	6
30522	Miami Airport	6
30530	Jupiter	7
30533	Frederick	7
30534	PGA Blvd	7
30537	Blue Heron	7
30539	WPB-Jupiter	7
30550	Old Scripps	8
30552	Mangonia-Scripps	8
30560	Aventura	11
30562	Hollywood-FEC	11
30563	FLL Airport-FEC	11
30564	Fort Lauderdale-FEC	10
30565	Sunrise	10
30566	Oakland Park	10
30567	Cypress Creek-FEC	10
30568	Atlantic	9
30569	Deerfield Beach-FEC	9
30570	Boca Raton-FEC	9

Table 6-1 (Continued)

Number of Tri-Rail Farezone Traveled:

2000 Model		
From/To Farezone		Farezones Traveled
1	1	**1**
1	2	**2**
1	3	**3**
1	4	**4**
1	5	**5**
1	6	**6**
2	2	**1**
2	3	**2**
2	4	**3**
2	5	**4**
2	6	**5**
3	3	**1**
3	4	**2**
3	5	**3**
3	6	**4**
4	4	**1**
4	5	**2**
4	6	**3**
5	5	**1**
5	6	**2**
6	6	**1**

2030 Model		
From/To Farezone		Farezones Traveled
1	1	**1**
1	2	**2**
1	3	**3**
1	4	**4**
1	5	**5**
1	6	**6**
1	7	**2**
1	8	**2**
1	9	**4**
1	10	**5**
1	11	**6**
2	2	**1**
2	3	**2**
2	4	**3**
2	5	**4**
2	6	**5**
2	7	**3**
2	8	**3**
2	9	**3**
2	10	**4**
2	11	**5**

2030 Model		
From/To Farezone		Farezones Traveled
3	3	**1**
3	4	**2**
3	5	**3**
3	6	**4**
3	7	**4**
3	8	**4**
3	9	**2**
3	10	**3**
3	11	**4**
4	4	**1**
4	5	**2**
4	6	**3**
4	7	**5**
4	8	**5**
4	9	**3**
4	10	**2**
4	11	**3**
5	5	**1**
5	6	**2**
5	7	**6**
5	8	**6**
5	9	**4**
5	10	**3**
5	11	**2**
6	6	**1**
6	7	**7**
6	8	**7**
6	9	**5**
6	10	**4**
6	11	**3**
7	7	**1**
7	8	**2**
7	9	**5**
7	10	**6**
7	11	**7**
8	8	**1**
8	9	**5**
8	10	**6**
8	11	**7**
9	9	**1**
9	10	**2**
9	11	**3**
10	10	**1**
10	11	**2**
11	11	**1**

Table 6-2 shows the curve used to calculate the peak and off-peak period transit run times. Different sets of curves were developed for the off-peak period. **Table 6-3** presents the speed conversion factors. Depending on area type and facility type of each link, a different curve is applied to estimate the transit speed from the auto speed. The curve number to be used for each area type and facility type combination is shown in **Table 6-2**.

Table 6-2: **Auto-Transit Curves Used by Area and Facility Type Combinations**
Southeast Regional Planning Model VI

Curves for mode 4 (Broward and Palm Beach County Buses)

FT AT	10-19	20-29	40-49	50-59	60-69	70-99
1-1	3	6	6	4	13	3
2-2	4	6	6	5	6	4
3-3	4		10	7	10	4
4-4	4		8	6	8	4
5-5	5		12	2	12	5

Curves for mode 5 (Metrobus)

FT AT	10-19	20-29	40-49	50-59	60-69	70-99
1-1	3	11	11	4	13	3
2-2	4	11	11	5	11	4
3-3	4		15	7	15	4
4-4	4		14	11	14	4
5-5	5		12	2	12	5

Table 6-3: **Auto-Transit Speed Relationship Curves**
Southeast Regional Planning Model VI

Peak period

Curve Number	X1	X2	Y1	Y2
1	30	70	2.5	2.5
2	30	70	30	70
3	25	45	25	30
4	27	50	27	40
5	35	55	35	48
6	18	32	10	16
7	20	35	12	19
8	20	35	10	14
9	16	36	11	21
10	17	36	14	20
11	20	34	9	13.5
12	24	48	16	25
13	20	28	10	14
14	16	37	12	15
15	21	38	12	18

Off-peak period

Curve Number	X1	X2	Y1	Y2
1	30	70	2.5	2.5
2	30	70	30	70
3	25	45	25	30
4	27	50	27	40
5	35	55	35	48
6	17	31	11.5	17.5
7	19	34	13.5	20.5
8	19	34	11.5	15.5
9	15	35	12.5	22.5
10	18	35	13.5	20.5
11	19	33	10.5	15
12	23	47	17.5	26.5
13	19	27	11.5	15.5
14	21	36	10.5	13.5
15	20	37	11.5	17.5

Note: (0, 0), (X1, Y1) and (X2, Y2) are the three curve points on the piecewise continuous auto-transit speed relationship

6.6 PCWALK File Development

There are four elements to correctly determine transit accessibility: zonal access, walk-access connectors, drive-access connectors, and non-centroid to non-centroid connectors. Percent walk represents the proportion of zone that is accessible to the transit stops. Proportions are determined using buffers in GIS around the stops and stations. The portion of a zone within 0.33 mile of the stops is called short-walk percent and that within one mile is long-walk area.

The percent walk is an input file required by the transit model. **Appendix I** describes an ARCVIEW based process to develop this percent walk file. This process also employs a user written program (CVLIN2AV) that parses Cube Voyager transit route lines for ARCVIEW import. A listing of this program is also presented in **Appendix I**. The format for PCWALK file is shown in **Table 6-4**. The walk percentages vary by short and long walk, peak and off-peak period and production and attraction ends.

Table 6-4: **Format for PCWALK Data**
Southeast Regional Planning Model VI

col 1-5	Zone number
col 6-11	Short production walk percentage - peak
col 12-17	Short attraction walk percentage - peak
col 18-23	Long production walk percentage - peak
col 24-29	Long attraction walk percentage - peak
col 30-35	Short production walk percentage - off-peak
col 36-41	Short attraction walk percentage - off-peak
col 42-47	Long production walk percentage - off-peak
col 48-53	Long attraction walk percentage - off-peak

GIS spatial analysis techniques were employed to estimate the percentage walk file. The process can generate coverages either along transit lines (line buffers) or around the stop nodes only (point buffers). For the SERPM6 models, coverages along the lines were used. Detailed step-by-step procedures along with programs are presented in **Appendix I**.

The idea behind the need for PCWALK file is that the mode choice logit equations should be applied only when there is a choice that can be estimated by the logit curve. If, for a given trip, either the origin or destination of a walk access trip is not within walking distance of transit service, then the trip cannot be a walk-to-transit trip and so the logit equation does not apply. In such cases, the choice of modes is determined by the access conditions alone. Florida's nested logit model assumes a long walk distance of one mile, and a short walk distance of one-third of a mile. These distances apply to the production end (home) of trips. For the attraction end, the percentage of activity within the walk area is assumed to be twice that of the production end (capped at 100%) on the assertion that trip attraction activities (like jobs and shopping) are more clustered, and that bus stops serve these areas directly.

The mode choice programs use the percentage walk file (PCWALK). It defines the walking coverage of each zone by short/long walk, production/attraction and peak/off-peak transit systems. The REWALK program may modify the data of PCWALK file to be compatible with PT generated walk connectors. Interested readers should consult **Section 3.7.2** of **Technical Report 3** for the logic of this modification.

7. OTHER DATA DEVELOPMENT AND REVIEW

SERPM6 includes "true" time of day modeling, with a peak and off-peak period modeled for all three main trip purposes (HBW, HBNW and NHB). It implements varying levels of time-of-day modeling for distribution, transit paths and skimming, mode choice and assignments. Right after trip generation, trips are distributed as peak and off-peak trips. Separate distributions are also made for trips with and without vehicles. Transit peak and off-peak periods are modeled separately. After mode choice, the highway peak period trips are subdivided again to AM- and PM-peak periods. The assignments from all periods are then combined and assigned trips are compared to 24-hour traffic counts, and transit assignments are compared to ridership counts. To evaluate the period model, period specific traffic counts also were assembled and entered into the network database. The three periods, totaling 24 hours that are modeled in SERPM6 are:

4. **AM-Peak Period (6:30-9:30 am)**
5. **PM-Peak Period (3:30-6:30 pm)**
6. **Off-peak Period (9:30 am – 3:30 pm, 6:30 pm – 6:30 am)**

This chapter presents the results of surveys to derive time-of-day factors. In addition, it presents the calibrated friction factors and trip CTPP trip length data. In particular, this data was used to assess trip lengths for zero-vehicle household trips.

7.1 Trip Length and Friction Factor Data

The friction factor curves used in SERPM6 model use a "Gamma" function (a function most commonly used for synthesized friction factors). **Table 7-1** presents the parameters of the gamma function that was validated for all eleven purposes in both off-peak and peak period trip distribution using free-flow and congested skims. The validated friction factors files (FF.CSV and FF2.CSV) are shown in **Tables C-4** and **C-5** of **Technical Report 2** (Model Calibration and Validation). The FF.CSV file is used in the distribution with free-flow skims and FF2.CSV file is used for the distribution with congested skims.

The zero-car household trip distribution uses a standard gravity model and "deterrence" functions for four home based trip purposes (Work, Shopping, Social-Recreation and Others). This is done separately for peak and off-peak periods. The validated deterrence coefficients (DC) of zero-car household trips of four home-based purposes are:

- Home-Based Work: 0.077265
- Home-Based Shopping: 0.115906
- Home-Based Social-Recreation: 0.106250
- Home-Based-Other: 0.110874

The DC for the work purpose is different from the other purposes. The friction factors (FF_{ij}) of the IJ zone pairs are calculated using following exponential function:

$$FF_{ij} = EXP(-DC_p * I_{ij})$$

Where, DC_p is purpose specific deterrence coefficient,
I_{ij} is impedance (transit travel time) between IJ zone pair,
EXP is the exponential function.

Table 7-1: **Validated Gamma Function Parameters of Friction Factors**
Southeast Regional Planning Model VI

	Parameters for Peak Distribution			Parameters for Off-Peak Distribution		
Purpose	a_p	b_p	c_p	a_p	b_p	c_p
1. HB Work	1,000,000	-0.040	-0.104	1,000,000	-0.040	-0.104
2. HB Shopping	1,000,000	-1.451	-0.120	1,000,000	-1.451	-0.120
3. HB SocRec	1,000,000	-1.451	-0.080	1,000,000	-1.451	-0.080
4a. HB School -Non Public	1,000,000	-1.451	-0.124	1,000,000	-1.451	-0.124
5. HB Other	1,000,000	-1.726	-0.093	1,000,000	-1.726	-0.093
6. Non Home Based Work	1,000,000	-1.201	-0.070	1,000,000	**-1.251**	**-0.085**
7. Non Home Based Other	1,000,000	-1.201	-0.076	1,000,000	**-1.251**	**-0.092**
8. Airport	100,000	-0.020	-0.180	100,000	-0.020	-0.180
9. Trucks - 4-tired	100,000		-0.110	100,000		**-0.120**
10. Trucks - Single Unit	100,000		-0.091	100,000		**-0.101**
11. Trucks - Combinations	100,000		-0.073	100,000		**-0.083**

Gamma Function:

$$F(I)_p = a_p * (I ** b_p) * EXP (c_p * I)$$

where,

a_p, b_p and c_p = calibration coefficients,

$F(I)_p$ = friction factor for ompedance value "I" and trip purpose "p",

I = impedance value, and

EXP = exponential function.

To validate the zero car household's trip lengths, the trip lengths data from CTPP were summarized for Southeast Florida region. **Table 7-2** presents that summary. Trip length of public transportation mode was used to validate the zero vehicle household trip lengths. Whereas, the surveys trips assembled for previous SERPM models as well as model estimated trip lengths of recently validated Southeast Florida models (see **Sections D** and **E** of **Table 6-2, Technical Report 2**) were used to validate the SERPM6 model.

Table 7-2 : **CTPP 2000 Travel Time Summary for Southeast Region**

Southeast Regional Planning Model VI

Means of Transportation	County (1)	Workers who did not work at home	Mean travel time to work (minutes)
0. All Modes	Miami-Dade	875,175	30.1
	Broward	722,035	27.4
	Palm Beach	456,120	25.7
	Region	**2,053,330**	**28.2**
1. Drove alone	Miami-Dade	663,900	28.7
	Broward	595,165	26.6
	Palm Beach	378,760	24.9
	Region	**1,637,825**	**27.1**
2. Carpooled	Miami-Dade	131,300	31.5
	Broward	89,375	28.2
	Palm Beach	56,745	27.8
	Region	**277,420**	**29.7**
3. Public transportation (Include taxicab)	Miami-Dade	47,085	51.0
	Broward	17,050	47.9
	Palm Beach	6,670	45.6
	Region	**70,805**	**49.7**
4. Bicycle or walked	Miami-Dade	23,445	15.0
	Broward	13,085	15.0
	Palm Beach	8,925	14.6
	Region	**45,455**	**14.9**
5. Motorcycle or other means	Miami-Dade	9,435	41.5
	Broward	7,360	54.5
	Palm Beach	5,015	52.6
	Region	**21,810**	**48.4**

(1) Regional data of mean travel time are weighted averages.

7.2 Time-of-Day Model Factors and CONFAC

At the initial stage of this study, the development of a Time-of-Day model was considered. Both "pre" and "post" distribution TOD modeling processes were considered. After several rounds of conversation among the model advisory committee, it was decided that SERPM6 would be a pre-distribution TOD model.

An analysis of travel logs of both Household and Transit On-Board Surveys [Reference 25] was carried out using SPSS software. Following the standard practice of other areas of the nation, it was decided to use the mid-point of the travel log time to see the distribution of trips by purpose and to determine the time periods of the TOD models. The distribution of trips by half-hour interval of time in motion was done. Those distributions are shown in **Figure H-1** of **Appendix H.** A similar distribution of traffic counts was prepared using FDOT 15-minutes intervals traffic count data base. **Figure H-2** compares this distribution against survey trips.

Distributions of traffic counts using same half-hour intervals of FDOT 15-minutes traffic counts for the whole region as well as each of the counties were compared (see **Figure H-3**). A similar comparison was made for the truck classifications counts and is shown in **Figure H-4**.

Based on the trends exhibited in the temporal distribution of trips (see **Figures H-1** to **H-4**) as well as reference time employed in other time-of-day models in the nation, the following four time periods were selected to develop the TOD model factors. Some models in other urban areas use a different number of hours for the AM and PM peak periods. But for SERPM6, these periods were defined as 3 hours each after reviewing traffic patterns with the PRC. The time periods are:

1. AM-Peak Period (6:30 AM to 9:30 AM) – 3 hours
2. MIDDAY Period (9:30 AM to 3:30 PM) – 6 hours
3. PM-Peak Period (3:30 PM to 6:30 PM) – 3 hours
4. OFF-Peak / Night Period (6:30 PM to 6:30 AM) – 12 hours

Table H-1 presents a summary of the TOD model factors for these four periods by trip purpose and region. The factors were developed for each county (Palm Beach, Broward and Miami-Dade) as well as for the whole region.

In addition, four peak hours (7:30-8:30 AM, 2:30-3:30 PM, 5:00-6:00 PM and 6:30-7:30 PM) were selected within each four periods to develop corresponding peak hour factors. **Table H-2** presents these factors by trip purpose and region.

For any post-mode TOD adjustments (for example, two peak periods, AM and PM, after one peak mode step), production-to-attraction (P-to-A or PA) and attraction-to-production (A-to-P or AP) are required for the home-based trip purposes. **Tables H-3** and **H-4** present these distribution factors for the four time periods and the two peak hours of the HBW and HBNW trip purposes, respectively. Once again, these factors were compiled from the 1999 South Florida Household Travel Characteristics Survey [Reference 25].

The CONFAC values for the TOD model represent a fraction of the peak hour trips of the period. For the model application these values are again needed by the facility type. **Tables H-5** and **H-7** summarize the CONFAC values that were derived from both 15-minute period count data as well as temporal distribution of survey trips.

The truck traffic distributions are very different than that of passenger vehicles (see **Figure H-4**). Because of this, separate truck TOD factors were developed by analyzing truck traffic classification counts. Tables H-8 and H-9 presents these factors by different truck class as well as for cars.

The factors presented in Tables **H-1** to **H-8** were used in the SERPM6 model. The final validated TOD diurnal factors (see **Table 4-1** of **Technical Report 2**) are also presented in **Table 7-3**.

Table 7-3: **Time-of-Day Model Diurnal Factors**
Southeast Regional Planning Model VI

A. Peak & Off-Peak Factors:

HBW-PK	0.5980	HBW-OP	0.4020
HBSHP-PK	0.3790	HBSHP-OP	0.6210
HBSCR-PK	0.3861	HBSCR-OP	0.6139
HBSCH-PK	0.5225	HBSCH-OP	0.4775
HBO-PK	0.3821	HBO-OP	0.6179
NHBW-PK	0.3915	NHBW-OP	0.6085
NHBO-PK	0.2991	NHBO-OP	0.7009
ARPRT-PK	0.3316	ARPRT-OP	0.6684
T4TRK-PK	0.3864	T4TRK-OP	0.6136
SUTRK-PK	0.4541	SUTRK-OP	0.5459
COMBTRK-PK	0.3594	COMBTRK-OP	0.6406

B. AM and PM Peak Splitting Factors:

AMPKSF-HBW	0.4834	PMPKSF-HBW	0.5166
AMPKSF-HBNW	0.4482	PMPKSF-HBNW	0.5518
AMPKSF-NHB	0.3983	PMPKSF-NHB	0.6017
AMPKSF-4TTRK	0.4755	PMPKSF-4TTRK	0.5245
AMPKSF-SUTRK	0.4830	PMPKSF-SUTRK	0.5170
AMPKSF-COMBTRK	0.4492	PMPKSF-COMBTRK	0.5508

C. AM and PM Peak PtoA (PA) & AtoP (AP) Factors:

AMPKPAF-HBW	0.9549	PMPKPAF-HBW	0.0963	OFPKPAF-HBW	0.4947
AMPKPAF-HBNW	0.7683	PMPKPAF-HBNW	0.3051	OFPKPAF-HBNW	0.4889
AMPKAPF-HBW	0.0451	PMPKAPF-HBW	0.9037	OFPKAPF-HBW	0.5053
AMPKAPF-HBNW	0.2317	PMPKAPF-HBNW	0.6949	OFPKAPF-HBNW	0.5111

8. SUMMARY AND CONCLUSION

This study developed and validated version 6 of the 2000 and 2030 Southeast Regional Planning Model. The regional model encompasses the MPO modeling areas of the Palm Beach, Broward and Miami-Dade Counties. Although many enhancements were made to the regional model, most of the socio-economic and network data were taken directly from the MPO models.

SERPM6 provides the Southeast Florida region with full weekday multimodal and multi-period transportation system modeling capabilities including high occupancy vehicle (HOV) lanes, trucks and transit.

The processes used to develop the initial regional highway and transit networks are described in detail. Both highway and transit networks have undergone extensive updating as part of model validation. Zonal data were assembled. Most of the zonal data were assembled from the MPO model to support the regional "lifestyle" based programs. External model data were updated to reflect the 2000 and 2030 conditions. Transit ridership data and surveys were used to develop the new targets for transit model validation.

Survey data were used to develop the factors for the TOD models and to develop the targets for the transit model validation. In support of these model enhancements, the three area MPOs and FDOT District 4 staffs have collected the most current and accurate data available. The development, collection, analysis and review of these data are presented in numerous tables, figures and appendices of this report. The data and parameters presented in this report are used in model validation and calibration.

9. LIST OF REFERENCES

Recent MPO Model References:

1. **Data Compilation and Review, Technical Report 1, Palm Beach County Planning Model – 2000 Model Update**, Palm Beach County MPO and FDOT, Prepared by The Corradino Group, June 2005.
2. **Model Calibration and Validation, Technical Report 2, Palm Beach County Planning Model – 2000 Model Update**, Palm Beach County MPO and FDOT, Prepared by The Corradino Group, June 2005.
3. **Model Application Guidelines, Technical Report 3, Palm Beach County Planning Model – 1999 Model Update**, Palm Beach County MPO and FDOT, Prepared by The Corradino Group, June 2005.
4. **Data Compilation and Review, Technical Report 1, Broward County Planning Model – 2000 Model Update**, Broward County Department of Planning and Environmental Protection, FDOT, Prepared by The Corradino Group, June 2005.
5. **Model Calibration and Validation, Technical Report 2, Broward County Planning Model – 2000 Model Update**, Broward County Department of Planning and Environmental Protection, FDOT, The Corradino Group, June 2005.
6. **Model Application Guidelines, Technical Report 3, Broward County Planning Model – 2000 Model Update**, Broward County Department of Planning and Environmental Protection, FDOT, The Corradino Group, June 2005.
7. **Model Validation Report – Miami-Dade Transportation Plan (to the Year 2030)**, Miami-Dade MPO, Prepared by Gannett Fleming, April 2005.

Recent SERPM (Versions IV and V) Related References:

8. **Model Application Guidelines, Technical Report 3 (Draft), Southeast Regional Planning Model 6 (SERPM6) – 2000 and 2030 Models**, FDOT – District 4, Prepared by The Corradino Group and AECOM Consult. Inc., January 2007.
9. **Executive Summary, Model Description and Validation, SERPM6**, FDOT – District 4, Prepared by The Corradino Group and AECOM Consult. Inc., November 2006.
10. **Revised Transit Model and Validation, Technical Report, Southeast Regional Planning Model V (SERPM5) – 1999 and 2025 Models**, FDOT – District 4, Prepared by The Corradino Group and AECOM Consult. Inc., April 2005.
11. **Data Development and Model Update, Technical Report 1 (Draft), SERPM5 – 1999 and 2025 Models**, FDOT- District 4, Prepared by The Corradino Group, December 2002.
12. **Model Calibration and Validation, Technical Report 2 (Draft), SERPM5 – 1999 and 2025 Models**, FDOT- District 4, Prepared by The Corradino Group, December 2002.
13. **Model Application Guidelines, Technical Report 3 (Draft), SERPM5 – 1999 and 2025 Models**, FDOT- District 4, Prepared by The Corradino Group, December 2002.

14. **SERPM4 Model Forecast Enhancements, Technical Report**, Southeast Florida Travel Characteristics Study Phase IV, FDOT, Prepared by Carr Smith Corradino, October 2001.

15. **Tri-Rail Long Range Plan Modeling Using SERPM4, Technical Memorandum,** Prepared for Parsons Brinkerhoff, Prepared By The Corradino Group, October 2001.

16. **SERPM4 1996 Model Validation,, Technical Report**, FDOT, Prepared by Reynolds, Smith and Hills, Inc and The Corradino Group, June 1999.

17. **SERPM4 Users Manual: PC-X32 Version**, FDOT, Prepared by The Corradino Group, September 1997.

18. **Southeast Regional Planning Model IV (SERPM4), Model Validation Report,** FDOT, Prepared by The Corradino Group, August 1996.

Other Florida References:

19. **Data Dictionary**, Systems Planning Office, FDOT, December 2005.

20. **Tri-Rail On-Board Survey Analysis**, Tri-County Commuter Rail Authority, Prepared by Center for Urban Transportation Research - University of South Florida, October 1991.

21. **MDTA On-Board Survey Analysis**, MDTA, Prepared by Center for Urban Transportation Research- University of South Florida, May 1994.

22. **Enhanced FSUTMS Trip Generation Model – Final Report**, FDOT, District 4, Prepared by Carr Smith Corradino, August 1997.

23. **An Addendum to the Enhanced FSUTMS Trip Generation Model**, FDOT, Prepared by Carr Smith Corradino, September 1997.

24. **Lifestyle Trip Generation Model: Revised Special Generator and Schools Model**, Technical Memorandum, Florida Department of Transportation, District 4, submitted by: Carr Smith Corradino, September 1999.

25. **Southeast Florida Regional Travel Characteristics Study - Travel 2000,** Executive Summary and Final Technical Reports, Prepared for Florida Department of Transportation and Palm Beach, Broward and Miami-Dade MPOs, Prepared by Carr Smith Corradino, October 2000.

26. **Development of Trip Rates and Friction Factors for Southeast Florida Demand Forecast Models**, Technical Report, Southeast Florida Travel Characteristics Study Phase IV, Florida Department of Transportation, Prepared by Carr Smith Corradino, October 2001.

27. **Trip Attraction Equation Refinements, Draft Final Report**, FDOT, Prepared by Carr Smith Corradino, December 2001.

Other National References:

28. **NCHRP 365 – Travel Estimation Techniques for Urban Planning**, Transportation Research Board, National Research Council, 1998.

29. **Model Validation and Reasonableness Checking Manual**, Travel Model Improvement Program, Federal Highway Administration, February 1997.

30. **Quick Response Freight Manual**, Travel Model Improvement Program, USDOT, September 1996.

31. **Calibration and Adjustment of System Planning Models**, Federal Highway Administration, USDOT, December 1990.

32. **NCHRP 255 – Highway Traffic Data for Urbanized Area Project Planning and Design**, Transportation Research Board, National Research Council, December 1982.

33. **NCHRP 187 – Quick Response Urban Travel Estimation Techniques and Transferable Parameters: User's Guide**, Transportation Research Board, National Research Council, 1978.

34. **Traffic Assignment - methods, application and products**, U.S. Department of Transportation (USDOT), August 1973.

Appendix A

2000 Highway Merging CV Flowcharts and Scripts

Figure A-1: **CV Flowcharts for Initial 2000 Highway Network Development**
Southeast Regional Planning Model VI

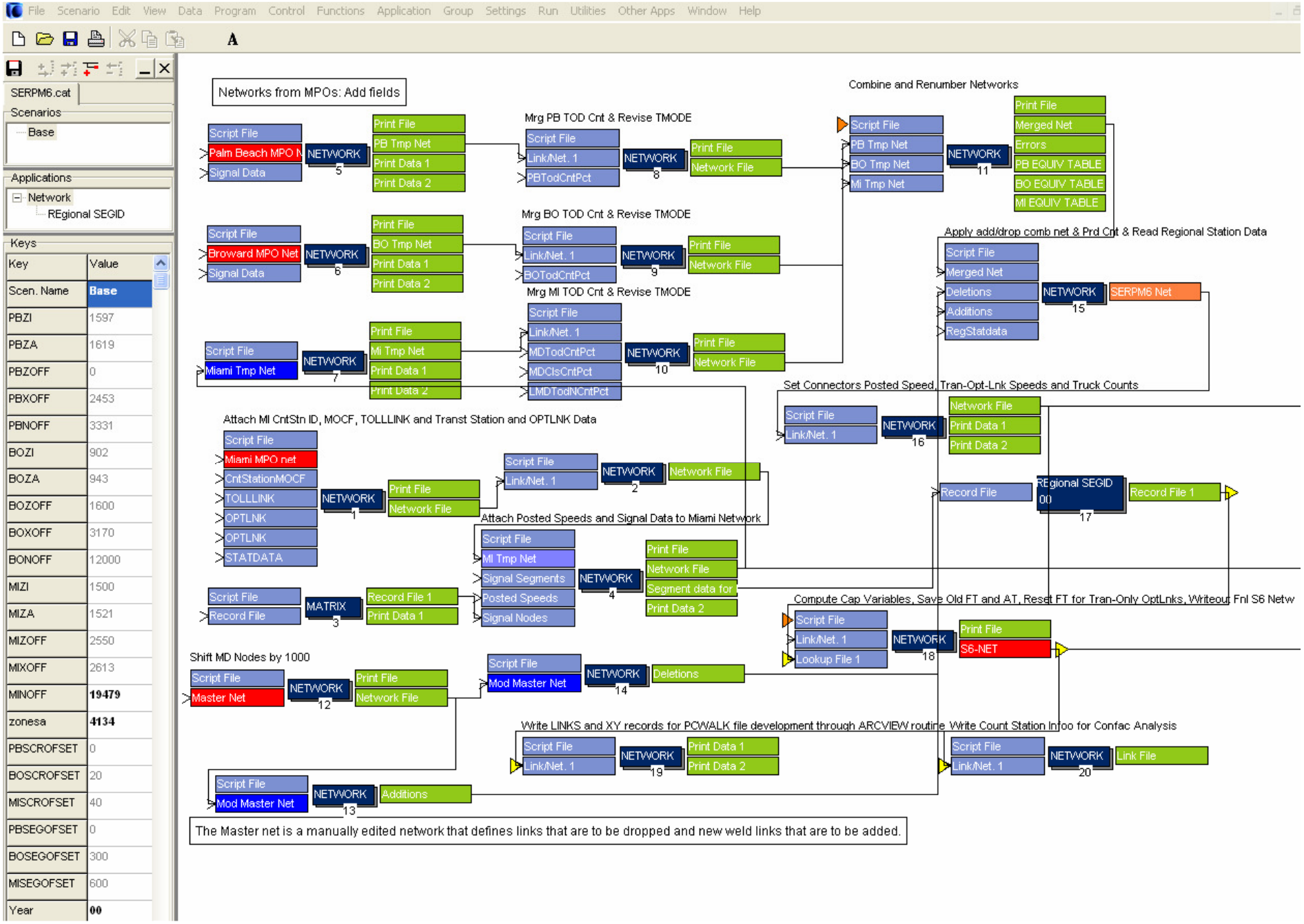


Figure A-1 (Continued)

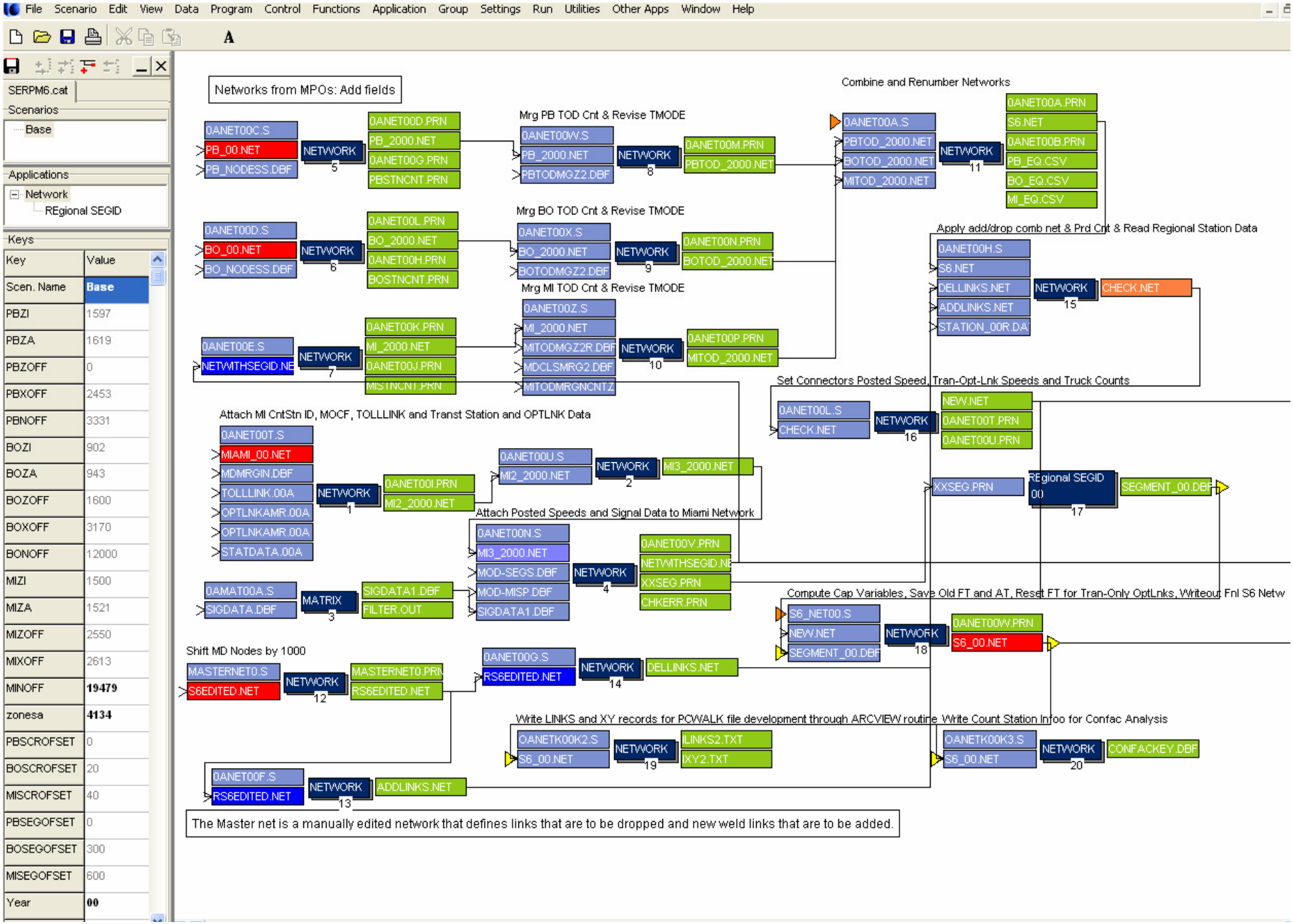


Figure A-1 (Continued)

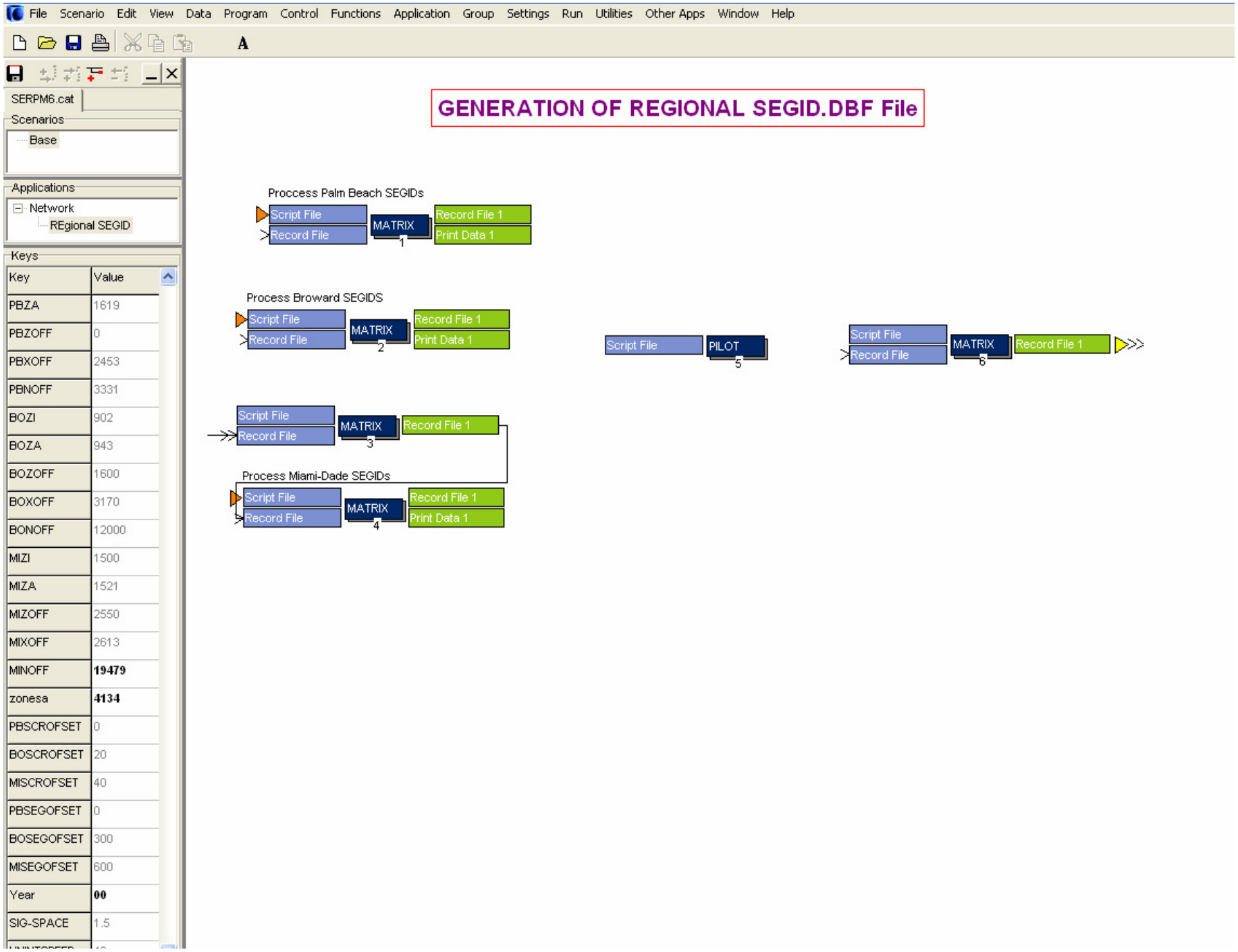
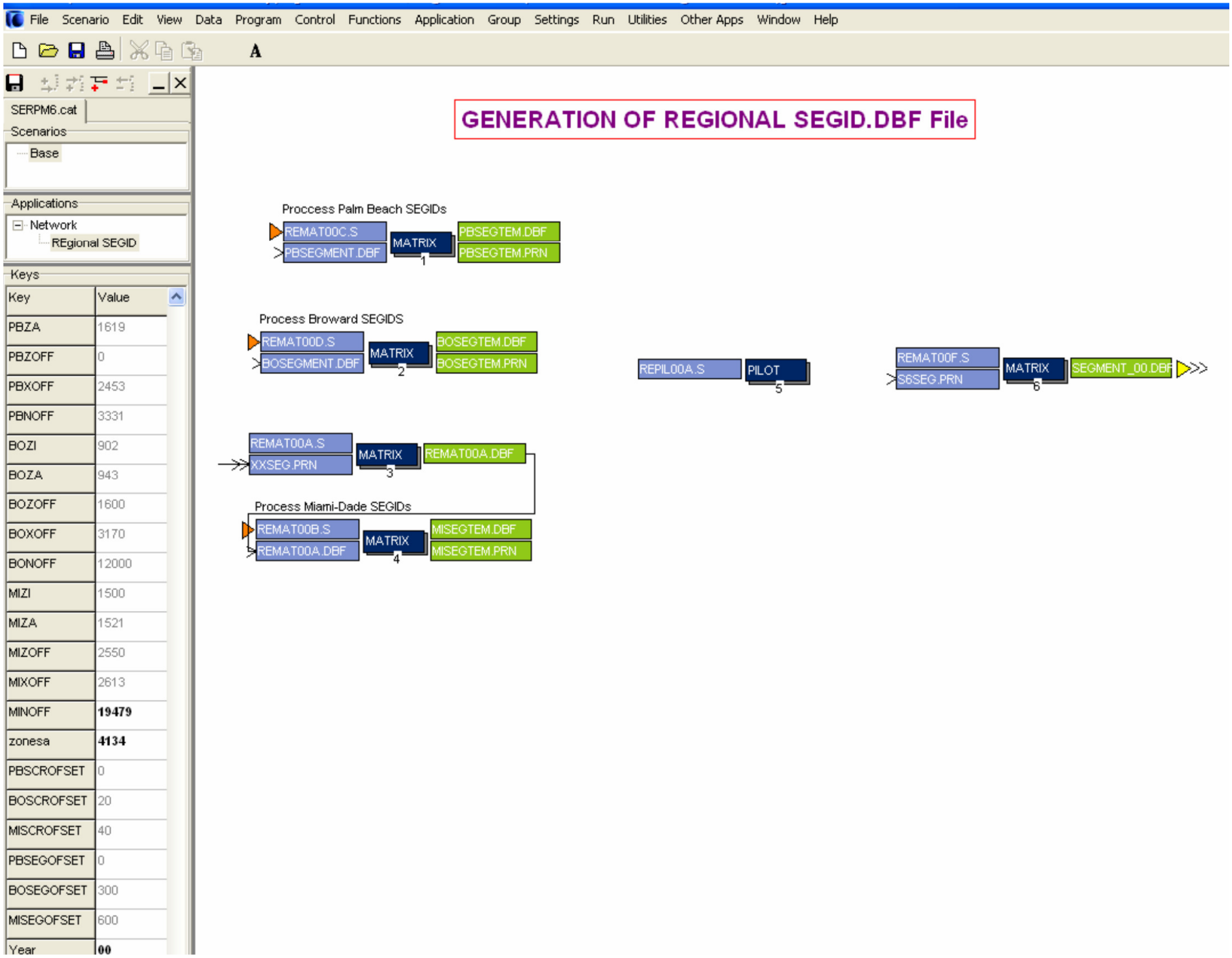


Figure A-1 (Continued)



1-0ANET00T.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00I.PRN" MSG='Attach MI CntStn ID, MOCF, TOLLLINK and Transt Station
and OPTLNK Data'
FILEI LINKI[5] = "D:\3038D4\S6\S6-NET\MIIN\OPTLNKAMR.00A",
 VAR=B, BEG=2, LEN=5,
 VAR=A, BEG=7, LEN=5,
 VAR=TMODE, BEG=13, LEN=1,
 VAR=TDIST, BEG=18, LEN=5,
 VAR=TSPEED, BEG=24, LEN=4,
 VAR=TTIME, BEG=29, LEN=4

FILEI LINKI[4] = "D:\3038D4\S6\S6-NET\MIIN\OPTLNKAMR.00A",
 VAR=A, BEG=2, LEN=5,
 VAR=B, BEG=7, LEN=5,
 VAR=TMODE, BEG=13, LEN=1,
 VAR=TDIST, BEG=18, LEN=5,
 VAR=TSPEED, BEG=24, LEN=4,
 VAR=TTIME, BEG=29, LEN=4

FILEI NODEI[2] = "D:\3038D4\S6\S6-NET\MIIN\STATDATA.00A",
 VAR=STATIONNUMBER BEG=1, LEN=4,
 VAR=N, BEG=5, LEN=6,
 VAR=STATIONZONE, BEG=11, LEN=6,
 VAR=SERVICEMILES, BEG=17, LEN=6,
 VAR=PARKINGSPACES, BEG=23, LEN=6,
 VAR=PARKINGCOSTAM, BEG=29, LEN=6,
 VAR=PARKINGCOSTMD, BEG=35, LEN=6,
 VAR=TERMTIMEPNR, BEG=41 LEN=6,
 VAR=TERMTIMEKNR, BEG=47, LEN=6,
 VAR=ACTIVEFLAG, BEG=55, LEN=1,
 VAR=STATIONDESC, BEG=57, LEN=24,TYP=A,
 VAR=FAREZONE, BEG=81, LEN=2

FILEI LINKI[3] = "D:\3038D4\S6\S6-NET\MIIN\TOLLLINK.00A",
 var=TOLL,beg=1,len=2,
 var=TOLLTYPE,beg=3,len=2,
 var=A,beg=6,len=5,
 var=B,beg=12,len=5,
 var=PLAZADESC,beg=18,len=25,typ=a,
 var=PLZALNSMIN,beg=44,len=2,
 var=PLZALNSMAX,beg=47,len=2,
 var=CARTOLL,beg=50,len=5,
 var=SVCMINUTES,beg=56,len=1,
 var=SVCSECONDS,beg=58,len=2,
```

```
 var=DECELCODE,beg=61,len=1,
 var=ACCELCODE,beg=63,len=1,
 var=EXACTCHGLNS,beg=65,len=2,
 var=AVILANES,beg=68,len=2,
 var=PCTTRUCKS,beg=71,len=4,
 START=(substr(record,4,1)=='1'),
 STOP=(SUBSTR(RECORD,1,1)=='C')

FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\MIAMI_00.NET"
FILEO NETO = "D:\3038D4\S6\S6-NET\MI2_2000.NET"
FILEI LINKI[2] = "D:\3038D4\S6\S6-NET\MDMRGIN.DBF"

PHASE=LINKMERGE
;set DIRCODE attribute same as PB/BO network

  if (TWOWAY==0)
     DIRCODE=1           ; 1-way definition in PB/BO network

   elseif (TWOWAY==1)    ; 2-way definition on PB/BO network
     DIRCODE=0
   else
     DIRCODE=9           ; to trap missing codes for TWOWAY (if any)
  endif

;Fix General HOV Facility Type Codes

   if ((FACILITY_TYPE=87)|(FACILITY_TYPE=88))
      FACILITY_TYPE=84
     elseif ((FACILITY_TYPE=86)&((B.Y)>(A.Y)))
      FACILITY_TYPE=88
     elseif ((FACILITY_TYPE=86)&((B.Y)<=(A.Y)))
      FACILITY_TYPE=87
     else
      FACILITY_TYPE=FACILITY_TYPE
   endif

; save MPO peak-season count in (PSCOUNT_MI)

  if (Count>0) PSCOUNT_MI = Count

;Set MPO Transit Mode RoadName and set DISTANCE same as TDIST

IF(TMODE=4|TMODE=6)
 ROADNAME='BUS'
 DISTANCE=TDIST
 LOCATION=3
 CONUM=3
ENDIF
```

```
IF(TMODE=5)
 ROADNAME='METRORAIL'
 DISTANCE=TDIST
 LOCATION=3
 CONUM=3

ENDIF

IF(TMODE=7)
 ROADNAME='TRIRAIL'
 DISTANCE=TDIST
 LOCATION=3
 CONUM=3
ENDIF

IF(TMODE=8)
 ROADNAME='METROMOVER'
 DISTANCE=TDIST
 LOCATION=3
 CONUM=3
ENDIF

ENDPHASE

ENDRUN
```

2-0ANET00U.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK
FILEO NETO = "D:\3038D4\S6\S6-NET\MI3_2000.NET"
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\MI2_2000.NET"

PHASE=LINKMERGE

  if ((PSCOUNT_MI > 0)&(MOCF100==0)) MOCF100=98
  if (PSCOUNT_MI > 0) Count=PSCOUNT_MI*(MOCF100/100)

ENDPHASE

ENDRUN
```

3-0AMAT00A.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX
FILEO PRINTO[1] = "D:\3038D4\S6\GF DATA\1999SIGNAL-GIS\FILTER.OUT"
FILEO RECO[1] = "D:\3038D4\S6\GF DATA\1999SIGNAL-GIS\SIGDATA1.DBF",
```

```
FIELDS=RECI.ALLFIELDS, EXCLUDERECI=DISTANCE

FILEI RECI = "D:\3038D4\S6\GF DATA\1999SIGNAL-GIS\SIGDATA.DBF"
;
 icount=icount+1
 if(ri.N<>NOLD & ri.Distance<250)
   write reco=1
   ocount=ocount+1
 endif
 nold=ri.N

if (I==0) print list=icount,ocount,printo=1
;
ENDRUN
```

4-0ANET00N.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00V.PRN" MSG='Attach Posted Speeds and Signal Data to Miami Network'
FILEO PRINTO[2] = "D:\3038D4\S6\CUBE\CHKERR.PRN"
FILEI LINKI[3] = "D:\3038D4\S6\GDT\TRANSCAD\MOD-MISP.DBF"
FILEI NODEI[2] = "D:\3038D4\S6\GF DATA\1999SIGNAL-GIS\SIGDATA1.DBF"
FILEO PRINTO[1] = "D:\3038D4\S6\MI_TRANSCAD_SEGS\XXSEG.PRN"
FILEO NETO = "D:\3038D4\S6\MI_TRANSCAD_SEGS\NETWITHSEGID.NET"
FILEI LINKI[2] = "D:\3038D4\S6\MI_TRANSCAD_SEGS\MOD-SEGS.DBF"
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\MI3_2000.NET"
;Add segment codes
ARRAY SIGS=300,segd=300,FT1=300
Phase=LinkMerge
  if(li.1.DISTANCE==0)
    Delete
  elseif (FACILITY_TYPE>0)      ;SKS - exclude any strict transit optional links
    ; SEGMENTS Calculated by KDK using TransCAD segment tool

    SEGID=li.2.SEGID
;SKS- 5 Manual fixes for FT1 of SEGID

    if (SEGID=162)       ;SEGID 162 includes FT2s 60s(mostly) and few 70s
         _FTONE=6
      elseif (SEGID=164) ;SEGID 164 includes FT2s 40s(mostly) and few 70s
         _FTONE=4
      elseif (SEGID=265) ;SEGID 265 (Causeway Xing) includes FT2s 17s (mostly-Controlled Access Pkwy) and few 70s
         _FTONE=2
      elseif (SEGID=266) ;SEGID 266 (causeway Xing) includes FT2s 20s(mostly) and few 70s
         _FTONE=2
      elseif (SEGID=267) ;SEGID 267 includes TOLL for causeways and most other FT2s are 20s
         _FTONE=2
      else
        _FTONE=INT(li.1.FACILITY_TYPE/10)
```

```
    endif

    if(TWOWAY==1)
      _d=DISTANCE*0.5
      _sad=0.5
    else
      _d=DISTANCE
      _sad=1.0
    endif
    segd[SEGID] = segd[SEGID]+_d
    if(b.sectionid<>0) SIGS[SEGID]=SIGS[SEGID]+_sad
    FT1[SEGID] = _FTONE
; Important Note: Handle option of FT=1,7,9 in the program    if (FT1[SEGID] == 9) FT1[SEGID]=3
  else   ;add by SKS to see the links of STRICT transit optional links not included in calculation
    print LIST='A/B/FT2/TMODE', A(5.0),B(5.0),FACILITY_TYPE(5.0),TMODE(5.0) printo=2
  endif

endphase
PHASE=SUMMARY
 loop _k=1,300
   if(segd[_k]>0) print CSV=T list=_K(6.0),segd[_k](6.2),SIGS[_k](4.0),FT1[_k](4.0) PRINTO=1
 endloop
endphase

ENDRUN
```

5-0ANET00C.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00D.PRN"
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\PB_00.NET"
FILEI NODEI[2] = "D:\3038D4\S6\HIGHWAY NODES\PB_NODESS.DBF"
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\0ANET00G.PRN"
FILEO PRINTO[2] = "D:\3038D4\S6\PBSTNCNT.PRN"
FILEO NETO = "D:\3038D4\S6\S6-NET\PB_2000.NET"

Phase=NodeMerge
  ;if(n>=9039) DELETE                    ;Find how PB nodes 9039-9043 get into outnet

 if((x==0)&(y==0)) DELETE          ;Delete nodes with zero coordinates

  ONODE=ni.1.n
  print csv=t list=n,x,y, printo=1
  if (FAREZONE>0) FAREZONE=FAREZONE-1   ;Decerease by original no.(2-4) since BO statrs at 4
                                        ;BO Farezones ranges 3-5 and Miami farezone is 6
endphase

Phase=LinkMerge
  OA=li.1.a
```

```
  OB=li.1.b
  ADD=0
  DROP=0

;  cntr=0
;set TWOWAY attribute same as Miami-Dade network
  if (DIRCODE==1)
     TWOWAY=0            ; 1-way definition in MD network
   elseif (DIRCODE==0)   ; 2-way definition on MD network
     TWOWAY=1
   else
     TWOWAY=9           ; to trap missing codes for DIRCODE (if any)
  endif

;set Regional TOLL numbers (PB MPO:1-65 => Reg: 101-165)
   if (TOLL>0) TOLL = TOLL + 100    ; Palm Beach Cases

;populate Station if it is zero but there County_station is not empty

; if (((COUNTY_STN<>'NONE')&(COUNTY_STN<>''))&(STATION=0))

 if ((val(COUNTY_STN)<>0)&(STATION=0))
   STATION=val(substr(COUNTY_STN,1,4))
   Cntsrc=2
;   cntr=cntr+1
 endif

; if (STATION>0)print list='cntr=',cntr

; Determine Count Directionality (CNTDIR)

_XA=A.X
_YA=A.Y
_XB=B.X
_YB=B.Y

_DX=_XB-_XA
_DY=_YB-_YA

;if(LI.1.nrec=1)
; print csv=t list="a","b","STATION","COUNT","xa","xb","DX","ya","yb","DY", printo=2
;endif

if (abs(_DX)>abs(_DY))            ; E or W
     if(_DX>0)
       _CNTDIR='E'
      else
       _CNTDIR='W'
```

```
     endif
  elseif (abs(_DY)>abs(_DX))       ; N or S
    if(_DY>0)
       _CNTDIR='N'
      else
       _CNTDIR='S'
     endif
  elseif (abs(_DY)==abs(_DX))       ;Not determined
      _CNTDIR='B'
  else
      _CNTDIR=' '
endif

if (COUNT>0)
 print csv=f list=a(5.0),b(5.0),STATION(5.0),COUNT(7.0),_xa(7.0),_xb(7.0),
                  _DX(7.0),_ya(7.0),_yb(7.0),_DY(7.0),_cntdir(5.2) printo=2
endif

endphase

phase=summary
; print list='cntr=',cntr

endphase

ENDRUN
```

6-0ANET00D.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00L.PRN"
FILEO PRINTO[2] = "D:\3038D4\S6\BOSTNCNT.PRN"
FILEI NODEI[2] = "D:\3038D4\S6\HIGHWAY NODES\BO_NODESS.DBF"
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\0ANET00H.PRN"
FILEO NETO = "D:\3038D4\S6\S6-NET\BO_2000.NET"
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\BO_00.NET"
Phase=NodeMerge
  ONODE=ni.1.n
  print csv=t list=n,x,y, printo=1
endphase

Phase=LinkMerge
  OA=li.1.a
  OB=li.1.b
  ADD=0
  DROP=0

;set TWOWAY attribute same as Miami-Dade network
  if (DIRCODE==1)
```

```
     TWOWAY=0            ; 1-way definition in MD network
   elseif (DIRCODE==0)   ; 2-way definition on MD network
     TWOWAY=1
   else
     TWOWAY=9           ; to trap missing codes for DIRCODE (if any)
  endif

;set Regional TOLL numbers (BO MPO:1-46 => Reg: 201-246)
   if (TOLL>0) TOLL = TOLL + 200    ; Broward Cases

; Determine Count Directionality (CNTDIR)

_XA=A.X
_YA=A.Y
_XB=B.X
_YB=B.Y

_DX=_XB-_XA
_DY=_YB-_YA

if (abs(_DX)>abs(_DY))            ; E or W
     if(_DX>0)
       _CNTDIR='E'
      else
       _CNTDIR='W'
     endif
  elseif (abs(_DY)>abs(_DX))       ; N or S
    if(_DY>0)
       _CNTDIR='N'
      else
       _CNTDIR='S'
     endif
  elseif (abs(_DY)==abs(_DX))       ;Not determined
      _CNTDIR='B'
  else
      _CNTDIR=' '
endif

if (COUNT>0)
 print csv=f list=a(5.0),b(5.0),STATION(5.0),COUNT(7.0),_xa(7.0),_xb(7.0),
                  _DX(7.0),_ya(7.0),_yb(7.0),_DY(7.0),_cntdir(5.2) printo=2
endif


;Delete Transit Access Optional Links (TMODE 1-3)
IF ((TMODE>=1)&(TMODE<=3)) DELETE

endphase
```

```
ENDRUN
```

7-0ANET00E.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00K.PRN"
FILEO PRINTO[2] = "D:\3038D4\S6\MISTNCNT.PRN"
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\0ANET00J.PRN"
FILEI LINKI[1] = "D:\3038D4\S6\MI_TRANSCAD_SEGS\NETWITHSEGID.NET"
FILEO NETO = "D:\3038D4\S6\S6-NET\MI_2000.NET"

Phase=NodeMerge
  ONODE=ni.1.n
  print csv=t list=n,x,y, printo=1
endphase

Phase=LinkMerge
  OA=li.1.a
  OB=li.1.b
  ADD=0
  DROP=0

;set Regional TOLL numbers (MI MPO:1-56 => Reg: 301-356)
   if (TOLL>0) TOLL = TOLL + 300    ; Miami Cases

; Determine Count Directionality (CNTDIR)

_XA=A.X
_YA=A.Y
_XB=B.X
_YB=B.Y

_DX=_XB-_XA
_DY=_YB-_YA

if (abs(_DX)>abs(_DY))            ; E or W
     if(_DX>0)
       _CNTDIR='E'
      else
       _CNTDIR='W'
     endif
  elseif (abs(_DY)>abs(_DX))       ; N or S
    if(_DY>0)
       _CNTDIR='N'
      else
       _CNTDIR='S'
     endif
  elseif (abs(_DY)==abs(_DX))       ;Not determined
      _CNTDIR='B'
```

```
  else
      _CNTDIR=' '
endif


if (COUNT>0)
 print csv=f list=a(5.0),b(5.0),STATION(5.0),COUNT(7.0),_xa(7.0),_xb(7.0),
                  _DX(7.0),_ya(7.0),_yb(7.0),_DY(7.0),_cntdir(5.2) printo=2
endif

endphase

ENDRUN
```

8-0ANET00W.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00M.PRN" MSG='Mrg PB TOD Cnt & Revise TMODE'
FILEO NETO = "D:\3038D4\S6\S6-NET\PBTOD_2000.NET",
 EXCLUDE=TMODE
FILEI LINKI[2] = "D:\3038D4\S6\S6-NET\PBIN\PBTODMGZ2.DBF"
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\PB_2000.NET"

Phase=LinkMerge

;Set PB & BO MPO OPTLNK TMODE to Regional TMODE and ROADNAME

IF (TMODE=1)
  RTMODE=1
  ROADNAME='PBBO-WALKCON'
ENDIF

IF (TMODE=3)
  RTMODE=3
  ROADNAME='PBBO-SIDECON'
ENDIF

IF (TMODE=4)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF

IF (TMODE=6)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF

IF (TMODE=7)
  RTMODE=7
```

```
  ROADNAME='PBBO-Rail'
ENDIF

IF (TMODE=8)
  RTMODE=8
  ROADNAME='TRIRAIL'
ENDIF

IF (TMODE=12)
  RTMODE=12
  ROADNAME='TR-FEEDER BUS'
ENDIF

Endphase

ENDRUN
```

9-0ANET00X.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00N.PRN" MSG='Mrg BO TOD Cnt & Revise TMODE'
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\BO_2000.NET"
FILEO NETO = "D:\3038D4\S6\S6-NET\BOTOD_2000.NET",
 EXCLUDE=TMODE
FILEI LINKI[2] = "D:\3038D4\S6\S6-NET\BOIN\BOTODMGZ2.DBF"

Phase=LinkMerge

;Set PB & BO MPO OPTLNK TMODE to Regional TMODE and ROADNAME

IF (TMODE=1)
  RTMODE=1
  ROADNAME='PBBO-WALKCON'
ENDIF

IF (TMODE=3)
  RTMODE=3
  ROADNAME='PBBO-SIDECON'
ENDIF

IF (TMODE=4)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF

IF (TMODE=6)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF
```

```
IF (TMODE=7)
  RTMODE=7
  ROADNAME='PBBO-Rail'
ENDIF

IF (TMODE=8)
  RTMODE=8
  ROADNAME='TRIRAIL'
ENDIF

IF (TMODE=12)
  RTMODE=12
  ROADNAME='TR-FEEDER BUS'
ENDIF

Endphase

ENDRUN
```

10-0ANET00Z.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00P.PRN" MSG='Mrg MI TOD Cnt & Revise TMODE'
FILEI LINKI[4] = "D:\3038D4\S6\S6-NET\MIIN\MITODMRGNCNTZ.DBF"
FILEI LINKI[3] = "D:\3038D4\S6\S6-NET\MIIN\MDCLSMRG2.DBF"
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\MI_2000.NET"
FILEO NETO = "D:\3038D4\S6\S6-NET\MITOD_2000.NET",
 EXCLUDE=TMODE
FILEI LINKI[2] = "D:\3038D4\S6\S6-NET\MIIN\MITODMGZ2R.DBF"


Phase=LinkMerge

;Set Miami-Dade MPO OPTLNK TMODE to Regional TMODE and ROADNAME

IF (TMODE=4)
  RTMODE=5
  ROADNAME='MD-BUS'
ENDIF

IF (TMODE=5)
  RTMODE=7
  ROADNAME='METRORAIL'
ENDIF

IF (TMODE=6)
  RTMODE=5
  ROADNAME='MD-BUS'
```

```
ENDIF

IF (TMODE=7)
  RTMODE=8
  ROADNAME='TRIRAIL'
ENDIF

IF (TMODE=8)
  RTMODE=9
  ROADNAME='METROMOVER'
ENDIF


Endphase

ENDRUN
```

11-0ANET00A.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00A.PRN" MSG='Combine and Renumber Networks'
FILEI LINKI[3] = "D:\3038D4\S6\S6-NET\MITOD_2000.NET"
FILEI LINKI[2] = "D:\3038D4\S6\S6-NET\BOTOD_2000.NET"
FILEI LINKI[1] = "D:\3038D4\S6\S6-NET\PBTOD_2000.NET"
FILEO PRINTO[4] = "D:\3038D4\S6\CUBE\MI_EQ.CSV"
FILEO PRINTO[3] = "D:\3038D4\S6\CUBE\BO_EQ.CSV"
FILEO PRINTO[2] = "D:\3038D4\S6\CUBE\PB_EQ.CSV"
FILEO NETO = "D:\3038D4\S6\CUBE\S6.NET",
 EXCLUDE=RTMODE,STATIONNUMBER,STATIONZONE,SERVICEMILES,PARKINGSPACES,PARKINGCOSTAM,PARKINGCOSTMD,
         TERMTIMEPNR,TERMTIMEKNR,ACTIVEFLAG,STATIONDESC,FAREZONE
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\0ANET00B.PRN"

PARAMETERS zones=4134

;==============================================================
; PALM BEACH RENUMBER
Phase=Input filei=ni.1
   ONODE=n
   if(n<={PBZI})
      n=n+{PBZOFF}
   elseif((n >{PBZI}) & (n<={PBZA}))
      n=n+{PBXOFF}
   elseif(n >{PBZA})
      n=n+{PBNOFF}
   else
      PRINT LIST='error at node ',n
   endif
endphase
Phase=Input filei=li.1
```

```
   OA=a
   OB=b
   if(a<={PBZI})
      a=a+{PBZOFF}
   elseif((a >{PBZI}) & (a<={PBZA}))
      a=a+{PBXOFF}
   else
      a=a+{PBNOFF}
   endif

   if(b<={PBZI})
      b=b+{PBZOFF}
   elseif((b >{PBZI}) & (b<={PBZA}))
      b=b+{PBXOFF}
   else
      b=b+{PBNOFF}
   endif


; Palm Beach Screenline (MPO No. 0,1-18,95,96,99) renumber

   if(screenline=0)
        screenline=99
     elseif((screenline>=1)&(screenline<=18))
        screenline=screenline+{PBSCROFSET}
     else
        screenline=screenline
   endif

; Palm Beach SEGID (MPO No. 1-271) renumber

   if(segid==0)
        segid=0
     else
        segid=segid+{PBSEGOFSET}
   endif

endphase

;==============================================================
; BROWARD RENUMBER
Phase=Input filei=ni.2
   ONODE=n
   if(n<={BOZI})
      n=n+{BOZOFF}
   elseif((n >{BOZI}) & (n<={BOZA}))
      n=n+{BOXOFF}
   elseif(n >{BOZA})
```

```
      n=n+{BONOFF}
   else
      PRINT LIST='error at node ',n
   endif
endphase
Phase=Input filei=li.2
   OA=a
   OB=b
   if(a<={BOZI})
      a=a+{BOZOFF}
   elseif((a >{BOZI}) & (a<={BOZA}))
      a=a+{BOXOFF}
   else
      a=a+{BONOFF}
   endif

   if(b<={BOZI})
      b=b+{BOZOFF}
   elseif((b >{BOZI}) & (b<={BOZA}))
      b=b+{BOXOFF}
   else
      b=b+{BONOFF}
   endif

; Broward Screenline (MPO No. 0,1-14,59,75,82,86,91,95,99) renumber

   if(screenline=0)
        screenline=99
     elseif((screenline>=1)&(screenline<=14))
        screenline=screenline+{BOSCROFSET}
     else
        screenline=screenline
   endif

; Broward SEGID (MPO No. 1-201) renumber

   if(segid==0)
        segid=0
     else
        segid=segid+{BOSEGOFSET}
   endif

endphase

;==============================================================
; MIAMI-DADE RENUMBER
Phase=Input filei=ni.3
   ONODE=n
```

```
   if(n<={MIZI})
      n=n+{MIZOFF}
   elseif((n >{MIZI}) & (n<={MIZA}))
      n=n+{MIXOFF}
   elseif(n >{MIZA})
      n=n+{MINOFF}
   else
      PRINT LIST='error at node ',n
   endif
endphase
Phase=Input filei=li.3
   OA=a
   OB=b
   if(a<={MIZI})
      a=a+{MIZOFF}
   elseif((a >{MIZI}) & (a<={MIZA}))
      a=a+{MIXOFF}
   else
      a=a+{MINOFF}
   endif

   if(b<={MIZI})
      b=b+{MIZOFF}
   elseif((b >{MIZI}) & (b<={MIZA}))
      b=b+{MIXOFF}
   else
      b=b+{MINOFF}
   endif

; Miami-Dade Screenline (MPO No. 1-13,99) renumber

   if(screenline=0)
        screenline=99
     elseif((screenline>=1)&(screenline<=13))
        screenline=screenline+{MISCROFSET}
     else
        screenline=screenline
   endif


; Miami-Dade SEGID (MPO No. 1-286) renumber

   if(segid==0)
        segid=0
     else
        segid=segid+{MiSEGOFSET}
   endif
```

```
endphase
;==========================================================

Phase=NodeMerge
  if(ni.1.n >0) CONUM=1
  if(ni.2.n >0) CONUM=2
  if(ni.3.n >0) CONUM=3
  If(n=1) PRINT CFORM=6 CSV=T LIST="ONODE","N","CONUM" PRINTO=2
  If(n=1) PRINT CFORM=6 CSV=T LIST="ONODE","N","CONUM" PRINTO=3
  If(n=1) PRINT CFORM=6 CSV=T LIST="ONODE","N","CONUM" PRINTO=4
  if(CONUM==1) print FORM=6 CSV=T list=ONODE,N,CONUM PRINTO=2
  if(CONUM==2) print FORM=6 CSV=T list=ONODE,N,CONUM PRINTO=3
  if(CONUM==3) print FORM=6 CSV=T list=ONODE,N,CONUM PRINTO=4
endphase
Phase=LinkMerge
  if(li.1.a >0) CONUM=1
  if(li.2.a >0) CONUM=2
  if(li.3.a >0) CONUM=3

;Reset RTMODE as TMODE and exclude RTMODE

 if(RTMODE>=1) TMODE=RTMODE

;Reset Screenline to zero for any centroid connector
 if((a<={zonesa})|(b<={zonesa}))SCREENLINE=0


endphase
;
ENDRUN
```

12-MASTERNET0.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\MASTERNET0.PRN" MSG='Shift MD Nodes by 1000'
FILEO NETO = "D:\3038D4\S6\CUBE\RS6EDITED.NET"
FILEI LINKI[1] = "D:\3038D4\S6\CUBE\S6EDITED.NET"

Phase=Input filei=ni.1
   ONODE2=n
   if (n>=20001)
      n=n+1000
     else
      n=n
   endif

endphase

Phase=Input filei=li.1
```

```
   OA2=a
   OB2=b

   if(a>=20001)
     a=a+1000
   else
      a=a
   endif

   if(b>=20001)
     b=b+1000
   else
      b=b
   endif

endphase

Phase=NodeMerge
;  if ((CONUM==3)&(n>=20001)) n=n+1000
; if((x==0)&(y==0)) DELETE          ;Delete nodes with zero coordinates

endphase

Phase=LinkMerge
;if((a==0)&(b==0)) DELETE          ;Delete links with missing values


;  if ((CONUM==3)&(a>=20001)) a=a+1000
;  if ((CONUM==3)&(b>=20001)) b=b+1000

endphase

ENDRUN
```

13-0ANET00F.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK
FILEI LINKI[1] = "D:\3038D4\S6\CUBE\RS6EDITED.NET"
FILEO NETO = "D:\3038D4\S6\CUBE\ADDLINKS.NET"
if(ADD <>1) delete
if(ADD==1) screenline=99

ENDRUN
```

14-0ANET00G.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK
```

```
FILEI LINKI[1] = "D:\3038D4\S6\CUBE\RS6EDITED.NET"
FILEO NETO = "D:\3038D4\S6\CUBE\DELLINKS.NET"
if(DROP <>1) delete
ENDRUN
```

15-0ANET00H.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK MSG='Apply add/drop comb net & Prd Cnt & Read Regional Station Data'
FILEI NODEI[2] = "D:\3038D4\S6\S6-NET\TRANSIT\STATION_00R.DAT",
 VAR=STATIONNUMBER BEG=1, LEN=4,
 VAR=N, BEG=5, LEN=6,
 VAR=STATIONZONE, BEG=11, LEN=6,
 VAR=SERVICEMILES, BEG=17, LEN=6,
 VAR=PARKINGSPACES, BEG=23, LEN=6,
 VAR=PARKINGCOSTAM, BEG=29, LEN=6,
 VAR=PARKINGCOSTMD, BEG=35, LEN=6,
 VAR=TERMTIMEPNR, BEG=41 LEN=6,
 VAR=TERMTIMEKNR, BEG=47, LEN=6,
 VAR=ACTIVEFLAG, BEG=55, LEN=1,
 VAR=STATIONDESC, BEG=57, LEN=24,TYP=A,
 VAR=FAREZONE, BEG=81, LEN=2

FILEI LINKI[3] = "D:\3038D4\S6\CUBE\ADDLINKS.NET"
FILEI LINKI[2] = "D:\3038D4\S6\CUBE\DELLINKS.NET"
FILEI LINKI[1] = "D:\3038D4\S6\CUBE\S6.NET"
FILEO NETO = "D:\3038D4\S6\CUBE\CHECK.NET",
 EXCLUDE=RPAS4T, RSUTRK, RSUCOM, RCOMBTRK

Phase=LinkMerge

if(li.2.A>0) delete
;

;SKS- Generate Period Model Counts

  if(li.1.Count>0)

   Cnt_AMPRD=ROUND(Count*(PAMPRD/100))             ;AM Peak Period (7:00-9:00AM) Count
   Cnt_MDPRD=ROUND(Count*(PMDPRD/100))             ;MIDDAY Period (9:00AM-3:00PM) Count
   Cnt_PMPRD=ROUND(Count*(PPMPRD/100))             ;PM Peak Period (3:00-6:00PM) Count
   Cnt_NTPRD=ROUND(Count*(PNTPRD/100))             ;Off-Peak/NIGHT Period (6:00PM-7:00AM) Count
   Cnt_OFPRD=ROUND(Count*((PMDPRD+PNTPRD)/100))    ;OFF-Peak Period (9:00AM-3:00PM & 6:00PM-7:00AM) Count

   Cnt_AMPKH=ROUND(Count*(PAMPH/100))              ;AM Peak Hour (7:30-8:30AM) Count
   Cnt_PMMPH=ROUND(Count*(PPMPH/100))              ;PM Peak Hour (5:00-6:00 PM) Count

  endif
```

```
endphase

;
ENDRUN
```

16-0ANET00L.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK MSG='Set Connectors Posted Speed, Tran-Opt-Lnk Speeds and Truck Counts'
FILEO PRINTO[2] = "D:\3038D4\S6\CUBE\0ANET00U.PRN"
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\0ANET00T.PRN"
FILEO NETO = "D:\3038D4\S6\CUBE\NEW.NET"
FILEI LINKI[1] = "D:\3038D4\S6\CUBE\CHECK.NET"

;Setup Area Type in Node Layer to fillup later in GIS
;  see KDK to see if this could be automated having link layer info

;Phase=NodeMerge
;  if (ni.1.n>0)
;    AreaType=99
;  endif

;endphase

;  MODSIGID=SEGID%10
;
// Set Speeds for the Centroid Connectors
   _AT1=INT(li.1.AREA_TYPE/10)
   _NTA=A.nodetype
   _NTB=B.nodetype

;CBD Area Connectors
 if (_AT1=1)
    if(_NTA=1 | _NTB=1)              ;internal connector
       RPOSTSPD=10
      elseif (_NTA=2 | _NTB=2)       ;external
       RPOSTSPD=15
      elseif (_NTA=3 | _NTB=3)       ;internal dummy
       RPOSTSPD=10
      elseif (_NTA=4 | _NTB=4)       ;external dummy
       RPOSTSPD=15
      else
       RPOSTSPD=POSTSPD
     endif
 endif

;Fringe-Residential-OBD Area Connectors
 if (_AT1=2|_AT1=3|_AT1=4)
    if(_NTA=1 | _NTB=1)              ;internal connector
```

```
       RPOSTSPD=12.5
      elseif (_NTA=2 | _NTB=2)       ;external
       RPOSTSPD=17.5
      elseif (_NTA=3 | _NTB=3)       ;internal dummy
       RPOSTSPD=12.5
      elseif (_NTA=4 | _NTB=4)       ;external connector
       RPOSTSPD=17.5
      else
       RPOSTSPD=POSTSPD
     endif
 endif

;Rural Area Connectors
 if (_AT1=5)
    if(_NTA=1 | _NTB=1)              ;internal connector
       RPOSTSPD=15.0
      elseif (_NTA=2 | _NTB=2)       ;external
       RPOSTSPD=20.0
      elseif (_NTA=3 | _NTB=3)       ;internal dummy
       RPOSTSPD=15.0
      elseif (_NTA=4 | _NTB=4)       ;external connector
       RPOSTSPD=20.0
      else
       RPOSTSPD=POSTSPD
     endif
 endif

//Fix Optional Link Speeds
if(TMODE>1)
   if (TSPEED>0)
       TSPEED=TSPEED                     ;retain coded transit speed
     elseif (TTIME>0)
       TSPEED=round((TDIST/TTIME)*60)    ;compute transit speed from time and distance
     elseif (POSTSPD>0)
       TSPEED=POSTSPD                    ;retain coded posted speed
     elseif (_AT1=1)
       TSPEED=10                         ;assumed default for CBD
     else
       TSPEED=15                         ;assumed default for non-CBD
    endif
endif

if (TMODE=8)
   if(TSPEED<30) TSPEED=30       ; set minimum speed for the Tri-Rail
endif


;Test Print - selected attributes
```

```
if (TMODE<1)
  print csv=f list=a(7.0),b(7.0),_AT1(5.0),_NTA(5.0),_NTB(5.0),
                  POSTSPD(5.0),RPOSTSPD(5.0),OA(7.0),OB(7.0),CONUM(5),TMODE(5.0) printo=1
endif

;Test Print - LINKS with No Posted Speeds

if (TMODE<1)
    if (RPOSTSPD=0) print csv=f list=a(7.0),b(7.0),_AT1(5.0),_NTA(5.0),_NTB(5.0),
         POSTSPD(5.0),RPOSTSPD(5.0),OA(7.0),OB(7.0),CONUM(5),TMODE(5.0) printo=2
endif



//Compute 24-Hour Truck Classification Counts based on the percentages and "Count" field
//(Note: Truck counts are non-directional and 24-hour estimates)

if (COUNT>0)                                          ;Based on Count field
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*COUNT)          ;Passenger and 4-Tire Trucks
   TrkCnt_4Tire=Round((F4T_PCT)*COUNT)                   ;4-Tire Trucks
   TrkCnt_SU=Round((SU_PCT)*COUNT)                       ;Single-Unit Trucks
   TrkCnt_COMB=Round((COMB_PCT)*COUNT)                   ;Combination Trucks
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*COUNT)          ;Single-Unit and Combination Trucks
  elseif ((CTOTAL>0) & (TWOWAY=1))                    ;Based on CTOTAL (Classification Raw Totals) & 2-way links
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*CTOTAL*0.5)
   TrkCnt_4Tire=Round((F4T_PCT)*CTOTAL*0.5)
   TrkCnt_SU=Round((SU_PCT)*CTOTAL*0.5)
   TrkCnt_COMB=Round((COMB_PCT)*CTOTAL*0.5)
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*CTOTAL*0.5)
  elseif ((CTOTAL>0) & (TWOWAY=0))                    ;Based on CTOTAL & 1-way links
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*CTOTAL*1.0)
   TrkCnt_4Tire=Round((F4T_PCT)*CTOTAL*1.0)
   TrkCnt_SU=Round((SU_PCT)*CTOTAL*1.0)
   TrkCnt_COMB=Round((COMB_PCT)*CTOTAL*1.0)
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*CTOTAL*1.0)
  else                                                 ;ZERO Counts
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*COUNT)
   TrkCnt_4Tire=Round((F4T_PCT)*COUNT)
   TrkCnt_SU=Round((SU_PCT)*COUNT)
   TrkCnt_COMB=Round((COMB_PCT)*COUNT)
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*COUNT)
endif


// TEMPORARY FIELDS FOR TESTING
;if(li.1.AREA_TYPE     = 0) AREA_TYPE=4
;if(li.1.FACILITY_TYPE = 0) FACILITY_TYPE=49
```

```
;if(li.1.NUM_LANES     = 0) NUM_LANES=1
;if(li.1.POSTSPD       = 0) POSTSPD=15

// TEMPORARY FIELDS FOR TESTING
;if (li.1.POSTSPD>0)
;  LBTIME=60*li.1.DISTANCE/li.1.POSTSPD
;else
;  LBTIME=60*li.1.DISTANCE/15
;endif
;WALKTIME=60*li.1.DISTANCE/3

ENDRUN
```

17-1-REMAT00C.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX MSG='Proccess Palm Beach SEGIDs'
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\PBSEGTEM.PRN"
FILEO RECO[1] = "D:\3038D4\S6\CUBE\PBSEGTEM.DBF",
          FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF        ;FIELDS=reci.allfields

FILEI RECI = "D:\3038D4\S6\S6-NET\PBSEGMENT.DBF"

  SEGID=ri.SEGID+{PBSEGOFSET}
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1
  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF


WRITE RECO=1

print CSV=T list=SEGID(6.0), LENGTH(6.2), NUMSIG(6.0), FT1Old(6.0), CYCLE(6.0),
                 GC(6.2), DF(6.2) PRINTO=1

IF (I=0)
   PRINT LIST="\n"   PRINTO=1
ENDIF


ENDRUN
```

17-2-REMAT00D.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX MSG='Process Broward SEGIDS'
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\BOSEGTEM.PRN"
```

```
FILEO RECO[1] = "D:\3038D4\S6\CUBE\BOSEGTEM.DBF",
       FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF        ;FIELDS=reci.allfields

FILEI RECI = "D:\3038D4\S6\S6-NET\BOSEGMENT.DBF"

  SEGID=ri.SEGID+{BOSEGOFSET}
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1
  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF


WRITE RECO=1
print CSV=T list=SEGID(6.0), LENGTH(6.2), NUMSIG(6.0), FT1Old(6.0), CYCLE(6.0),
                 GC(6.2), DF(6.2) PRINTO=1
IF (I=0)
   PRINT LIST="\n"   PRINTO=1
ENDIF

ENDRUN
```

17-3-REMAT00A.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX
FILEI RECI = "D:\3038D4\S6\MI_TRANSCAD_SEGS\XXSEG.PRN",
    SEGID=1, LENGTH=2, NUMSIG=3, FT1Old=4

FILEO RECO[1] = "D:\3038D4\S6\CUBE\REMAT00A.DBF",
    FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF

                                    ;,FT1(8.0), CYCLE(8.0), GC(4.2), DF(4.2)

;NRECS=RECI.NUMRECORDS

  SEGID=ri.SEGID
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1Old
  CYCLE=0
  GC=0.00
  DF=0.00

print list='NRECS =', SEGID

/* LOOP k=1,NRECS
    FT1(k)=0
```

```
    CYCLE(k)=0
    GC(k)=0.0
    DF(k)=0.0
ENDLOOP */


WRITE RECO=1

ENDRUN
```

17-4-REMAT00D.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX MSG='Process Miami-Dade SEGIDs'
FILEO PRINTO[1] = "D:\3038D4\S6\CUBE\MISEGTEM.PRN"
FILEO RECO[1] = "D:\3038D4\S6\CUBE\MISEGTEM.DBF",
      FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF        ;FIELDS=reci.allfields
FILEI RECI = "D:\3038D4\S6\CUBE\REMAT00A.DBF"

  SEGID=ri.SEGID+{MISEGOFSET}
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1Old
  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF

WRITE RECO=1
print CSV=T list=SEGID(6.0), LENGTH(6.2), NUMSIG(6.0), FT1Old(6.0), CYCLE(6.0),
                 GC(6.2), DF(6.2) PRINTO=1

IF (I=0)
   PRINT LIST="\n"   PRINTO=1
ENDIF


ENDRUN
```

17-5-REPIL00A.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.

*D:
*cd \3038D4\s6\cube
*if exist pbsegtem.prn copy /a pbsegtem.prn s6seg.prn
*if exist bosegtem.prn copy /a s6seg.prn+bosegtem.prn
*if exist misegtem.prn copy /a s6seg.prn+misegtem.prn
```

17-6-REMAT00F.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX
FILEO RECO[1] = "D:\3038D4\S6\S6-NET\SEGMENT_{Year}.DBF",
      FIELDS=SEGID, LENGTH, NUMSIG, FT1SEGS, CYCLE, GC, DF

FILEI RECI = "D:\3038D4\S6\CUBE\S6SEG.PRN",
    SEGID=1, LENGTH=2, NUMSIG=3, FT1Old=4, CYCLE=5, GC=6, DF=7

  SEGID=ri.SEGID
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG

  ;FT1=ri.FT1
;A closest translation SEGMENT File's Old 1-digit FT to revised FTC1's 1-digit FT
  IF (ri.FT1Old=1)
      FT1SEGS=1
    elseif (ri.FT1Old=2)
      FT1SEGS=4
    elseif (ri.FT1Old=3)
      FT1SEGS=6
    elseif (ri.FT1Old=4)
      FT1SEGS=6
    elseif (ri.FT1Old=5)
      FT1SEGS=5
    elseif (ri.FT1Old=6)
      FT1SEGS=4
    elseif (ri.FT1Old=7)
      FT1SEGS=7
    elseif (ri.FT1Old=8)
      FT1SEGS=8
    elseif (ri.FT1Old=9)
      FT1SEGS=9
    else
      FT1SEGS=ri.FT1Old
  ENDIF

  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF

WRITE RECO=1

ENDRUN
```

18-S6_NET00.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\3038D4\S6\CUBE\0ANET00W.PRN" MSG='Compute Cap Variables, Save Old FT and AT, Reset FT for
Tran-Only OptLnks, Writeout Fnl S6 Netw'
FILEI LOOKUPI[1] = "D:\3038D4\S6\S6-NET\SEGMENT_{Year}.DBF"
FILEI LINKI[1] = "D:\3038D4\S6\CUBE\NEW.NET"
FILEO NETO = "D:\3038D4\S6\CUBE\S6_{Year}.NET",
 EXCLUDE=RPOSTSPD,FACILITY_TYPE,AREA_TYPE

Phase=LinkMerge
  if(li.1.TMODE>0)
    POSTSPD=POSTSPD             ;Transit Optional Links
   ELSE
    POSTSPD=RPOSTSPD            ;Other Links
  endif


LOOKUP, NAME=SEGMENTm,
      LOOKUP[1]=SEGID, RESULT=LENGTH,  ; curve 1 lookup from column 1 return value from column 2
      LOOKUP[2]=SEGID, RESULT=NUMSIG,  ; curve 2 lookup from column 1 return value from column 3
      LOOKUP[3]=SEGID, RESULT=FT1SEGS, ; curve 3 lookup from column 1 return value from column 4
      LOOKUP[4]=SEGID, RESULT=CYCLE,   ; curve 4 lookup from column 1 return value from column 5
      LOOKUP[5]=SEGID, RESULT=GC,      ; curve 5 lookup from column 1 return value from column 6
      LOOKUP[6]=SEGID, RESULT=DF,      ; curve 6 lookup from column 1 return value from column 7
      FAIL[3]=0,
      INTERPOLATE=N, LOOKUPI=1;

     LENGTH=SEGMENTm(1,SEGID)
     NUMSIG=SEGMENTm(2,SEGID)
     FT1SEGS=SEGMENTm(3,SEGID)
     CYCLE= SEGMENTm(4,SEGID)
     GC=    SEGMENTm(5,SEGID)
     DF=    SEGMENTm(6,SEGID)

;LOOKUP LOOKUPI=1,
;       NAME=SEGMENT_00,
;         LOOKUP[1]=SEGID, RESULT=LENGTH,
;         LOOKUP[2]=SEGID, RESULT=NUMSIG,
;         LOOKUP[3]=SEGID, RESULT=FT1SEGS,
;         LOOKUP[4]=SEGID, RESULT=CYCLE,
;         LOOKUP[5]=SEGID, RESULT=GC,
;         LOOKUP[6]=SEGID, RESULT=DF,
;       FAIL[3]=0
; example of use: v=SEGMENT_00(6,25)
; look for 25 in the SEGID field and returns the DF value
```

```
;Save Old FACILITY_TYPE and Area_TYPE (S5-2digit FT2 & AT2 as) xxx_old

FT2_OLD=FACILITY_TYPE
AT2_OLD=AREA_TYPE

;Reset Facility Type Codes for Transit-Only Optional Links
  IF (FT2_OLD=0)   ;ALL Transit-Only Optional Links
     FT2_OLD=69
     FTC1=69
     FTC2=69
  ENDIF


;Populate Network with Capacity Calculator Attributes
;PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
;BEGIN POPULATE NETWORK

OVERIDE=0  ;Temporary.  Comment out if network has overides


IF (FT2_OLD=81-89)             ;HOV FACILITIES
    HOV=1
    FTC1=80
ENDIF

IF (FT2_OLD=91-99)             ;TOLL FACILITIES
    KTOLL=1
    FTC1=90
    IF (FT2_OLD=99)
        TOLLPLAZA=1
        FTC2=95
    ENDIF
ENDIF


;IF (FT2_OLD=11-14,81-82,91-93)
IF (FT2_OLD=11-14,81-85,91-95)
    FRWY=1                          ;DESIGNATED FREEWAY SEGMENTS FOR CAPACITY CLACULATION PURPOSES
    IF (HOV=1)
       FTC2=81                      ;HOV FREEWAY
    ELSEIF (KTOLL=1)
           FTC2=91                  ;TOLL FREEWAY
    ELSE
        FTC1=10
        FTC2=11                     ;NON-HOV AND NON-TOLL FREEWAY
    ENDIF
ENDIF
```

```
IF (FT2_OLD=15-17)              ;CDs, EXPRESSWAYS AND PARKKWAYS
    UNINTRP=1
    FTC1=20
    FTC2=21
ENDIF

IF (FT2_OLD=71-79,86-89,97-98) ;ALL RAMPS
   RAMPS=1
   IF (FT2_OLD=71-79)           ;ALL NON-HOV AND NON-TOLL RAMPS
       FTC1=70
       IF (FT2_OLD=71,73)       ;NON-HOV AND NON-TOLL NON-LOOP ON-RAMPS, EXCLUDING FREEWAY-TO-FREEWAY
           ON=1
           FTC2=71
       ENDIF
       IF (FT2_OLD=72,74)       ;NON-TOLL AND NON-HOV LOOP ON-RAMPS
           ONLOOP=1
           FTC2=72
       ENDIF
       IF (FT2_OLD=75,77)       ;NON-HOV AND NON-TOLL OFF-RAMPS, EXCLUDING FREEWAY-TO-FREEWAY
           OFF=1
           FTC2=73
       ENDIF
       IF (FT2_OLD=76,78)       ;NON-TOLL AND NON-HOV LOOP OFF-RAMPS
           OFFLOOP=1
           FTC2=74
       ENDIF
       IF (FT2_OLD=79)          ;FREEWAY-TO-FREEWAY RAMPS
           FRWY2FRWY=1
           FTC2=75
           FRWY=1                    ;CONSIDERED A FREEWAY SEGMENT FOR CAPACITY CALCULATION PURPOSES
       ENDIF
   ENDIF

   IF (FT2_OLD=86-88)           ;PEAK ONLY HOV RAMPS
      HOVPEAK=1
      FTC2=83
   ENDIF
   IF (FT2_OLD=89)              ;ALL-DAY HOV RAMPS
       HOVDAY=1
       FTC2=84
   ENDIF

   IF (FT2_OLD=97,98)           ;TOLL RAMPS
       IF (FT2_OLD=97)          ;TOLL ON-RAMPS
           TOLLON=1
           FTC2=93
       ENDIF
       IF (FT2_OLD=98)          ;TOLL OFF-RAMPS
```

```
          TOLLOFF=1
          FTC2=94
       ENDIF
   ENDIF

ENDIF

IF (FT2_OLD=21-25,61-68,41,44,94)   DIVIDED=1                    ;DIVIDED
IF (FT2_OLD=21-25,31-34,41-42,44,61-68 | DIVIDED=1)  LEFTTURN=1 ;LEFT-TURN LANES

IF (FT2_OLD=51-52)             ;CENTROID CONNECTORS
    FTC1=50
    FTC2=FT2_OLD               ;51=INT CENTROID CONNECTORS, 52=EXT CENTROID CONNECTORS
ENDIF

;END POPULATE
;PPPP
```

```
;END NEW CONDITIONS
;NNNN
```

```
;  endif
;endif



;EX/AP are not needed and are used as XX, just for space holder
if(_FT<>0)
    print CSV=T list=a(6.0),'XX'(2.0c),B(6.0),NUM_LANES(2.0),_AT(2.0),_FT(2.0) PRINTO=1
endif


endphase

PHASE=SUMMARY
endphase


ENDRUN
```

20-OANETK00K3.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK MSG='Write Count Station Infoo for Confac Analysis'
FILEO LINKO = "D:\3038D4\S6\CUBE\CONFACKEY.DBF" format=DBF INCLUDE=KCoStn,FTC2,FTC1,a,b,TWOWAY,COUNT,POSTSPD,NUM_Lanes
FILEI LINKI[1] = "D:\3038D4\S6\CUBE\S6_{Year}.NET"

KCoStn=CNTCO*10000+STN

IF (LI.1.STN=0 | LI.1.A>LI.1.B)delete
ENDRUN
```

Appendix B

2030 Highway Merging CV Flowcharts and Scripts

Figure B-1: **CV Flowcharts for Initial 2030 Highway Network Development**
Southeast Regional Planning Model VI

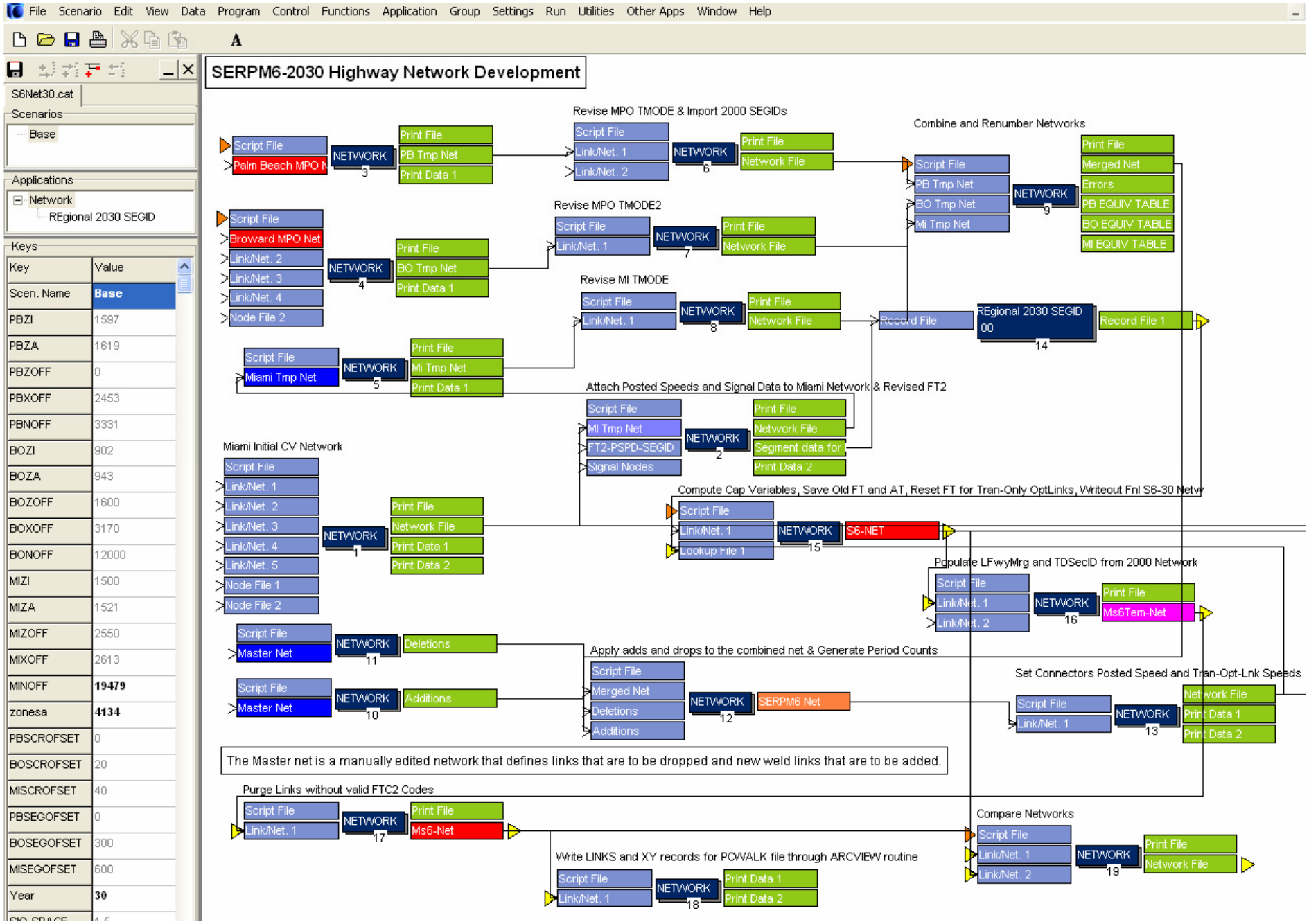


Figure B-1 (Continued)

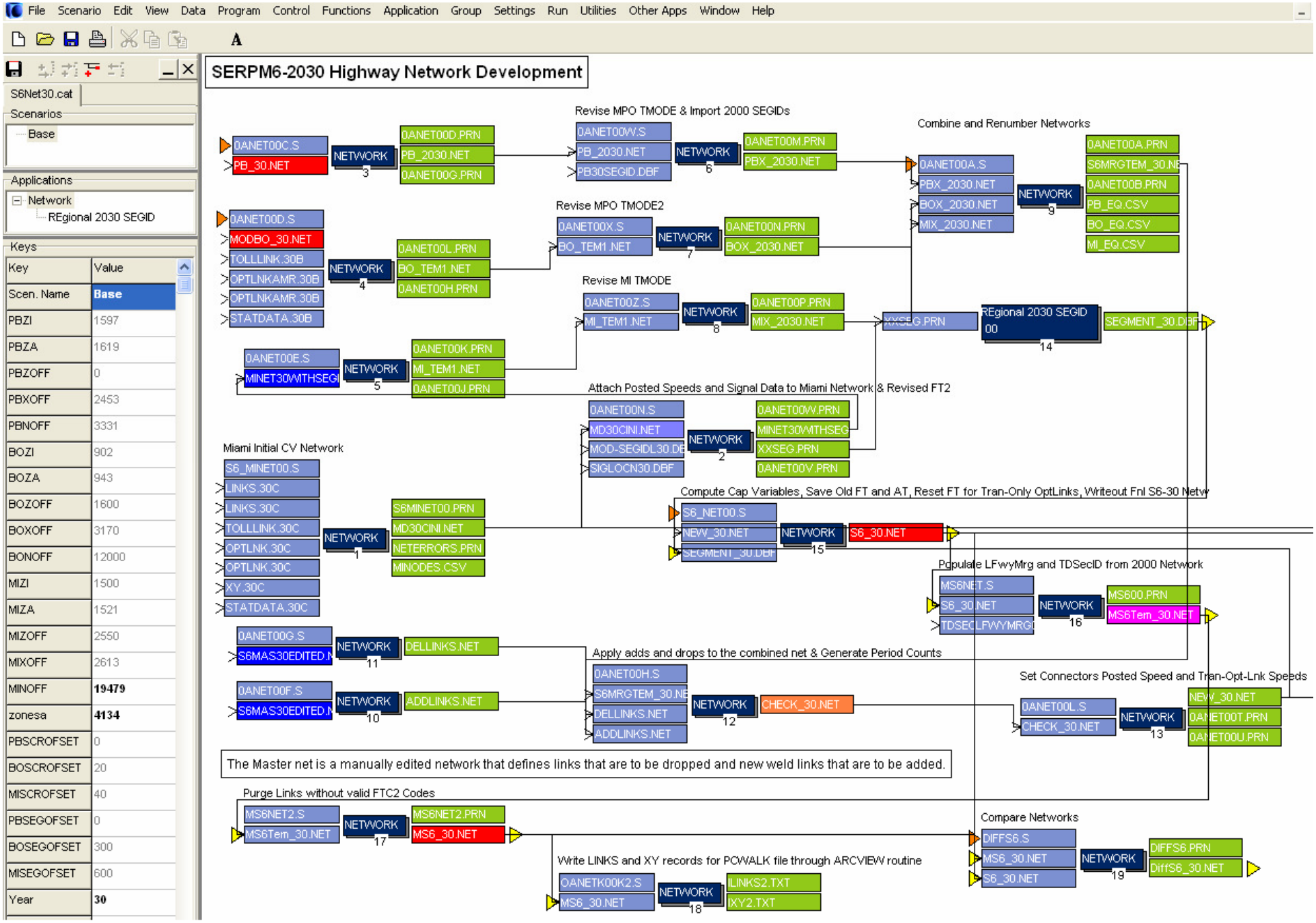


Figure B-1 (Continued)

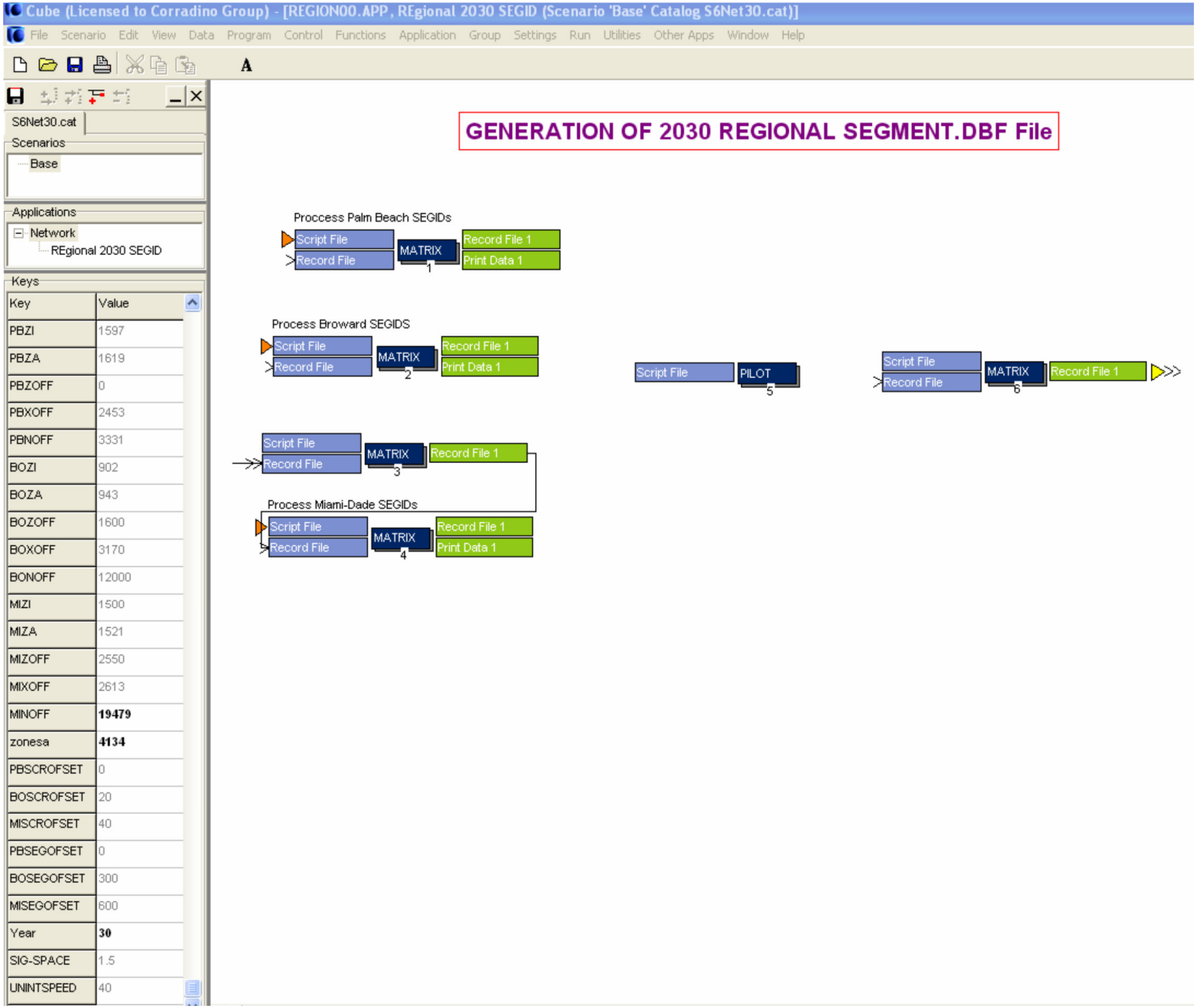
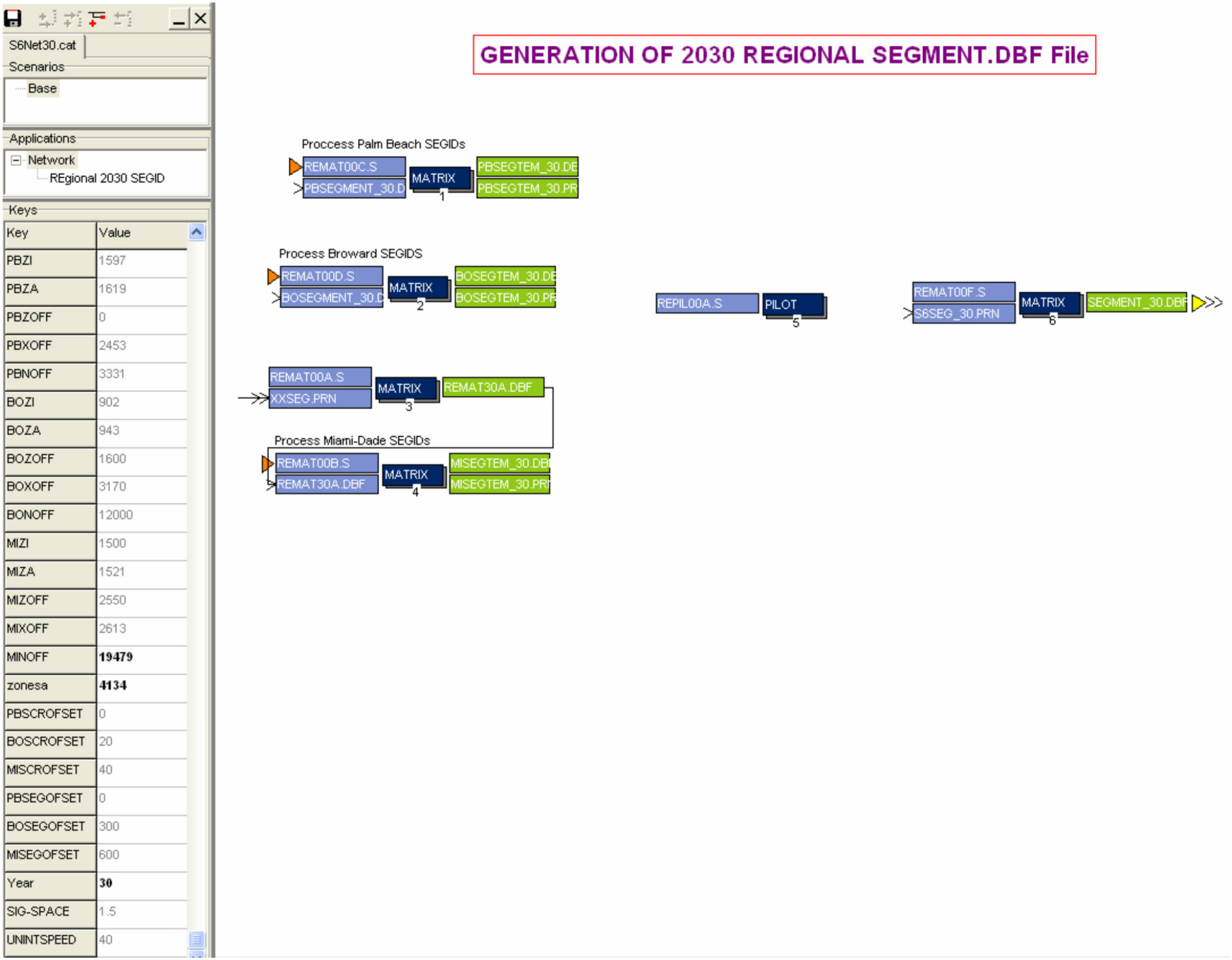


Figure B-1 (Continued)



Key	Value
PBZI	1597
PBZA	1619
PBZOFF	0
PBXOFF	2453
PBNOFF	3331
BOZI	902
BOZA	943
BOZOFF	1600
BOXOFF	3170
BONOFF	12000
MIZI	1500
MIZA	1521
MIZOFF	2550
MIXOFF	2613
MINOFF	**19479**
zonesa	**4134**
PBSCROFSET	0
BOSCROFSET	20
MISCROFSET	40
PBSEGOFSET	0
BOSEGOFSET	300
MISEGOFSET	600
Year	**30**
SIG-SPACE	1.5
UNINTSPEED	40

1-S6_MINET00.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6NET30\CUBE\S6MINET00.PRN" MSG='Miami Initial CV Network'
FILEO PRINTO[2] = "D:\S6NET30\CUBE\MINODES.CSV"
FILEO PRINTO[1] = "D:\S6NET30\CUBE\NETERRORS.PRN"
FILEO NETO = "D:\S6NET30\CUBE\MD30CINI.NET",
 EXCLUDE=UF,CF,BPRLOS,BPREXP,
         BIGCNT,COUNT,PCTTRUCKS                      ;Exclude Any Count Related attributes

FILEI NODEI[2] = "D:\S6NET30\S6-NET\MIIN\STATDATA.30C",
 VAR=STATIONNUMBER BEG=1, LEN=4,
 VAR=N, BEG=5, LEN=6,
 VAR=STATIONZONE, BEG=11, LEN=6,
 VAR=SERVICEMILES, BEG=17, LEN=6,
 VAR=PARKINGSPACES, BEG=23, LEN=6,
 VAR=PARKINGCOSTAM, BEG=29, LEN=6,
 VAR=PARKINGCOSTMD, BEG=35, LEN=6,
 VAR=TERMTIMEPNR, BEG=41 LEN=6,
 VAR=TERMTIMEKNR, BEG=47, LEN=6,
 VAR=ACTIVEFLAG, BEG=55, LEN=1,
 VAR=STATIONDESC, BEG=57, LEN=24,TYP=A,
 VAR=FAREZONE, BEG=81, LEN=2

FILEI NODEI[1] = "D:\S6NET30\S6-NET\MIIN\XY.30C",
 VAR=N,1-6,X,7-15,Y,16-24

FILEI LINKI[5] = "D:\S6NET30\S6-NET\MIIN\OPTLNK.30C",
 VAR=B, BEG=2, LEN=5,
 VAR=A, BEG=7, LEN=5,
 VAR=TMODE, BEG=13, LEN=1,
 VAR=TDIST, BEG=18, LEN=5,
 VAR=TSPEED, BEG=24, LEN=4,
 VAR=TTIME, BEG=29, LEN=4

FILEI LINKI[4] = "D:\S6NET30\S6-NET\MIIN\OPTLNK.30C",
 VAR=A, BEG=2, LEN=5,
 VAR=B, BEG=7, LEN=5,
 VAR=TMODE, BEG=13, LEN=1,
 VAR=TDIST, BEG=18, LEN=5,
 VAR=TSPEED, BEG=24, LEN=4,
 VAR=TTIME, BEG=29, LEN=4

FILEI LINKI[3] = "D:\S6NET30\S6-NET\MIIN\TOLLLINK.30C",
```

```
 var=TOLL,beg=1,len=2,
 var=TOLLTYPE,beg=3,len=2,
 var=A,beg=6,len=5,
 var=B,beg=12,len=5,
 var=PLAZADESC,beg=18,len=25,typ=a,
 var=PLZALNSMIN,beg=44,len=2,
 var=PLZALNSMAX,beg=47,len=2,
 var=CARTOLL,beg=50,len=5,
 var=SVCMINUTES,beg=56,len=1,
 var=SVCSECONDS,beg=58,len=2,
 var=DECELCODE,beg=61,len=1,
 var=ACCELCODE,beg=63,len=1,
 var=EXACTCHGLNS,beg=65,len=2,
 var=AVILANES,beg=68,len=2,
 var=PCTTRUCKS,beg=71,len=4,
 START=(substr(record,4,1)=='1'),
 STOP=(SUBSTR(RECORD,1,1)=='C')

FILEI LINKI[2] = "D:\S6NET30\S6-NET\MIIN\LINKS.30C",
 var=USER,beg=1,len=1,
 var=DIRCODE,beg=2,len=1,
 var=B,beg=3, len=5,
 var=A,beg=8, len=5,
 var=DISTANCE,beg=13, len=4,
 var=TOLL,beg=17, len=2,
 var=CONSTRUCTION,beg=21, len=2,
 var=LANDUSE,beg=23,len=1,
 var=ZONE,beg=24,len=4,
 var=LOCATION,beg=28,len=2,
 var=USECODE,beg=30,len=1,
 var=STCARD,beg=52,len=1,typ=a,
 var=TIME,beg=53,len=3,
 var=TIME2,beg=56, len=4,
 var=CAPACITY,beg=60,len=5,
 var=COUNT,beg=65,len=5,
 var=NUM_LANES,beg=70,len=1,
 var=SCREENLINE,beg=71,len=2,
 var=FACILITY_TYPE,beg=73,len=2,
 var=AREA_TYPE,beg=75,len=2,
 var=BIGCNT,beg=83,len=6,
 SELECT=(substr(record,2,2)==' ');ADD REVERSE DIRECTION

FILEI LINKI[1] = "D:\S6NET30\S6-NET\MIIN\LINKS.30C",
 var=USER,beg=1,len=1,
 var=DIRCODE,beg=2,len=1,
 var=A,beg=3, len=5,
 var=B,beg=8, len=5,
```

```
 var=DISTANCE,beg=13, len=4,
 var=TOLL,beg=17, len=2,
 var=CONSTRUCTION,beg=21, len=2,
 var=LANDUSE,beg=23,len=1,
 var=ZONE,beg=24,len=4,
 var=LOCATION,beg=28,len=2,
 var=USECODE,beg=30,len=1,
 var=STCARD,beg=31,len=1,typ=a,
 var=TIME,beg=32,len=3,
 var=TIME2,beg=35,len=4,
 var=CAPACITY,beg=39,len=5,
 var=COUNT,beg=44,len=5,
 var=NUM_LANES,beg=49,len=1,
 var=SCREENLINE,beg=50,len=2,
 var=FACILITY_TYPE,beg=73,len=2,
 var=AREA_TYPE,beg=75,len=2,
 var=BIGCNT,beg=77,len=6

PAR ZONES=1521 LIST_ERRS=0 MAX_IP_ERRS=999999 ; MD ZONESA from 30C Profile.mas
ARRAY BPRL=99,BPRC=99,CONF=99,URF=99

PHASE=NODEMERGE
  X=X*100 ; SCALE TRANPLAN COORDINATES
  Y=Y*100 ; SCALE TRANPLAN COORDINATES
  print csv=t list=n,x,y, printo=2

 if (n>0) location=3              ;Set location attribute of Miami-Dade as 3

ENDPROCESS

PHASE=LINKMERGE
  IF (BIGCNT>COUNT) COUNT=BIGCNT
  if (distance=0)
     DISTANCE= SQRT((a.x-b.x)^2+(a.y-b.y)^2)/5280
  ELSE
     DISTANCE=DISTANCE/100
  ENDIF

;set TWOWAY attribute
  if (DIRCODE==1)
     TWOWAY=0            ; 1-way definition
   elseif (DIRCODE==0)   ; 2-way definition
     TWOWAY=1
   else
     TWOWAY=9           ; to trap missing codes for DIRCODE (if any)
  endif
```

```
;set Regional TOLL numbers (MD MPO:1-69 => Reg: 301-369)
   if (TOLL>0) TOLL = TOLL + 300    ; Miami-Dade Cases

;set Location to 3 (Miami-Dade County)
   if (Location==3)
       Location=location
     else
       Location=3
   endif

;set Transit Optional Link's Facility Type as zero when facility_Type is NOT non-ZERO
   if ((TMODE>0)&(FACILITY_TYPE>0)) ;Preserve existing hwy lnk FT that coded as transit optional link
      FACILITY_TYPE=FACILITY_TYPE
     elseif ((TMODE>0)&(FACILITY_TYPE=0)) ; Pure Transit Optional Link
      FACILITY_TYPE=0
     else                              ;Highway-Only Links
      FACILITY_TYPE=FACILITY_TYPE
   endif

;Save FACILITY_TYPE as FT2_old since many of those will be updated in next step

   FT2_old=FACILITY_TYPE

ENDPROCESS

PROCESS  PHASE=SUMMARY
  REPORT ALL=T
ENDPROCESS

ENDRUN
```

2-0ANET00N.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6NET30\CUBE\0ANET00W.PRN" MSG='Attach Posted Speeds and Signal Data to Miami Network &
Revised FT2'
FILEI LINKI[1] = "D:\S6NET30\CUBE\MD30CINI.NET"
FILEO PRINTO[2] = "D:\S6NET30\CUBE\0ANET00V.PRN"
FILEI NODEI[2] = "D:\S6NET30\S6-NET\MIIN\SIGLOCN30.DBF"
FILEI LINKI[3] = "D:\S6NET30\S6-NET\MIIN\MOD-SEGIDL30.DBF"
FILEO PRINTO[1] = "D:\S6Net30\S6-NET\XXSEG.PRN"
FILEO NETO = "D:\S6Net30\S6-NET\MINET30WITHSEGID.NET"
;Add segment codes
ARRAY SIGS=325,segd=325,FT1=325

;Phase=NodeMerge
```

```
;endphase

Phase=LinkMerge
  if(li.1.DISTANCE==0)
    Delete
  elseif (FACILITY_TYPE>0)      ;SKS - exclude any strict transit optional links
    ; SEGMENTS Calculated by KDK using TransCAD segment tool
    SEGID=li.3.SEGID

;Update Facility Type from the SEGID-DBF file (many cases were revised manually
;                       through TransCAD as part of QA/QC of Signal related Data)

    IF((FACILITY_T>0)&(FACILITY_TYPE<>FACILITY_T))
       FACILITY_TYPE=FACILITY_T
       ChkRevFT=1                                  ;Flag for which FT codes modified
    ENDIF

    if (SEGID=162)       ;SEGID 162 includes FT2s 60s(mostly) and few 70s
         _FTONE=6
      elseif (SEGID=164) ;SEGID 164 includes FT2s 40s(mostly) and few 70s
         _FTONE=4
      elseif (SEGID=265) ;SEGID 265 (Causeway Xing) includes FT2s 17s (mostly-Controlled Access Pkwy) and few 70s
         _FTONE=2
      elseif (SEGID=266) ;SEGID 266 (causeway Xing) includes FT2s 20s(mostly) and few 70s
         _FTONE=2
      elseif (SEGID=267) ;SEGID 267 includes TOLL for causeways and most other FT2s are 20s
         _FTONE=2
      else
        _FTONE=INT(li.1.FACILITY_TYPE/10)
    endif


    if(TWOWAY==1)
      _d=DISTANCE*0.5
      _sad=0.5
    else
      _d=DISTANCE
      _sad=1.0
    endif
    segd[SEGID] = segd[SEGID]+_d
    if(b.sectionid<>0) SIGS[SEGID]=SIGS[SEGID]+_sad
    FT1[SEGID] = _FTONE
; Important Note: Handle option of FT=1,7,9 in the program    if (FT1[SEGID] == 9) FT1[SEGID]=3
  else   ;add by SKS to see the links of STRICT transit optional links not included in calculation
    print LIST='A/B/FT2/TMODE', A(5.0),B(5.0),FACILITY_TYPE(5.0),TMODE(5.0) printo=2
  endif
```

```
endphase

PHASE=SUMMARY
 loop _k=1,325
   if(segd[_k]>0) print CSV=T list=_K(6.0),segd[_k](6.2),SIGS[_k](4.0),FT1[_k](4.0) PRINTO=1
 endloop
endphase

ENDRUN
```

3-0ANET00C.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6Net30\CUBE\0ANET00D.PRN"
FILEI LINKI[1] = "D:\S6NET30\S6-NET\PB_30.NET"
FILEO PRINTO[1] = "D:\S6Net30\CUBE\0ANET00G.PRN"
FILEO NETO = "D:\S6Net30\S6-NET\PB_2030.NET",
  EXCLUDE=STATION,AADT,CTOTAL,PASS_VEH,F4T_TRUCK,COMBTRK,PASS_PCT,F4T_PCT,SU_PCT,COMB_PCT,CTYPE,
          RPAS4T,RSUTRK,RSUCOM,COUNTY,PCTTRUCKS,COUNT,     ;Exclude Any Count Related attributes
          POSTEDSPEED,                                     ;Passed to POSTSPD
          SEGID                                            ;Excluded since PROBLEM with DATA

/*
;Phase=Input filei=li.1
; IF (SEGID.R==99)
;    BA_SEGID=AB_SEGID
;   ELSEIF((SEGID==99)&(SEGID.R<>99))
;    SEGID=SEGID.R
;   ELSE
;    SEGID.R=SEGID
; ENDIF

;Endphase
*/

Phase=NodeMerge

  if (n>0) location=1              ;Set location attribute of Palm beach as 1

;set NODETYPE as...
  if (n <=1566)                      ;Internal zones
        NODETYPE=1
    elseif ((n>{PBZI})&(n<=1606))    ;MPO External - Regional External
        NODETYPE=2
    elseif ((n>1566)&(n<={PBZI}))    ;MPO Dummy Int TAZ - Regional Dummy TAZ
        NODETYPE=3
    elseif ((n>=1607)&(n<={PBZA}))   ;MPO External - Regional Dummy
```

```
        NODETYPE=4
    else
        NODETYPE=0                  ;Internal Nodes
  endif

  ;if(n>=9039) DELETE              ;Find how PB nodes 9039-9043 get into outnet

 if((x==0)&(y==0)) DELETE          ;Delete nodes with zero coordinates

  ONODE=ni.1.n
  print csv=t list=n,x,y, printo=1
  if (FAREZONE>0) FAREZONE=FAREZONE-1   ;Decerease by original no.(2-4) since BO statrs at 4
                                        ;BO Farezones ranges 3-5 and Miami farezone is 6
endphase

Phase=LinkMerge
  OA=li.1.a
  OB=li.1.b
  ADD=0
  DROP=0

;  cntr=0

;set TWOWAY attribute
  if (DIRCODE==1)
     TWOWAY=0            ; 1-way definition
   elseif (DIRCODE==0)   ; 2-way definition
     TWOWAY=1
   else
     TWOWAY=9           ; to trap missing codes for DIRCODE (if any)
  endif

;set Regional TOLL numbers (PB MPO:1-66 => Reg: 101-166)
   if (TOLL>0) TOLL = TOLL + 100    ; Palm Beach Cases


;set Location to 1 (PB County) & Pass POSTEDSPEED to POSTSPD (PB County)
   if (Location==1)
       Location=location
       POSTSPD=POSTEDSPEED
     else
       Location=1
       POSTSPD=POSTEDSPEED
   endif

;Set POSTSPD for TOLL BOOTH (FT=99) as 30 mph
    if ((FACILITY_TYPE=99)&(POSTSPD=0)) POSTSPD=30
```

```
;Delete Transit Optional Link of Transit Modes 1-3 (access links)
   if ((TMODE>=1)&(TMODE<=3)) DELETE

;set Transit Optional Link's Facility Type as zero

;Reset Transit Optional Link's (TMODE) Facility Type as zero when facility_Type is coded as 49
   if ((TMODE>3)&(FACILITY_TYPE<>49)) ;Preserve existing hwy lnk FT that coded as transit optional link
      FACILITY_TYPE=FACILITY_TYPE
     elseif ((TMODE>3)&(FACILITY_TYPE=49)) ; Pure Transit Optional Link
      FACILITY_TYPE=0
     else                                ;Highway-Only Links
      FACILITY_TYPE=FACILITY_TYPE
   endif


;VERY IMPORTANT - Delete FT of 49 and TMODE as ZERO. The Input network has 2 directional links for the 1-way links (for
example, Freeway and TPK links)

   if ((TMODE==0)&(FACILITY_TYPE=49)) DELETE

endphase

phase=summary
; print list='cntr=',cntr

endphase

ENDRUN
```

4-0ANET00D.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6Net30\CUBE\0ANET00L.PRN"
FILEI NODEI[2] = "D:\S6NET30\S6-NET\BOIN\STATDATA.30B",
 VAR=STATIONNUMBER BEG=1, LEN=4,
 VAR=N, BEG=5, LEN=6,
 VAR=STATIONZONE, BEG=11, LEN=6,
 VAR=SERVICEMILES, BEG=17, LEN=6,
 VAR=PARKINGSPACES, BEG=23, LEN=6,
 VAR=PARKINGCOSTAM, BEG=29, LEN=6,
 VAR=PARKINGCOSTMD, BEG=35, LEN=6,
 VAR=TERMTIMEPNR, BEG=41 LEN=6,
 VAR=TERMTIMEKNR, BEG=47, LEN=6,
 VAR=ACTIVEFLAG, BEG=55, LEN=1,
 VAR=STATIONDESC, BEG=58, LEN=23,TYP=A,
```

```
 VAR=FAREZONE, BEG=81, LEN=2


FILEI LINKI[4] = "D:\S6NET30\S6-NET\BOIN\OPTLNKAMR.30B",
  VAR=A, BEG=2, LEN=5,
  VAR=B, BEG=7, LEN=5,
  VAR=TMODE2, BEG=13, LEN=2,
  VAR=TDIST, BEG=23, LEN=5,
  VAR=TSPEED, BEG=29, LEN=4,
  VAR=TTIME, BEG=34, LEN=4

FILEI LINKI[3] = "D:\S6NET30\S6-NET\BOIN\OPTLNKAMR.30B",
  VAR=B, BEG=2, LEN=5,
  VAR=A, BEG=7, LEN=5,
  VAR=TMODE2, BEG=13, LEN=2,
  VAR=TDIST, BEG=23, LEN=5,
  VAR=TSPEED, BEG=29, LEN=4,
  VAR=TTIME, BEG=34, LEN=4

FILEI LINKI[2] = "D:\S6NET30\S6-NET\BOIN\TOLLLINK.30B",
 var=TOLL,beg=1,len=2,
 var=TOLLTYPE,beg=3,len=2,
 var=A,beg=6,len=5,
 var=B,beg=12,len=5,
 var=PLAZADESC,beg=18,len=25,typ=a,
 var=PLZALNSMIN,beg=44,len=2,
 var=PLZALNSMAX,beg=47,len=2,
 var=CARTOLL,beg=50,len=5,
 var=SVCMINUTES,beg=56,len=1,
 var=SVCSECONDS,beg=58,len=2,
 var=DECELCODE,beg=61,len=1,
 var=ACCELCODE,beg=63,len=1,
 var=EXACTCHGLNS,beg=65,len=2,
 var=AVILANES,beg=68,len=2,
 var=PCTTRUCKS,beg=71,len=4,
 START=(substr(record,4,1)=='1'),
 STOP=(SUBSTR(RECORD,1,1)=='C')

FILEO PRINTO[1] = "D:\S6Net30\CUBE\0ANET00H.PRN"
FILEO NETO = "D:\S6Net30\S6-NET\BO_TEM1.NET",
 EXCLUDE=PCTTRUCKS,COUNT,                        ;Exclude Any Count Related attributes
         POSTEDSPEED,TEMPDIS                     ;POSTEDSPEED Passed to POSTSPD

FILEI LINKI[1] = "D:\S6NET30\S6-NET\MODBO_30.NET"

Phase=NodeMerge
  ONODE=ni.1.n
```

```
  print csv=t list=n,x,y, printo=1

 if (n>0) location=2              ;Set location attribute of Broward as 2

;set NODETYPE as... {Note: There is no Internal Dummy zone for Broward)
  if (n <={BOZI})                     ;Internal zones
        NODETYPE=1
    elseif ((n>=918)&(n<=919))      ;MPO External - Regional External
        NODETYPE=2
    elseif ((n>{BOZI})&(n<={BOZA}))   ;MPO External - Regional Dummy
        NODETYPE=4
    else
        NODETYPE=0                    ;Internal Nodes
  endif


endphase

Phase=LinkMerge
  OA=li.1.a
  OB=li.1.b
  ADD=0
  DROP=0

;set TWOWAY attribute
  if (DIRCODE==1)
     TWOWAY=0            ; 1-way definition
   elseif (DIRCODE==0)   ; 2-way definition
     TWOWAY=1
   else
     TWOWAY=9           ; to trap missing codes for DIRCODE (if any)
  endif

;set Regional TOLL numbers (BO MPO:1-46 => Reg: 201-246)
   if (TOLL>0) TOLL = TOLL + 200    ; Broward Cases


;Void out TMODE from the Input Network-Not Sure about their validity

   if (TMODE>0)TMODE=0

;set Transit Optional Link's (TMODE2) Facility Type as zero when facility_Type is NOT non-ZERO
   if ((TMODE2>0)&(FACILITY_TYPE>0)) ;Preserve existing hwy lnk FT that coded as transit optional link
      FACILITY_TYPE=FACILITY_TYPE
     elseif ((TMODE2>0)&(FACILITY_TYPE=0)) ; Pure Transit Optional Link
      FACILITY_TYPE=0
     else                                ;Highway-Only Links
```

```
      FACILITY_TYPE=FACILITY_TYPE
   endif


;set Location to 2 & Pass POSTEDSPEED to POSTSPD (Broward County)
   if (Location==2)
       Location=location
;not reqd for modified network:       POSTSPD=POSTEDSPEED
     else
       Location=2
;not reqd for modified network:       POSTSPD=POSTEDSPEED
   endif

endphase

phase=summary

;   if((ni.2.x==0)&(ni.2.y==0)) print list="n= ", n(5.0)


; print list='cntr=',cntr


endphase

ENDRUN
```

5-0ANET00E.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6Net30\CUBE\0ANET00K.PRN"
FILEO PRINTO[1] = "D:\S6Net30\CUBE\0ANET00J.PRN"
FILEI LINKI[1] = "D:\S6Net30\S6-NET\MINET30WITHSEGID.NET"
FILEO NETO = "D:\S6Net30\S6-NET\MI_TEM1.NET",
   EXCLUDE=FT2_OLD,FACILITY_T,CHKREVFT

Phase=NodeMerge
  ONODE=ni.1.n
  print csv=t list=n,x,y, printo=1
endphase

Phase=LinkMerge
  OA=li.1.a
  OB=li.1.b
  ADD=0
  DROP=0
```

```
endphase

ENDRUN
```

6-0ANET00W.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6Net30\CUBE\0ANET00M.PRN" MSG='Revise MPO TMODE & Import 2000 SEGIDs'
FILEI LINKI[2] = "D:\S6NET30\S6-NET\PBIN\PB30SEGID.DBF"
FILEO NETO = "D:\S6Net30\S6-NET\PBX_2030.NET",
 EXCLUDE=TMODE
FILEI LINKI[1] = "D:\S6Net30\S6-NET\PB_2030.NET"


Phase=LinkMerge

;Set PB & BO MPO OPTLNK TMODE to Regional TMODE and ROADNAME

IF (TMODE=1)
  RTMODE=1
  ROADNAME='PBBO-WALKCON'
ENDIF

IF (TMODE=3)
  RTMODE=3
  ROADNAME='PBBO-SIDECON'
ENDIF

IF (TMODE=4)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF

IF (TMODE=6)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF

IF (TMODE=8)
  RTMODE=8
  ROADNAME='TRIRAIL'
ENDIF

IF (TMODE=12)
  RTMODE=12
  ROADNAME='TR-FEEDER BUS'
```

```
ENDIF


Endphase

ENDRUN
```

7-0ANET00X.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6Net30\CUBE\0ANET00N.PRN" MSG='Revise MPO TMODE2'
FILEI LINKI[1] = "D:\S6Net30\S6-NET\BO_TEM1.NET"
FILEO NETO = "D:\S6Net30\S6-NET\BOX_2030.NET",
 EXCLUDE=TMODE2,TMODE

Phase=LinkMerge

;Set PB & BO MPO OPTLNK TMODE to Regional TMODE and ROADNAME

IF (TMODE2=1)
  RTMODE=1
  ROADNAME='PBBO-WALKCON'
ENDIF

IF (TMODE2=3)
  RTMODE=3
  ROADNAME='PBBO-SIDECON'
ENDIF

IF (TMODE2=4)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF

IF (TMODE2=6)
  RTMODE=4
  ROADNAME='PBBO-BUS'
ENDIF

IF (TMODE2=7)
  RTMODE=7
  ROADNAME='PBBO-RAIL'
ENDIF

IF (TMODE2=8)
  RTMODE=8
  ROADNAME='TRIRAIL'
```

```
ENDIF

IF (TMODE2=12)
  RTMODE=12
  ROADNAME='TR-FEEDER BUS'
ENDIF


Endphase

ENDRUN
```

8-0ANET00Z.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6Net30\CUBE\0ANET00P.PRN" MSG='Revise MI TMODE'
FILEI LINKI[1] = "D:\S6Net30\S6-NET\MI_TEM1.NET"
FILEO NETO = "D:\S6Net30\S6-NET\MIX_2030.NET",
 EXCLUDE=TMODE

Phase=LinkMerge

;Set Miami-Dade MPO OPTLNK TMODE to Regional TMODE (RTMODE) and ROADNAME

IF (TMODE=4)
  RTMODE=5
  ROADNAME='MD-BUS'
ENDIF

IF (TMODE=5)
  RTMODE=7
  ROADNAME='RAIL'
ENDIF

IF (TMODE=6)
  RTMODE=5
  ROADNAME='MD-BUS'
ENDIF

IF (TMODE=7)
  RTMODE=8
  ROADNAME='TRIRAIL'
ENDIF

IF (TMODE=8)
  RTMODE=9
  ROADNAME='METROMOVER'
```

```
ENDIF


Endphase

ENDRUN
```

9-0ANET00A.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6Net30\CUBE\0ANET00A.PRN" MSG='Combine and Renumber Networks'
FILEI LINKI[3] = "D:\S6Net30\S6-NET\MIX_2030.NET"
FILEI LINKI[2] = "D:\S6Net30\S6-NET\BOX_2030.NET"
FILEI LINKI[1] = "D:\S6Net30\S6-NET\PBX_2030.NET"
FILEO PRINTO[4] = "D:\S6Net30\CUBE\MI_EQ.CSV"
FILEO PRINTO[3] = "D:\S6Net30\CUBE\BO_EQ.CSV"
FILEO PRINTO[2] = "D:\S6Net30\CUBE\PB_EQ.CSV"
FILEO NETO = "D:\S6Net30\CUBE\S6MRGTEM_30.NET",
 EXCLUDE=RTMODE
FILEO PRINTO[1] = "D:\S6Net30\CUBE\0ANET00B.PRN"

PARAMETERS zones=4134

;==============================================================
; PALM BEACH RENUMBER
Phase=Input filei=ni.1
   ONODE=n
   if(n<={PBZI})
      n=n+{PBZOFF}
   elseif((n >{PBZI}) & (n<={PBZA}))
      n=n+{PBXOFF}
   elseif(n >{PBZA})
      n=n+{PBNOFF}
   else
      PRINT LIST='error at node ',n
   endif
endphase
Phase=Input filei=li.1
   OA=a
   OB=b
   if(a<={PBZI})
      a=a+{PBZOFF}
   elseif((a >{PBZI}) & (a<={PBZA}))
      a=a+{PBXOFF}
   else
      a=a+{PBNOFF}
   endif
```

```
   if(b<={PBZI})
      b=b+{PBZOFF}
   elseif((b >{PBZI}) & (b<={PBZA}))
      b=b+{PBXOFF}
   else
      b=b+{PBNOFF}
   endif


; Palm Beach Screenline (MPO No. 0,1-18,95,96,99) renumber

   if(screenline=0)
        screenline=99
     elseif((screenline>=1)&(screenline<=18))
        screenline=screenline+{PBSCROFSET}
     else
        screenline=screenline
   endif

; Palm Beach SEGID (MPO No. 1-271) renumber

   if(segid==0)
        segid=0
     else
        segid=segid+{PBSEGOFSET}
   endif

endphase

;==============================================================
; BROWARD RENUMBER
Phase=Input filei=ni.2
   ONODE=n
   if(n<={BOZI})
      n=n+{BOZOFF}
   elseif((n >{BOZI}) & (n<={BOZA}))
      n=n+{BOXOFF}
   elseif(n >{BOZA})
      n=n+{BONOFF}
   else
      PRINT LIST='error at node ',n
   endif
endphase
Phase=Input filei=li.2
   OA=a
   OB=b
```

```
   if(a<={BOZI})
      a=a+{BOZOFF}
   elseif((a >{BOZI}) & (a<={BOZA}))
      a=a+{BOXOFF}
   else
      a=a+{BONOFF}
   endif

   if(b<={BOZI})
      b=b+{BOZOFF}
   elseif((b >{BOZI}) & (b<={BOZA}))
      b=b+{BOXOFF}
   else
      b=b+{BONOFF}
   endif

; Broward Screenline (MPO No. 0,1-14,59,75,82,86,91,95,99) renumber

   if(screenline=0)
        screenline=99
     elseif((screenline>=1)&(screenline<=14))
        screenline=screenline+{BOSCROFSET}
     else
        screenline=screenline
   endif

; Broward SEGID (MPO No. 1-201) renumber

   if(segid==0)
        segid=0
     else
        segid=segid+{BOSEGOFSET}
   endif

endphase

;==============================================================
; MIAMI-DADE RENUMBER
Phase=Input filei=ni.3
   ONODE=n
   if(n<={MIZI})
      n=n+{MIZOFF}
   elseif((n >{MIZI}) & (n<={MIZA}))
      n=n+{MIXOFF}
   elseif(n >{MIZA})
      n=n+{MINOFF}
   else
```

```
      PRINT LIST='error at node ',n
   endif
endphase
Phase=Input filei=li.3
   OA=a
   OB=b
   if(a<={MIZI})
      a=a+{MIZOFF}
   elseif((a >{MIZI}) & (a<={MIZA}))
      a=a+{MIXOFF}
   else
      a=a+{MINOFF}
   endif

   if(b<={MIZI})
      b=b+{MIZOFF}
   elseif((b >{MIZI}) & (b<={MIZA}))
      b=b+{MIXOFF}
   else
      b=b+{MINOFF}
   endif

; Miami-Dade Screenline (MPO No. 1-13,99) renumber

   if(screenline=0)
        screenline=99
     elseif((screenline>=1)&(screenline<=13))
        screenline=screenline+{MISCROFSET}
     else
        screenline=screenline
   endif


; Miami-Dade SEGID (MPO No. 1-286,300-301) renumber

   if(segid==0)
        segid=0
     else
        segid=segid+{MiSEGOFSET}
   endif

endphase
;=============================================================

Phase=NodeMerge
  if(ni.1.n >0) CONUM=1
  if(ni.2.n >0) CONUM=2
```

```
  if(ni.3.n >0) CONUM=3
  If(n=1) PRINT CFORM=6 CSV=T LIST="ONODE","N","CONUM" PRINTO=2
  If(n=1) PRINT CFORM=6 CSV=T LIST="ONODE","N","CONUM" PRINTO=3
  If(n=1) PRINT CFORM=6 CSV=T LIST="ONODE","N","CONUM" PRINTO=4
  if(CONUM==1) print FORM=6 CSV=T list=ONODE,N,CONUM PRINTO=2
  if(CONUM==2) print FORM=6 CSV=T list=ONODE,N,CONUM PRINTO=3
  if(CONUM==3) print FORM=6 CSV=T list=ONODE,N,CONUM PRINTO=4
endphase
Phase=LinkMerge
  if(li.1.a >0) CONUM=1
  if(li.2.a >0) CONUM=2
  if(li.3.a >0) CONUM=3

;Reset RTMODE as TMODE and exclude RTMODE
 if(RTMODE>=1) TMODE=RTMODE

;Reset Screenline to zero for any centroid connector
 if((a<={zonesa})|(a<={zonesa}))SCREENLINE=0

endphase
;
ENDRUN
```

10-0ANET00F.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK
FILEI LINKI[1] = "D:\S6NET30\CUBE\S6MAS30EDITED.NET"
FILEO NETO = "D:\S6Net30\CUBE\ADDLINKS.NET"
if(ADD <>1) delete
if(ADD==1) screenline=99

ENDRUN
```

11-0ANET00G.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK
FILEI LINKI[1] = "D:\S6NET30\CUBE\S6MAS30EDITED.NET"
FILEO NETO = "D:\S6Net30\CUBE\DELLINKS.NET"
if(DROP <>1) delete
ENDRUN
```

12-0ANET00H.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK MSG='Apply adds and drops to the combined net & Generate Period Counts'
FILEI LINKI[3] = "D:\S6Net30\CUBE\ADDLINKS.NET"
```

```
FILEI LINKI[2] = "D:\S6Net30\CUBE\DELLINKS.NET"
FILEI LINKI[1] = "D:\S6Net30\CUBE\S6MRGTEM_30.NET"
FILEO NETO = "D:\S6Net30\CUBE\CHECK_30.NET",
 EXCLUDE=RPAS4T, RSUTRK, RSUCOM, RCOMBTRK

Phase=LinkMerge

if(li.2.A>0) delete
;

;SKS- Generate Period Model Counts
/*
  if(li.1.Count>0)

   Cnt_AMPRD=ROUND(Count*(PAMPRD/100))             ;AM Peak Period (7:00-9:00AM) Count
   Cnt_MDPRD=ROUND(Count*(PMDPRD/100))             ;MIDDAY Period (9:00AM-3:00PM) Count
   Cnt_PMPRD=ROUND(Count*(PPMPRD/100))             ;PM Peak Period (3:00-6:00PM) Count
   Cnt_NTPRD=ROUND(Count*(PNTPRD/100))             ;Off-Peak/NIGHT Period (6:00PM-7:00AM) Count
   Cnt_OFPRD=ROUND(Count*((PMDPRD+PNTPRD)/100))    ;OFF-Peak Period (9:00AM-3:00PM & 6:00PM-7:00AM) Count

   Cnt_AMPKH=ROUND(Count*(PAMPH/100))              ;AM Peak Hour (7:30-8:30AM) Count
   Cnt_PMMPH=ROUND(Count*(PPMPH/100))              ;PM Peak Hour (5:00-6:00 PM) Count

  endif
*/

endphase

;
ENDRUN
```

13-0ANET00L.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK MSG='Set Connectors Posted Speed and Tran-Opt-Lnk Speeds'
FILEO PRINTO[2] = "D:\S6Net30\CUBE\0ANET00U.PRN"
FILEO PRINTO[1] = "D:\S6Net30\CUBE\0ANET00T.PRN"
FILEO NETO = "D:\S6Net30\CUBE\NEW_30.NET"
FILEI LINKI[1] = "D:\S6Net30\CUBE\CHECK_30.NET"

;Setup Area Type in Node Layer to fillup later in GIS
;  see KDK to see if this could be automated having link layer info

;Phase=NodeMerge
;  if (ni.1.n>0)
;    AreaType=99
;  endif
```

```
;endphase


;  MODSIGID=SEGID%10
;
// Set Speeds for the Centroid Connectors
   _AT1=INT(li.1.AREA_TYPE/10)
   _NTA=A.nodetype
   _NTB=B.nodetype

;CBD Area Connectors
 if (_AT1=1)
    if(_NTA=1 | _NTB=1)              ;internal connector
       RPOSTSPD=10
      elseif (_NTA=2 | _NTB=2)       ;external
       RPOSTSPD=15
      elseif (_NTA=3 | _NTB=3)       ;internal dummy
       RPOSTSPD=10
      elseif (_NTA=4 | _NTB=4)       ;external dummy
       RPOSTSPD=15
      else
       RPOSTSPD=POSTSPD
     endif
 endif

;Fringe-Residential-OBD Area Connectors
 if (_AT1=2|_AT1=3|_AT1=4)
    if(_NTA=1 | _NTB=1)              ;internal connector
       RPOSTSPD=12.5
      elseif (_NTA=2 | _NTB=2)       ;external
       RPOSTSPD=17.5
      elseif (_NTA=3 | _NTB=3)       ;internal dummy
       RPOSTSPD=12.5
      elseif (_NTA=4 | _NTB=4)       ;external connector
       RPOSTSPD=17.5
      else
       RPOSTSPD=POSTSPD
     endif
 endif


;Rural Area Connectors
 if (_AT1=5)
    if(_NTA=1 | _NTB=1)              ;internal connector
       RPOSTSPD=15.0
      elseif (_NTA=2 | _NTB=2)       ;external
```

```
       RPOSTSPD=20.0
      elseif (_NTA=3 | _NTB=3)       ;internal dummy
       RPOSTSPD=15.0
      elseif (_NTA=4 | _NTB=4)       ;external connector
       RPOSTSPD=20.0
      else
       RPOSTSPD=POSTSPD
     endif
 endif

//Fix Optional Link Speeds
if(TMODE>1)
   if (TSPEED>0)
       TSPEED=TSPEED                     ;retain coded transit speed
     elseif (TTIME>0)
       TSPEED=round((TDIST/TTIME)*60)    ;compute transit speed from time and distance
     elseif (POSTSPD>0)
       TSPEED=POSTSPD                    ;retain coded posted speed
     elseif (_AT1=1)
       TSPEED=10                         ;assumed default for CBD
     else
       TSPEED=15                         ;assumed default for non-CBD
    endif
endif

if (TMODE=8)
   if(TSPEED<30) TSPEED=30       ; set minimum speed for the Tri-Rail
endif


;Test Print - selected attributes

if (TMODE<1)
  print csv=f list=a(7.0),b(7.0),_AT1(5.0),_NTA(5.0),_NTB(5.0),
                  POSTSPD(5.0),RPOSTSPD(5.0),OA(7.0),OB(7.0),CONUM(5),TMODE(5.0) printo=1
endif

;Test Print - LINKS with No Posted Speeds

if (TMODE<1)
    if (RPOSTSPD=0) print csv=f list=a(7.0),b(7.0),_AT1(5.0),_NTA(5.0),_NTB(5.0),
         POSTSPD(5.0),RPOSTSPD(5.0),OA(7.0),OB(7.0),CONUM(5),TMODE(5.0) printo=2
endif

//Compute 24-Hour Truck Classification Counts based on the percentages and "Count" field
//(Note: Truck counts are non-directional and 24-hour estimates)
/*
```

```
if (COUNT>0)                                          ;Based on Count field
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*COUNT)          ;Passenger and 4-Tire Trucks
   TrkCnt_4Tire=Round((F4T_PCT)*COUNT)                   ;4-Tire Trucks
   TrkCnt_SU=Round((SU_PCT)*COUNT)                       ;Single-Unit Trucks
   TrkCnt_COMB=Round((COMB_PCT)*COUNT)                   ;Combination Trucks
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*COUNT)          ;Single-Unit and Combination Trucks
  elseif ((CTOTAL>0) & (TWOWAY=1))                    ;Based on CTOTAL (Classification Raw Totals) & 2-way links
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*CTOTAL*0.5)
   TrkCnt_4Tire=Round((F4T_PCT)*CTOTAL*0.5)
   TrkCnt_SU=Round((SU_PCT)*CTOTAL*0.5)
   TrkCnt_COMB=Round((COMB_PCT)*CTOTAL*0.5)
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*CTOTAL*0.5)
  elseif ((CTOTAL>0) & (TWOWAY=0))                    ;Based on CTOTAL & 1-way links
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*CTOTAL*1.0)
   TrkCnt_4Tire=Round((F4T_PCT)*CTOTAL*1.0)
   TrkCnt_SU=Round((SU_PCT)*CTOTAL*1.0)
   TrkCnt_COMB=Round((COMB_PCT)*CTOTAL*1.0)
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*CTOTAL*1.0)
  else                                                 ;ZERO Counts
   TrkCnt_PAS4T=Round((PASS_PCT+F4T_PCT)*COUNT)
   TrkCnt_4Tire=Round((F4T_PCT)*COUNT)
   TrkCnt_SU=Round((SU_PCT)*COUNT)
   TrkCnt_COMB=Round((COMB_PCT)*COUNT)
   TrkCnt_SUCOMB=Round((SU_PCT+COMB_PCT)*COUNT)
endif
*/

// TEMPORARY FIELDS FOR TESTING
;if(li.1.AREA_TYPE     = 0) AREA_TYPE=4
;if(li.1.FACILITY_TYPE = 0) FACILITY_TYPE=49
;if(li.1.NUM_LANES     = 0) NUM_LANES=1
;if(li.1.POSTSPD       = 0) POSTSPD=15

// TEMPORARY FIELDS FOR TESTING
;if (li.1.POSTSPD>0)
;  LBTIME=60*li.1.DISTANCE/li.1.POSTSPD
;else
;  LBTIME=60*li.1.DISTANCE/15
;endif
;WALKTIME=60*li.1.DISTANCE/3

ENDRUN
```

14-1-REMAT00C.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX MSG='Proccess Palm Beach SEGIDs'
FILEO PRINTO[1] = "D:\S6Net30\CUBE\PBSEGTEM_30.PRN"
FILEO RECO[1] = "D:\S6Net30\CUBE\PBSEGTEM_30.DBF",
          FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF        ;FIELDS=reci.allfields

FILEI RECI = "D:\S6NET30\S6-NET\PBIN\PBSEGMENT_30.DBF"

  SEGID=ri.SEGID+{PBSEGOFSET}
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1
  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF

WRITE RECO=1


print CSV=T list=SEGID(6.0), LENGTH(6.2), NUMSIG(6.0), FT1Old(6.0), CYCLE(6.0),
                 GC(6.2), DF(6.2) PRINTO=1


IF (I=0)
   PRINT LIST="\n"   PRINTO=1
ENDIF

ENDRUN
```

14-2-REMAT00D.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX MSG='Process Broward SEGIDS'
FILEO PRINTO[1] = "D:\S6Net30\CUBE\BOSEGTEM_30.PRN"
FILEO RECO[1] = "D:\S6Net30\CUBE\BOSEGTEM_30.DBF",
       FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF        ;FIELDS=reci.allfields

FILEI RECI = "D:\S6NET30\S6-NET\BOIN\BOSEGMENT_30.DBF"

  SEGID=ri.SEGID+{BOSEGOFSET}
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1
  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF
```

```
WRITE RECO=1
print CSV=T list=SEGID(6.0), LENGTH(6.2), NUMSIG(6.0), FT1Old(6.0), CYCLE(6.0),
                 GC(6.2), DF(6.2) PRINTO=1

IF (I=0)
   PRINT LIST="\n"   PRINTO=1
ENDIF

ENDRUN
```

14-3-REMAT00A.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX
FILEI RECI = "D:\S6Net30\S6-NET\XXSEG.PRN",
   SEGID=1, LENGTH=2, NUMSIG=3, FT1Old=4

FILEO RECO[1] = "D:\S6Net30\CUBE\REMAT30A.DBF",
  FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF

                                    ;,FT1(8.0), CYCLE(8.0), GC(4.2), DF(4.2)

;NRECS=RECI.NUMRECORDS

 SEGID=ri.SEGID
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1Old
  CYCLE=0
  GC=0.00
  DF=0.00

print list='NRECS =', SEGID

/* LOOP k=1,NRECS
    FT1(k)=0
    CYCLE(k)=0
    GC(k)=0.0
    DF(k)=0.0
ENDLOOP */

WRITE RECO=1
```

```
ENDRUN
```

14-4-REMAT00B.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX MSG='Process Miami-Dade SEGIDs'
FILEO PRINTO[1] = "D:\S6Net30\CUBE\MISEGTEM_30.PRN"
FILEO RECO[1] = "D:\S6Net30\CUBE\MISEGTEM_30.DBF",
      FIELDS=SEGID, LENGTH, NUMSIG, FT1Old, CYCLE, GC, DF        ;FIELDS=reci.allfields
FILEI RECI = "D:\S6Net30\CUBE\REMAT30A.DBF"

  SEGID=ri.SEGID+{MISEGOFSET}
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG
  FT1Old=ri.FT1Old
  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF


WRITE RECO=1
print CSV=T list=SEGID(6.0), LENGTH(6.2), NUMSIG(6.0), FT1Old(6.0), CYCLE(6.0),
                 GC(6.2), DF(6.2) PRINTO=1

IF (I=0)
   PRINT LIST="\n"   PRINTO=1
ENDIF

ENDRUN
```

14-5-REPIL00A.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.

*D:
*cd \S6Net30\cube
*if exist pbsegtem_30.prn copy /a pbsegtem_30.prn s6seg_30.prn
*if exist bosegtem_30.prn copy /a s6seg_30.prn+bosegtem_30.prn
*if exist misegtem_30.prn copy /a s6seg_30.prn+misegtem_30.prn
```

14-6-REMAT00F.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=MATRIX
FILEO RECO[1] = "D:\S6Net30\S6-NET\SEGMENT_{Year}.DBF",
      FIELDS=SEGID, LENGTH, NUMSIG, FT1SEGS, CYCLE, GC, DF

FILEI RECI = "D:\S6Net30\CUBE\S6SEG_30.PRN",
```

```
    SEGID=1, LENGTH=2, NUMSIG=3, FT1Old=4, CYCLE=5, GC=6, DF=7

  SEGID=ri.SEGID
  LENGTH=ri.LENGTH
  NUMSIG=ri.NUMSIG

  ;FT1=ri.FT1
;A closest translation SEGMENT File's Old 1-digit FT to revised FTC1's 1-digit FT
  IF (ri.FT1Old=1)
      FT1SEGS=1
    elseif (ri.FT1Old=2)
      FT1SEGS=4
    elseif (ri.FT1Old=3)
      FT1SEGS=6
    elseif (ri.FT1Old=4)
      FT1SEGS=6
    elseif (ri.FT1Old=5)
      FT1SEGS=5
    elseif (ri.FT1Old=6)
      FT1SEGS=4
    elseif (ri.FT1Old=7)
      FT1SEGS=7
    elseif (ri.FT1Old=8)
      FT1SEGS=8
    elseif (ri.FT1Old=9)
      FT1SEGS=9
    else
      FT1SEGS=ri.FT1Old
  ENDIF

  CYCLE=ri.CYCLE
  GC=ri.GC
  DF=ri.DF

WRITE RECO=1

ENDRUN
```

15-S6_NET00.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK MSG='Compute Cap Variables, Save Old FT and AT, Reset FT for Tran-Only OptLinks, Writeout Fnl S6-30 Netw'
FILEI LOOKUPI[1] = "D:\S6Net30\S6-NET\SEGMENT_{Year}.DBF"
FILEI LINKI[1] = "D:\S6Net30\CUBE\NEW_30.NET"
FILEO NETO = "D:\S6Net30\CUBE\S6_{Year}.NET",
  EXCLUDE=RPOSTSPD,FACILITY_TYPE,AREA_TYPE
```

```
Phase=LinkMerge

  if(li.1.TMODE>0)
    POSTSPD=POSTSPD             ;Transit Optional Links
   ELSE
    POSTSPD=RPOSTSPD            ;Other Links
  endif

LOOKUP, NAME=SEGMENTm,
      LOOKUP[1]=SEGID, RESULT=LENGTH,  ; curve 1 lookup from column 1 return value from column 2
      LOOKUP[2]=SEGID, RESULT=NUMSIG,  ; curve 2 lookup from column 1 return value from column 3
      LOOKUP[3]=SEGID, RESULT=FT1SEGS, ; curve 3 lookup from column 1 return value from column 4
      LOOKUP[4]=SEGID, RESULT=CYCLE,   ; curve 4 lookup from column 1 return value from column 5
      LOOKUP[5]=SEGID, RESULT=GC,      ; curve 5 lookup from column 1 return value from column 6
      LOOKUP[6]=SEGID, RESULT=DF,      ; curve 6 lookup from column 1 return value from column 7
      FAIL[3]=0,
      INTERPOLATE=N, LOOKUPI=1;

     LENGTH=SEGMENTm(1,SEGID)
     NUMSIG=SEGMENTm(2,SEGID)
     FT1SEGS=SEGMENTm(3,SEGID)
     CYCLE= SEGMENTm(4,SEGID)
     GC=    SEGMENTm(5,SEGID)
     DF=    SEGMENTm(6,SEGID)

;Save Old FACILITY_TYPE and Area_TYPE (S5-2digit FT2 & AT2 as) xxx_old

FT2_OLD=FACILITY_TYPE
AT2_OLD=AREA_TYPE

;Reset Facility Type Codes for Transit-Only Optional Links
  IF (FT2_OLD=0)   ;ALL Transit-Only Optional Links
     FT2_OLD=69
     FTC1=69
     FTC2=69
  ENDIF

;Populate Network with Capacity Calculator Attributes
;PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
;BEGIN POPULATE NETWORK

OVERIDE=0  ;Temporary.  Comment out if network has overides


IF (FT2_OLD=81-89)             ;HOV FACILITIES
    HOV=1
```

```
    FTC1=80
ENDIF

IF (FT2_OLD=91-99)              ;TOLL FACILITIES
    KTOLL=1
    FTC1=90
    IF (FT2_OLD=99)
        TOLLPLAZA=1
        FTC2=95
    ENDIF
ENDIF


;IF (FT2_OLD=11-14,81-82,91-93)
IF (FT2_OLD=11-14,81-85,91-95)
    FRWY=1                          ;DESIGNATED FREEWAY SEGMENTS FOR CAPACITY CLACULATION PURPOSES
    IF (HOV=1)
       FTC2=81                      ;HOV FREEWAY
    ELSEIF (KTOLL=1)
           FTC2=91                  ;TOLL FREEWAY
    ELSE
        FTC1=10
        FTC2=11                     ;NON-HOV AND NON-TOLL FREEWAY
    ENDIF
ENDIF

IF (FT2_OLD=15-17)              ;CDs, EXPRESSWAYS AND PARKKWAYS
    UNINTRP=1
    FTC1=20
    FTC2=21
ENDIF

IF (FT2_OLD=71-79,86-89,97-98) ;ALL RAMPS
   RAMPS=1
   IF (FT2_OLD=71-79)           ;ALL NON-HOV AND NON-TOLL RAMPS
       FTC1=70
       IF (FT2_OLD=71,73)       ;NON-HOV AND NON-TOLL NON-LOOP ON-RAMPS, EXCLUDING FREEWAY-TO-FREEWAY
           ON=1
           FTC2=71
       ENDIF
       IF (FT2_OLD=72,74)       ;NON-TOLL AND NON-HOV LOOP ON-RAMPS
           ONLOOP=1
           FTC2=72
       ENDIF
       IF (FT2_OLD=75,77)       ;NON-HOV AND NON-TOLL OFF-RAMPS, EXCLUDING FREEWAY-TO-FREEWAY
           OFF=1
           FTC2=73
```

```
        ENDIF
        IF (FT2_OLD=76,78)       ;NON-TOLL AND NON-HOV LOOP OFF-RAMPS
            OFFLOOP=1
            FTC2=74
        ENDIF
        IF (FT2_OLD=79)          ;FREEWAY-TO-FREEWAY RAMPS
            FRWY2FRWY=1
            FTC2=75
            FRWY=1                     ;CONSIDERED A FREEWAY SEGMENT FOR CAPACITY CALCULATION PURPOSES
        ENDIF
    ENDIF

    IF (FT2_OLD=86-88)           ;PEAK ONLY HOV RAMPS
       HOVPEAK=1
       FTC2=83
    ENDIF
    IF (FT2_OLD=89)              ;ALL-DAY HOV RAMPS
        HOVDAY=1
        FTC2=84
    ENDIF

    IF (FT2_OLD=97,98)           ;TOLL RAMPS
        IF (FT2_OLD=97)          ;TOLL ON-RAMPS
            TOLLON=1
            FTC2=93
        ENDIF
        IF (FT2_OLD=98)          ;TOLL OFF-RAMPS
            TOLLOFF=1
            FTC2=94
        ENDIF
    ENDIF

ENDIF

IF (FT2_OLD=21-25,61-68,41,44,94)   DIVIDED=1                    ;DIVIDED
IF (FT2_OLD=21-25,31-34,41-42,44,61-68 | DIVIDED=1)  LEFTTURN=1 ;LEFT-TURN LANES

IF (FT2_OLD=51-52)               ;CENTROID CONNECTORS
    FTC1=50
    FTC2=FT2_OLD                 ;51=INT CENTROID CONNECTORS, 52=EXT CENTROID CONNECTORS
ENDIF

;END POPULATE
;PPPP
```

```
IF(!(FT2_OLD=51-52))           ; for non-centroid links

 IF (SEGID>0 & NUMSIG>0)             ;SIGNALIZED ONLY
    SIG_RATE=NUMSIG/LENGTH           ;SIGNALS PER MILE FOR EACH SEGMENT
    SIG_SPACE=1/SIG_RATE             ;SPACE BETWEEN SIGNALS FOR EACH SEGMENT
 ENDIF

;NOTE: It is assumed that HOV and Toll facilities will not be significantly interrupted by signals (UNINTERRUPTED)
;UNINTERRUPTED CHECK
 IF (NUMSIG>0 & FRWY=0 & RAMPS=0 & POSTSPD>{UNINTSPEED} & SIG_SPACE>{SIG-SPACE}) ;SIGNALIZED
    UNINTRP=1
    FTC1=20
    FTC2=21
 ELSEIF (NUMSIG=0 & FRWY=0 & RAMPS=0 & POSTSPD>{UNINTSPEED})                     ;UNSIGNALIZED
    UNINTRP=1
    FTC1=20
    FTC2=21
 ENDIF


 IF (UNINTRP=0 & RAMPS=0 & POSTSPD<35 & KTOLL=0 & HOV=0 & FT2_OLD<>69)      ;LOW SPEED CHECK
   LOWSPD=1
   FTC1=60                                                   ;LOW SPEED ROADS
   FTC2=61
 ENDIF

ENDIF                                                       ;Non-Centroid links

;END NEW CONDITIONS
;NNNN
```

```
ENDIF                                        ;END NON-CENTROID


endphase

ENDRUN
```

16-MS6NET.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6NET30\S6-NET\MS600.PRN" MSG='Populate LFwyMrg and TDSecID from 2000 Network'
FILEO NETO = "D:\S6Net30\CUBE\MS6Tem_{Year}.NET"
FILEI LINKI[2] = "D:\S6NET30\S6-NET\TDSECLFWYMRG00.DBF"
FILEI LINKI[1] = "D:\S6Net30\CUBE\S6_{Year}.NET"

PROCESS  PHASE=INPUT
;Use this phase to modify data as it is read, such as recoding node numbers.


ENDPROCESS


PROCESS  PHASE=NODEMERGE
; Use this phase to make computations and selections of any data on the NODEI files.


ENDPROCESS


PROCESS  PHASE=LINKMERGE
; Use this phase to make computations and selections of any data on the LINKI files.


ENDPROCESS


PROCESS  PHASE=SUMMARY
; Use this phase for combining and reporting of working variables.


ENDPROCESS

ENDRUN
```

17-MS6NET2.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
```

```
RUN PGM=NETWORK PRNFILE="D:\S6NET30\CUBE\MS6NET2.PRN" MSG='Purge Links without valid FTC2 Codes'
FILEI LINKI[1] = "D:\S6Net30\CUBE\MS6Tem_{Year}.NET"
FILEO NETO = "D:\S6Net30\CUBE\MS6_{Year}.NET"

PROCESS  PHASE=INPUT
;Use this phase to modify data as it is read, such as recoding node numbers.


ENDPROCESS


PROCESS  PHASE=NODEMERGE
; Use this phase to make computations and selections of any data on the NODEI files.


ENDPROCESS


PROCESS  PHASE=LINKMERGE
; Use this phase to make computations and selections of any data on the LINKI files.
if (FTC2=0) delete

ENDPROCESS


PROCESS  PHASE=SUMMARY
; Use this phase for combining and reporting of working variables.


ENDPROCESS

ENDRUN
```

18-OANETK002.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK MSG='Write LINKS and XY records for PCWALK file through ARCVIEW routine'
FILEI LINKI[1] = "D:\S6Net30\CUBE\MS6_{Year}.NET"
FILEO PRINTO[1] = "D:\S6Net30\CUBE\ILINKS2.TXT"
FILEO PRINTO[2] = "D:\S6Net30\CUBE\IXY2.TXT"

Phase=NodeMerge
  print CSV=T list=n(6.0),x(9.0),y(9.0),SECTIONID(4.0) PRINTO=2
endphase

Phase=LinkMerge
  _AT=int(AT2_OLD/10)
```

```
  _FT=int(FT2_OLD/10)

;if(_FT<>0)
;  if(a.SECTIONID<>0)
;    print CSV=T list=a(6.0),'EX'(2.0c),B(6.0),NUM_LANES(2.0),_AT(2.0),_FT(2.0) PRINTO=1
;  endif
;-sks 'EX' & 'AP' are related to Junction Modeling of signal approach (AP) and Exit (EX) links
;  if(b.SECTIONID<>0)
;    print CSV=T list=b(6.0),'AP'(2.0c),a(6.0),NUM_LANES(2.0),_AT(2.0),_FT(2.0) PRINTO=1
;  endif
;endif

;EX/AP are not needed and are used as XX, just for space holder
if(_FT<>0)
    print CSV=T list=a(6.0),'XX'(2.0c),B(6.0),NUM_LANES(2.0),_AT(2.0),_FT(2.0) PRINTO=1
endif


endphase

PHASE=SUMMARY
endphase

ENDRUN
```

19-DIFFS6.S

```
;;<<PROCESS TEMPLATE>><<NETWORK>>;;
;{note1,note,10,"Compare 2 Highway Networks"}  Compare Highway Networks >>>
;Input  Highway Network File 1: {neti1,filename,"Enter Input Highway Network File 1
Name",x,"D:\S6Net30\CUBE\MS6_{Year}.NET","Network File (*.net)|*.net"}
;Input  Highway Network File 2: {neti2,filename,"Enter Input Highway Network File 2
Name",x,"D:\S6Net30\CUBE\S6_{Year}.NET","Network File (*.net)|*.net"}
;Output Highway Network File:   {neto,filename,"Enter Output Highway Network File
Name",x,"D:\S6Net30\CUBE\DiffS6_{Year}.NET","Network File (*.net)|*.net"}
;;<<End Parameters>>;;
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="D:\S6NET30\CUBE\DIFFS6.PRN" MSG='Compare Networks'
FILEI LINKI[1] = "D:\S6Net30\CUBE\MS6_{Year}.NET"
FILEI LINKI[2] = "D:\S6Net30\CUBE\S6_{Year}.NET"
; Compare 2 highway networks and flags the links that are different
;  NETI={neti1.q}, {neti2.q}
FILEO NETO = {NETO.Q}
  MERGE RECORD=T
  PHASE=LINKMERGE
    COMPARE RECORD=1-2, LIST=20  ; compare link record 1 with 2
    CMPFLAG=_COMPARE             ; save comparison flag
```

```
                                        ; -2 = link in NET1, not in NET2
                                        ; -1 = link in NET2, not in NET1
                                        ;  0 = links identical
                                        ; +n = number of attributes that are different
ENDRUN
```

Appendix C

Source Code of Transit Merge Program for Initial Transit Network

- COM-SKS.BAT
- TMERGS6.X32
- TMERGE.SYN (For 2000 Network)
- TMERGE.SYN (For 2030 Network)
- TMERGES6.FOR

COM-SKS.BAT

```
rem fl32 /G5 /Ox /Fs /c tmerges6.for
fl32 /G5 /Fs /4Yb /c tmerges6.for
link @tmerges6.x32
rem copy tmerges6.exe d:\s5exe\tmerges6.exe
rem del *.obj
```

TMERGES6.X32

```
TMERGES6
c:\trnp\subsx32\sublib32.lib
/OUT:TMERGES6.EXE
```

TMERGE.SYN (For 2000 Network)

```
00R
PB_EQ.CSV
BO_EQ.CSV
MI_EQ.CSV
pbinet\TROUTEAM.00P
boinet\TROUTEAM.00B
miinet\TROUTEAM.00A
pbinet\TROUTEMD.00P
boinet\TROUTEMD.00B
miinet\TROUTEMD.00A
pbinet\STATDATA.00P
boinet\STATDATA.00B
miinet\STATDATA.00A
```

TMERGE.SYN (For 2030 Network)

```
30R
PB_EQ.CSV
BO_EQ.CSV
MI_EQ.CSV
pbinet\TROUTEAM.30C
boinet\TROUTEAM.30B
miinet\TROUTEAM.30A
pbinet\TROUTEMD.30C
boinet\TROUTEMD.30B
miinet\TROUTEMD.30A
pbinet\STATDATA.30C
boinet\STATDATA.30B
miinet\STATDATA.30A
```

TMERGES6.FOR

```
C        PROGRAM:   tmergeS6.for
C
C        PURPOSE:   Merges UATS transit files for SERPM use.
C                   Reads YRALT for SERPM output data sets and UATS
C                   input data sets.  Reads CMATRIX files for each
C                   urban area into memory.
C
C        VERSION:   1.0 -- MICROCOMPUTER VERSION
C      V1.0 DATE:   20MAY92 BY S.P. SEEBURGER
C
C     VERSION:   2.0(m) -- Modified by Sunil Saha, TCG
C                          For Use in SERPM4-CF Network
C                          November, 1996
c
C     VERSION:   3.0 -- Modified by Sunil Saha, TCG
C                       For Use in SERPM5-25 Network
C                       January, 2002
C                 Note: Handles 2-digit transit modes
C                       (Functions used: c2i2 and i2c2)
C
C                4.0 -- CUBE/Voyager Version - Kaltenbach, May 2005
C
C      (Note that the only input files which should be in the current
C       directory are TMERGE.SYN AND CMATxx.yya.  All other input files
C       should be in the appropriate "/xx/yya" subdirectory, where
C       urban area=xx, year=yy, alt=a.  This is required as the SERPM
C       output filenames and the input filenames for each urban area are
C       identical for many of these data sets.  All filename subdirectory
C       locations are specified in the TMERGE.SYN input file.)
C
C        INPUT:     TMERGE.SYN          SERPM yralt, input file info
C                   CMATxx.yya          CMAT files,year=yy,alt=A,
C                                       urban area=xx
C                   TROUTEAM.yya        TROUTEAM files for each urban area
C                   TROUTEMD.yya        TROUTEMD files for each urban area
C                   STATDATA.yya        STATDATA file for pb
C                   STATDATA.yya        STATDATA file for bo
C                   STATDATA.yya        STATDATA file for mi
C
C        OUTPUT:    TROUTEAM.yya        TROUTEAM file for year=yy,alt=a
C                   TROUTEMD.yya        TROUTEMD file for year=yy,alt=a
C                   STATDATA.yya        STATDATA file for year=yy,alt=a
C
C*********************************************************************
C
C   LUN10   -->  TMERGE.SYN  YRALT & file specs for SERPM & UAT files
C   LUN12   -->  CMAT reads
C   LUN21   -->  Input data files
```

```
C   LUN31   -->  SERPM AM output files
C
C*********************************************************************
C
C   LUN10  RECORD #1  = SERPM YRALT
C          RECORD #2  = PB CMAT FILE NAME
C          RECORD #3  = BO CMAT FILE NAME
C          RECORD #4  = MI CMAT FILE NAME
C          RECORD #5  = PB TROUTEAM FILENAME
C          RECORD #6  = BO TROUTEAM FILENAME
C          RECORD #7  = MI TROUTEAM FILENAME
C          RECORD #8  = PB TROUTEMD FILENAME
C          RECORD #9  = BO TROUTEMD FILENAME
C          RECORD #10 = MI TROUTEMD FILENAME
C          RECORD #11 = PB STATDATA FILENAME
C          RECORD #12 = BO STATDATA FILENAME
C          RECORD #13 = MI STATDATA FILENAME
C
C*********************************************************************
C
C   SUBROUTINES:
C
C   CONVRT     CONVERTS NODES IN &ROUTE N-LIST TO SERPM, SETS LASTN
C              VARIABLE VALUE (NUMBER OF NODES IN N-LIST)
C   IMAGE      WRITES &ROUTE CARDS TO SERPM OUTPUT FILE
C   RESET      RESETS &ROUTE VARIABLES PRIOR TO NEXT &ROUTE READ
C   OPTMOD     CONVERTS UATS MODES TO SERPM MODES FOR OPTIONAL LINKS CARDS
C
C*********************************************************************
C
C   FUNCTIONS:
C
C   RPMMOD     CONVERTS UATS MODE VALUES TO SERPM MODE VALUES:
C
C              UATS     SERPM
C
C***OLD:         4   =     4    LOCAL BUS (BROWARD, PALM BEACH)
C                4   =     5    LOCAL BUS (DADE)
C                5   =     7    METRORAIL
C                6   =     6    XBUS
C                7   =     8    TRIRAIL
C                8   =     7    DPM
C
C**Version 2 (modified by Sunil Saha, TCG)
C
C****   MODE          UATS             SERPM
C****   LOCAL BUS       4        =       4 (BO,PB)
C****   LOCAL BUS       5        =       4 (PB)
C****   LOCAL BUS       4        =       5 (MI)
C****   XBUS            6        =       6 (BO)
```

```
C****   XBUS            4(M=6?)  =       6 (MI)
C****   METRORAIL       5        =       7 (MI)
C****   DPM             4(M=8?)  =       7 (MI)
C** TRIRAIL(Metromover?)8        =       7 (BO)
C****   TRIRAIL         8        =       8 (PB)
C****   TRIRAIL         5        =       8 (BO)
C****   TRIRAIL         7        =       8 (MI)
C
C**Version 3 Mode Mapping (Sunil Saha,TCG, January 2002)
C
C****   MODE          UATS             SERPM
C****   LOCAL BUS       4        =       4 (BO,PB)
C****   LOCAL BUS       4        =       5 (MI)
C****   XBUS            6        =       6 (PB)
C****   XBUS            6        =       6 (BO)
C****   XBUS            6        =       6 (MI)
C****   RAIL            7        =       7 (PB)
C****   RAIL            7        =       7 (BO)
C****   METRORAIL       5        =       7 (MI)
C****   DPM             8        =       7 (MI)
C****   TRIRAIL         8        =       8 (PB)
C****   TRIRAIL         8        =       8 (BO)
C****   TRIRAIL         7        =       8 (MI)
C****   LB (TR FEEDER) 12        =      12 (BO,PB)
C
C*********************************************************************
C**Version 4 (SERPM6) Mode Mapping based on S5-Revised Transit (Sunil Saha,TCG, Sept 2006)
C
C****   MODE          UATS             SERPM
C****   LOCAL BUS       4        =       4 (BO,PB)
C****   LOCAL BUS       4        =       5 (MI)
C****   XBUS            6        =       4 (PB)
C****   XBUS            6        =       4 (BO)
C****   XBUS            6        =       5 (MI)
C****   RAIL            7        =       7 (PB)
C****   RAIL            7        =       7 (BO)
C****   METRORAIL       5        =       7 (MI)
C****   DPM             8        =       9 (MI)
C****   TRIRAIL         8        =       8 (PB)
C****   TRIRAIL         8        =       8 (BO)
C****   TRIRAIL         7        =       8 (MI)
C****   LB (TR FEEDER) 12        =      12 (BO,PB)
C
C*********************************************************************
c-sks -   Set OPERATOR (C) based on Transit Fare Company defined in S5 regional model as follows:
c        OPERATOR/C=1 => Palm Beach Buses (Local Buses)
c        OPERATOR/C=2 => Tri Rail Shuttle Buses
c        OPERATOR/C=3 => Broward Local Buses
c        OPERATOR/C=4 => Metro-Dade Buses (Local Buses)
c        OPERATOR/C=5 => Palm Beach & Broward Express Buses
```

```
c        OPERATOR/C=6 => Miami-Dade Express Buses
c        OPERATOR/C=7 => Palm Beach & Broward Rail
c        OPERATOR/C=8 => Metrorail
c        OPERATOR/C=9 => Metromover
c        OPERATOR/C=10 => TRI-RAIL
C*********************************************************************
C-sks- SERPM6 New LINE Attributes
c     USERA1 = OLD MPO Route Group (RG)
c     USERA2 = MPO Mode
c     USERA3 = MPO Line Number
c--------------------------------
c     USERA4 = S5REV Special Company Codes
c            =1 (Palm Beach Local Bus) [Regional Mode 4 & 12]
c            =2 (Broward Local Bus) [Regional Mode 4 & 12]
c            =3 (Miami-Dade Local Bus) [Regional Mode 5]
c            =5 (Miami-Dade [Regional Mode 7-Rail & 9-Mover]
c            =6 (Tri-Rail) [Regional Mode 8]
c            =11 (PB-Express Bus [Regional Mode 4-PR]
c            =12 (BO-Express Bus [Regional Mode 4-PR]
c            =13 (MD-Express Bus [Regional Mode 5-PR]
c            =21 (PB-Limited Stop Bus [Regional Mode 4-SS]
c            =22 (BO-Limited Stop Bus [Regional Mode 4-SS]
c            =23 (MD-Limited Stop Bus [Regional Mode 5-SS]
c            =31 (PB-BRT/LRT [Regional Mode 6-BL]
c            =32 (BO-BRT/LRT [Regional Mode 6-BL]
c            =33 (MD-BRT/LRT [Regional Mode 6-BL]
c IMPORTANT: Users should check the USERA4 codes of 11-13 and then recode the lines for USERRA4 of 21-33.
C*********************************************************************
C
C   VARIABLES:
C
C   CMAT(I,N)      =  SERPM NODE FOR UATS=N AND UATS NODE=I
C   URBN1          =  UATS NODE NUMBER
C   URBN2          =  UATS NODE NUMBER (USED IF TWO-NODE RECORD)
C   RPMN1          =  SERPM NODE NUMBER
C   RPMN2          =  SERPM NODE NUMBER (USED IF TWO-NODE RECORD)
C   AREA           =  UATS NO.--> 1=PB, 2=BO, 3=MI
C   LASTN          =  NUMBER OF NODES IN N &ROUTE N-LIST.  SET IN CONVRT
C   LMAT(L,M,P,A)  =  LINE CONVERSION MATRIX FOR UATS LINE=L, SERPM
C                     MODE=M, PERIOD=P, AREA=A
C   CARD           =  USE FOR NAMELIST PARSING
C
C*********************************************************************
C   Data Typing Section
C*********************************************************************

      IMPLICIT INTEGER(A-Z)
      LOGICAL ONEWAY/.FALSE./,INERR/.FALSE./
      LOGICAL*4 EXISTS
      CHARACTER FLD1*1,FLD58*58,FLD66*66
```

```
      CHARACTER*1 PERIOD(8)
c      CHARACTER*4 PERIOD(2)
      CHARACTER*58 ID,BLANK
      CHARACTER*3 YRALT
      CHARACTER*10 M5
      CHARACTER*80 CARD,DSNIN,DSNOUT
      INTEGER USTNID,RSTNID
      INTEGER CMAT(30000,3),LMAT(255,12,2,3)/18360*999/
      INTEGER N(500)/500*-32767/,LINE(12)/12*0/
      INTEGER LUN10/10/,LUN12/12/,LUN21/21/,LUN31/31/
      INTEGER M/-32767/,L/-32767/,RG/-32767/,IG/-32767/
      INTEGER RL/-32767/,RM/-32767/
      REAL H/-32767./,NH/-32767./,MH/-32767./,FH/-32767./,S/-32767./
      REAL LAY,TCOST,DCOST,UCOST,TVCE,ET(401)

c---      character*2 i2c2
      integer c2i2
c output line counter
      integer KL(20,3)/60*0/


      NAMELIST/ROUTE/M,L,ID,RG,IG,C,PERIOD,DELETE,H,NH,MH,FH,N,
     #    ONEWAY,RL,RM,LAY,LPC,ET,S,PPV,TCOST,DCOST,UCOST,TVCE,TECH
      COMMON /A/CMAT

C*********************************************************************
C   OPEN SYS/CMAT FILE AND CHECK FOR INPUT FILES
C*********************************************************************

      INQUIRE(FILE='TMERGE.SYN',EXIST=EXISTS)
      IF(.NOT. EXISTS) THEN
          WRITE(*,91000)
91000     FORMAT(' ERROR:  TMERGE.SYN File Does Not Exist',
     *           '-->  TMERGE99 Abnormal Termination')
          GOTO 8000
      ENDIF
      OPEN(LUN10,FILE='TMERGE.SYN',STATUS='OLD',FORM='FORMATTED')
      READ(LUN10,91050)  YRALT
91050 FORMAT(A3)
      FILCNT = 0
 1100 READ(LUN10,91100,END=1300)  DSNIN
91100 FORMAT(A)
91101 FORMAT(1H;,A)
      write(*,99999)  DSNIN
99999 format(1x,a)
      FILCNT = FILCNT + 1
      INQUIRE(FILE=DSNIN,EXIST=EXISTS)
      IF(.NOT. EXISTS) THEN
          DO 1150 I=80,1,-1
              IF(DSNIN(I:I).NE.' ') GOTO 1200
```

```
 1150     CONTINUE
 1200     WRITE(*,91200)  DSNIN(1:I)
91200     FORMAT(' ERROR:  ',A,'  Does Not Exist',
     *           '-->  TMERGE Abnormal Termination')
          INERR = .TRUE.
      ENDIF
      GOTO 1100
 1300 CONTINUE
      IF (FILCNT .NE. 12)  INERR = .TRUE.
      IF(INERR)  GOTO 8000
      REWIND (LUN10)
      READ(LUN10,91050)  YRALT

C*********************************************************************
C   LOAD CMATS
C*********************************************************************
       write(*,*) 'Will Load EQ Tables'
      DO 1500 AREA=1,3
          READ(LUN10,91100)  DSNIN
      write(*,99999)  DSNIN
          OPEN(LUN12,FILE=DSNIN,STATUS='OLD',FORM='FORMATTED')
          READ(LUN12,45) card
45        format(a)
 1400     READ(LUN12,91400,END=1500)  URBN1,RPMN1
c91400     FORMAT(I5,2X,I5)
91400     FORMAT(I6,1X,I6)
          IF (URBN1 .GT. 17000)  THEN
              WRITE(*,91450)  DSNIN
91450         FORMAT(/' ERROR:  UATS NODE > 17000 IN FILE= ',A,
     *           '  -->  TMERGE Abnormal Termination')
              STOP
          ENDIF
          CMAT(URBN1,AREA) = RPMN1
          GOTO 1400
 1500 CONTINUE
      CLOSE (LUN12)

C*********************************************************************
C   GENERATE LINE CONVERSION MATRIX
C*********************************************************************
C   PROCESS AM ROUTES
C**********************

      DO 2500 AREA=1,3
          READ(LUN10,91100)  DSNIN
      write(*,99999)  DSNIN
          OPEN(LUN21,FILE=DSNIN,STATUS='OLD',FORM='FORMATTED',
     #         ACCESS='SEQUENTIAL')
 2400     READ(LUN21,91100,END=2500)  CARD
c ...          IF (CARD(2:2) .NE. '&')  GOTO 2400
```

```
          IF((CARD(1:1) .NE. '&').and.(CARD(2:2) .NE. '&')) GOTO 2400
c          write(*,*) card
          BACKSPACE (LUN21)
          READ(LUN21,ROUTE)
c-sks
c-sks          write(*,99998)  m,l
c-sks99998 format(' m=',i2,'     l=',i3)
c-sks
          IF ((L .GT. 255) .OR. (RL .GT. 255)) THEN
              WRITE(*,92450)  DSNIN
92450         FORMAT(/' ERROR:  UATS L OR RL VALUE> 255 IN FILE=  ',A,
     *                '  -->  TMERGE Abnormal Termination')
              STOP
          ENDIF
          IM = RPMMOD(M,L,AREA)
          LINE(IM) = LINE(IM) + 1
          LMAT(L,IM,1,AREA) = LINE(IM)
          GOTO 2400
 2500 CONTINUE

C************************
C   PROCESS MD ROUTES
C************************

      DO 2600 I=1,12
 2600 LINE(I) = 0
      DO 2800 AREA=1,3
          READ(LUN10,91100)  DSNIN
      write(*,99999)  DSNIN
          OPEN(LUN21,FILE=DSNIN,STATUS='OLD',FORM='FORMATTED',
     #         ACCESS='SEQUENTIAL')
 2700     READ(LUN21,91100,END=2800)  CARD
c ..          IF (CARD(2:2) .NE. '&')  GOTO 2700
          IF((CARD(1:1) .NE. '&').and.(CARD(2:2) .NE. '&')) GOTO 2700
          BACKSPACE (LUN21)
          READ(LUN21,ROUTE)
c-sks
c-sks          write(*,99090)  m,l
c-sks99090 format(' m=',i2,'     l=',i3)
c-sks
          IF ((L .GT. 255) .OR. (RL .GT. 255)) THEN
              WRITE(*,92450)  DSNIN
              STOP
          ENDIF
          IM = RPMMOD(M,L,AREA)
          LINE(IM) = LINE(IM) + 1
          LMAT(L,IM,2,AREA) = LINE(IM)
          GOTO 2700
 2800 CONTINUE
```

```
C*********************************************************************
C   PROCESS TROUTES FILES
C*********************************************************************
C   PROCESS AM ROUTES
C**********************

      CALL RESET(ONEWAY,M,L,RG,IG,RL,RM,H,NH,MH,FH,S,
     #           ID,BLANK,PERIOD,N)
      DO 2900 I=1,6
 2900 BACKSPACE (LUN10)
 3000 DSNOUT = 'TROUTEAM_'//YRALT//'.LIN'
      PKPRD=1                                                !sks - Peak Period 1(yes), 0 (no)

      INQUIRE(FILE=DSNOUT,EXIST=EXISTS)
      IF(EXISTS) THEN
          OPEN(LUN31,FILE=DSNOUT,STATUS='OLD',FORM='FORMATTED')
          CLOSE (LUN31,STATUS='DELETE')
      ENDIF
      OPEN(LUN31,FILE=DSNOUT,STATUS='NEW',FORM='FORMATTED')

      DO 3200 AREA=1,3
          READ(LUN10,91100)  DSNIN
      write(*,99999)  DSNIN
          OPEN(LUN21,FILE=DSNIN,STATUS='OLD',FORM='FORMATTED',
     #         ACCESS='SEQUENTIAL')
 3100     READ(LUN21,91100,END=3200)  CARD
c          IF (CARD(2:2) .NE. '&')  THEN
          IF((CARD(1:1) .NE. '&').and.(CARD(2:2) .NE. '&')) then
              WRITE(LUN31,91101)  CARD
              GOTO 3100
          ENDIF
          BACKSPACE (LUN21)
          READ(LUN21,ROUTE)
c-sks-s6-save MPO mode  and line number as CNTYM and CNTYL
          CNTYM= M
          CNTYL= L

          IM  = M
          M   = RPMMOD(IM,L,AREA)
          IL  = L
          L   = LMAT(IL,M,1,AREA)
          IRM = RM
          IF (RM .NE. -32767)  THEN
              RM = RPMMOD(IRM,L,AREA)
          ELSE
              RM = M
          ENDIF
          if((RL .gt. 255).or.(rl.eq.0)) then
            write(*,*) 'RL',rl,rm,area
            pause
```

```
          endif
          IF (RL .NE. -32767)  RL = LMAT(RL,RM,1,AREA)
          CALL CONVRT(AREA,LASTN,N)
          CALL IMAGE(LASTN,LUN31,M,ONEWAY,L,RG,H,NH,MH,FH,
     #         S,IG,RL,RM,C,ID,PERIOD,N,area,CNTYM,CNTYL,PKPRD,KL)

           CALL RESET(ONEWAY,M,L,RG,IG,RL,RM,H,NH,MH,FH,S,
     #                ID,BLANK,PERIOD,N)
          GOTO 3100
 3200 CONTINUE

C************************
C   PROCESS MD ROUTES
C************************

 3400 DSNOUT = 'TROUTEMD_'//YRALT//'.LIN'
        PKPRD=0                                                !sks - Peak Period 1(yes), 0 (no)

      INQUIRE(FILE=DSNOUT,EXIST=EXISTS)
      IF(EXISTS) THEN
          OPEN(LUN31,FILE=DSNOUT,STATUS='OLD',FORM='FORMATTED')
          CLOSE (LUN31,STATUS='DELETE')
      ENDIF
      OPEN(LUN31,FILE=DSNOUT,STATUS='NEW',FORM='FORMATTED')

      DO 3600 AREA=1,3
          LINENO = 0
          READ(LUN10,91100)  DSNIN
      write(*,99999)  DSNIN
          OPEN(LUN21,FILE=DSNIN,STATUS='OLD',FORM='FORMATTED',
     #         ACCESS='SEQUENTIAL')
 3500     READ(LUN21,91100,END=3600)  CARD
c          IF (CARD(2:2) .NE. '&')  THEN
          IF((CARD(1:1) .NE. '&').and.(CARD(2:2) .NE. '&')) then
              WRITE(LUN31,91101)  CARD
              GOTO 3500
          ENDIF
          BACKSPACE (LUN21)
          READ(LUN21,ROUTE)
c-sks-s6-save MPO mode  and line number as CNTYM and CNTYL
          CNTYM= M
          CNTYL= L

          IM  = M
          M   = RPMMOD(IM,L,AREA)
          IL  = L
          L   = LMAT(IL,M,2,AREA)
          IRM = RM
          IF (RM .NE. -32767)  THEN
              RM = RPMMOD(IRM,L,AREA)
```

```
          ELSE
              RM = M
          ENDIF
          IF (RL .NE. -32767)  RL = LMAT(RL,RM,2,AREA)
          CALL CONVRT(AREA,LASTN,N)
          CALL IMAGE(LASTN,LUN31,M,ONEWAY,L,RG,H,NH,MH,FH,
     #         S,IG,RL,RM,C,ID,PERIOD,N,area,CNTYM,CNTYL,PKPRD,KL)

          CALL RESET(ONEWAY,M,L,RG,IG,RL,RM,H,NH,MH,FH,S,
     #                 ID,BLANK,PERIOD,N)
          GOTO 3500
 3600 CONTINUE

C*********************************************************************
C   PROCESS STATDATA FILES - ALL THREE AREAS
C*********************************************************************

 5999 DSNOUT = 'STATION_'//YRALT//'.DAT'
      INQUIRE(FILE=DSNOUT,EXIST=EXISTS)
      IF(EXISTS) THEN
          OPEN(LUN31,FILE=DSNOUT,STATUS='OLD',FORM='FORMATTED')
          CLOSE (LUN31,STATUS='DELETE')
      ENDIF
      OPEN(LUN31,FILE=DSNOUT,STATUS='NEW',FORM='FORMATTED')

c-sks  USTNID=Urban Staion ID; RSTNID=Regional Staion ID
      RSTNID=0
      DO 7001 AREA=1,3

      READ(LUN10,91100,END=1300)  DSNIN
      OPEN(LUN21,FILE=DSNIN,STATUS='OLD',FORM='FORMATTED')
 6000 READ(LUN21,96000,END=7001) USTNID,URBN1,URBN2,FLD66
96000 FORMAT(I4,2I6,A66)

      IF (AREA .EQ. 1) THEN
          RSTNID = USTNID
        ELSE
          RSTNID = RSTNID + 1
      ENDIF

c-sks      AREA = 3

      RPMN1 = CMAT(URBN1,AREA)
      RPMN2 = CMAT(URBN2,AREA)

      WRITE(LUN31,96000)  RSTNID,RPMN1,RPMN2,FLD66
      GOTO 6000

 7001 CONTINUE
```

```
C*********************************************************************
C   PROGRAM END SEQUENCE
C*********************************************************************

 8000 STOP
      END

C*********************************************************************
C   BLOCK DATA
C*********************************************************************

      BLOCK DATA
      IMPLICIT INTEGER(A-Z)
      INTEGER CMAT(30000,3)
      COMMON /A/CMAT
      DATA CMAT/90000*99999/
      END

C*********************************************************************
C   SUBROUTINE CONVRT:  CONVERT NODE NUMBERS TO RPM NODE NUMBERS
C                       AND DETERMINE NUMBER OF NODES IN "N" LIST
C*********************************************************************

      SUBROUTINE CONVRT(AREA,LASTN,N)
      IMPLICIT INTEGER(A-Z)
      INTEGER N(500),CMAT(30000,3)
      COMMON /A/CMAT

      LASTN = 0
      DO 1000 I = 1,500
          IF (N(I) .EQ. -32767)  GOTO 2000
          IF (N(I) .LT. 1)  THEN
              if((ABS(N(I)) .gt. 30000).or.(ABS(N(I)) .eq. 0)) then
                 write(*,*) 'N',i,n(i),area
                 write(*,*)
     &        '**** BIG PROBLEM - Voyager cannot deal with ref. lines'
                 pause
              endif
              if(N(i) .ne. 0) N(I)  = -CMAT(ABS(N(I)),AREA) ! pass through 0
          ELSE
              N(I)  = CMAT(N(I),AREA)
          ENDIF
 1000 LASTN = I
 2000 CONTINUE
      RETURN
      END

C*******************************************************************
C    SUBROUTINE IMAGE -- WRITES &ROUTE DATA TO SERPM OUTPUT FILE
C*******************************************************************
```

```
      SUBROUTINE IMAGE(LASTN,LUNOUT,M,ONEWAY,L,RG,H,NH,MH,FH,
     #           S,IG,RL,RM,C,ID,PERIOD,N,karea,CNTYM,CNTYL,PKPRD,KL)


      IMPLICIT INTEGER(A-Z)
      LOGICAL ONEWAY
      INTEGER N(500)
      REAL H,NH,MH,FH,S
      CHARACTER*1 EM/'M'/,EN/'N'/,EF/'F'/
      CHARACTER*1 PERIOD(8),rpt
      CHARACTER*58 ID
      character*2 fmt1,fmt2
      character*20 fmt
      character*72 fx
      character*10 vnam
      Character*11 prdhdwy
      integer karea,USERA4
      character*2 cnty(3)
      data cnty /'PB','BO','MI'/
      integer KL(20,3)

C ---------------------------------------------------------------------
c *** HERE IS WHERE THE CONVERSION TO VOYAGER FORMAT HAPPENS ***
c   INET              VOYAGER
c ----------------------------------------
c   M                 MODE                *
c   L                 NAME --> MxxLxxx    *
c   ONEWAY            ONEWAY              *
c   C                 OPERATROR           *
c   ID                LONGNAME            *
c   N                 (1)*N               *
c   RG                USERA1              *
c   H                 HEADWAY[1]          *
c   ****              XYSPEED=15          NEW .
C ---------------------------------------------------------------------
      if(karea.lt.1 .or. karea.gt.3) then
        write(*,*) 'area=',karea
        pause
      endif
c-sks-new -- Set Default mode specific XYSPEED
      IF (M.EQ.4) THEN
          XYSPEED=15
        ELSEIF (M.EQ.5) THEN
          XYSPEED=14
        ELSEIF (M.EQ.6) THEN
          XYSPEED=20
        ELSEIF (M.EQ.7) THEN
          XYSPEED=30
        ELSEIF (M.EQ.8) THEN
```

```
          XYSPEED=35
        ELSEIF (M.EQ.9) THEN
          XYSPEED=15
        ELSEIF (M.EQ.12) THEN
          XYSPEED=12
        ELSE
          XYSPEED=0
      ENDIF

c-sks-new -- Set Default Company Code per SERPM5(rev Transit) as USERA4 and
c         IMPORTANT: Manual adjustments are required for Company codes (11-33)

c-sks -   Set OPERATOR (C) based on Transit Fare Company defined in S5 regional model as follows:
c        OPERATOR/C=1 => Palm Beach Buses (Local Buses)
c        OPERATOR/C=2 => Tri Rail Shuttle Buses
c        OPERATOR/C=3 => Broward Local Buses
c        OPERATOR/C=4 => Metro-Dade Buses (Local Buses)
c        OPERATOR/C=5 => Palm Beach & Broward Express Buses
c        OPERATOR/C=6 => Miami-Dade Express Buses
c        OPERATOR/C=7 => Palm Beach & Broward Rail
c        OPERATOR/C=8 => Metrorail
c        OPERATOR/C=9 => Metromover
c        OPERATOR/C=10 => TRI-RAIL


      IF (((CNTYM.EQ.4).OR.(CNTYM.EQ.12)).AND.(karea.EQ.1)) THEN        !PB Local and TR-Feeder
          USERA4=1
          IF (CNTYM.EQ.4) THEN
              C=1
            ELSEIF (CNTYM.EQ.12) THEN
              C=2
            ELSE
              C=0
          ENDIF

        ELSEIF ((CNTYM.EQ.6).AND.(karea.EQ.1)) THEN                     !PB Express
          USERA4=11
          C=5

        ELSEIF (((CNTYM.EQ.4).OR.(CNTYM.EQ.12)).AND.(karea.EQ.2)) THEN  !BO Local and TR-Feeder
          USERA4=2
          IF (CNTYM.EQ.4) THEN
              C=3
            ELSEIF (CNTYM.EQ.12) THEN
              C=2
            ELSE
              C=0
          ENDIF

        ELSEIF ((CNTYM.EQ.6).AND.(karea.EQ.2)) THEN                     !BO Express
```

```
          USERA4=12
          C=5

        ELSEIF (((CNTYM.EQ.4).OR.(CNTYM.EQ.12)).AND.(karea.EQ.3)) THEN  !MD Local
          USERA4=3
          IF (CNTYM.EQ.4) THEN
              C=4
            ELSEIF (CNTYM.EQ.12) THEN
              C=2
            ELSE
              C=0
          ENDIF

        ELSEIF ((CNTYM.EQ.6).AND.(karea.EQ.3)) THEN                     !MD Express
          USERA4=13
          C=6

       ELSEIF ((karea.EQ.1).AND.(CNTYM.EQ.7)) THEN                     !PB Rail
          USERA4=31
          C=7

       ELSEIF ((karea.EQ.2).AND.(CNTYM.EQ.7)) THEN                     !BO Rail
          USERA4=32
          C=7

        ELSEIF (((CNTYM.EQ.5).OR.(CNTYM.EQ.8)).AND.(karea.EQ.3)) THEN   !MD Metrorail & Metromover
          USERA4=5
          IF (CNTYM.EQ.5) THEN
              C=8
            ELSEIF (CNTYM.EQ.8) THEN
              C=9
            ELSE
              C=0
          ENDIF

        ELSEIF ((CNTYM.EQ.8).AND.(karea.EQ.1)) THEN                     !Trirail
          USERA4=6
          C=10
        ELSEIF ((CNTYM.EQ.8).AND.(karea.EQ.2)) THEN                     !Trirail
          USERA4=6
          C=10
        ELSEIF ((CNTYM.EQ.7).AND.(karea.EQ.3)) THEN                     !Trirail
          USERA4=6
          C=10
        ELSE
          USERA4=0
          C=0
      ENDIF
c      write(*,*) ' hello'
```

```
C*************************************
C   WRITE PRE "N" RECORDS BASED ON MODE
C*************************************

      IF (M.LT.4) THEN
c-sks      print *, M
          WRITE(LUNOUT,91000) M,ONEWAY
91000     FORMAT('LINE MODE=',I2,',ONEWAY=',L1)
      ELSE

C******************************
C   WRITE TRANSIT ROUTE RECORDS
C******************************

c construct voyager 'NAME'
           KL(m,karea)=KL(m,karea)+1
           fmt1='I1'
           if(m.gt. 9) fmt1='I2'
           fmt2='I1'
           if(KL(m,karea).gt. 9) fmt2='I2'
           if(KL(m,karea).gt.99) fmt2='I3'
           fmt='(1HM,'//trim(fmt1)//',1HL,'//trim(fmt2)//',a2'//')'
c           write(*,*) fmt1,fmt2,fmt
c           pause
           write(VNAM,fmt) m,KL(m,karea),cnty(karea)
c           write(*,*) VNAM

 2000      WRITE(LUNOUT,92000) M,trim(vnam),ONEWAY,trim(ID)
92000      FORMAT('LINE MODE=',I2,',NAME=',a,
     #      ',ONEWAY=',L1,1H,,/2X,'LONGNAME=',1H',A,2H',)

c           IF(RG.NE.-32767)  WRITE(LUNOUT,92100) RG
c92100      FORMAT(22X,'RG=',I5,1H,)
c92100      FORMAT(22X,3HRG=,I5,1H,)
           IF(RG.NE.-32767) WRITE(LUNOUT,92005) RG
92005      FORMAT(7X,'USERA1=',I3,1H,)
c-kdk-s6           WRITE(LUNOUT,92009)
c0kdk-s6 92009      FORMAT(7X,'XYSPEED=15',1H,)
           WRITE(LUNOUT,92009) XYSPEED
92009      FORMAT(7X,'XYSPEED=',I3,1H,)

c-sks-s6 -Write MPO Mode and Line Number for reference as well as S5-Rev Company code.
c         IMPORTANT: Manual adjustments are required for Company codes (11-33)

c           write(*,*) USERA4
c           write(*,*) CNTYM
           WRITE(LUNOUT,92010) CNTYM
92010      FORMAT(7X,'USERA2=',I3,1H,)   !USERA2 is MPO Mode Number
           WRITE(LUNOUT,92011) CNTYL
92011      FORMAT(7X,'USERA3=',I3,1H,)   !USERA3 is MPO Line Number
```

```
          WRITE(LUNOUT,92012) USERA4
92012     FORMAT(7X,'USERA4=',I3,1H,)   !USERA4 is S5-Rev Company Code

c-sks           IF(H.NE.-32767.)  WRITE(LUNOUT,92200)  H
c-sks 92200      FORMAT(7X,' HEADWAY[1]=',F5.1,1H,)

          if (PKPRD.EQ.1) then
             prdhdwy='HEADWAY[1]='
            else
             prdhdwy='HEADWAY[2]='
          endif

          IF(H.NE.-32767.)  WRITE(LUNOUT,92200)prdhdwy,H
92200     FORMAT(7X,a11,F5.1,1H,)

c          IF(NH.NE.-32767.)  WRITE(LUNOUT,92300)  EN,NH
c92300     FORMAT(7X,A1,'H=',F5.1,1H,)
c          IF(MH.NE.-32767)  WRITE(LUNOUT,92300) EM,MH
c          IF(FH.NE.-32767)  WRITE(LUNOUT,92300) EF,FH
c          IF(PERIOD(8).NE.' ')  WRITE(LUNOUT,92400) PERIOD
c92400     FORMAT(7X,8HPERIOD=(,2(4A1,2H),))
c          IF(S.NE.-32767.)  WRITE(LUNOUT,92500) S
c92500     FORMAT(7X,2HS=,F5.1,1H,)
c          IF(IG.NE.-32767)  WRITE(LUNOUT,92600) IG
c92600     FORMAT(7X,'IG=',I5,1H,)
c          IF(RM.NE.-32767 .AND. RM.NE.M)  WRITE(LUNOUT,92700) RM
c92700     FORMAT(7X,'RM=',I5,1H,)
c          IF(RL.NE.-32767)  WRITE(LUNOUT,92800) RL
c92800     FORMAT(7X,'RL=',I5,1H,)
          WRITE(LUNOUT,92900)  C
92900     FORMAT(7X,'OPERATOR=',I3,1H,)


      ENDIF

      IF (LASTN.LT.10)  THEN
          write(rpt,'(i1)') LASTN-1
          fx='(3H N=,T5,I6,'//rpt//'(1H,I6))'
c          WRITE(LUNOUT,93000) (N(J)*(-1),J=1,LASTN)
          WRITE(LUNOUT,FMT=fx) (N(J)*(-1),J=1,LASTN)
c93000     FORMAT(3H N=,T5,(9(I6,1H,)))
93000     FORMAT(3H N=,T5,(9(I6,1H,)))
      ELSE
          IF ( (MOD(REAL(LASTN),9.)) .GT. .00001)  THEN
              RECNUM = NINT((REAL(LASTN)/9.)+.5)
          ELSE
              RECNUM = LASTN/9
          ENDIF
          WRITE(LUNOUT,93100) (N(J)*(-1),J=1,9)
93100     FORMAT(3H N=,9(I6,1H,))
```

```
          J2 = 9
          DO 3300 I=2,RECNUM
              J1 = J2 + 1
              J2 = J1 + 8
              J2 = MIN0(J2,LASTN)
              if(i.eq.recnum) then
                write(rpt,'(i1)') J2-J1
c                write(*,*) 'rpt ',rpt,j2-J1
                if(j2-j1 .eq. 0) then
                   fx='(T4,i6)'
                else
                   fx='(T4,i6,'//rpt//'(1H,I6))'
                endif
c                pause
                WRITE(LUNOUT,FMT=fx) (N(J)*(-1),J=J1,J2)
              else
                WRITE(LUNOUT,93200) (N(J)*(-1),J=J1,J2)
93200           FORMAT(T4,9(I6,1H,))
              endif
 3300     CONTINUE
      ENDIF
c      WRITE(LUNOUT,93300)
c93300 FORMAT(22X,4H&END)
      RETURN
      END

C*********************************************************************
C   SUBROUTINE RESET :  RESET ROUTE VARIABLES
C*********************************************************************

      SUBROUTINE RESET(ONEWAY,M,L,RG,IG,RL,RM,H,NH,MH,FH,S,
     #                 ID,BLANK,PERIOD,N)
      IMPLICIT INTEGER(A-Z)
      LOGICAL ONEWAY
      INTEGER N(500)
      REAL H,NH,MH,FH,S
      CHARACTER*1 PERIOD(8)
      CHARACTER*58 ID,BLANK

      M     =  -32767
      L     =  -32767
      ID    =  BLANK
      RG    =  -32767
      IG    =  -32767
      DO 1000 NN=1,8
 1000 PERIOD(NN) = ' '
      H     =  -32767.
      NH    =  -32767.
      MH    =  -32767.
      FH    =  -32767.
```

```
      DO 2000 K=1,300
 2000 N(K)  =  -32767
      ONEWAY=  .FALSE.
      RL    =  -32767
      RM    =  -32767
      S     =  -32767.
      RETURN
      END

C*****************************************************************
C    SUBROUTINE OPTMOD -- CONVERTS UATS MODES TO SERPM MODES FOR
C                         OPTIONAL LINKS CARDS
C*****************************************************************

      SUBROUTINE OPTMOD(M5,AREA)
      IMPLICIT INTEGER(A-Z)
      CHARACTER*2 CM(5)
      CHARACTER*10 M5
      INTEGER KM, KL, II, K, IM

      character*2 i2c2
      integer c2i2


      DO 1000 I=1,10,2
         II=I+1
         K=II/2


 1000 CM(K) = M5(I:II)


      DO 2000 I=1,5
          IF (CM(I) .EQ. '  ')  GOTO 3000


          M = C2I2(CM(I))

c-sks***Revise Mode and Line Number for Miami Local/Express Opt links
          IF((AREA .EQ. 3).AND.(M .EQ. 6)) THEN
c-sks           KM=4
             KM=6
             KL=245
c-**             print *, 'M=',M,'KM=',KM
          ELSE IF((AREA .EQ. 3).AND.(M .EQ. 4)) THEN
             KM=4
             KL=200
c-**             print *, 'M=',M,'KM=',KM
          ELSE
             KM=M
```

```
            KL=1
          END IF
c-sks

          IM = RPMMOD(KM,KL,AREA)

cxxx          CM(I) = CHAR(IM+48)

           CM(I) = I2C2(IM)

 2000 CONTINUE

 3000 M5 = CM(1)//CM(2)//CM(3)//CM(4)//CM(5)
      RETURN
      END

C*********************************************************************
C****   FUNCTION RPMMOD -- CONVERTS UATS MODE TO SERPM MODE
C****   Version 2 (Modified by Sunil saha (Jan., 1996)
C****   MODE          UATS             SERPM
C****   LOCAL BUS       4        =       4 (BO,PB)
C****   LOCAL BUS       5        =       4 (PB)
C****   LOCAL BUS       4        =       5 (MI)
C****   XBUS            6        =       6 (BO)
C****   XBUS            4(M=6?)  =       6 (MI)
C****   METRORAIL       5        =       7 (MI)
C****   DPM             4(M=8?)  =       7 (MI)
C** TRIRAIL(Metromover?)8        =       7 (BO)
C****   TRIRAIL         8        =       8 (PB)
C****   TRIRAIL         5        =       8 (BO)
C****   TRIRAIL         7        =       8 (MI)
c-------------------------------------------------------
C**Version 3 Mode Mapping (Sunil Saha,TCG, January 2002)
C
C****   MODE          UATS             SERPM
C****   LOCAL BUS       4        =       4 (BO,PB)
C****   LOCAL BUS       4        =       5 (MI)
C****   XBUS            6        =       6 (PB)
C****   XBUS            6        =       6 (BO)
C****   XBUS            6        =       6 (MI)
C****   RAIL            7        =       7 (PB)
C****   RAIL            7        =       7 (BO)
C****   METRORAIL       5        =       7 (MI)
C****   DPM             8        =       7 (MI)
C****   TRIRAIL         8        =       8 (PB)
C****   TRIRAIL         8        =       8 (BO)
C****   TRIRAIL         7        =       8 (MI)
C****   LB (TR FEEDER) 12        =      12 (BO,PB)
C
C*********************************************************************
```

```
C**Version 4 (SERPM6) Mode Mapping based on S5-Revised Transit (Sunil Saha,TCG, Sept 2006)
C
C****   MODE          UATS             SERPM
C****   LOCAL BUS       4        =       4 (BO,PB)
C****   LOCAL BUS       4        =       5 (MI)
C****   XBUS            6        =       4 (PB)
C****   XBUS            6        =       4 (BO)
C****   XBUS            6        =       5 (MI)
C****   RAIL            7        =       7 (PB)
C****   RAIL            7        =       7 (BO)
C****   METRORAIL       5        =       7 (MI)
C****   DPM             8        =       9 (MI)
C****   TRIRAIL         8        =       8 (PB)
C****   TRIRAIL         8        =       8 (BO)
C****   TRIRAIL         7        =       8 (MI)
C****   LB (TR FEEDER) 12        =      12 (BO,PB)
C*********************************************************************


      INTEGER FUNCTION RPMMOD(IMODE,ILINE,IAREA)
      INTEGER IMODE,IAREA,ILINE

      GOTO (2000,2000,2000,1100,1200,1300,1400,1500,2000,2000,2000,
     +      1600) IMODE

c-sks***Urban Mode = 4
 1100 IF(IAREA.EQ.3) THEN
          RPMMOD = 5
      ELSE
          RPMMOD = 4
      ENDIF
      GOTO 2000

c-sks***Urban Mode = 5
 1200 IF(IAREA.EQ.1) THEN
          RPMMOD = 4
      ELSE IF(IAREA.EQ.2) THEN
          RPMMOD = 4
      ELSE
          RPMMOD = 7
      ENDIF
      GOTO 2000

c-sks***Urban Mode = 6
 1300 IF(IAREA.EQ.1) THEN
          RPMMOD = 4
      ELSE IF(IAREA.EQ.2) THEN
          RPMMOD = 4
      ELSE
          RPMMOD = 5
```

```
      ENDIF

      GOTO 2000

c-sks***Urban Mode = 7
c-sks 1400 RPMMOD = 8

 1400 IF(IAREA.EQ.1) THEN
          RPMMOD = 7
      ELSE IF(IAREA.EQ.2) THEN
          RPMMOD = 7
      ELSE
          RPMMOD = 8
      ENDIF
      GOTO 2000

c-sks***Urban Mode = 8
 1500 IF(IAREA.EQ.1) THEN
          RPMMOD = 8
      ELSE IF(IAREA.EQ.2) THEN
          RPMMOD = 8
      ELSE
          RPMMOD = 9
      ENDIF
      GOTO 2000

c-sks***Urban Mode = 12
 1600 RPMMOD = 12
      GOTO 2000

 2000 CONTINUE
      END


C**********************************************************************
C Function C2I2 converts 2 byte character to 2 byte integer
c
c ----- CHARACTER TO INTEGER --------
      integer function c2i2(c)
      character*2 c

      read(c,101) i ! loads character into the integer
c     c is the source, i is the target
101   format(i2)

      c2i2=i
      return
      end
c -----------------------------------
C**********************************************************************
```

```
C Function I2C2 converts 2 byte integer to 2 byte character
c
c ---- INTEGER TO CHARACTER -----------

      character*2 function i2c2(j)
      character*2 cj
      integer j

      write(cj,101) j ! load integer into the character
c     j is the source, cj is the target
101   format(i2)
      if(j .ne. 0) then
         i2c2=cj
      else
         i2c2='  '
      endif

      return
      end
C*********************************************************************
```

Appendix D

Transit Line Parameter Summary

Table D-1: **Year 2000 Transit Line Parameters**
Southeast Regional Planning Model VI

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M4L1PB"	4	1	T	30	30	RTE 1 GRDNS-BOCA SB",	1
"M4L2PB"	4	1	T	30	30	RTE 1 BOCA-GRDNS NB",	2
"M4L3PB"	4	1	F	30	30	RTE 1 JUPITER-PBGDNS",	3
"M4L4PB"	4	1	F	30	30	ROUTE 2",	4
"M4L5PB"	4	1	F	30	30	ROUTE 3",	5
"M4L6PB"	4	1	F	60	60	RTE 4",	6
"M4L7PB"	4	1	F	30	60	RTE 20",	7
"M4L8PB"	4	1	F	60	60	RTE 21",	8
"M4L9PB"	4	1	F	30	60	RTE 30",	9
"M4L10PB"	4	1	F	60	60	RTE 32",	10
"M12L1PI"	4	2	T	30	60	RTE 31	11
"M12L1PO"	4	2	T	30	60	RTE 31	12
"M12L2PB"	4	2	F	30	60	RTE 40",	13
"M4L11PB"	4	1	T	60	60	RTE 41 SB",	14
"M4L12PB"	4	1	T	60	60	RTE 41 NB",	15
"M4L13PB"	4	1	F	60	60	RTE 42",	16
"M12L3PB"	4	2	F	30	60	RTE 43",	17
"M12L4PB"	4	2	F	60	60	RTE 44",	18
"M12L5PB"	4	2	F	30	60	RTE 46",	19
"M4L14PB"	4	1	F	90	90	RTE 52",	20
"M12L6PB"	12	2	F	30	0	RTE 53 PB TR - AIRPORT",	21
"M12L7PB"	12	2	T	20	0	RTE 54",	22
"M12L8PB"	12	2	T	20	0	RTE 55",	23
"M4L15PB"	4	1	F	60	60	RTE 61",	24
"M12L9PI"	4	2	T	60	60	RTE 60	25
"M12L9PO"	4	2	T	60	60	RTE 60	26
"M12L10PI"	4	2	T	30	60	RTE 62	27
"M12L10PO"	4	2	T	30	60	RTE 62	28
"M4L16PB"	4	1	F	60	60	RTE 63",	29
"M12L11PB"	4	2	F	30	60	RTE 70",	30
"M4L17PB"	4	1	F	60	60	RTE 71",	31
"M4L18PB"	4	1	F	60	60	RTE 72",	32
"M4L19PB"	4	1	F	60	60	RTE 80",	33
"M12L12PB"	4	2	F	60	60	RTE 81",	34
"M4L20PB"	4	1	F	30	60	RTE 91",	35
"M4L21PB"	4	1	F	60	60	RTE 92",	36
"M12L13PB"	4	2	F	60	60	RTE 94",	37
"M4L22PB"	4	1	F	60	60	RTE 97:CENT VILL97 - PB a	38
"M4L23PB"	4	1	T	60	60	Lake Worth 1",	39
"M4L24PB"	4	1	T	60	60	Lake Worth 2",	40
"M4L25PB"	4	1	T	60	60	Lake Worth 3",	41
"M4L1BO"	4	3	T	20	20	RTE 1 SB:FT LD AVENTURA	42
"M4L2BO"	4	3	T	20	20	RTE 1 NB:AVENTURA M FT	43
"M4L3BI"	4	3	T	30	30	RTE 2:HOLLYWOOD BLVD - BO	44
"M4L3BO"	4	3	T	30	30	RTE 2:HOLLYWOOD BLVD - BO	45
"M4L4BO"	4	3	F	60	60	RTE 3:RAVENSWOOD GARAGE",	46
"M4L5BO"	4	3	F	60	60	RTE 5:HOLLYWOOD BLVD",	47
"M4L6BO"	4	3	T	30	30	RTE 6 SB:YOUNG CIRCLE",	48
"M4L7BO"	4	3	T	30	30	RTE 6 NB:YOUNG CIRCLE",	49
"M4L8BO"	4	3	F	30	30	RTE 7:YOUNG CIRCLE",	50
"M4L9BI"	4	3	T	40	40	RTE 9:BROWARD CENTRAL - B	51
"M4L9BO"	4	3	T	40	40	RTE 9:BROWARD CENTRAL - B	52
"M4L10BO"	4	3	F	30	30	RTE 10: BROWARD CENTRAL -	53
"M4L11BI"	4	3	T	30	30	RTE 11:POMPANO SQUARE	54
"M4L11BO"	4	3	T	30	30	RTE 11:POMPANO SQUARE	55
"M4L12BO"	4	3	F	45	45	RTE 12:WEST BROWARD",	56
"M4L13BO"	4	3	F	30	30	RTE 14:BROWARD CENTRAL",	57
"M4L14BO"	4	3	T	45	45	RTE 15 SB:",	58
"M4L15BO"	4	3	T	45	45	RTE 15 NB:",	59
"M4L16BO"	4	3	T	40	40	RTE 17 WB:HOLLYWOOD BLVD"	60
"M4L17BO"	4	3	T	40	40	RTE 17 EB:HOLLYWOOD BLVD"	61

Table D-1 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	
"M4L18BI"	4	3	T	15	15	RTE 18:MARGATE TERMINAL -	62
"M4L18BO"	4	3	T	15	15	RTE 18:MARGATE TERMINAL -	63
"M4L19BO"	4	3	F	40	40	RTE 20:POMPANO SQUARE",	64
"M4L20BO"	4	3	F	20	20	RTE 22:SAWGRASS MILLS",	65
"M4L21BO"	4	3	F	30	30	RTE 28:YOUNG CIRCLE - BO-	66
"M4L22BO"	4	3	F	30	30	RTE 30:BROWARD CENTRAL",	67
"M4L23BO"	4	3	F	30	30	RTE 31:BROWARD CENTRAL",	68
"M4L24BO"	4	3	F	30	0	RTE 34: SAMPLE ROAD",	69
"M4L25BO"	4	3	F	20	20	RTE 36:SAWGRASS MILLS",	70
"M4L26BI"	4	3	T	30	30	RTE 40:BROWARD CENTRAL	71
"M4L26BO"	4	3	T	30	30	RTE 40:BROWARD CENTRAL	72
"M4L27BI"	4	3	T	30	30	RTE 50:BROWARD CENTRAL	73
"M4L27BO"	4	3	T	30	30	RTE 50:BROWARD CENTRAL	74
"M4L28BO"	4	3	F	40	40	RTE 55:BROWARD CENTRAL",	75
"M4L29BO"	4	3	F	30	30	RTE 56:SUNSHINE PLAZA",	76
"M4L30BO"	4	3	T	70	70	RTE 57 WB:SUNSHINE PLAZA"	77
"M4L31BO"	4	3	T	70	70	RTE 57 EB:SUNSHINE PLAZA"	78
"M4L32BO"	4	3	F	30	30	RTE 60:",	79
"M4L33BO"	4	3	F	60	60	RTE 62:CORAL SQUARE MALL"	80
"M4L34BO"	4	3	F	20	20	RTE 72:SAWGRASS MILLS",	81
"M4L35BO"	4	3	T	60	60	RTE 75:WEST BROWARD",	82
"M4L36BO"	4	3	T	30	30	RTE 81 EB:BROWARD CENTRAL	83
"M4L37BO"	4	3	T	30	30	RTE 81 WB:BROWARD CENTRAL	84
"M4L38BO"	4	3	F	30	30	RTE 83:POMPANO SQUARE",	85
"M4L39BO"	4	3	F	30	30	RTE 84:",	86
"M4L40BO"	4	3	F	45	45	RTE 92:CENT VILL92",	87
"M4L41BO"	4	3	F	90	90	RTE 93:CENT VILL93",	88
"M4L42BO"	4	3	F	45	45	RTE 94:CENT VILL94",	89
"M4L43BO"	4	3	F	90	90	RTE 95:CENT VILL95",	90
"M12L1BO"	12	2	F	60	60	RTE=53:DT-LO",	91
"M12L2BO"	12	2	T	60	60	RTE=43",	92
"M12L3BO"	12	2	T	60	60	RTE=41",	93
"M12L4BO"	12	2	T	60	60	RTE=42",	94
"M12L5BO"	12	2	T	60	60	RTE=33 WB",	95
"M12L6BO"	12	2	T	60	60	RTE=33 EB",	96
"M12L7BO"	12	2	T	60	60	RTE=23",	97
"M12L8BO"	12	2	F	60	60	RTE=24",	98
"M12L9BO"	12	2	T	60	60	RTE=63",	99
"M12L10BO"	12	2	T	60	60	RTE=74",	100
"M4L45BO"	4	3	F	60	60	RTE=MA-A:MARGATE A",	101
"M4L46BO"	4	3	F	30	120	RTE=MA-B:MARGATE B",	102
"M4L110MD"	4	3	F	0	120	RTE=MA-B:TURTLE RUN",	103
"M4L111MD"	4	3	T	0	120	RTE=MA-B:PALM LAKES",	104
"M4L47BO"	4	3	F	60	60	RTE=MA-C:MARGATE C",	105
"M4L48BO"	4	3	F	30	60	RTE=MA-D:MARGATE D",	106
"M4L114MD"	4	3	F	0	120	RTE=MA-D:PALM LAKES",	107
"M4L115MD"	4	3	F	0	120	RTE=MA-D:COC. CREEK",	108
"M4L49BO"	4	3	T	90	90	RTE=CO:COOPER CITY",	109
"M4L50BO"	4	3	T	60	60	RTE=HI:HILLSBORO BEACH",	110
"M4L51BO"	4	3	F	90	90	RTE=PP:PEMBROKE PINES",	111
"M4L52BO"	4	3	F	90	90	RTE=CC:COCONUT CREEK",	112
"M4L53BO"	4	3	F	60	60	RTE=MI:MIRAMAR",	113
"M4L123MD"	4	3	F	0	40	RTE=Dania Beach Beach Rou	114
"M4L124MD"	4	3	F	0	40	RTE=Dania Beach East Rout	115
"M4L125MD"	4	3	F	0	40	RTE=Dania Beach West Rout	116
"M4L54BO"	4	3	T	60	60	RTE=BUS:BRO URB SHUTTLE",	117
"M4L55BO"	6	5	T	30	30	RTE=DAVIE/SFEC EXPRESS",	118
"M4L56BO"	6	5	T	35	0	RTE=WESTON/BON EXP WB",	119
"M4L57BO"	6	5	T	35	0	RTE=WESTON/BON EXP EB",	120
"M4L58BO"	6	5	T	90	0	RTE=PEM PINES EXP WB",	121
"M4L59BO"	6	5	T	90	0	RTE=PEM PINES EXP EB",	122
"M4L60BO"	4	3	F	60	0	Deerfield Beach Exp 1",	123
"M4L61BO"	4	3	F	60	0	Deerfield Beach Exp 2",	124
"M4L62BO"	4	3	F	60	0	Deerfield Beach Exp 3",	125
"M4L63BO"	4	3	F	10	10	COURTHOUSE LOOP",	126
"M4L64BO"	6	5	F	30	0	LAUD MKPLACE PNR",	127

Table D-1 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	
"M5L1MI"	5	4	T	20	20	RTE A: MIAMI BCH -> OMNI	128
"M5L1MO"	5	4	T	20	20	RTE A: MIAMI BCH -> OMNI	129
"M5L2MI"	5	4	T	15	30	RTE B: BRK -> KEY BISCAYN	130
"M5L2MO"	5	4	T	15	30	RTE B: BRK -> KEY BISCAYN	131
"M5L3MI"	5	4	T	20	20	RTE C: MT SINAI HO -> OMN	132
"M5L3MO"	5	4	T	20	20	RTE C: MT SINAI HO -> OMN	133
"M5L4MI"	5	4	T	60	0	RTE E: AVENTURA MALL -> M	134
"M5L4MO"	5	4	T	60	0	RTE E: AVENTURA MALL -> M	135
"M5L118MI"	5	4	T	0	60	RTE E: AVENTURA MALL -> M	136
"M5L118MO"	5	4	T	0	60	RTE E: AVENTURA MALL -> M	137
"M5L5MI"	5	4	T	30	30	RTE F/M: NW 22ND AVE -> M	138
"M5L5MO"	5	4	T	30	30	RTE F/M: NW 22ND AVE -> M	139
"M5L6MI"	5	4	T	60	0	RTE G: OPALKA -> BAL HBR"	140
"M5L6PM"	5	4	T	0	0	RTE G: BAL HBR-> OPALCKA"	141
"M5L104MI"	5	4	T	30	30	RTE G: OPALKA -> MBCC	142
"M5L104MO"	5	4	T	30	30	RTE G: OPALKA -> MBCC	143
"M5L7MI"	5	4	T	20	20	RTE H: SKY LAKE -> SO BEA	144
"M5L7MO"	5	4	T	20	20	RTE H: SKY LAKE -> SO BEA	145
"M5L8MI"	5	4	T	20	30	RTE J: NORMNDY ISL -> DR	146
"M5L8MO"	5	4	T	20	30	RTE J: NORMNDY ISL -> DR	147
"M5L9MI"	5	4	T	40	30	RTE K: DIPLOMAT -> OMNI -	148
"M5L9MO"	5	4	T	40	30	RTE K: DIPLOMAT -> OMNI -	149
"M5L10MI"	5	4	T	40	30	RTE K: HAULOVER -> CBD	150
"M5L10MO"	5	4	T	40	30	RTE K: HAULOVER -> CBD	151
"M5L11MI"	5	4	T	20	24	RTE L: HIA TRK -> MBCC	152
"M5L11MO"	5	4	T	20	24	RTE L: HIA TRK -> MBCC	153
"M5L12MI"	5	4	T	20	24	RTE L: AMTRAK -> MBCC	154
"M5L12MO"	5	4	T	20	24	RTE L: AMTRAK -> MBCC	155
"M5L13MI"	5	4	T	60	60	RTE R: BAL HBR -> LINC RD	156
"M5L13MO"	5	4	T	60	60	RTE R: BAL HBR -> LINC RD	157
"M5L14MI"	5	4	T	12	12	RTE S: CBD -> ADVENTURA	158
"M5L14MO"	5	4	T	12	12	RTE S: CBD -> ADVENTURA	159
"M5L15MI"	5	4	T	20	30	RTE T: HAULOVER -> CBD	160
"M5L15MO"	5	4	T	20	30	RTE T: HAULOVER -> CBD	161
"M5L98MI"	5	4	T	60	60	RTE V: DIPLOMAT -> GOLDEN	162
"M5L98MO"	5	4	T	60	60	RTE V: DIPLOMAT -> GOLDEN	163
"M5L16MI"	5	4	T	24	24	RTE W: MBCC -> SO BCH CIR	164
"M5L17MI"	5	4	F	15	30	RTE 38: BSWY MX: DN -> FC	165
"M5L18MI"	13	4	F	20	0	RTE 287: SAGA BAY MX : DS	166
"M5L19MI"	5	4	F	20	45	RTE 252: CORAL RF MX: DS	167
"M5L20MI"	5	4	F	30	45	RTE 1: VIA BSWY: DN -> QL	168
"M5L21MI"	5	4	T	60	60	RTE 2: PKWY HOSP -> CBD	169
"M5L21MO"	5	4	T	60	60	RTE 2: PKWY HOSP -> CBD	170
"M5L22MI"	5	4	T	20	20	RTE 2: LITTLE RIVER -> CB	171
"M5L22MO"	5	4	T	20	20	RTE 2: LITTLE RIVER -> CB	172
"M5L23MI"	5	4	T	10	10	RTE 3: DIPLOMAT -> CBD -	173
"M5L23MO"	5	4	T	10	10	RTE 3: DIPLOMAT -> CBD -	174
"M5L24MI"	5	4	T	60	60	RTE 6: CBD -> COCONUT GRO	175
"M5L24MO"	5	4	T	60	60	RTE 6: CBD -> COCONUT GRO	176
"M5L25MI"	5	4	T	40	40	RTE 7: HOOK SQ -> CBD	177
"M5L25MO"	5	4	T	40	40	RTE 7: HOOK SQ -> CBD	178
"M5L26MI"	5	4	T	40	40	RTE 7: INTL MALL -> CBD	179
"M5L26MO"	5	4	T	40	40	RTE 7: INTL MALL -> CBD	180
"M5L27MI"	5	4	T	30	30	RTE 8: FIU TAMIAMI -> CBD	181
"M5L27MO"	5	4	T	30	30	RTE 8: FIU TAMIAMI -> CBD	182
"M5L28MI"	5	4	T	30	0	RTE 8: WESTCHSTR -> CBD	183
"M5L28MO"	5	4	T	30	0	RTE 8: WESTCHSTR -> CBD	184
"M5L29MI"	5	4	T	30	30	RTE 8: FIU -> CBD VIA 8TH	185
"M5L29MO"	5	4	T	30	30	RTE 8: FIU -> CBD VIA 8TH	186
"M5L30MI"	5	4	T	40	40	RTE 9: AVENTURA MALL -> C	187
"M5L30MO"	5	4	T	40	40	RTE 9: AVENTURA MALL -> C	188
"M5L31MI"	5	4	T	8	0	RTE 9: 163RD ST MALL -> C	189
"M5L31MO"	5	4	T	8	0	RTE 9: 163RD ST MALL -> C	190
"M5L32MI"	5	4	T	40	40	RTE 10: 163RD ST MALL ->	191
"M5L32MO"	5	4	T	40	40	RTE 10: 163RD ST MALL ->	192
"M5L33MI"	5	4	T	15	20	RTE 11: FIU -> CBD	193

Table D-1 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	
"M5L33MO"	5	4	T	15	20	RTE 11: FIU -> CBD	194
"M5L34MI"	5	4	T	15	20	RTE 11: MIDWAY MALL -> CB	195
"M5L34MO"	5	4	T	15	20	RTE 11: MIDWAY MALL -> CB	196
"M5L35MI"	5	4	F	30	0	RTE 12: NS -> MERCY VIA 1	197
"M5L36MI"	5	4	T	20	20	RTE 16: 163RD ST MALL ->	198
"M5L36MO"	5	4	T	20	20	RTE 16: 163RD ST MALL ->	199
"M5L37MI"	5	4	F	30	30	RTE 17: VZ STA -> NORWOOD	200
"M5L38MI"	5	4	F	30	0	RTE 17: FLG -> NW 103RD S	201
"M5L39MI"	5	4	T	60	60	RTE 21: NW 27TH AVE & 160	202
"M5L39MO"	5	4	T	60	60	RTE 21: NW 27TH AVE & 160	203
"M5L40MI"	5	4	T	60	60	RTE 21: NORTHSIDE -> CBD	204
"M5L40MO"	5	4	T	60	60	RTE 21: NORTHSIDE -> CBD	205
"M5L41MI"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	206
"M5L41MO"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	207
"M5L42MI"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	208
"M5L42MO"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	209
"M5L102MI"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	210
"M5L102MO"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	211
"M5L43MI"	5	4	T	30	0	RTE 24: 137TH AVE -> CBD	212
"M5L43MO"	5	4	T	30	0	RTE 24: 137TH AVE -> CBD	213
"M5L44MI"	5	4	T	30	0	RTE 24: WESTCHSTR -> CBD	214
"M5L44MO"	5	4	T	30	0	RTE 24: WESTCHSTR -> CBD	215
"M5L45MI"	5	4	F	30	30	RTE 27: CALDER -> FLAGLER	216
"M5L46MI"	5	4	F	30	30	RTE 27: CALDER -> GROVE",	217
"M5L47MI"	5	4	T	60	60	RTE 28: FIU NORTH -> HLH	218
"M5L47MO"	5	4	T	60	60	RTE 28: FIU NORTH -> HLH	219
"M5L48MI"	5	4	T	70	70	RTE 29: VOTECH -> TRI PAR	220
"M5L48MO"	5	4	T	70	70	RTE 29: VOTECH -> TRI PAR	221
"M5L49MI"	5	4	T	20	30	RTE 32: CAROL CITY -> OMN	222
"M5L49MO"	5	4	T	20	30	RTE 32: CAROL CITY -> OMN	223
"M5L50MI"	5	4	F	30	45	RTE 33: LITTLE RIVER -> H	224
"M5L51MI"	5	4	F	60	60	RTE 35: MDCC-S -> FLA CIT	225
"M5L52MI"	5	4	F	30	60	RTE 36: KOGER CTR -> OMNI	226
"M5L53MI"	5	4	F	60	60	RTE 36: HOOK SQ -> OMNI",	227
"M5L100MI"	5	4	F	20	20	RTE 36: KOGER CTR -> OMNI	228
"M5L54MI"	5	4	T	30	30	RTE 37: SM STA -> ML VOTE	229
"M5L54MO"	5	4	T	30	30	RTE 37: SM STA -> ML VOTE	230
"M5L55MI"	5	4	F	30	30	RTE 40: 132ND AVE & 8TH S	231
"M5L56MI"	5	4	F	30	0	RTE 40: 147TH AVE -> DOUG	232
"M5L57MI"	5	4	T	60	60	RTE 42: GOLDEN GLADES ->	233
"M5L57MO"	5	4	T	60	60	RTE 42: GOLDEN GLADES ->	234
"M5L58MI"	5	4	T	60	60	RTE 48: SM STA -> BRK	235
"M5L58MO"	5	4	T	60	60	RTE 48: SM STA -> BRK	236
"M5L59MI"	5	4	T	60	60	RTE 52: CR GOV CNTR -> GA	237
"M5L59MO"	5	4	T	60	60	RTE 52: CR GOV CNTR -> GA	238
"M5L60MI"	5	4	T	60	0	RTE 52: CR GOV CTR -> SM	239
"M5L60MO"	5	4	T	60	0	RTE 52: CR GOV CTR -> SM	240
"M5L61MI"	5	4	F	20	30	RTE 54: WESTLAND -> BB &	241
"M5L62MI"	5	4	F	120	60	RTE 56: MDCC-S -> CRL GAB	242
"M5L63MI"	5	4	F	120	0	RTE 56: L MEADOWS -> CRL	243
"M5L64MI"	5	4	F	60	0	RTE 57: CORAL RF -> SM ST	244
"M5L65MI"	5	4	T	60	30	RTE 62: TRI PARK HLH -> O	245
"M5L65MO"	5	4	T	60	30	RTE 62: TRI PARK HLH -> O	246
"M5L66MI"	5	4	T	30	30	RTE 62: MLK STA -> OMNI	247
"M5L66MO"	5	4	T	30	30	RTE 62: MLK STA -> OMNI	248
"M5L67MI"	5	4	T	30	0	RTE 62: MLK STA -> 41ST S	249
"M5L67MO"	5	4	T	30	0	RTE 62: MLK STA -> 41ST S	250
"M5L68MI"	5	4	T	60	0	RTE 62: TRI PARK HLH -> B	251
"M5L68MO"	5	4	T	60	0	RTE 62: TRI PARK HLH -> B	252
"M5L69MI"	5	4	F	60	60	RTE 70: HMST STAD -> CR M	253

Table D-1 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	
"M5L70MI"	5	4	F	60	60	RTE 71: DN STA -> INTL MA	254
"M5L71MI"	5	4	F	60	60	RTE 72: 157TH AVE / 88TH	255
"M5L72MI"	5	4	F	60	0	RTE 72: 137TH AVE LOOP ->	256
"M5L73MI"	5	4	F	60	60	RTE 73: MIAMI LAKES -> DS	257
"M5L74MI"	5	4	F	60	0	RTE 73: MIAMI LAKES -> CR	258
"M5L75MI"	5	4	T	30	30	TE 75: ML VOTCH -> MDCC-N	259
"M5L75MO"	5	4	T	30	30	TE 75: ML VOTCH -> MDCC-N	260
"M5L76MI"	5	4	T	20	30	RTE 77: NW 183RD ST & 7TH	261
"M5L76MO"	5	4	T	20	30	RTE 77: NW 183RD ST & 7TH	262
"M5L77MI"	5	4	T	20	30	RTE 77: 441 & 199TH ST ->	263
"M5L77MO"	5	4	T	20	30	RTE 77: 441 & 199TH ST ->	264
"M5L78MI"	5	4	F	60	30	RTE 83: MIAMI LAKES -> FI	265
"M5L79MI"	5	4	F	30	0	RTE 83: MIAMI LAKES -> 16	266
"M5L80MI"	5	4	F	30	60	RTE 87: DN STA -> OKEE ST	267
"M5L81MI"	5	4	F	30	0	RTE 88: SW 88TH ST & 157T	268
"M5L181MD"	5	4	F	0	60	RTE 88: SW 88TH ST & 157T	269
"M5L82MI"	5	4	F	30	60	RTE 88: SW 84TH ST & 141S	270
"M5L83MI"	5	4	F	60	60	RTE 91: NW 67TH AVE -> 16	271
"M5L84MI"	5	4	T	60	0	RTE 132: TCR -> KOGER CNT	272
"M5L85MI"	5	4	F	60	60	RTE 104: MDCC -> DN STA",	273
"M5L86MI"	13	4	T	15	0	RTE 93: BISCAYNE MAX	274
"M5L86MO"	13	4	T	15	0	RTE 93: BISCAYNE MAX	275
"M5L87MI"	13	4	T	15	0	RTE 51: FLAGLER MAX: BEAC	276
"M5L87MO"	13	4	T	15	0	RTE 51: FLAGLER MAX: BEAC	277
"M5L88MI"	13	4	F	15	0	RTE 97: 27TH AVE MAX",	278
"M5L103MI"	5	4	F	15	0	RTE 31: BUSWAY LOCAL",	279
"M5L89MI"	5	4	T	60	60	RTE 133: TCR -> MIA",	280
"M5L90MI"	5	4	F	15	0	RTE 134: RIVERSIDE SHUTTL	281
"M5L91MI"	5	4	F	15	15	RTE EW1: MBCC -> SO BCH C	282
"M5L92MI"	13	4	T	20	40	RTE 240: BIRD ROAD MAX	283
"M5L92MO"	13	4	T	20	40	RTE 240: BIRD ROAD MAX	284
"M5L93MI"	5	4	F	30	60	RTE 137: WEST DADE CONNEC	285
"M5L94MI"	5	4	F	30	0	RTE 242: DORAL CONNECTION	286
"M5L95MI"	5	4	T	15	30	RTE 243: SEAPORT CONNECTI	287
"M5L97MI"	5	4	F	15	15	RTE 38: BSWY MX: DN -> FC	288
"M5L99MI"	5	4	T	30	60	RTE: 241 NORTH DADE CONNE	289
"M5L99MO"	5	4	T	30	60	RTE: 241 NORTH DADE CONNE	290
"M5L101MI"	5	4	T	20	0	RTE 1: VIA BUSWAY	291
"M5L101MO"	5	4	T	20	0	RTE 1: VIA BUSWAY	292
"M5L105MI"	6	6	T	15	0	RTE 288: KAT KENDALL	293
"M5L105MO"	6	6	T	15	0	RTE 288: KAT KENDALL	294
"M5L106MI"	6	6	T	6.5	0	RTE 204: KAT KILLIAN	295
"M5L106MO"	6	6	T	6.5	0	RTE 204: KAT KILLIAN	296
"M5L107MI"	6	6	T	10	60	RTE 272: SUNSET KAT	297
"M5L107MO"	6	6	T	10	60	RTE 272: SUNSET KAT	298
"M5L108MI"	6	6	T	60	0	RTE 65X: DOUGLAS MR -> DA	299
"M5L108PM"	6	6	T	0	0	RTE 65X: DOUGLAS MR -> DA	300
"M5L109MI"	6	6	T	15	0	RTE 95X: GOLDEN GLADES ->	301
"M5L109PM"	6	6	T	0	0	RTE 95X: GOLDEN GLADES ->	302
"M5L110MI"	6	6	T	30	0	RTE 95X: NORWD -> GOLDEN	303
"M5L110PM"	6	6	T	0	0	RTE 95X: NORWD -> GOLDEN	304
"M5L111MI"	6	6	T	30	0	RTE 95X: CAROL CITY -> OM	305
"M5L111PM"	6	6	T	0	0	RTE 95X: CAROL CITY -> OM	306
"M5L112MI"	6	6	T	30	0	RTE 95X: NORWD -> GOLDEN	307
"M5L112PM"	6	6	T	0	0	RTE 95X: NORWD -> GOLDEN	308
"M5L113MI"	6	6	T	30	0	RTE 95X: AVENT -> GOLDEN	309
"M5L113PM"	6	6	T	0	0	RTE 95X: AVENT -> GOLDEN	310
"M5L114MI"	6	6	F	120	60	DADE-MONROE EXPRESS",	311
"M5L132MD"	5	4	F	0	30	RTE 231: BSWY LCL: DS ->	312
"M7L1MI"	7	8	F	6	12	STAGE 1: OKEECHOBEE -> DA	313
"M9L1MI"	9	9	T	1.5	1.5	DPM: CW INNER LOOP",	314
"M9L2MI"	9	9	T	3	3.5	DPM: OMNI LOOP",	315
"M9L3MI"	9	9	T	4	4	DPM: BRICKELL LOOP",	316
"M8L1S6"	8	10	F	60	60	TRI-RAIL MANGONIA-MIA",	317

Table D-2: **Year 2030 Transit Line Parameters**
Southeast Regional Planning Model VI

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M4L1PB"	4	1	F	30	30	Indiantown Rd (Seminole P	1
"M4L2PB"	4	1	F	30	30	PGA Blvd (Seminole Pratt	2
"M4L3PB"	4	1	F	30	30	Northlake Blvd (Coconut B	3
"M4L4PB"	4	1	F	30	30	Blue Heron Blvd (Beeline	4
"M4L5PB"	4	1	F	30	30	8th Street(VA Hospital-Po	5
"M4L6PB"	4	1	F	30	30	45th St (Military Tr - US	6
"M4L7PB"	4	1	F	30	30	Palm Beach Lakes Blvd (Ro	7
"M4L8PI"	4	1	T	15	15	Okeechobee Blvd (Seminole	8
"M4L8PO"	4	1	T	15	15	Okeechobee Blvd (Seminole	9
"M4L9PB"	4	1	F	30	30	Belvedere (Military Trail	10
"M4L10PI"	4	1	T	15	15	Southern Blvd (Okeechobee	11
"M4L10PO"	4	1	T	15	15	Southern Blvd (Okeechobee	12
"M4L11PB"	4	1	F	30	30	Summit (Jog Rd - Dixie Hi	13
"M4L12PB"	4	1	F	30	30	Forest Hill (Okeechobee B	14
"M4L13PB"	4	1	F	30	30	10th Ave (Jog Rd - US1)",	15
"M4L14PI"	4	1	T	30	30	Lake Worth Rd (SR 7 - US1	16
"M4L14PO"	4	1	T	30	30	Lake Worth Rd (SR 7 - US1	17
"M4L15PB"	4	1	F	30	30	Lantana (SR 7 - US1)",	18
"M4L16PB"	4	1	F	30	30	Hypoluxo (SR 7 - US1)",	19
"M4L17PB"	4	1	F	30	30	Boynton Beach BLvd (SR 7	20
"M4L18PB"	4	1	F	30	30	Woolbright (Jog Rd - US 1	21
"M4L19PB"	4	1	F	30	30	Lake Ida (Jog Rd - US 1)"	22
"M4L20PB"	4	1	F	30	30	Atlantic Ave (SR 7 - US 1	23
"M4L21PB"	4	1	F	30	30	Lawson/ SW 10th (Military	24
"M4L22PB"	4	1	F	30	30	Linton Blvd (Jog Rd - US	25
"M4L23PB"	4	1	F	30	30	Glades Rd (US 441/ SR7 -	26
"M4L24PB"	4	1	F	30	30	Palmetto Park (SR 7 - Oce	27
"M4L25PB"	4	1	F	30	30	US 441/ SR 7 (PGA Blvd -	28
"M4L26PB"	4	1	F	30	30	US 441/ SR7 (Glades Rd -	29
"M4L27PB"	4	1	F	30	30	Jog Rd (Donald Ross Rd -	30
"M4L28PB"	4	1	F	15	15	Military Trail (PGA Blvd	31
"M4L29PB"	4	1	F	15	15	Australian Blvd (Blue Her	32
"M4L30PI"	4	1	T	15	15	Congress Ave (Airport - Y	33
"M4L30PO"	4	1	T	15	15	Congress Ave (Airport - Y	34
"M4L31PB"	4	1	F	30	30	Old Dixie Hwy (Blue Heron	35
"M4L32PI"	4	1	T	15	15	US1 (PGA Blvd - Broward C	36
"M4L32PO"	4	1	T	15	15	US1 (PGA Blvd - Broward C	37
"M4L33PB"	4	1	F	30	30	Donald Ross Rd (Jog Rd -	38
"M4L34PB"	4	1	F	30	30	Seacrest/Swinton (Old Dix	39
"M4L35PB"	4	1	F	30	30	Ocean Blvd (Okeechobee Bl	40
"M4L36PB"	4	1	F	30	30	Seminole Pratt (Indiantow	41
"M4L37PB"	4	1	F	30	30	Military Trail (Indiantow	42
"M4L38PB"	4	1	F	30	30	US1 (Tequesta - PGA Blvd)	43
"M4L39PB"	6	11	F	15	15	Express Bus - Glades Rd (	44
"M4L40PB"	6	11	F	15	15	Express Bus - Okeechobee	45
"M4L41PB"	6	11	F	30	30	Express Bus - I-95 (India	46
"M8L2PB"	8	10	F	30	60	TRI-RAIL MARTIN COUNTY-WP	47
"M8L3PB"	8	10	F	60	60	TRI-RAIL SCRIPPS AREA-WPB	48
"M4L1BO"	4	3	T	10	10	RTE 1 SB:FT LD AVENTURA	49
"M4L2BO"	4	3	T	10	10	RTE 1 NB:AVENTURA M FT	50
"M4L3BO"	4	3	F	15	15	RTE 2:HOLLYWOOD BLVD",	51
"M4L4BO"	4	3	F	30	30	RTE 3:RAVENSWOOD GARAGE",	52
"M4L5BI"	4	3	T	30	30	RTE 4:SUNRISE BLVD	53
"M4L5BO"	4	3	T	30	30	RTE 4:SUNRISE BLVD	54
"M4L6BO"	4	3	F	30	30	RTE 5:HOLLYWOOD BLVD",	55
"M4L7BO"	4	3	T	30	30	RTE 6 SB:YOUNG CIRCLE",	56
"M4L8BO"	4	3	T	30	30	RTE 6 NB:YOUNG CIRCLE",	57
"M4L9BO"	4	3	F	20	20	RTE 7:YOUNG CIRCLE",	58

Table D-2 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M4L10BO"	4	3	F	30	30	RTE 9:BROWARD CENTRAL",	59
"M4L11BO"	4	3	F	20	20	RTE 10: BROWARD CENTRAL",	60
"M4L12BO"	4	3	F	20	20	RTE 11:POMPANO SQUARE",	61
"M4L13BO"	4	3	F	30	30	RTE 12:WEST BROWARD",	62
"M4L14BO"	4	3	F	15	15	RTE 14:BROWARD CENTRAL",	63
"M4L15BO"	4	3	T	30	30	RTE 15 SB:",	64
"M4L16BO"	4	3	T	30	30	RTE 15 NB:",	65
"M4L17BO"	4	3	T	40	40	RTE 17 WB:HOLLYWOOD BLVD"	66
"M4L18BO"	4	3	T	40	40	RTE 17 EB:HOLLYWOOD BLVD"	67
"M4L118BI"	4	3	T	15	15	RTE 18:MARGATE TERMINAL -	68
"M4L118BO"	4	3	T	15	15	RTE 18:MARGATE TERMINAL -	69
"M4L19BO"	4	3	F	30	30	RTE 20:POMPANO SQUARE",	70
"M4L20BO"	4	3	F	20	20	RTE 22:SAWGRASS MILLS",	71
"M4L21BO"	4	3	T	20	20	RTE 23: WESTON SB",	72
"M4L22BO"	4	3	T	20	20	RTE 23: WESTON NB",	73
"M4L23BO"	4	3	F	20	20	RTE 28:YOUNG CIRCLE",	74
"M4L24BO"	4	3	F	30	30	RTE 30:BROWARD CENTRAL",	75
"M4L25BO"	4	3	F	15	15	RTE 31:BROWARD CENTRAL",	76
"M4L26BO"	4	3	F	30	0	RTE 34: SAMPLE ROAD",	77
"M4L27BO"	4	3	F	30	30	RTE 35:ATLANTIC BLVD",	78
"M4L28BO"	4	3	F	10	10	RTE 36:SAWGRASS MILLS",	79
"M4L29BO"	4	3	F	15	15	RTE 40:BROWARD CENTRAL",	80
"M4L30BO"	4	3	F	30	30	RTE 44:SAWGRASS MILLS",	81
"M4L31BO"	4	3	F	15	15	RTE 50:BROWARD CENTRAL",	82
"M4L32BO"	4	3	F	30	30	RTE 55:BROWARD CENTRAL",	83
"M4L33BO"	4	3	F	30	30	RTE 56:SUNSHINE PLAZA",	84
"M4L34BO"	4	3	T	40	40	RTE 57 WB:SUNSHINE PLAZA"	85
"M4L35BO"	4	3	T	40	40	RTE 57 EB:SUNSHINE PLAZA"	86
"M4L36BO"	4	3	F	15	15	RTE 60:",	87
"M4L37BO"	4	3	F	30	30	RTE 62:CORAL SQUARE MALL"	88
"M4L38BO"	4	5	F	10	10	SAWGRASS MILLS BRT",	89
"M4L39BO"	4	3	T	60	60	RTE 75:WEST BROWARD",	90
"M4L40BO"	4	3	T	30	30	RTE 81 EB:BROWARD CENTRAL	91
"M4L41BO"	4	3	T	30	30	RTE 81 WB:BROWARD CENTRAL	92
"M4L42BO"	4	3	F	20	20	RTE 83:POMPANO SQUARE",	93
"M4L43BO"	4	3	F	30	30	RTE 84:",	94
"M4L44BO"	4	3	F	30	30	RTE 88:SR A1A VIA HILLSBO	95
"M4L45BO"	4	3	F	30	30	RTE 89:SR A1A VIA HILLSBO	96
"M4L46BO"	4	3	F	45	45	RTE 92:CENT VILL92",	97
"M4L47BO"	4	3	F	90	90	RTE 93:CENT VILL93",	98
"M4L48BO"	4	3	F	45	45	RTE 94:CENT VILL94",	99
"M4L49BO"	4	3	F	90	90	RTE 95:CENT VILL95",	100
"M4L50BO"	4	3	F	60	60	RTE 97:CENT VILL97",	101
"M4L51BO"	4	3	F	30	30	RTE 201:US-1 TO I-75 VIA	102
"M4L52BO"	4	3	F	30	30	RTE 202:US-1 TO NW 172nd	103
"M12L1BO"	12	2	F	60	60	RTE=53:DT-LO",	104
"M12L2BO"	12	2	T	60	60	RTE=43",	105
"M12L3BO"	12	2	T	60	60	RTE=41",	106
"M12L4BO"	12	2	T	60	60	RTE=42",	107
"M12L5BO"	12	2	T	60	60	RTE=33 WB",	108
"M12L6BO"	12	2	T	60	60	RTE=33 EB",	109
"M12L7BO"	12	2	T	60	60	RTE=23",	110
"M12L8BO"	12	2	F	60	60	RTE=24",	111
"M12L9BO"	12	2	T	60	60	RTE=63",	112
"M12L10BO"	12	2	T	60	60	RTE=74",	113
"M4L53BO"	4	3	F	60	60	RTE=MA-A:MARGATE A",	114
"M4L54BO"	4	3	F	30	120	RTE=MA-B:MARGATE B",	115
"M4L151BO"	4	3	F	0	120	RTE=MA-B:TURTLE RUN",	116

Table D-2 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M4L152BO"	4	3	T	0	120	RTE=MA-B:PALM LAKES",	117
"M4L55BO"	4	3	F	60	60	RTE=MA-C:MARGATE C",	118
"M4L56BO"	4	3	F	30	30	RTE=MA-D:MARGATE D",	119
"M4L155BO"	4	3	F	0	120	RTE=MA-D:PALM LAKES",	120
"M4L156BO"	4	3	F	0	120	RTE=MA-D:COC. CREEK",	121
"M4L57BO"	4	3	T	90	90	RTE=CO:COOPER CITY",	122
"M4L58BO"	4	3	T	60	60	RTE=HI:HILLSBORO BEACH",	123
"M4L59BO"	4	3	F	90	90	RTE=PP:PEMBROKE PINES",	124
"M4L60BO"	4	3	F	90	90	RTE=CC:COCONUT CREEK",	125
"M4L61BO"	4	3	F	60	60	RTE=MI:MIRAMAR",	126
"M4L62BO"	4	3	T	60	60	RTE=BUS:BRO URB SHUTTLE",	127
"M4L63BO"	6	5	T	30	30	RTE=DAVIE/SFEC EXPRESS",	128
"M4L64BO"	6	5	T	35	0	RTE=WESTON/BON EXP WB",	129
"M4L65BO"	6	5	T	35	0	RTE=WESTON/BON EXP EB",	130
"M4L66BO"	6	5	T	90	0	RTE=PEM PINES EXP WB",	131
"M4L67BO"	6	5	T	90	0	RTE=PEM PINES EXP EB",	132
"M4L68BO"	13	5	F	10	10	RTE= Sample Rd Express",	133
"M4L69BO"	13	5	F	15	0	RTE= Atlantic Blvd Expres	134
"M4L70BI"	6	5	T	15	0	RTE= Commercial Blvd to P	135
"M4L70BO"	6	5	T	15	0	RTE= Commercial Blvd to P	136
"M4L71BO"	6	5	T	15	0	RTE= Sunrise Thtr to Miam	137
"M4L72BO"	6	5	T	15	0	RTE= Sunrise Thtr to Miam	138
"M4L73BO"	4	3	F	10	15	RTE= Broward to Sawgrass	139
"M4L74BO"	13	5	F	10	20	RTE= University Blvd BRT"	140
"M4L75BO"	13	5	T	15	0	RTE= Cypress Creek to Hil	141
"M4L76BO"	13	5	T	15	0	RTE= Cypress Creek to Hil	142
"M4L77BO"	13	5	F	15	0	RTE= A1A to Sawgrass Mill	143
"M4L78BO"	13	5	F	10	20	RTE= Federal Highway to D	144
"M4L79BO"	13	3	F	60	0	Deerfield Beach Exp 1",	145
"M4L80BO"	13	3	F	60	0	Deerfield Beach Exp 2",	146
"M4L81BO"	13	3	F	60	0	Deerfield Beach Exp 2",	147
"M4L82BO"	4	3	F	20	30	Flamingo Rd to Miami-Dade	148
"M4L83BO"	4	3	F	20	30	Broward to Pines via Palm	149
"M4L84BO"	4	3	F	20	30	Downtown to Flamingo Rd v	150
"M4L85BO"	4	3	F	20	30	441 to I-75 via Stirling	151
"M4L86BO"	4	3	F	20	30	Sheridan St to Miramar Pk	152
"M4L87BO"	4	3	F	20	30	SR7/441 to Dykes Rd. via	153
"M4L88BO"	4	3	T	20	30	Dowtown A1A to Federal Hi	154
"M4L89BO"	4	3	T	20	30	Dowtown A1A to Federal Hi	155
"M4L90BO"	4	3	F	20	30	Oakland Park to Sheridan	156
"M4L91BI"	13	5	T	10	20	RTE 18:MARGATE TERMINAL	157
"M4L91BO"	13	5	T	10	20	RTE 18:MARGATE TERMINAL	158
"M7L1BO"	10	7	F	10	20	BRT I-595 Corridor",	159
"M8L2BO"	8	10	F	10	30	FEC TRI-RAIL EXPANSION",	160
"M4L92BO"	4	5	T	15	0	Cypress Creek Express Bus	161
"M4L93BO"	4	5	T	15	0	Cypress Creek Express Bus	162
"M4L94BO"	4	3	F	20	10	COURTHOUSE LOOP",	163
"M4L181BO"	4	3	F	0	10	TMAX LUNCH",	164
"M4L182BO"	4	3	F	0	10	COURTHOUSE TROLLEY",	165
"M4L95BO"	4	5	F	30	0	LAUD MKPLACE PNR",	166
"M7L2BO"	10	7	F	10	20	Downtown - Airport - US1/	167

Table D-2 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M5L1MI"	5	4	T	15	20	RTE A: MIAMI BCH -> OMNI	168
"M5L1MO"	5	4	T	15	20	RTE A: MIAMI BCH -> OMNI	169
"M5L2MI"	5	4	T	15	30	RTE B: BRK -> KEY BISCAYN	170
"M5L2MO"	5	4	T	15	30	RTE B: BRK -> KEY BISCAYN	171
"M5L3MI"	5	4	T	15	20	RTE C: MT SINAI HO -> OMN	172
"M5L3MO"	5	4	T	15	20	RTE C: MT SINAI HO -> OMN	173
"M5L4MI"	5	4	T	20	30	RTE E: AVENTURA MALL -> M	174
"M5L4MO"	5	4	T	20	30	RTE E: AVENTURA MALL -> M	175
"M5L5MI"	5	4	T	30	30	RTE F/M: NW 22ND AVE -> M	176
"M5L5MO"	5	4	T	30	30	RTE F/M: NW 22ND AVE -> M	177
"M5L6MI"	5	4	T	30	0	RTE G: OPALKA -> BAL HBR	178
"M5L6MO"	5	4	T	0	0	RTE G: OPALKA -> BAL HBR	179
"M5L152MI"	5	4	T	0	30	RTE G: OPALAKA	180
"M5L152MO"	5	4	T	0	30	RTE G: OPALAKA	181
"M5L7MI"	5	4	T	15	20	RTE H: SKY LAKE -> SO BEA	182
"M5L7MO"	5	4	T	15	20	RTE H: SKY LAKE -> SO BEA	183
"M5L8MI"	5	4	T	15	30	RTE J: NORMNDY ISL -> DR	184
"M5L8MO"	5	4	T	15	30	RTE J: NORMNDY ISL -> DR	185
"M5L9MI"	5	4	T	30	60	RTE K: DIPLOMAT -> OMNI	186
"M5L9MO"	5	4	T	30	60	RTE K: DIPLOMAT -> OMNI	187
"M5L10MI"	5	4	T	30	30	RTE K: HAULOVER -> CBD	188
"M5L10MO"	5	4	T	30	30	RTE K: HAULOVER -> CBD	189
"M5L11MI"	5	4	T	20	24	RTE L: HIA TRK -> MBCC	190
"M5L11MO"	5	4	T	20	24	RTE L: HIA TRK -> MBCC	191
"M5L12MI"	5	4	T	12	24	RTE L: AMTRAK -> MBCC	192
"M5L12MO"	5	4	T	12	24	RTE L: AMTRAK -> MBCC	193
"M5L13MI"	5	4	T	20	30	RTE R: BAL HBR -> LINC RD	194
"M5L13MO"	5	4	T	20	30	RTE R: BAL HBR -> LINC RD	195
"M5L14MI"	5	4	T	10	10	RTE S: CBD -> ADVENTURA	196
"M5L14MO"	5	4	T	10	10	RTE S: CBD -> ADVENTURA	197
"M5L15MI"	5	4	T	20	30	RTE T: HAULOUVER -> CBD	198
"M5L15MO"	5	4	T	20	30	RTE T: HAULOUVER -> CBD	199
"M5L16MI"	5	4	T	15	24	RTE W: MBCC -> SO BCH CIR	200
"M5L17MI"	5	4	F	30	40	RTE 1: VIA BSWY: DN -> QL	201
"M5L18MI"	5	4	T	60	60	RTE 2: PKWY HOSP -> CBD	202
"M5L18MO"	5	4	T	60	60	RTE 2: PKWY HOSP -> CBD	203
"M5L19MI"	5	4	T	20	20	RTE 2: LITTLE RIVER -> CB	204
"M5L19MO"	5	4	T	20	20	RTE 2: LITTLE RIVER -> CB	205
"M5L20MI"	5	4	T	10	10	RTE 3: DIPLOMAT -> CBD	206
"M5L20MO"	5	4	T	10	10	RTE 3: DIPLOMAT -> CBD	207
"M5L21MI"	5	4	T	20	30	RTE 6: CBD -> COCONUT GRO	208
"M5L21MO"	5	4	T	20	30	RTE 6: CBD -> COCONUT GRO	209
"M5L22MI"	5	4	T	30	30	RTE 7: HOOK SQ -> CBD	210
"M5L22MO"	5	4	T	30	30	RTE 7: HOOK SQ -> CBD	211
"M5L23MI"	5	4	T	30	30	RTE 7: INTL MALL -> CBD	212
"M5L23MO"	5	4	T	30	30	RTE 7: INTL MALL -> CBD	213
"M5L24MI"	5	4	T	30	30	RTE 8: FIU TAMIAMI -> CBD	214
"M5L24MO"	5	4	T	30	30	RTE 8: FIU TAMIAMI -> CBD	215
"M5L25MI"	5	4	T	30	0	RTE 8: WESTCHSTR -> CBD	216
"M5L25MO"	5	4	T	30	0	RTE 8: WESTCHSTR -> CBD	217
"M5L26MI"	5	4	T	30	30	RTE 8: FIU -> CBD VIA 8TH	218
"M5L26MO"	5	4	T	30	30	RTE 8: FIU -> CBD VIA 8TH	219
"M5L27MI"	5	4	T	30	30	RTE 9: AVENTURA MALL -> C	220
"M5L27MO"	5	4	T	30	30	RTE 9: AVENTURA MALL -> C	221
"M5L28MI"	5	4	T	20	30	RTE 9: 163RD ST MALL -> C	222
"M5L28MO"	5	4	T	20	30	RTE 9: 163RD ST MALL -> C	223
"M5L29MI"	5	4	T	15	30	RTE 10: 163RD ST MALL ->	224
"M5L29MO"	5	4	T	15	30	RTE 10: 163RD ST MALL ->	225

Table D-2 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M5L30MI"	5	4	T	15	20	RTE 11: FIU -> CBD	226
"M5L30MO"	5	4	T	15	20	RTE 11: FIU -> CBD	227
"M5L31MI"	5	4	T	15	20	RTE 11: MIDWAY MALL -> CB	228
"M5L31MO"	5	4	T	15	20	RTE 11: MIDWAY MALL -> CB	229
"M5L32MI"	5	4	F	15	30	RTE 12: NS -> MERCY VIA 1	230
"M5L33MI"	5	4	T	15	20	RTE 16: 163RD ST MALL ->	231
"M5L33MO"	5	4	T	15	20	RTE 16: 163RD ST MALL ->	232
"M5L34MI"	5	4	F	30	30	RTE 17: VZ STA -> NORWOOD	233
"M5L35MI"	5	4	F	30	0	RTE 17: FLG -> NW 103RD S	234
"M5L36MI"	5	4	T	30	60	RTE 21: NW 27TH AVE & 160	235
"M5L36MO"	5	4	T	30	60	RTE 21: NW 27TH AVE & 160	236
"M5L37MI"	5	4	T	30	60	RTE 21: NORTHSIDE -> CBD	237
"M5L37MO"	5	4	T	30	60	RTE 21: NORTHSIDE -> CBD	238
"M5L38MI"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	239
"M5L38MO"	5	4	T	60	60	RTE 22: 163RD ST MALL ->	240
"M5L39MI"	5	4	T	40	60	RTE 22: 163RD ST MALL ->	241
"M5L39MO"	5	4	T	40	60	RTE 22: 163RD ST MALL ->	242
"M5L40MI"	5	4	T	30	30	RTE 24: 137TH AVE -> CBD	243
"M5L40MO"	5	4	T	30	30	RTE 24: 137TH AVE -> CBD	244
"M5L41MI"	5	4	T	30	30	RTE 24: WESTCHSTR -> CBD	245
"M5L41MO"	5	4	T	30	30	RTE 24: WESTCHSTR -> CBD	246
"M5L42MI"	5	4	F	30	30	RTE 27: CALDER -> FLAGLER	247
"M5L43MI"	5	4	F	30	30	RTE 27: CALDER -> GROVE",	248
"M5L44MI"	5	4	T	20	30	RTE 28: FIU NORTH -> HLH	249
"M5L44MO"	5	4	T	20	30	RTE 28: FIU NORTH -> HLH	250
"M5L45MI"	5	4	T	20	30	RTE 29: VOTECH -> TRI PAR	251
"M5L45MO"	5	4	T	20	30	RTE 29: VOTECH -> TRI PAR	252
"M5L46MI"	5	4	T	15	30	RTE 32: CAROL CITY -> OMN	253
"M5L46MO"	5	4	T	15	30	RTE 32: CAROL CITY -> OMN	254
"M5L47MI"	5	4	F	15	30	RTE 33: LITTLE RIVER -> H	255
"M5L48MI"	5	4	F	15	30	RTE 35: MDCC-S -> FLA CIT	256
"M5L49MI"	5	4	F	30	60	RTE 36: KOGER CTR -> OMNI	257
"M5L50MI"	5	4	F	60	60	RTE 36: HOOK SQ -> OMNI",	258
"M5L51MI"	5	4	T	15	30	RTE 37: SM STA -> ML VOTE	259
"M5L51MO"	5	4	T	15	30	RTE 37: SM STA -> ML VOTE	260
"M5L52MI"	5	4	F	30	60	RTE 40: 132ND AVE & 8TH S	261
"M5L53MI"	5	4	F	30	30	RTE 40: 147TH AVE -> DOUG	262
"M5L54MI"	5	4	T	15	30	RTE 42: GOLDEN GLADES ->	263
"M5L54MO"	5	4	T	15	30	RTE 42: GOLDEN GLADES ->	264
"M5L55MI"	5	4	T	20	30	RTE 48: SM STA -> BRK	265
"M5L55MO"	5	4	T	20	30	RTE 48: SM STA -> BRK	266
"M5L56MI"	5	4	T	30	30	RTE 52: CR GOV CNTR -> GA	267
"M5L56MO"	5	4	T	30	30	RTE 52: CR GOV CNTR -> GA	268
"M5L57MI"	5	4	T	30	0	RTE 52: CR GOV CTR -> SM	269
"M5L57MO"	5	4	T	30	0	RTE 52: CR GOV CTR -> SM	270
"M5L58MI"	5	4	F	15	30	RTE 54: WESTLAND -> BB &	271
"M5L59MI"	5	4	F	30	60	RTE 56: MDCC-S -> CRL GAB	272
"M5L60MI"	5	4	F	30	0	RTE 56: L MEADOWS -> CRL	273
"M5L199MI"	5	4	F	0	60	RTE 56: MDCC-S -> CRL GAB	274
"M5L61MI"	5	4	F	20	0	RTE 57: CORAL RF -> SM ST	275
"M5L62MI"	5	4	T	60	30	RTE 62: TRI PARK HLH -> O	276
"M5L62MO"	5	4	T	60	30	RTE 62: TRI PARK HLH -> O	277
"M5L63MI"	5	4	T	30	30	RTE 62: MLK STA -> OMNI	278
"M5L63MO"	5	4	T	30	30	RTE 62: MLK STA -> OMNI	279
"M5L64MI"	5	4	T	30	0	RTE 62: MLK STA -> 41ST S	280
"M5L64MO"	5	4	T	30	0	RTE 62: MLK STA -> 41ST S	281
"M5L65MI"	5	4	T	60	0	RTE 62: TRI PARK HLH -> B	282
"M5L65MO"	5	4	T	60	0	RTE 62: TRI PARK HLH -> B	283

Table D-2 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M5L66MI"	5	4	F	20	30	RTE 70: HMST STAD -> CR M	284
"M5L67MI"	5	4	F	15	60	RTE 71: DN STA -> INTL MA	285
"M5L68MI"	5	4	F	30	30	RTE 72: 157TH AVE / 88TH	286
"M5L69MI"	5	4	F	30	0	RTE 72: 137TH AVE LOOP ->	287
"M5L70MI"	5	4	F	60	30	RTE 73: MIAMI LAKES -> DS	288
"M5L71MI"	5	4	F	20	0	RTE 73: MIAMI LAKES -> CR	289
"M5L72MI"	5	4	F	15	30	RTE 75: ML VOTCH -> MDCC-	290
"M5L73MI"	5	4	T	15	30	RTE 77: NW 183RD ST & 7TH	291
"M5L73MO"	5	4	T	15	30	RTE 77: NW 183RD ST & 7TH	292
"M5L74MI"	5	4	T	15	30	RTE 77: 441 & 199TH ST ->	293
"M5L74MO"	5	4	T	15	30	RTE 77: 441 & 199TH ST ->	294
"M5L75MI"	5	4	F	30	30	RTE 83: MIAMI LAKES -> FI	295
"M5L76MI"	5	4	F	30	0	RTE 83: MIAMI LAKES -> 16	296
"M5L77MI"	5	4	F	15	30	RTE 87: DN STA -> OKEE ST	297
"M5L78MI"	5	4	F	40	60	RTE 88: SW 88TH ST & 157T	298
"M5L79MI"	5	4	F	40	120	RTE 88: SW 84TH ST & 141S	299
"M5L80MI"	5	4	F	15	15	RTE 91: NW 67TH AVE -> 16	300
"M5L81MI"	5	4	T	60	0	RTE 132: TCR -> KOGER CNT	301
"M5L82MI"	5	4	F	15	15	RTE 104: MDCC -> DN STA",	302
"M5L83MI"	5	4	T	60	0	RTE 133: TCR -> MIA",	303
"M5L84MI"	5	4	T	15	0	RTE 134: RIVERSIDE SHUTTL	304
"M5L84MO"	5	4	T	15	0	RTE 134: RIVERSIDE SHUTTL	305
"M5L85MI"	5	4	F	15	15	RTE EW1: MBCC",	306
"M5L86MI"	5	4	F	20	30	RTE 137: W DADE CONNECT",	307
"M5L87MI"	5	4	F	20	30	RTE 242: DORAL CONNECTION	308
"M5L88MI"	5	4	T	15	30	RTE 243: SEAPORT CONNECTI	309
"M5L90MI"	5	4	F	15	15	RTE 38: BSWY MX: DN -> FC	310
"M5L91MI"	5	4	T	20	0	RTE V: DIPLOMAT -> GOLDEN	311
"M5L91MO"	5	4	T	20	0	RTE V: DIPLOMAT -> GOLDEN	312
"M5L92MI"	5	4	T	20	30	RTE: 241 NORTH DADE CONNE	313
"M5L92MO"	5	4	T	20	30	RTE: 241 NORTH DADE CONNE	314
"M5L93MI"	5	4	F	20	0	RTE 36: KOGER CTR -> OMNI	315
"M5L94MI"	5	4	F	15	30	RTE 1: VIA BUSWAY",	316
"M5L95MI"	5	4	T	40	0	RTE 22: 163RD ST MALL ->	317
"M5L95MO"	5	4	T	40	0	RTE 22: 163RD ST MALL ->	318
"M5L96MI"	5	4	F	10	15	RTE 31: BUSWAY LOCAL",	319
"M5L97MI"	5	4	T	30	0	RTE G: OPALAKA	320
"M5L97MO"	5	4	T	30	0	RTE G: OPALAKA	321
"M5L98MI"	5	4	T	15	15	BRICKELL KEY SHUTTLE",	322
"M5L99MI"	5	4	F	30	60	RTE 88: SW 88TH ST & 157T	323
"M5L100MI"	5	4	F	30	30	RTE 152: GABLES CONNECTIO	324
"M5L101MI"	5	4	T	20	30	RTE 202: LITTLE HAITI CON	325
"M5L101MO"	5	4	T	20	30	RTE 202: LITTLE HAITI CON	326
"M5L102MI"	5	4	T	15	20	RTE 208: LITTLE HAVANA CI	327
"M5L102MO"	5	4	T	15	20	RTE 208: LITTLE HAVANA CI	328
"M5L103MI"	5	4	F	15	15	RTE 212: SWEETWATER CIRCU	329
"M5L104MI"	5	4	T	20	30	RTE 238: EAST-WEST CONNEC	330
"M5L104MO"	5	4	T	20	30	RTE 238: EAST-WEST CONNEC	331
"M5L105MI"	5	4	T	20	30	RTE 245: OKEECHOBEE CONNE	332
"M5L106MI"	5	4	F	15	15	RTE 249: COCONUT GROVE CI	333
"M5L107MI"	5	4	F	20	30	RTE 278: FLAGAMI CONNECTI	334
"M5L108MI"	5	4	F	20	30	RTE 282: HIALEAH GARDENS	335
"M5L109MI"	5	4	F	20	30	97 AVE. CROSSTOWN",	336
"M5L110MI"	5	4	F	15	30	120/136 ST CROSSTOWN",	337
"M5L111MI"	5	4	F	15	30	163 ST SHUTTLE",	338
"M5L112MI"	5	4	F	40	60	AIRPORT WEST CONNECTION",	339
"M5L113MI"	5	4	F	40	60	AIRPORT WEST CONNECTION",	340
"M5L114MI"	5	4	F	20	30	FL CITY->HOMESTEAD",	341
"M5L115MI"	5	4	F	30	30	GRATIGNY CONNECTION",	342

Table D-2 (Continued)

NAME	MODE	OPERATOR	ONEWAY	HDWY[1]	HDWY[2]	LONGNAME	SI No
"M5L116MI"	5	4	T	20	30	KENDALL CIRCULATOR",	343
"M5L117MI"	5	4	F	20	30	KENDALL CONNECTION",	344
"M5L118MI"	5	4	F	15	30	LIBERTY CITY CIRCULATOR",	345
"M5L119MI"	5	4	F	15	30	RTE 122",	346
"M5L120MI"	5	4	F	20	20	SAGA BAY/GOULDS BUSWAY FE	347
"M5L121MI"	13	4	T	15	0	NW 7 AVE. MAX	348
"M5L121MO"	13	4	T	15	0	NW 7 AVE. MAX	349
"M5L122MI"	13	4	T	15	30	RTE 93: BISCAYNE MAX	350
"M5L122MO"	13	4	T	15	30	RTE 93: BISCAYNE MAX	351
"M5L123MI"	13	4	T	15	30	RTE 51: FLAGLER MAX: BEAC	352
"M5L123MO"	13	4	T	15	30	RTE 51: FLAGLER MAX: BEAC	353
"M5L124MI"	5	4	F	10	0	RTE 97: 27TH AVE MAX",	354
"M5L125MI"	13	4	T	15	30	RTE 240: BIRD ROAD MAX	355
"M5L125MO"	13	4	T	15	30	RTE 240: BIRD ROAD MAX	356
"M5L126MI"	5	4	F	15	20	RTE 224: CORAL WAY MAX",	357
"M5L127MI"	5	4	F	15	0	RTE 267: LUDLAM MAX",	358
"M5L128MI"	5	4	T	15	0	79 ST MAX	359
"M5L128MO"	5	4	T	15	0	79 ST MAX	360
"M5L129MI"	5	4	T	15	15	BEACH MAX	361
"M5L129MO"	5	4	T	15	15	BEACH MAX	362
"M5L130MI"	5	4	F	15	0	RED ROAD MAX",	363
"M5L131MI"	5	4	F	10	15	RTE 38: BSWY MAX: DN -> F	364
"M5L132MI"	5	4	F	15	30	RTE 252: CORAL RF MAX: DS	365
"M5L133MI"	5	4	F	15	0	RTE 287: SAGA BAY MAX : D	366
"M5L134MI"	6	6	T	12	0	RTE 288: KAT KENDALL	367
"M5L134MO"	6	6	T	12	0	RTE 288: KAT KENDALL	368
"M5L135MI"	6	6	T	5	0	RTE 204: KAT KILLIAN	369
"M5L135MO"	6	6	T	5	0	RTE 204: KAT KILLIAN	370
"M5L136MI"	6	6	T	7.5	30	RTE 272: SUNSET KAT	371
"M5L136MO"	6	6	T	7.5	30	RTE 272: SUNSET KAT	372
"M5L138MI"	6	6	T	10	120	RTE 95X: GOLDEN GLADES ->	373
"M5L138MO"	6	6	T	0	120	RTE 95X: GOLDEN GLADES ->	374
"M5L139MI"	6	6	T	30	120	RTE 95X: NORWD -> GOLDEN	375
"M5L139MO"	6	6	T	0	120	RTE 95X: NORWD -> GOLDEN	376
"M5L140MI"	6	6	T	25	25	RTE 95X: CAROL CITY -> OM	377
"M5L140MO"	6	6	T	0	25	RTE 95X: CAROL CITY -> OM	378
"M5L141MI"	6	6	T	30	120	RTE 95X: NORWD -> GOLDEN	379
"M5L141MO"	6	6	T	0	120	RTE 95X: NORWD -> GOLDEN	380
"M5L142MI"	6	6	T	30	120	RTE 95X: AVENT -> GOLDEN	381
"M5L142MO"	6	6	T	0	120	RTE 95X: AVENT -> GOLDEN	382
"M5L144MI"	5	6	T	15	0	80 ST KAT	383
"M5L144MO"	5	6	T	15	0	80 ST KAT	384
"M5L145MI"	5	6	T	15	0	96 ST KAT	385
"M5L145MO"	5	6	T	15	0	96 ST KAT	386
"M5L146MI"	6	6	T	30	30	WESTERN EXPRESS	387
"M5L146MO"	6	6	T	30	30	WESTERN EXPRESS	388
"M7L21MI"	7	8	F	6	10	STAGE 1+: FLORIDA CITY -	389
"M7L22MI"	7	8	F	6	10	Kendall - Okeechobee",	390
"M7L23MI"	7	8	F	6	10	East-West Metrorail",	391
"M7L24MI"	7	8	F	10	20	East-West Metrorail via E	392
"M7L13MI"	10	12	F	5	10	Beach LRT",	393
"M5L164MI"	5	4	F	0	30	RTE 231: BSWY LCL: DS ->	394
"M5L137MI"	5	6	F	20	20	RTE 65X: DOUGLAS MR -> DA	395
"M5L143MI"	5	6	F	120	60	DADE-MONROE EXPRESS",	396
"M9L1MI"	9	9	T	1.5	1.5	DPM: CW INNER LOOP",	397
"M9L2MI"	9	9	T	3	3.5	DPM: OMNI LOOP",	398
"M9L3MI"	9	9	T	4	4	DPM: BRICKELL LOOP",	399
"M8L1S6"	8	10	F	20	30	TRI-RAIL MANGONIA-MIA",	400

Appendix E

Transit Ridership and Station Data

Table E-1 Year 2000 Weekday Transit Boardings of PalmTran Routes
Table E-2 Year 2000 Weekday Transit Boardings of BCT Routes
Table E-3 Year 2000 Weekday Transit Boardings of Metrobus Routes
Table E-4 Year 2000 Weekday Tri-Rail Station Boarding and Alighting Summary and Target Riderships

Table E-5 Year 2000 Station Data
Table E-6 Year 2030 Station Data

Table E-1: **Year 2000 Weekday Transit Boardings of PalmTran Routes**
Southeast Regional Planning Model VI

	MPO Model Mode & Line Nos.		
Route	AM (Mode,Line)	MD (Mode,Line)	**Boardings**
1	M=4, L=1-2	M=4, L=1-2	4,188
101	M=4, L=3	M=4, L=3	48
2	M=4, L=6	M=4, L=6	2,140
3	M=4, L=7	M=4, L=7	1,972
4	M=4, L=8	M=4, L=8	244
20	M=4, L=20	M=4, L=20	406
21	M=4, L=21	M=4, L=21	249
30	M=4, L=30	M=4, L=30	295
32	M=4, L=32	M=4,L=32	275
41	M=4, L=41,47	M=4, L=41,47	185
42	M=4, L=42	M=4, L=42	126
52	M=4, L=52	M=4, L=52	68
61	M=4, L=61	M=4, L=61	465
63	M=4, L=63	M=4, L=63	214
71	M=4, L=71	M=4, L=71	380
72	M=4, L=72	M=4, L=72	110
80	M=4, L=80	M=4, L=80	346
91	M=4, L=91	M=4, L=91	1,091
92	M=4, L=92	M=4, L=92	319
97	M=4, L=97	M-4, L=97	
Lake Worth	M=4, L=101-103	M=4, L=101-103	230
31	M=12, L=31	M=12, L=31	748
40	M=12, L=40	M=12, L=40	948
43	M=12, L=43	M=12, L=43	504
44	M=12, L=44	M=12, L=44	303
46	M=12, L=46	M=12, L=46	708
60	M=12, L=60	M=12, L=60	220
62	M=12, L=62	M=12, L=62	648
70	M=12, L=70	M=12, L=70	764
81	M=12, L=81	M=12, L=81	326
94	M=12, L=94	M=12, L=94	283
MODE 4 (Local Bus) Subtotal:			**18,802**
53	M=12, L=53	AM Only	40
54	M=12, L=54	AM Only	53
55	M=12,L=55	AM Only	57
MODE 12 (TR-Feeder Bus) Subtotal:			**149**
Mode 4 & 12 Total:			**18,951**

Table E-2: **Year 2000 Weekday Transit Boardings of BCT Routes**
Southeast Regional Planning Model VI

(a) Fixed Route (BCT) Daily Weekday Boardings

	MPO Model Mode & Line Nos.		
Route	AM (Mode,Line)	MD (Mode,Line)	Boardings
1	M=4, L=1,201	M=4, L=1,201	5,562
2	M=4, L=2	M=4, L=2	4,224
3	M=4, L=3	M=4, L=3	1,106
5	M=4, L=5	M=4, L=5	1,773
6	M=4, L=6,206	M=4, L=6,206	1,915
7	M=4, L=7	M=4, L=7	3,242
9	M=4, L=9	M=4, L=9	3,462
10	M=4, L=10	M=4, L=10	3,269
11	M=4, L=11	M=4, L=11	4,219
12	M=4, L=12	M=4, L=12	1,311
14	M=4, L=14	M=4, L=14	2,963
15	M=4, L=15,215	M=4, L=15,215	651
17	M=4, L=17,217	M=4, L=17,217	510
18	M=4, L=18	M=4, L=18	10,038
20	M=4, L=20	M=4, L=20	1,196
22	M=4, L=22	M=4, L=22	3,656
28	M=4, L=28	M=4, L=28	3,127
30	M=4, L=30	M=4, L=30	2,238
31	M=4, L=31	M=4, L=31	4,221
34	M=4, L=34	AM Only	779
36	M=4, L=36	M=4, L=36	6,382
40	M=4, L=40	M=4, L=40	3,577
50	M=4, L=50	M=4, L=50	3,901
55	M=4, L=55	M=4, L=55	1,177
56	M=4, L=56	M=4, L=56	1,971
57	M=4, L=57,58	M=4, L=57,58	274
60	M=4, L=60	M=4, L=60	2,181
62	M=4, L=62	M=4, L=62	1,219
72	M=4, L=72	M=4, L=72	4,805
75	M=4, L=75	M=4, L=75	250
81	M=4, L=81,82	M=4, L=81,82	2,497
83	M=4, L=83	M=4, L=83	1,755
84	M=4,L=84	M=4, L=84	1,239
92	M=4, L=92	M=4, L=92	439
93	M=4, L=93	M=4, L=93	227
94	M=4, L=94	M=4, L=94	169
95	M=4, L=95	M=4, L=95	177
97	M=4, L=97	M=4,L=97	111
TOTAL (a)			**91,815**

Table E-2 (Continued)

(b) Community Bus Daily Weekday Boardings

Route	AM (Mode,Line)	MD (Mode,Line)	Boardings
Cooper City	M=4, L=134	M=4, L=134	38
Coconut Creek	M=4, L=137	M=4, L=137	87
Dania Beach	MD Only	M=4,L=160-162	31
Davie (TMA)	M=6, L= 152	M=6, L= 152	97
Deerfield	M=4,L=164-166	AM Only	24
Ft Lauderdale (TMA)	M=6, L=211	AM Only	55
Hillsboro Beach	M=4, L=135	M=4, L=135	46
Margate	M=4, L=130-133	M=4, L=130-133,141-144	665
Miramar	M=4, L=138	M=4, L=138	146
Pembroke Pines	M=4, L=136	M=4, L=136	83
Ft Lauderdale (URC)	M=4, L=140	M=4, L=140	89
RTE=Weston/BON EXP WB	M=6, L=154	AM Only	10
RTE=Weston/BON EXP EB	M=6, L=155	AM Only	10
RTE=PEN PINES EXP WB	M=6, L=156	AM Only	6
RTE=PEN PINES EXP EB	M=6, L=157	AM Only	7
Courthouse Loop	M=4, L=210	M=4,L=210	402
TMAX Lunch	MD Only	M=4, L=211	x
Courthouse Trolley	MD Only	M=4, L=212	x
TOTAL (b)			**1,796**

(c) Tri-Rail Feeder Services & Tri-Rail Daily Weekday Boardings

Route	AM (Mode,Line)	MD (Mode,Line)	Boardings
23 (Hillsboro)	M=12, L=122	M=12, L=122	29
24 (Hillsboro)	M=12,L=124	M=12,L=124	52
33 (Pompano)	M=12, L=118,119	M=12, L=118,119	119
41 (Cypress Creek)	M=12, L=110	M=12, L=110	39
42 (Cypress Creek)	M=12, L=114	M=12, L=114	37
43 (Cypress Creek)	M=12, L=108	M=12, L=108	33
53 (Ft. Lauderdale)	M=12, L=106	M=12, L=106	305
63 (Airport)	M=12, L=126	M=12, L=126	118
74 (Sheridan)	M=12, L=128	M=12, L=128	20
TOTAL ©			**752**
Tri-Rail	M=8, L=200	M=8, L=200	7,514

(d) Systemwide Daily Weekday Boardings

Route	Boardings
ALL MODES TOTAL	101,876
Local (M 4 & 12) TOTAL	94,177
Express (M 6) TOTAL	185
Local & Express TOTAL	94,362

Table E-3: **Year 2000 Weekday Transit Boardings of Metrobus Routes**
Southeast Regional Planning Model VI

	METROBUS Boardings by Route (March 20000)				
	Average	Boardings By Day of Week			Monthly
ROUTES	Weekday	Weekdays	Saturdays	Sundays	Boardings
A	486	11,183	940	235	12,358
B	1,617	37,201	4,788	3,400	45,389
C	4,219	97,028	16,230	10,477	123,735
E	1,067	24,546	2,393	831	27,770
G	3,448	79,305	9,593	5,855	94,753
H	5,528	127,140	19,251	14,590	160,981
J	5,402	124,239	14,315	7,347	145,901
K	4,985	114,657	12,063	12,059	138,779
L	11,415	262,536	34,041	21,550	318,127
M	2,150	49,439	2,695	2,568	54,702
R	388	8,922	-	-	8,922
S	13,328	306,543	53,833	40,603	400,979
T	2,187	50,292	3,569	3,936	57,797
V	68	1,556	-	-	1,556
W	435	9,995	1,498	934	12,427
1	1,909	43,902	4,606	1,391	49,899
2	3,819	87,847	8,330	3,990	100,167
3	-	-	40,255	25,950	66,205
3/16	14,076	323,743	-	-	323,743
6	329	7,559	-	-	7,559
7	3,709	85,307	14,113	11,346	110,766
8	7,440	171,126	18,859	12,035	202,020
9	5,312	122,181	-	6,503	128,684
9/10	-	-	18,414	-	18,414
10	2,606	59,930	-	2,916	62,846
11	13,533	311,249	42,604	34,052	387,905
12	3,360	77,277	-	-	77,277
12/21	-	-	10,023	5,389	15,412
16	-	-	10,775	7,696	18,471
17	5,667	130,334	12,534	6,554	149,422
21	2,626	60,395	-	-	60,395
22	4,292	98,717	11,018	5,285	115,020
24	4,359	100,252	11,329	7,068	118,649
27	8,813	202,689	22,683	14,661	240,033
28	762	17,524	-	-	17,524
29	432	9,929	-	-	9,929
31	1,032	23,737	-	-	23,737
32	3,889	89,443	6,487	2,881	98,811
33	2,368	54,458	3,241	1,875	59,574
35/52	-	-	6,206	5,289	11,495

Table E-3 (Continued)

	METROBUS Boardings by Route (March 20000)				
	Average	Boardings By Day of Week			Monthly
ROUTES	Weekday	Weekdays	Saturdays	Sundays	Boardings
35/70	2,020	46,455	-	-	46,455
36	3,636	83,639	7,658	4,739	96,036
37	3,815	87,743	-	-	87,743
37/72	-	-	10,200	6,763	16,963
38	3,525	81,067	14,020	11,904	106,991
40	2,227	51,210	5,463	2,972	59,645
42	1,058	24,344	2,806	2,036	29,186
48	626	14,397	-	-	14,397
51-FLAGLER MAX	1,799	41,368	-	-	41,368
52	1,300	29,892	-	-	29,892
54	3,459	79,546	5,996	3,619	89,161
56	1,162	26,722	-	-	26,722
57/72	1,845	42,424	-	-	42,424
62	5,439	125,108	11,293	7,231	143,632
71	850	19,557	1,964	668	22,189
73	2,330	53,585	3,988	984	58,557
75	4,174	95,995	1,837	1,063	98,895
77	9,763	224,543	20,285	11,581	256,409
83	5,194	119,451	11,528	4,714	135,693
87	1,645	37,826	1,989	1,588	41,403
88	3,691	84,900	8,825	6,701	100,426
91	1,325	30,475	3,027	1,868	35,370
BISC MAX	2,586	59,470	-	-	59,470
27 MAX	825	18,983	-	-	18,983
104	1,518	34,910	-	-	34,910
TR-36 ST	38	880	-	-	880
TR-MIA	537	12,349	992	626	13,967
231-BUSWAY LOCAL	614	14,124	5,928	2,473	22,525
240-BIRD MAX	372	8,550	-	-	8,550
241-NORTH DADE CONN	176	4,056	-	-	4,056
252-CORAL REEF	1,198	27,557	2,415	572	30,544
287-SAGA BAY	403	9,266	-	-	9,266
Special	-	5,492	1,190	12,906	19,588
Park n Ride	-	-	-	-	-
TOTALS(a)	**216,206**	**4,978,065**	**538,090**	**364,274**	**5,880,429**
95EX	1,740	40,021	-	-	40,021
65EX	312	7,168	-	-	7,168
KAT-KILLIAN	914	21,024	-	-	21,024
KAT-SUNSET	700	16,106	-	-	16,106
KAT-KENDALL	480	11,039	-	-	11,039
TOTALS(b)	**4,146**				

Table E-4: **Year 2000 Weekday Tri-Rail Station Boarding and Alighting Summary and Target Ridership**
Southeast Regional Planning Model VI

	Morning Peak		Midday		Evening Peak		Peak Period		ALL Period		Yr 2000 Target
	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Ridership
STATION									(A)	(B)	C = (A+B)/2
45th Road Station/Mangonia Park	81	268	94	73	409	113	490	381	584	454	519
West Palm Beach Station	115	474	150	143	408	277	523	751	673	894	784
Lake Worth Station	206	98	93	77	143	207	349	305	442	382	412
Boynton Beach Station	331	89	54	62	103	280	434	369	488	431	460
Delray Beach Station	160	100	59	63	112	192	272	292	331	355	343
Boca Raton Station	185	267	79	82	239	242	424	509	503	591	547
PB TOTALS	**1,078**	**1,296**	**529**	**500**	**1,414**	**1,311**	**2,492**	**2,607**	**3,021**	**3,107**	**3,064**
Deerfield Beach	170	117	81	69	147	184	317	301	398	370	384
Pompano Beach	178	138	73	66	144	207	322	345	395	411	403
Cypress Creek	175	204	87	79	214	205	389	409	476	488	482
Ft. Lauderdale	275	175	142	129	234	341	509	516	651	645	648
Ft. Lauderdale Airport/Griffin Rd.	94	80	67	65	98	134	192	214	259	279	269
Sheridan	136	54	45	42	62	148	198	202	243	244	244
Hollywood	201	77	89	85	117	223	318	300	407	385	396
BO TOTALS	**1,229**	**845**	**584**	**535**	**1,016**	**1,442**	**2,245**	**2,287**	**2,829**	**2,822**	**2,826**
Golden Glades	154	63	55	66	89	176	243	239	298	305	302
Opa-Locka	63	27	22	23	38	60	101	87	123	110	117
Metrorail Transfer	240	452	250	276	730	364	970	816	1,220	1,092	1,156
Hialeah Market	23	47	14	18	49	22	72	69	86	87	87
Miami Airport	88	141	96	136	203	153	291	294	387	430	409
MIAMI-DADE TOTALS	**568**	**730**	**437**	**519**	**1,109**	**775**	**1,677**	**1,505**	**2,114**	**2,024**	**2,069**
TOTAL	**2,875**	**2,871**	**1,550**	**1,554**	**3,539**	**3,528**	**6,414**	**6,399**	**7,964**	**7,953**	**7,959**

Table E-5: **Year 2000 Station Data**
Southeast Regional Planning Model VI

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
1	7170	1248	7.5	1300	0	0	3	2	1	TR PB-WPB STN	
2	10634	4069	5	0	9999	9999	3	2	0	TR EXTERNAL BROWARD	
3	10642	370	5	1300	0	0	3	2	1	TR PB-LAKE WORTH STN	
4	10646	596	5	1300	0	0	3	2	1	TR PB-BOCA RATON STN	
5	10648	569	5	1300	0	0	3	2	1	TR PB-DELRAY BEACH STN	
6	10650	419	5	1300	0	0	3	2	1	TR PB-BOYNTON BEACH STN	
7	10658	140	7.5	1300	0	0	3	2	1	TR PB-MANGONIA STN	
8	14172	1618	5	100	0	0	3	2	1	TR: DEERFIELD BEACH	
9	14180	1772	5	275	0	0	3	2	1	TR: POMPANO BEACH	
10	15106	1989	5	750	0	0	3	2	1	TR: CYPRESS CREEK	
11	15520	2011	5	100	0	0	2	1	1	LAUDERDALE MARKETPLACE	
12	16178	1882	5	750	0	0	3	2	1	TR: FT LAUDERDALE	
13	16958	2248	5	50	0	0	3	2	1	TR: AIRPORT/GRIFFIN RD	
14	17088	2292	5	750	0	0	3	2	1	TR: SHERIDAN STOP	
15	17330	2327	5	182	0	0	3	2	1	TR: HOLLYWOOD	
16	18272	2186	5	100	0	0	2	1	1	WESTON/BONAVENTURE	
17	18584	2422	5	100	0	0	2	1	1	PEMBROKE PINES	
18	18677	4069	5	0	9999	9999	3	2	0	TR: I95 IN PALM BEACH	
19	18678	2382	5	0	9999	9999	3	2	0	TR: I95 IN MIAMI-DADE	
20	21603	3159	2	0	9999	9999	2	0.5	0	COLLINS/79	
21	21768	3247	2	61	0	0	5	2.5	1	TR-MI5:HIALEAH TR	
22	22095	4096	5	50	0	0	2	0.5	1	87AV/183ST	
23	22102	2578	5	50	0	0	2	0.5	1	67AV/183ST	
24	22183	2638	5	100	0	0	2	0.5	1	Aventura	
25	22709	3683	2	0	9999	9999	2	0.5	0	US1/128 ST	
26	22917	2885	7	1012	300	300	5	5	1	MR: OKEECHOBEE	
27	22945	2897	5	321	300	300	3	2	1	MR: HIALEAH	
28	22962	2965	2	0	9999	9999	9.9	2.5	0	TR-MI4:MR-Transfer	
29	22967	2915	5	293	300	300	3.5	2.5	1	MR: NORTHSIDE	
30	23209	2804	2	72	0	0	5	5	1	TR-MI3:OPA-LOCKA	
31	23576	3563	2	20	0	0	2	0.5	1	SW 8th ST	
32	24019	3000	2	0	9999	9999	9.9	2.5	0	TRIRAIL END -NW25th ST	
33	24031	2972	5	900	300	300	5	3	1	MR: MLK JR.	
34	24033	2997	5	423	300	300	3.5	2.5	1	MR: BRWNSVILLE	
35	24111	3260	2	20	0	0	2	0.5	1	NW 36/41 ST	
36	24172	2992	2	95	300	300	3.5	2.5	1	MR: E. HEIGHTS	
37	24195	2989	2	66	300	300	4	2	1	MR: ALLAPATTAH	
38	24271	3295	5	242	0	0	5	2.5	1	TR-MI6:MIC/MIA	
39	24335	3035	2	89	300	300	3.5	2.5	1	MR: ST CLARA	
40	24456	3031	2	0	9999	9999	9.9	1.7	0	MR: CIVIC CTR	

Table E-5 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
41	24472	3038	2	89	9999	9999	2	0.8	0	MR: CULMER	
42	24727	3066	2	36	300	300	2	0.8	1	MR: OVERTOWN	
43	24738	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
44	25082	3562	2	20	0	0	2	0.5	1	Coral Way	
45	25160	3600	2	93	300	300	2	0.8	1	MR: VIZCAYA	
46	25175	3123	2	0	9999	9999	9.9	1.7	0	BRICKELL	
47	25288	3604	5	204	300	300	2	0.8	1	MR: COCO GROVE	
48	25418	3630	5	226	300	300	2.5	0.8	1	MR: DOUGLAS RD	
49	25438	3423	2	50	0	0	2	0.5	1	W LAKE PLZ	
50	25488	3653	10	1787	300	300	2	0.8	1	MR: S MIAMI	
51	25506	3639	5	401	300	300	2	0.9	1	MR: UNIVERSITY	
52	25582	3703	10	1329	300	300	4.5	2	1	MR: DADELAND S	
53	25589	3656	10	2059	300	300	4	1	1	MR: DADELAND N	
54	25618	3809	2	50	0	0	2	0.5	1	SW 104 ST/142 AVE	
55	25646	3711	2	0	9999	9999	2	0.5	0	US1/104 ST	
56	25697	3710	2	0	9999	9999	2	0.5	0	US1/117 ST	
57	25698	3710	2	0	9999	9999	2	0.5	0	US1/112 ST	
58	25748	3735	2	0	9999	9999	2	0.5	0	US1/136 ST	
59	25750	3733	2	0	9999	9999	2	0.5	0	US1/124 ST	
60	25783	3747	2	125	0	0	2	0.5	1	SW 152 ST/TURNPIKE	
61	25792	3739	5	126	0	0	2	0.5	1	US1/152 ST	
62	25793	3681	2	0	9999	9999	2	0.5	0	US1/144 ST 1	
63	25827	3742	2	0	9999	9999	2	0.5	0	US1/168 ST	
64	25828	3742	2	0	9999	9999	2	0.5	0	US1/160 ST	
65	25870	3677	2	0	9999	9999	2	0.5	0	US1/INDIGO	
66	25876	3678	2	0	9999	9999	2	0.5	0	US1/173 ST	
67	25927	3896	2	0	9999	9999	2	0.5	0	US1/200 ST	
68	25933	3879	2	0	9999	9999	2	0.5	0	US1/MARLIN	
69	25938	3878	2	0	9999	9999	2	0.5	0	US1/186 ST	
70	25979	3897	7	1000	0	0	2	0.5	1	CTLR RIDGE	
71	26827	3726	2	50	0	0	2	0.5	1	SW 104 ST/113 AVE	
72	27861	2725	7	1400	0	0	5	0.5	1	TR-MI2:G GLADES	
73	30001	2885	7	1012	300	300	5	5	1	MR: OKEECHOBEE	
74	30002	2897	5	321	300	300	3	2	1	MR: HIALEAH	
75	30003	2965	2	0	9999	9999	9.9	2.5	0	TR-MI4:MR-Transfer	
76	30004	2915	5	293	300	300	3.5	2.5	1	MR: NORTHSIDE	
77	30005	2972	5	900	300	300	5	3	1	MR: MLK JR.	
78	30006	2997	5	423	300	300	3.5	2.5	1	MR: BRWNSVILLE	
79	30007	2992	2	95	300	300	3.5	2.5	1	MR: E. HEIGHTS	
80	30008	2989	2	66	300	300	4	2	1	MR: ALLAPATTAH	

Table E-5 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
81	30009	3035	2	89	300	300	3.5	2.5	1	MR: ST CLARA	
82	30010	3031	2	0	9999	9999	9.9	1.7	0	MR: CIVIC CTR	
83	30011	3038	2	89	9999	9999	2	0.8	0	MR: CULMER	
84	30012	3066	2	36	300	300	2	0.8	1	MR: OVERTOWN	
85	30013	3082	2	0	9999	9999	9.9	2.5	0	MR: GOVT CTR	
86	30014	3123	2	0	9999	9999	9.9	1.7	0	MR: BRICKELL	
87	30015	3600	2	93	300	300	2	0.8	1	MR: VIZCAYA	
88	30016	3604	5	204	300	300	2	0.8	1	MR: COCO GROVE	
89	30017	3630	5	226	300	300	2.5	0.8	1	MR: DOUGLAS RD	
90	30018	3639	5	401	300	300	2	0.9	1	MR: UNIVERSITY	
91	30019	3653	0	1787	300	300	2	0.8	1	MR: S MIAMI	
92	30020	3656	0	2059	300	300	4	1	1	MR: DADELAND N	
93	30021	3703	0	1329	300	300	4.5	2	1	MR: DADELAND S	
94	30500	140	7	1000	0	0	2	1	1	TR PB-MANGONIA STN	1
95	30501	1248	5	900	0	0	2	1	1	TR PB-WPB STN	1
96	30503	370	4	700	0	0	2	1	1	TR PB-LAKE WORTH STN	1
97	30504	419	4	700	0	0	2	1	1	TR PB-BOYNTON BEACH STN	2
98	30505	569	4	700	0	0	2	1	1	TR PB-DELRAY BEACH STN	2
99	30506	596	4	700	0	0	2	1	1	TR PB-BOCA RATON STN	3
100	30508	4069	5	0	9999	9999	3	2	0	TR EXTERNAL BROWARD	3
101	30509	1618	2.5	100	0	0	2	1	1	TR: DEERFIELD BEACH	3
102	30510	1772	2.5	275	0	0	2	1	1	TR: POMPANO BEACH	3
103	30511	1984	2.5	750	0	0	2	1	1	TR: CYPRESS CREEK	4
104	30512	1882	2.5	50	0	0	2	1	1	TR: FT LAUDERDALE	4
105	30513	2248	2.5	750	0	0	2	1	1	TR: AIRPORT/GRIFFIN RD	5
106	30514	2292	2.5	750	0	0	2	1	1	TR: SHERIDAN STOP	5
107	30515	2327	2.5	182	0	0	2	1	1	TR: HOLLYWOOD	5
108	30516	2382	5	0	9999	9999	3	2	0	TR: I95 IN MIAMI-DADE	6
109	30518	2725	5	1350	0	0	2	1	1	TR-MI2:G GLADES	6
110	30519	2804	4	200	0	0	2	1.5	1	TR-MI3:OPA-LOCKA	6
111	30520	2965	5	0	9999	9999	2	1.5	0	TR-MI4:MR-Transfer	6
112	30521	3247	4	70	100	100	2	1.5	1	TR-MI5:HIALEAH TR	6
113	30522	3295	5	200	100	100	2	1.5	1	TR-MI6:MIC/MIA	6
114	30700	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
115	30752	3123	2	0	9999	9999	9.9	1.7	0	BRICKELL	
116	30761	3123	2	0	9999	9999	9.9	1.7	0	BRICKELL	

Note: The STATION data are kept in Network and are written only for use in Auto Connector program and to have a summary table for review.

Table E-6: **Year 2030 Station Data**
Southeast Regional Planning Model VI

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
1	10634	4069	5	0	9999	9999	3	2	0	TR EXTERNAL BROWARD 3	3
2	10646	596	5	1300	0	0	3	2	1	TR PB-BOCA RATON STN 3	3
3	10648	569	5	1300	0	0	3	2	1	TR PB-DELRAY BEACH STN 2	2
4	10650	419	5	1300	0	0	3	2	1	TR PB-BOYNTON BEACH STN 2	2
5	10652	370	5	1300	0	0	3	2	1	TR PB-LAKE WORTH STN 1	1
6	10654	207	5	500	0	0	3	2	1	TR PB-AUSTRALIAN AV STA 1	1
7	10656	1248	7.5	1300	0	0	3	2	1	TR PB-WPB STN 1	1
8	10658	140	7.5	1300	0	0	3	2	1	TR PB-MANGONIA STN 1	1
9	11981	824	5	500	0	0	3	2	1	TR PB-SCRIPSS STA 1	1
10	12014	20	5	500	0	0	3	2	1	TR PB-JUPITER STA 1	1
11	12017	1134	5	500	0	0	3	2	1	TR PB-FREDERICK SM STA 1	1
12	12018	1127	5	500	0	0	3	2	1	TR PB-PGA BLVD STA 1	1
13	12021	128	5	500	0	0	3	2	1	TR PB-BLUE HERON STA 1	1
14	12281	1102	7.5	800	0	0	3	2	1	TR PB-SR 7/SOUTHERN BL 1	1
15	12282	815	5	500	0	0	3	2	1	TR PB-SR 7/ OKEE STA 1	1
16	12283	236	5	500	0	0	3	2	1	TR PB-OKEE BLVD STA 1	1
17	14080	1614	5	100	0	0	3	2	1	TR-FEC: DEERFIELD BEACH	9
18	14124	1675	5	275	0	0	3	2	1	TR-FEC: POMPANA BEACH	
19	14172	1618	5	100	0	0	3	2	1	TR: DEERFIELD BEACH 3	3
20	14180	1772	5	275	0	0	3	2	1	TR: POMPANO BEACH 3	3
21	14210	1788	5	100	0	0	2	1	1	FESTIVAL FLEA MARKET	
22	14222	4067	5	750	0	0	2	1	1	DEERFIELD MALL	
23	14262	4064	5	0	0	0	2	1	1	PARKLAND	
24	14288	1665	5	0	0	0	2	1	1	COCONUT CREEK	
25	14400	1706	5	0	0	0	2	1	1	DOWNTOWN CORAL SPRINGS	
26	14512	1820	5	50	0	0	2	1	1	POMPANO PIER	
27	14600	1814	5	0	0	0	2	1	1	DOWNTOWN POMPANO BCH	
28	14764	1686	5	0	0	0	2	1	1	MARGATE DOWNTOWN	
29	14864	2502	5	750	0	0	2	1	1	CORAL MALL	
30	15026	1833	5	750	0	0	3	2	1	TR-FEC: CYPRESS CREEK	10
31	15106	1989	5	750	0	0	3	2	1	TR: CYPRESS CREEK 4	4
32	15206	1757	5	50	0	0	2	1	1	Queen of Heaven	
33	15376	1841	5	750	0	0	2	1	1	CORAL RIDGE MALL	
34	15394	2029	5	0	0	0	2	1	1	OAKLAND PARK	
35	15460	2040	5	0	0	0	2	1	1	WILTON MANORS	
36	15520	2011	5	100	0	0	2	1	1	LAUDERDALE MARKETPLACE	
37	15592	2062	5	0	0	0	2	1	1	SPRING TREE CNTRY CLB	
38	15770	1893	5	750	0	0	3	2	1	TR-FEC: FT LAUDERDALE	10
39	15858	1873	5	50	0	0	2	1	1	SWAP SHOP	
40	16128	1935	5	50	0	0	2	1	1	RIVERWALK	

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
41	16158	1939	5	0	0	0	2	1	1	DOWNTOWN FT L	
42	16178	1882	5	750	0	0	3	2	1	TR: FT LAUDERDALE 4	4
43	16212	1876	5	0	0	0	2	1	1	MELROSE PARK	
44	16400	1980	5	0	0	0	2	1	1	I-595 @ US 1	
45	16588	1959	5	0	0	0	2	1	1	I-595 @ US 441	
46	16596	2140	5	0	0	0	2	1	1	I-595 @ UNIVERSITY DR	
47	16606	2144	5	0	0	0	2	1	1	JACARANDA CNTRY CLB	
48	16666	2244	5	999	0	0	2	1	1	FT L INT'L AIRPORT	
49	16960	2249	5	50	0	0	3	2	1	TR: AIRPORT/GRIFFIN RD 5	5
50	17088	2292	5	750	0	0	3	2	1	TR: SHERIDAN STOP 5	5
51	17248	2364	5	0	0	0	2	1	1	YOUNG CIRCLE PARK	
52	17290	2364	5	182	0	0	3	2	1	TR-FEC: HOLLYWOOD	11
53	17330	2327	5	182	0	0	3	2	1	TR: HOLLYWOOD 5	5
54	17420	2351	5	0	0	0	2	1	1	PINES PAR 3 GC	
55	17494	2429	5	100	0	0	2	1	1	N PERRY AIRPORT	
56	17968	2623	5	500	9999	9999	3	2	0	TR-FEC: HALLANDALE	
57	17992	2612	5	0	0	0	2	1	1	PEMBROKE PARK	
58	18006	2608	5	400	0	0	2	1	1	CALDER RACE COURSE	
59	18059	2078	10	999	0	0	2	1	1	SAWGRASS MILLS	
60	18108	2086	5	0	0	0	2	1	1	PLANTATION	
61	18272	2186	5	100	0	0	2	1	1	WESTON/BONAVENTURE	
62	18582	2424	5	750	0	0	2	1	1	PEMBROKE LAKES MALL	
63	18584	2422	5	100	0	0	2	1	1	PEMBROKE PINES	
64	18600	2418	5	750	0	0	2	1	1	GRAND PALMS	
65	18677	4069	5	0	9999	9999	3	2	0	TR: I95 IN PALM BEACH 3	3
66	18678	2618	5	0	9999	9999	3	2	0	TR: I95 IN MIAMI-DADE 6	3
67	19617	2149	5	0	0	0	2	1	1	I-595 @ TURNPIKE	
68	21481	3071	5	0	9999	9999	9.9	0.5	0	MIAMI PORT	
69	21483	3060	2	0	9999	9999	9.9	0.5	0	PALM ISLAND	
70	21490	3185	2	0	9999	9999	9.9	0.5	0	ALTON ROAD	
71	21492	3191	2	0	9999	9999	9.9	0.5	0	OCEAN DRIVE	
72	21498	3190	2	0	9999	9999	9.9	0.5	0	3RD ST / BAYLINK	
73	21501	3182	2	0	9999	9999	9.9	0.5	0	8TH ST / BAYLINK	
74	21502	3187	2	0	9999	9999	9.9	0.5	0	7TH ST / BAYLINK	
75	21510	3178	2	0	9999	9999	9.9	0.5	0	12TH ST / BAYLINK	
76	21515	3174	2	0	9999	9999	9.9	0.5	0	LINCOLN ROAD WEST / BAYL	
77	21517	3176	2	0	9999	9999	9.9	0.5	0	14TH ST / BAYLINK	
78	21520	3176	2	0	9999	9999	9.9	0.5	0	LINCOLN ROAD EAST / BAYL	
79	21532	3170	2	0	9999	9999	9.9	0.5	0	MERIDIAN AVE / BAYLINK	
80	21535	3169	2	0	9999	9999	9.9	0.5	0	CONVENTION CENTER / BAYL	

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
81	21541	3169	5	0	9999	9999	9.9	0.5	0	COLLINS AVE / BAYLINK	
82	21768	3247	2	61	0	0	5	2.5	1	TR-MI5: HIALEAH TR 6	6
83	21802	3354	2	0	9999	9999	9.9	0.5	0	NW 57TH AVE	
84	21841	3350	2	0	9999	9999	9.9	0.5	0	NW 7TH ST	
85	21867	3347	2	0	9999	9999	9.9	0.5	0	NW 7 AVE	
86	21988	2608	5	1	0	0	4	2	1	NORTH CORRIDOR	
87	21989	2608	2	100	200	200	2	0.5	1	NW 215 ST STATION (BRT P	
88	22012	2623	5	1	0	0	4	2	1	NORTHEAST CORRIDOR	
89	22037	4102	2	0	9999	9999	9.9	0.5	0	NW 199 ST	
90	22078	4109	5	100	200	200	2	0.5	1	AVENTURE MALL STATION	
91	22129	2692	2	0	9999	9999	9.9	0.5	0	NW 183 ST	
92	22131	2685	2	0	9999	9999	9.9	0.5	0	NW 175 ST	
93	22183	2638	5	100	0	0	2	0.5	1	Aventura	
94	22260	2685	2	100	200	200	2	0.5	1	NW 166 ST STATION	
95	22328	2648	2	50	0	0	2	0.5	1	NE TERMINA	
96	22329	2736	5	0	9999	9999	9.9	0.5	0	NE 163 ST @ BISCAYNE	
97	22382	2799	2	0	9999	9999	9.9	0.5	0	NW 151 ST	
98	22441	2737	5	0	9999	9999	9.9	0.5	0	NE 151 ST @ BISCAYNE	
99	22506	2800	2	0	9999	9999	9.9	0.5	0	ALI-BABA AVE	
100	22509	2805	5	1	0	0	4	2	1	NORTH CORRIDOR	
101	22510	2805	2	0	9999	9999	9.9	0.5	0	NW 135 ST	
102	22558	2744	5	0	9999	9999	9.9	0.5	0	NE 135 ST @ BISCAYNE	
103	22626	2816	2	100	200	200	2	0.5	1	NW 113 ST STATION	
104	22688	2752	5	0	9999	9999	9.9	0.5	0	NE 123 ST @ BISCAYNE	
105	22709	3683	2	0	9999	9999	9.9	0.5	0	US1/128 ST	
106	22749	2911	2	0	9999	9999	9.9	0.5	0	NW 103 ST	
107	22841	2918	2	0	9999	9999	9.9	0.5	0	NW 95 ST	
108	22842	2913	5	1	0	0	4	2	1	NORTH CORRIDOR	
109	22881	2924	5	0	9999	9999	9.9	0.5	0	NE 98 ST @ BISCAYNE	
110	22897	3231	7	710	300	300	5	5	1	PALMETTO	
111	22917	2885	7	1012	300	300	5	5	1	OKEECHOBEE	
112	22945	2897	5	321	300	300	3	2	1	HIALEAH MR	
113	22962	2965	2	39	300	300	9.9	2.5	1	TR-MI4: MR-TR XFER 6	6
114	22967	2915	5	293	300	300	3.5	2.5	1	NORTHSIDE	
115	23041	2948	5	0	9999	9999	9.9	0.5	0	NE 81 ST @ BISCAYNE	
116	23042	2948	5	1	0	0	4	2	1	NORTHEAST CORRIDOR	
117	23155	3373	5	1	0	0	4	2	1	PALM->HEFT NW 7/SW 112	
118	23166	3181	2	0	9999	9999	9.9	0.5	0	13TH ST / BAYLINK	
119	23206	3375	2	0	9999	9999	9.9	0.5	0	FIU SOUTH	
120	23209	2804	2	72	0	0	5	5	1	TR-MI3: OPA-LOCKA 6	6

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
121	23241	3342	2	0	9999	9999	9.9	0.5	0	W FLAGLER	
122	23508	3321	5	1	0	0	4	2	1	EW NW 14 ST/LEJEUNE	
123	23576	3563	2	20	0	0	2	0.5	1	SW 8th ST	
124	24019	3000	2	0	9999	9999	9.9	2.5	0	TRIRAIL END -NW25th ST	
125	24031	2972	5	900	300	300	5	3	1	MLK JR.	
126	24033	2997	5	423	300	300	3.5	2.5	1	BRWNSVILLE	
127	24088	2945	5	0	9999	9999	9.9	0.5	0	NE 61 ST @ BISCAYNE	
128	24090	2930	5	0	9999	9999	9.9	0.5	0	NE 54 ST @ BISCAYNE	
129	24111	3260	2	20	0	0	2	0.5	1	NW 36/41 ST	
130	24116	3251	2	0	9999	9999	9.9	0.5	0	NW 36 AVE	
131	24172	2992	2	95	300	300	3.5	2.5	1	E. HEIGHTS	
132	24195	2989	2	66	300	300	4	2	1	ALLAPATTAH	
133	24226	2932	5	1	0	0	4	2	1	NORTHEAST CORRIDOR	
134	24228	3054	5	0	9999	9999	9.9	0.5	0	NE 36 ST @ BISCAYNE	
135	24271	3295	5	242	0	0	5	2.5	1	TR-MI6: MIA 6	6
136	24335	3035	2	89	300	300	3.5	2.5	1	ST CLARA	
137	24387	3372	2	0	9999	9999	9.9	0.5	0	NW 107TH AVE	
138	24432	3297	5	100	200	200	2	0.5	1	NW 27 ST STATION	
139	24456	3031	2	0	9999	9999	9.9	1.7	0	CIVIC CTR	
140	24472	3038	2	89	9999	9999	2	0.8	0	CULMER	
141	24545	3057	5	100	200	200	2	0.5	1	OMNI STATION	
142	24550	3061	2	1	0	9999	9.9	0.5	0	BISCAYNE BLVD	
143	24566	3359	2	0	9999	9999	9.9	0.5	0	NW 97TH AVE	
144	24613	3328	2	0	9999	9999	9.9	0.5	0	NW 39TH AVE@NW 7TH ST	
145	24620	3328	2	0	9999	9999	9.9	0.5	0	NW 37TH AVE@W FLAGLER	
146	24647	3303	5	100	200	200	2	0.5	1	ORANGE BOWL STATION	
147	24727	3066	2	36	300	300	2	0.8	1	OVERTOWN	
148	24738	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
149	24800	3069	5	100	200	200	2	0.5	1	MARITIME PARK STATION	
150	24809	3072	5	0	9999	9999	9.9	0.5	0	CRUISE PORT	
151	24821	3465	2	140	0	0	2	0.5	1	TAMIAMI TRAIL/SW 127 AVE	
152	24871	3588	5	1	0	0	4	2	1	DOUGLAS ROAD CORRIDOR	
153	24975	3099	2	0	9999	9999	9.9	2.5	0	BASEBALL STADIUM	
154	25082	3562	2	20	0	0	2	0.5	1	Coral Way	
155	25137	3584	5	1	0	0	4	2	1	DOUGLAS ROAD CORRIDOR	
156	25160	3600	2	93	300	300	2	0.8	1	VIZCAYA	
157	25175	3123	2	0	9999	9999	9.9	1.7	0	BRICKELL	
158	25202	3475	5	1	0	0	4	2	1	palmetto to US1	
159	25217	3515	2	38	0	0	2	0.5	1	BIRD RD/SW 89 AVE	
160	25288	3604	5	204	300	300	2	0.8	1	COCO GROVE	

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
161	25418	3630	5	400	300	300	2.5	0.8	1	DOUGLAS RD	
162	25424	3976	2	0	9999	9999	9.9	0.5	0	US1/336 ST	
163	25438	3423	2	50	0	0	2	0.5	1	W LAKE PLZ	
164	25453	3491	5	1	0	0	4	2	1	palmetto to US1	
165	25477	3555	2	100	200	200	2	0.5	1	SW 72 AVE	
166	25488	3653	10	1787	300	300	2	0.8	1	S MIAMI	
167	25506	3639	5	401	300	300	2	0.9	1	UNIVERSITY	
168	25525	3795	5	1	0	0	4	2	1	Kendall Corridor	
169	25527	3424	5	1	0	0	4	2	1	Kendall Corridor	
170	25530	3788	2	0	9999	9999	9.9	0.5	0	SW 147 AVE	
171	25532	3426	5	1	0	0	4	2	1	Kendall Corridor	
172	25536	3783	2	100	200	200	2	0.5	1	SW 137 STATION	
173	25540	3427	5	1	0	0	4	2	1	Kendall Corridor	
174	25541	3781	5	1	0	0	4	2	1	Kendall Corridor	
175	25544	3771	2	100	200	200	2	0.5	1	SW 122 ST STATION	
176	25546	3781	2	100	200	200	2	0.5	1	SW 127 ST STATION	
177	25549	3771	5	1	0	0	4	2	1	Kendall Corridor	
178	25550	3480	2	100	200	200	2	0.5	1	SW 117 AVE STATION	
179	25552	3480	5	1	0	0	4	2	1	palmetto to US1	
180	25557	3482	2	0	9999	9999	9.9	0	0	KENDALL/107	
181	25563	3718	2	100	200	200	2	0.5	1	SW 97 AVE STATION	
182	25569	3717	2	100	200	200	2	0.5	1	BAPTIST HOSPIAL STATION	
183	25572	3550	5	1	0	0	4	2	1	palmetto to US1	
184	25576	3551	2	100	200	200	2	0.5	1	SW 79 AVE STATION	
185	25580	3702	2	0	9999	9999	9.9	0.5	0	S DADELAND BLVD	
186	25582	3703	10	1329	300	300	4.5	2	1	DADELAND S	
187	25589	3656	10	2059	300	300	4	1	1	DADELAND N	
188	25618	3809	2	50	0	0	2	0.5	1	SW 104 ST/142 AVE	
189	25646	3711	2	0	9999	9999	9.9	0.5	0	US1/104 ST	
190	25697	3710	2	0	9999	9999	9.9	0.5	0	US1/117 ST	
191	25698	3710	2	0	9999	9999	9.9	0.5	0	US1/112 ST	
192	25748	3735	2	0	9999	9999	9.9	0.5	0	US1/136 ST	
193	25750	3733	2	0	9999	9999	9.9	0.5	0	US1/124 ST	
194	25783	3747	2	125	0	0	2	0.5	1	SW 152 ST/TURNPIKE	
195	25792	3739	5	126	0	0	2	0.5	1	US1/152 ST	
196	25793	3681	2	0	9999	9999	9.9	0.5	0	US1/144 ST	
197	25827	3742	2	149	0	0	2	0.5	1	US1/168 ST	
198	25828	3742	2	0	9999	9999	9.9	0.5	0	US1/160 ST	
199	25870	3677	2	0	9999	9999	9.9	0.5	0	US1/INDIGO	
200	25876	3678	2	0	9999	9999	9.9	0.5	0	US1/173 ST	

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
201	25927	3896	2	362	0	0	2	0.5	1	US1/200 ST	
202	25933	3879	2	0	9999	9999	9.9	0.5	0	US1/MARLIN	
203	25938	3878	2	0	9999	9999	9.9	0.5	0	US1/186 ST	
204	25971	3920	2	0	9999	9999	9.9	0.5	0	US1/216 ST	
205	25975	3897	2	0	9999	9999	9.9	0.5	0	US1/211 ST	
206	25979	3897	7	1000	0	0	2	0.5	1	CTLR RIDGE	
207	26025	3860	2	0	9999	9999	9.9	0.5	0	US1/220 ST	
208	26075	3934	5	1	0	0	4	2	1	cutler ridge to florida	
209	26077	3858	2	100	0	0	2	0.5	1	US1/244 ST	
210	26113	4016	2	124	0	0	2	0.5	1	US1/264 ST	
211	26147	4014	5	1	0	0	4	2	1	cutler ridge to florida	
212	26150	4014	2	0	9999	9999	9.9	0.5	0	US1/152 AVE	
213	26191	4008	5	1	0	0	4	2	1	cutler ridge to florida	
214	26195	3974	5	124	0	0	2	0.5	1	US1/304 ST	
215	26198	3974	2	0	9999	9999	9.9	0.5	0	US1/312 ST	
216	26243	3976	2	0	9999	9999	9.9	0.5	0	US1/328 ST	
217	26247	3975	5	124	0	0	2	0.5	1	US1/320 ST	
218	26287	3980	2	200	0	0	2	0.5	1	US1/344 ST	
219	26317	3980	5	1	0	0	4	2	1	cutler ridge to florida	
220	26779	3339	5	100	200	200	2	0.5	1	BLUE LAGOON STATION	
221	26827	3726	2	50	0	0	2	0.5	1	SW 104 ST/113 AVE	
222	27301	2744	5	1	0	0	4	2	1	NORTHEAST CORRIDOR	
223	27480	3768	5	100	200	200	2	0.5	1	PALMETTO STATION	
224	27607	3375	5	1	0	0	4	2	1	PALM->HEFT SW 115/FLAGLE	
225	27840	3942	2	200	0	0	2	0.5	1	US1/296 ST	
226	27861	2725	7	1400	0	0	5	0.5	1	TR-MI2: G GLADES 6	6
227	28241	3294	5	1	0	0	4	2	1	EW NW 21 ST/LEJEUNE	
228	29450	3322	5	1	0	0	4	2	1	EW DOLPHIN EXPRESSWAY	
229	30000	3231	7	710	300	300	5	5	1	PALMETTO	
230	30001	2885	7	1012	300	300	5	5	1	OKEECHOBEE	
231	30002	2897	5	321	300	300	3	2	1	HIALEAH MR	
232	30003	2965	2	39	300	300	9.9	2.5	1	TR-MI4: MR-TR XFER 6	6
233	30004	2915	5	293	300	300	3.5	2.5	1	NORTHSIDE	
234	30005	2972	5	900	300	300	5	3	1	MLK JR.	
235	30006	2997	5	423	300	300	3.5	2.5	1	BRWNSVILLE	
236	30007	2992	2	95	300	300	3.5	2.5	1	E. HEIGHTS	
237	30008	2989	2	66	300	300	4	2	1	ALLAPATTAH	
238	30009	3035	2	89	300	300	3.5	2.5	1	ST CLARA	
239	30010	3031	2	0	9999	9999	9.9	1.7	0	CIVIC CTR	
240	30011	3038	2	89	9999	9999	2	0.8	0	CULMER	

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
241	30012	3066	2	36	300	300	2	0.8	1	OVERTOWN	
242	30013	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
243	30014	3123	2	0	9999	9999	9.9	1.7	0	BRICKELL	
244	30015	3600	2	93	300	300	2	0.8	1	VIZCAYA	
245	30016	3604	5	204	300	300	2	0.8	1	COCO GROVE	
246	30017	3630	5	400	300	300	2.5	0.8	1	DOUGLAS RD	
247	30018	3639	5	401	300	300	2	0.9	1	UNIVERSITY	
248	30019	3653	0	1787	300	300	2	0.8	1	S MIAMI	
249	30020	3656	0	2059	300	300	4	1	1	DADELAND N	
250	30021	3703	0	1329	300	300	4.5	2	1	DADELAND S	
251	30022	3099	2	0	9999	9999	9.9	2.5	0	BASEBALL STADIUM	
252	30030	3350	2	0	9999	9999	9.9	0.5	0	NW 7TH ST	
253	30031	3339	5	100	200	200	2	0.5	1	BLUE LAGOON STATION	
254	30032	3322	5	1	0	0	4	2	1	EW DOLPHIN EXPRESSWAY	
255	30033	3321	5	1	0	0	4	2	1	EW NW 14 ST/LEJEUNE	
256	30034	3294	5	1	0	0	4	2	1	EW NW 21 ST/LEJEUNE	
257	30035	3295	5	242	0	0	5	2.5	1	TR-MI6: MIA 6	6
258	30037	3297	5	100	200	200	2	0.5	1	NW 27 ST STATION	
259	30040	3303	5	100	200	200	2	0.5	1	ORANGE BOWL STATION	
260	30042	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
261	30050	3375	5	1	0	0	4	2	1	PALM->HEFT SW 115/FLAGLE	
262	30051	3373	5	1	0	0	4	2	1	PALM->HEFT NW 7/SW 112	
263	30052	3372	2	0	9999	9999	9.9	0.5	0	NW 107TH AVE	
264	30053	3359	2	0	9999	9999	9.9	0.5	0	NW 97TH AVE	
265	30054	3354	2	0	9999	9999	9.9	0.5	0	NW 57TH AVE	
266	30055	3350	2	0	9999	9999	9.9	0.5	0	NW 7TH ST	
267	30060	3703	0	1329	300	300	4.5	2	1	DADELAND S	
268	30061	3711	2	0	9999	9999	9.9	0.5	0	US1/104 ST	
269	30062	3710	2	0	9999	9999	9.9	0.5	0	US1/112 ST	
270	30063	3710	2	0	9999	9999	9.9	0.5	0	US1/117 ST	
271	30064	3733	2	0	9999	9999	9.9	0.5	0	US1/124 ST	
272	30065	3683	2	0	9999	9999	9.9	0.5	0	US1/128 ST	
273	30066	3735	2	0	9999	9999	9.9	0.5	0	US1/136 ST	
274	30067	3681	2	0	9999	9999	9.9	0.5	0	US1/144 ST	
275	30068	3739	5	126	0	0	2	0.5	1	US1/152 ST	
276	30069	3742	2	0	9999	9999	9.9	0.5	0	US1/160 ST	
277	30070	3742	2	149	0	0	2	0.5	1	US1/168 ST	
278	30071	3678	2	0	9999	9999	9.9	0.5	0	US1/173 ST	
279	30072	3677	2	0	9999	9999	9.9	0.5	0	US1/INDIGO	
280	30073	3878	2	0	9999	9999	9.9	0.5	0	US1/186 ST	

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
281	30074	3879	2	0	9999	9999	9.9	0.5	0	US1/MARLIN	
282	30075	3896	2	362	0	0	2	0.5	1	US1/200 ST	
283	30076	3897	7	1000	0	0	2	0.5	1	CTLR RIDGE	
284	30080	2992	2	95	300	300	3.5	2.5	1	E. HEIGHTS	
285	30085	3295	5	242	0	0	5	2.5	1	TR-MI6: MIA 6	
286	30090	2972	5	900	300	300	5	3	1	MLK JR.	
287	30092	2913	5	1	0	0	4	2	1	NORTH CORRIDOR	
288	30093	2911	2	0	9999	9999	9.9	0.5	0	NW 103 ST	
289	30094	2805	5	1	0	0	4	2	1	NORTH CORRIDOR	
290	30095	2685	2	100	200	200	2	0.5	1	NW 166 ST STATION	
291	30096	2692	2	0	9999	9999	9.9	0.5	0	NW 183 ST	
292	30097	4102	2	0	9999	9999	9.9	0.5	0	NW 199 ST	
293	30098	2608	5	1	0	0	4	2	1	NORTH CORRIDOR	
294	30100	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
295	30101	3057	5	100	200	200	2	0.5	1	OMNI STATION	
296	30102	2932	5	1	0	0	4	2	1	NORTHEAST CORRIDOR	
297	30103	2948	5	1	0	0	4	2	1	NORTHEAST CORRIDOR	
298	30104	2752	5	0	9999	9999	9.9	0.5	0	NE 123 ST @ BISCAYNE	
299	30105	2744	5	1	0	0	4	2	1	NORTHEAST CORRIDOR	
300	30110	3295	5	242	0	0	5	2.5	1	TR-MI6: MIA 6	
301	30112	3328	2	0	9999	9999	9.9	0.5	0	NW 37TH AVE@W FLAGLER	
302	30113	3588	5	1	0	0	4	2	1	DOUGLAS ROAD CORRIDOR	
303	30114	3584	5	1	0	0	4	2	1	DOUGLAS ROAD CORRIDOR	
304	30115	3630	5	400	300	300	2.5	0.8	1	DOUGLAS RD	
305	30120	3375	5	1	0	0	4	2	1	PALM->HEFT SW 115/FLAGLE	
306	30122	3475	5	1	0	0	4	2	1	palmetto to US1	
307	30124	3491	5	1	0	0	4	2	1	palmetto to US1	
308	30125	3480	5	1	0	0	4	2	1	palmetto to US1	
309	30130	3795	5	1	0	0	4	2	1	Kendall Corridor	
310	30131	3424	5	1	0	0	4	2	1	Kendall Corridor	
311	30132	3426	5	1	0	0	4	2	1	Kendall Corridor	
312	30133	3427	5	1	0	0	4	2	1	Kendall Corridor	
313	30134	3781	5	1	0	0	4	2	1	Kendall Corridor	
314	30135	3771	5	1	0	0	4	2	1	Kendall Corridor	
315	30137	3480	5	1	0	0	4	2	1	palmetto to US1	
316	30138	3482	2	0	9999	9999	9.9	0	0	KENDALL/107	
317	30139	3550	5	1	0	0	4	2	1	palmetto to US1	
318	30140	3702	2	0	9999	9999	9.9	0.5	0	S DADELAND BLVD	
319	30141	3703	0	1329	300	300	4.5	2	1	DADELAND S	
320	30150	3897	7	1000	0	0	2	0.5	1	CTLR RIDGE	

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
321	30151	3934	5	1	0	0	4	2	1	cutler ridge to florida	
322	30153	4014	5	1	0	0	4	2	1	cutler ridge to florida	
323	30154	4008	5	1	0	0	4	2	1	cutler ridge to florida	
324	30156	3980	5	1	0	0	4	2	1	cutler ridge to florida	
325	30222	3099	2	0	9999	9999	9.9	2.5	0	BASEBALL STADIUM	
326	30500	140	5	700	0	0	2	1	1	TR PB-MANGONIA STN 1	1
327	30501	1248	5	700	0	0	2	1	1	TR PB-WPB 1	1
328	30502	207	4	500	0	0	2	1	1	TR PB-AUSTRALIAN AV STA 1	1
329	30503	370	4	700	0	0	2	1	1	TR PB-Lake Worth 1	1
330	30504	419	4	700	0	0	2	1	1	TR PB-BOYNTON BEACH STN 2	2
331	30505	569	4	700	0	0	2	1	1	TR PB-DELRAY BEACH STN 2	2
332	30506	596	4	700	0	0	2	1	1	TR PB-BOCA RATON STN 3	3
333	30508	4069	5	0	9999	9999	3	2	0	TR EXTERNAL BROWARD 3	3
334	30509	1618	2.5	100	0	0	2	1	1	TR: DEERFIELD BEACH 3	3
335	30510	1772	2.5	275	0	0	2	1	1	TR: POMPANO BEACH 3	3
336	30511	1989	2.5	750	0	0	2	1	1	TR: CYPRESS CREEK 4	4
337	30512	1882	2.5	50	0	0	2	1	1	TR: FT LAUDERDALE 4	4
338	30513	2249	2.5	750	0	0	2	1	1	TR: AIRPORT/GRIFFIN RD 5	5
339	30514	2292	2.5	750	0	0	2	1	1	TR: SHERIDAN STOP 5	5
340	30515	2327	2.5	182	0	0	2	1	1	TR: HOLLYWOOD 5	5
341	30516	2618	5	0	9999	9999	3	2	0	TR: I95 IN MIAMI-DADE 6	6
342	30518	2725	5	1350	0	0	2	1	1	TR-MI2: G GLADES 6	6
343	30519	2804	4	200	0	0	2	1.5	1	TR-MI3: OPA-LOCKA 6	6
344	30520	2965	5	0	9999	9999	4	1.5	0	TR-MI4: MR-TR XFER 6	6
345	30521	3247	2	61	0	0	5	2.5	1	TR-MI5: HIALEAH TR 6	6
346	30522	3295	5	200	200	100	2	1.5	1	TR-MI6: MIA 6	6
347	30530	20	7	500	0	0	2	1	1	TR PB-JUPITER STA 1	1
348	30533	1134	5	500	0	0	2	1	1	TR PB-FREDERICK SM STA 1	1
349	30534	1127	5	500	0	0	2	1	1	TR PB-PGA BLVD STA 1	1
350	30537	128	5	500	0	0	2	1	1	TR PB-BLUE HERON STA 1	1
351	30539	1248	5	700	0	0	2	1	1	TR PB-WPB-Jupiter 7	7
352	30550	852	5	500	0	0	3	2	1	TR PB-Old Scripps 8	8
353	30552	140	7.5	1300	0	0	3	2	1	TR PB-MANGONIA STN 1	1
354	30560	2623	5	500	9999	9999	3	2	0	TR-FEC: HALLANDALE11	11
355	30562	2364	3	200	0	0	3	2	1	TR-FEC: HOLLYWOOD11	11
356	30563	2244	3	0	9999	9999	3	2	0	FT L INT'L AIRPORT	
357	30564	1935	5	50	0	0	2	1	1	RIVERWALK	
358	30565	1893	3	0	9999	9999	3	2	0	TR-FEC: FT LAUDERDALE10	10
359	30566	2029	3	300	0	0	3	2	1	OAKLAND PARK10	10
360	30567	1833	5	750	0	0	3	2	1	TR-FEC: CYPRESS CREEK10	10

Table E-6 (Continued)

Station ID	Network Node nearest to Station	Zone Centroid nearest to station	Max Driving Distance (miles)	Parking Spaces	All-Day (peak) parking cost (cents)	Midday (off peak) parking cost (cents)	Added PNR impedance (terminal time - minutes)	Added drop-off impedance (terminal time - minutes)	Usage Flag (1=yes, 0=no)	Station Description	Tri-Rail Fare Zone (numbered north to south)
361	30568	1814	3	275	0	0	3	2	1	DOWNTOWN POMPANO BCH	
362	30569	1675	3	300	0	0	3	2	1	TR-FEC: N BRD MEDICAL CTR 9	9
363	30570	1614	5	300	0	0	3	2	1	TR-FEC: DEERFIELD BEACH 9	9
364	30700	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
365	30712	3099	2	0	9999	9999	9.9	2.5	0	BASEBALL STADIUM	
366	30721	3057	5	100	200	200	2	0.5	1	OMNI STATION	
367	30732	3057	5	100	200	200	2	0.5	1	OMNI STATION	
368	30752	3123	2	0	9999	9999	9.9	1.7	0	BRICKELL	
369	30761	3123	2	0	9999	9999	9.9	1.7	0	BRICKELL	
370	30800	2244	5	999	0	0	2	1	1	FT L INT'L AIRPORT	
371	30805	1935	5	50	0	0	2	1	1	RIVERWALK	
372	30806	1939	5	0	0	0	2	1	1	DOWNTOWN FT L	
373	30807	1882	5	750	0	0	3	2	1	TR: FT LAUDERDALE 4	4
374	30808	1876	5	0	0	0	2	1	1	MELROSE PARK	
375	30810	1959	5	0	0	0	2	1	1	I-595 @ US 441	
376	30811	2149	5	0	0	0	2	1	1	I-595 @ TURNPIKE	
377	30812	2140	5	0	0	0	2	1	1	I-595 @ UNIVERSITY DR	
378	30813	2144	5	0	0	0	2	1	1	JACARANDA CNTRY CLB	
379	30814	2086	5	0	0	0	2	1	1	PLANTATION	
380	30818	2078	0	999	0	0	2	1	1	SAWGRASS MILLS	
381	30830	3176	2	0	9999	9999	9.9	0.5	0	LINCOLN ROAD EAST / BAYL	
382	30831	3176	2	0	9999	9999	9.9	0.5	0	14TH ST / BAYLINK	
383	30832	3178	2	0	9999	9999	9.9	0.5	0	12TH ST / BAYLINK	
384	30833	3187	2	0	9999	9999	9.9	0.5	0	7TH ST / BAYLINK	
385	30834	3190	2	0	9999	9999	9.9	0.5	0	3RD ST / BAYLINK	
386	30835	3191	2	0	9999	9999	9.9	0.5	0	OCEAN DRIVE	
387	30836	3185	2	0	9999	9999	9.9	0.5	0	ALTON ROAD	
388	30837	3182	2	0	9999	9999	9.9	0.5	0	8TH ST / BAYLINK	
389	30838	3181	2	0	9999	9999	9.9	0.5	0	13TH ST / BAYLINK	
390	30839	3174	2	0	9999	9999	9.9	0.5	0	LINCOLN ROAD WEST / BAYL	
391	30847	3169	5	0	9999	9999	9.9	0.5	0	COLLINS AVE / BAYLINK	
392	30860	3082	2	0	9999	9999	9.9	2.5	0	GOVT CTR	
393	30861	3069	5	100	200	200	2	0.5	1	MARITIME PARK STATION	
394	30862	3061	2	0	9999	9999	9.9	0.5	0	BISCAYNE BLVD	
395	30865	3060	2	0	9999	9999	9.9	0.5	0	PALM ISLAND	
396	30868	3185	2	0	9999	9999	9.9	0.5	0	ALTON ROAD	
397	30870	3170	2	0	9999	9999	9.9	0.5	0	MERIDIAN AVE / BAYLINK	
398	30890	2244	5	999	0	0	2	1	1	FT L INT'L AIRPORT	

Note: The STATION data are kept in Network and are written only for use in Auto Connector program and to have a summary table for review.

Appendix F

Selected Results of 1999 Southeast Florida On-Board Transit Travel Survey
(Compiled from Year 1999 Southeast Florida Transit On-Board Survey)

Table F-1 Transit Trip Access by Household Vehicle, Trip Purpose, Time Period and System
Table F-2 Transit Trip Transfers by Household Vehicle, Trip Purpose, Time Period and System

Table F-1: **Transit Trip Access by Household Vehicle, Trip Purpose, Time Period and System**
Southeast Regional Planning Model VI

(A1) All Periods and All Systems:

i. Number of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	1,366	1,349	467	3,182
	pnr	16	10	3	29
	knr	44	27	42	113
	Total	**1,426**	**1,386**	**512**	**3,324**
one	walk	1,196	1,032	381	2,609
	pnr	110	40	18	168
	knr	130	89	49	268
	Total	**1,436**	**1,161**	**448**	**3,045**
two+	walk	573	827	300	1,700
	pnr	210	64	18	292
	knr	104	88	60	252
	Total	**887**	**979**	**378**	**2,244**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	95.79%	97.33%	91.21%	95.73%
	pnr	1.12%	0.72%	0.59%	0.87%
	knr	3.09%	1.95%	8.20%	3.40%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	83.29%	88.89%	85.04%	85.68%
	pnr	7.66%	3.45%	4.02%	5.52%
	knr	9.05%	7.67%	10.94%	8.80%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	64.60%	84.47%	79.37%	75.76%
	pnr	23.68%	6.54%	4.76%	13.01%
	knr	11.72%	8.99%	15.87%	11.23%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

(A2) Peak Period and All Systems:

i. Number of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	928	656	221	1,805
	pnr	8	2	1	11
	knr	31	15	21	67
	Total	**967**	**673**	**243**	**1,883**
one	walk	801	535	188	1,524
	pnr	78	23	10	111
	knr	82	52	29	163
	Total	**961**	**610**	**227**	**1,798**
two+	walk	367	442	150	959
	pnr	158	41	10	209
	knr	71	50	32	153
	Total	**596**	**533**	**192**	**1,321**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	95.97%	97.47%	90.95%	95.86%
	pnr	0.83%	0.30%	0.41%	0.58%
	knr	3.21%	2.23%	8.64%	3.56%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	83.35%	87.70%	82.82%	84.76%
	pnr	8.12%	3.77%	4.41%	6.17%
	knr	8.53%	8.52%	12.78%	9.07%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	61.58%	82.93%	78.13%	72.60%
	pnr	26.51%	7.69%	5.21%	15.82%
	knr	11.91%	9.38%	16.67%	11.58%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

(A3) Off-Peak Period and All Systems:

i. Number of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	415	679	237	1,331
	pnr	7	8	2	17
	knr	12	11	19	42
	Total	**434**	**698**	**258**	**1,390**
one	walk	369	477	182	1,028
	pnr	30	15	8	53
	knr	44	33	19	96
	Total	**443**	**525**	**209**	**1,177**
two+	walk	195	373	138	706
	pnr	43	20	8	71
	knr	27	36	26	89
	Total	**265**	**429**	**172**	**866**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	95.62%	97.28%	91.86%	95.76%
	pnr	1.61%	1.15%	0.78%	1.22%
	knr	2.76%	1.58%	7.36%	3.02%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	83.30%	90.86%	87.08%	87.34%
	pnr	6.77%	2.86%	3.83%	4.50%
	knr	9.93%	6.29%	9.09%	8.16%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	73.58%	86.95%	80.23%	81.52%
	pnr	16.23%	4.66%	4.65%	8.20%
	knr	10.19%	8.39%	15.12%	10.28%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Note: Compiled from 1999 Southeast Florida Transit On-Board Survey

Table F-1 (Continued)

(B1) All Periods and Rail Systems (TR & MR):

i. Number of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	27	31	12	70
	pnr	6		1	7
	knr	11	6	10	27
	Total	**44**	**37**	**23**	**104**
one	walk	58	33	22	113
	pnr	75	19	9	103
	knr	44	28	13	85
	Total	**177**	**80**	**44**	**301**
two+	walk	33	26	23	82
	pnr	180	38	10	228
	knr	41	42	15	98
	Total	**254**	**106**	**48**	**408**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	61.36%	83.78%	52.17%	67.31%
	pnr	13.64%		4.35%	6.73%
	knr	25.00%	16.22%	43.48%	25.96%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	32.77%	41.25%	50.00%	37.54%
	pnr	42.37%	23.75%	20.45%	34.22%
	knr	24.86%	35.00%	29.55%	28.24%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	12.99%	24.53%	47.92%	20.10%
	pnr	70.87%	35.85%	20.83%	55.88%
	knr	16.14%	39.62%	31.25%	24.02%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

(B2) Peak Period and Rail Systems (TR & MR):

i. Number of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	18	18	5	41
	pnr	4			4
	knr	10	4	5	19
	Total	**32**	**22**	**10**	**64**
one	walk	41	19	9	69
	pnr	56	10	4	70
	knr	29	13	9	51
	Total	**126**	**42**	**22**	**190**
two+	walk	23	15	8	46
	pnr	136	26	6	168
	knr	30	18	4	52
	Total	**189**	**59**	**18**	**266**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	56.25%	81.82%	50.00%	64.06%
	pnr	12.50%			6.25%
	knr	31.25%	18.18%	50.00%	29.69%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	32.54%	45.24%	40.91%	36.32%
	pnr	44.44%	23.81%	18.18%	36.84%
	knr	23.02%	30.95%	40.91%	26.84%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	12.17%	25.42%	44.44%	17.29%
	pnr	71.96%	44.07%	33.33%	63.16%
	knr	15.87%	30.51%	22.22%	19.55%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

(B3) Off-Peak Period and Rail Systems (TR & MR):

i. Number of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	7	12	5	24
	pnr	1		1	2
	knr		2	4	6
	Total	**8**	**14**	**10**	**32**
one	walk	11	13	10	34
	pnr	19	9	5	33
	knr	15	15	4	34
	Total	**45**	**37**	**19**	**101**
two+	walk	9	10	15	34
	pnr	38	10	4	52
	knr	10	24	10	44
	Total	**57**	**44**	**29**	**130**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose HBW	HBNW	NHB	Total
zero	walk	87.50%	85.71%	50.00%	75.00%
	pnr	12.50%		10.00%	6.25%
	knr		14.29%	40.00%	18.75%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	24.44%	35.14%	52.63%	33.66%
	pnr	42.22%	24.32%	26.32%	32.67%
	knr	33.33%	40.54%	21.05%	33.66%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	15.79%	22.73%	51.72%	26.15%
	pnr	66.67%	22.73%	13.79%	40.00%
	knr	17.54%	54.55%	34.48%	33.85%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Note: Compiled from 1999 Southeast Florida Transit On-Board Survey

Table F-1 (Continued)

(C1) All Periods and Bus Systems (Palm Tran, BCT & Metro-Bus):

i. Number of Trips:

HH Vehicle	Access	Purpose: HBW	HBNW	NHB	Total
zero	walk	1,339	1,318	455	3,112
	pnr	10	10	2	22
	knr	33	21	32	86
	Total	**1,382**	**1,349**	**489**	**3,220**
one	walk	1,138	999	359	2,496
	pnr	35	21	9	65
	knr	86	61	36	183
	Total	**1,259**	**1,081**	**404**	**2,744**
two+	walk	540	801	277	1,618
	pnr	30	26	8	64
	knr	63	46	45	154
	Total	**633**	**873**	**330**	**1,836**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose: HBW	HBNW	NHB	Total
zero	walk	96.89%	97.70%	93.05%	96.65%
	pnr	0.72%	0.74%	0.41%	0.68%
	knr	2.39%	1.56%	6.54%	2.67%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	90.39%	92.41%	88.86%	90.96%
	pnr	2.78%	1.94%	2.23%	2.37%
	knr	6.83%	5.64%	8.91%	6.67%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	85.31%	91.75%	83.94%	88.13%
	pnr	4.74%	2.98%	2.42%	3.49%
	knr	9.95%	5.27%	13.64%	8.39%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

(C2) Peak Period and Bus Systems (Palm Tran, BCT & Metro-Bus):

i. Number of Trips:

HH Vehicle	Access	Purpose: HBW	HBNW	NHB	Total
zero	walk	910	638	216	1,764
	pnr	4	2	1	7
	knr	21	11	16	48
	Total	**935**	**651**	**233**	**1,819**
one	walk	760	516	179	1,455
	pnr	22	13	6	41
	knr	53	39	20	112
	Total	**835**	**568**	**205**	**1,608**
two+	walk	344	427	142	913
	pnr	22	15	4	41
	knr	41	32	28	101
	Total	**407**	**474**	**174**	**1,055**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose: HBW	HBNW	NHB	Total
zero	walk	97.33%	98.00%	92.70%	96.98%
	pnr	0.43%	0.31%	0.43%	0.38%
	knr	2.25%	1.69%	6.87%	2.64%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	91.02%	90.85%	87.32%	90.49%
	pnr	2.63%	2.29%	2.93%	2.55%
	knr	6.35%	6.87%	9.76%	6.97%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	84.52%	90.08%	81.61%	86.54%
	pnr	5.41%	3.16%	2.30%	3.89%
	knr	10.07%	6.75%	16.09%	9.57%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

(C3) Off-Peak Period and Bus Systems (Palm Tran, BCT & Metro-Bus):

i. Number of Trips:

HH Vehicle	Access	Purpose: HBW	HBNW	NHB	Total
zero	walk	408	667	232	1,307
	pnr	6	8	1	15
	knr	12	9	15	36
	Total	**426**	**684**	**248**	**1,358**
one	walk	358	464	172	994
	pnr	11	6	3	20
	knr	29	18	15	62
	Total	**398**	**488**	**190**	**1,076**
two+	walk	186	363	123	672
	pnr	5	10	4	19
	knr	17	12	16	45
	Total	**208**	**385**	**143**	**736**

ii. Percentage of Trips:

HH Vehicle	Access	Purpose: HBW	HBNW	NHB	Total
zero	walk	95.77%	97.51%	93.55%	96.24%
	pnr	1.41%	1.17%	0.40%	1.10%
	knr	2.82%	1.32%	6.05%	2.65%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	walk	89.95%	95.08%	90.53%	92.38%
	pnr	2.76%	1.23%	1.58%	1.86%
	knr	7.29%	3.69%	7.89%	5.76%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	walk	89.42%	94.29%	86.01%	91.30%
	pnr	2.40%	2.60%	2.80%	2.58%
	knr	8.17%	3.12%	11.19%	6.11%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Note: Compiled from 1999 Southeast Florida Transit On-Board Survey

Table F-2: **Transit Trip Transfers by Household Vehicle, Trip Purpose, Time Period and System**
Southeast Regional Planning Model VI

(A1) All Periods and All Systems:

i. Number of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	774	822	282	1,878
	1	517	489	159	1,165
	2+	210	179	101	490
	Total	**1,501**	**1,490**	**542**	**3,533**
one	No	707	657	225	1,589
	1	587	392	169	1,148
	2+	226	180	76	482
	Total	**1,520**	**1,229**	**470**	**3,219**
two+	No	458	530	200	1,188
	1	347	357	134	838
	2+	135	152	74	361
	Total	**940**	**1,039**	**408**	**2,387**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	51.57%	55.17%	52.03%	53.16%
	1	34.44%	32.82%	29.34%	32.97%
	2+	13.99%	12.01%	18.63%	13.87%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	46.51%	53.46%	47.87%	49.36%
	1	38.62%	31.90%	35.96%	35.66%
	2+	14.87%	14.65%	16.17%	14.97%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	48.72%	51.01%	49.02%	49.77%
	1	36.91%	34.36%	32.84%	35.11%
	2+	14.36%	14.63%	18.14%	15.12%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

	HBW	HBNW	NHB	Total
zero	**1.3669**	**1.3275**	**1.3789**	**1.3518**
one	**1.4191**	**1.3517**	**1.4104**	**1.3913**
two+	**1.3953**	**1.3743**	**1.4063**	**1.3879**

(A2) Peak Period and All Systems:

i. Number of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	511	416	134	1,061
	1	359	221	66	646
	2+	141	87	60	288
	Total	**1,011**	**724**	**260**	**1,995**
one	No	463	351	116	930
	1	408	202	79	689
	2+	154	96	43	293
	Total	**1,025**	**649**	**238**	**1,912**
two+	No	318	295	111	724
	1	230	189	63	482
	2+	85	78	38	201
	Total	**633**	**562**	**212**	**1,407**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	50.54%	57.46%	51.54%	53.18%
	1	35.51%	30.52%	25.38%	32.38%
	2+	13.95%	12.02%	23.08%	14.44%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	45.17%	54.08%	48.74%	48.64%
	1	39.80%	31.12%	33.19%	36.04%
	2+	15.02%	14.79%	18.07%	15.32%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	50.24%	52.49%	52.36%	51.46%
	1	36.33%	33.63%	29.72%	34.26%
	2+	13.43%	13.88%	17.92%	14.29%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

	HBW	HBNW	NHB	Total
zero	**1.3763**	**1.3076**	**1.3997**	**1.3535**
one	**1.4333**	**1.3465**	**1.4088**	**1.3996**
two+	**1.3774**	**1.3579**	**1.3733**	**1.3689**

(A3) Off-Peak Period and All Systems:

i. Number of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	250	398	143	791
	1	151	262	88	501
	2+	62	90	38	190
	Total	**463**	**750**	**269**	**1,482**
one	No	227	296	105	628
	1	169	180	84	433
	2+	68	77	30	175
	Total	**464**	**553**	**219**	**1,236**
two+	No	132	226	86	444
	1	106	165	67	338
	2+	45	69	28	142
	Total	**283**	**460**	**181**	**924**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	54.00%	53.07%	53.16%	53.37%
	1	32.61%	34.93%	32.71%	33.81%
	2+	13.39%	12.00%	14.13%	12.82%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	48.92%	53.53%	47.95%	50.81%
	1	36.42%	32.55%	38.36%	35.03%
	2+	14.66%	13.92%	13.70%	14.16%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	46.64%	49.13%	47.51%	48.05%
	1	37.46%	35.87%	37.02%	36.58%
	2+	15.90%	15.00%	15.47%	15.37%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

	HBW	HBNW	NHB	Total
zero	**1.3425**	**1.3462**	**1.3526**	**1.3462**
one	**1.3944**	**1.3486**	**1.4005**	**1.3746**
two+	**1.4217**	**1.3937**	**1.4113**	**1.4056**

Note: Compiled from 1999 Southeast Florida Transit On-Board Survey

Table F-2 (Continued)

(B1) All Periods and Rail Systems (TR & MR):

i. Number of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	23	17	14	54
	1	30	16	9	55
	2+	15	17	6	38
	Total	**68**	**50**	**29**	**147**
one	No	79	36	17	132
	1	79	41	14	134
	2+	35	19	16	70
	Total	**193**	**96**	**47**	**336**
two+	No	167	46	23	236
	1	81	53	25	159
	2+	24	20	7	51
	Total	**272**	**119**	**55**	**446**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	33.82%	34.00%	48.28%	36.73%
	1	44.12%	32.00%	31.03%	37.41%
	2+	22.06%	34.00%	20.69%	25.85%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	40.93%	37.50%	36.17%	39.29%
	1	40.93%	42.71%	29.79%	39.88%
	2+	18.13%	19.79%	34.04%	20.83%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	61.40%	38.66%	41.82%	52.91%
	1	29.78%	44.54%	45.45%	35.65%
	2+	8.82%	16.81%	12.73%	11.43%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

zero		**1.5930**	**1.6495**	**1.4233**	**1.5743**
one		**1.4911**	**1.5375**	**1.6207**	**1.5212**
two+		**1.2651**	**1.5111**	**1.4594**	**1.3457**

(B2) Peak Period and Rail Systems (TR & MR):

i. Number of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	18	11	6	35
	1	21	8	3	32
	2+	6	11	2	19
	Total	**45**	**30**	**11**	**86**
one	No	53	17	9	79
	1	60	20	4	84
	2+	28	13	10	51
	Total	**141**	**50**	**23**	**214**
two+	No	131	18	9	158
	1	57	35	11	103
	2+	16	11	2	29
	Total	**204**	**64**	**22**	**290**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	40.00%	36.67%	54.55%	40.70%
	1	46.67%	26.67%	27.27%	37.21%
	2+	13.33%	36.67%	18.18%	22.09%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	37.59%	34.00%	39.13%	36.92%
	1	42.55%	40.00%	17.39%	39.25%
	2+	19.86%	26.00%	43.48%	23.83%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	64.22%	28.13%	40.91%	54.48%
	1	27.94%	54.69%	50.00%	35.52%
	2+	7.84%	17.19%	9.09%	10.00%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

zero		**1.4815**	**1.6271**	**1.3538**	**1.5104**
one		**1.5368**	**1.6097**	**1.6283**	**1.5628**
two+		**1.2401**	**1.6437**	**1.4545**	**1.3269**

(B3) Off-Peak Period and Rail Systems (TR & MR):

i. Number of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	5	6	7	18
	1	8	6	4	18
	2+	6	5	3	14
	Total	**19**	**17**	**14**	**50**
one	No	24	19	6	49
	1	17	21	10	48
	2+	6	5	4	15
	Total	**47**	**45**	**20**	**112**
two+	No	34	26	14	74
	1	20	18	14	52
	2+	8	8	4	20
	Total	**62**	**52**	**32**	**146**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose HBW	HBNW	NHB	Total
zero	No	26.32%	35.29%	50.00%	36.00%
	1	42.11%	35.29%	28.57%	36.00%
	2+	31.58%	29.41%	21.43%	28.00%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	51.06%	42.22%	30.00%	43.75%
	1	36.17%	46.67%	50.00%	42.86%
	2+	12.77%	11.11%	20.00%	13.39%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	54.84%	50.00%	43.75%	50.68%
	1	32.26%	34.62%	43.75%	35.62%
	2+	12.90%	15.38%	12.50%	13.70%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

zero		**1.7471**	**1.6095**	**1.4088**	**1.5936**
one		**1.3673**	**1.4487**	**1.6327**	**1.4417**
two+		**1.3333**	**1.3867**	**1.4382**	**1.3741**

Note: Compiled from 1999 Southeast Florida Transit On-Board Survey

Table F-2 (Continued)

(C1) All Periods and Bus Systems (Palm Tran, BCT & Metro-Bus):

i. Number of Trips:

HH Vehicle	Transfer	Purpose: HBW	HBNW	NHB	Total
zero	No	751	805	268	1,824
	1	487	473	150	1,110
	2+	195	162	95	452
	Total	**1,433**	**1,440**	**513**	**3,386**
one	No	628	621	208	1,457
	1	508	351	155	1,014
	2+	191	161	60	412
	Total	**1,327**	**1,133**	**423**	**2,883**
two+	No	291	484	177	952
	1	266	304	109	679
	2+	111	132	67	310
	Total	**668**	**920**	**353**	**1,941**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose: HBW	HBNW	NHB	Total
zero	No	52.41%	55.90%	52.24%	53.87%
	1	33.98%	32.85%	29.24%	32.78%
	2+	13.61%	11.25%	18.52%	13.35%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	47.32%	54.81%	49.17%	50.54%
	1	38.28%	30.98%	36.64%	35.17%
	2+	14.39%	14.21%	14.18%	14.29%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	43.56%	52.61%	50.14%	49.05%
	1	39.82%	33.04%	30.88%	34.98%
	2+	16.62%	14.35%	18.98%	15.97%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

	HBW	HBNW	NHB	Total
zero	**1.3577**	**1.3185**	**1.3765**	**1.3435**
one	**1.4092**	**1.3380**	**1.3903**	**1.3776**
two+	**1.4563**	**1.3584**	**1.3984**	**1.3980**

(C2) Peak Period and Bus Systems (Palm Tran, BCT & Metro-Bus):

i. Number of Trips:

HH Vehicle	Transfer	Purpose: HBW	HBNW	NHB	Total
zero	No	493	405	128	1,026
	1	338	213	63	614
	2+	135	76	58	269
	Total	**966**	**694**	**249**	**1,909**
one	No	410	334	107	851
	1	348	182	75	605
	2+	126	83	33	242
	Total	**884**	**599**	**215**	**1,698**
two+	No	187	277	102	566
	1	173	154	52	379
	2+	69	67	36	172
	Total	**429**	**498**	**190**	**1,117**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose: HBW	HBNW	NHB	Total
zero	No	51.04%	58.36%	51.41%	53.75%
	1	34.99%	30.69%	25.30%	32.16%
	2+	13.98%	10.95%	23.29%	14.09%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	46.38%	55.76%	49.77%	50.12%
	1	39.37%	30.38%	34.88%	35.63%
	2+	14.25%	13.86%	15.35%	14.25%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	43.59%	55.62%	53.68%	50.67%
	1	40.33%	30.92%	27.37%	33.93%
	2+	16.08%	13.45%	18.95%	15.40%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

	HBW	HBNW	NHB	Total
zero	**1.3718**	**1.2966**	**1.4018**	**1.3472**
one	**1.4181**	**1.3283**	**1.3888**	**1.3815**
two+	**1.4539**	**1.3282**	**1.3645**	**1.3803**

(C3) Off-Peak Period and Bus Systems (Palm Tran, BCT & Metro-Bus):

i. Number of Trips:

HH Vehicle	Transfer	Purpose: HBW	HBNW	NHB	Total
zero	No	245	392	136	773
	1	143	256	84	483
	2+	56	85	35	176
	Total	**444**	**733**	**255**	**1,432**
one	No	203	277	99	579
	1	152	159	74	385
	2+	62	72	26	160
	Total	**417**	**508**	**199**	**1,124**
two+	No	98	200	72	370
	1	86	147	53	286
	2+	37	61	24	122
	Total	**221**	**408**	**149**	**778**

ii. Percentage of Trips:

HH Vehicle	Transfer	Purpose: HBW	HBNW	NHB	Total
zero	No	55.18%	53.48%	53.33%	53.98%
	1	32.21%	34.92%	32.94%	33.73%
	2+	12.61%	11.60%	13.73%	12.29%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
one	No	48.68%	54.53%	49.75%	51.51%
	1	36.45%	31.30%	37.19%	34.25%
	2+	14.87%	14.17%	13.07%	14.23%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**
two+	No	44.34%	49.02%	48.32%	47.56%
	1	38.91%	36.03%	35.57%	36.76%
	2+	16.74%	14.95%	16.11%	15.68%
	Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

iii. Transfer Rates =>

	HBW	HBNW	NHB	Total
zero	**1.3293**	**1.3411**	**1.3497**	**1.3389**
one	**1.3976**	**1.3404**	**1.3807**	**1.3682**
two+	**1.4486**	**1.3946**	**1.4057**	**1.4117**

Note: Compiled from 1999 Southeast Florida Transit On-Board Survey

Appendix G

Mode Choice Transit Target Trips

Table G-1 Transit Trip Purposes and Household Vehicle Distribution for Transit Mode Targets
Table G-2 Transfer Rates and Peak and Off-Peak Distribution of Transit Trips for Transit Mode Targets
Table G-3 Mode of Access of Bus Transit Trips for Transit Mode Targets
Table G-4 Mode of Access of Rail Transit Trips for Transit Mode Targets
Table G-5 Year 2000 Transit Ridership Summary by Modes
Table G-6 Year 2000 Peak Period Mode Choice Target Linked Transit Trips
Table G-7 Year 2000 Off-Peak Period Mode Choice Target Linked Transit Trips

Table G-1: **Transit Trip Purposes and Household Vehicle Distribution for Transit Mode Targets**
Southeast Regional Planning Model VI

A. Transit Trip Purpose Distribution

	Company							
Purpose	Metro Rail	Tri Rail	Palm Tran	Metro Bus	BCT	**ALL**	**PalmTran & BCT**	**Buses**
HBW	55.0	60.0	45.0	45.0	45.0	45.0	45.0	45.0
HBNW	30.0	25.0	40.0	40.0	40.0	40.0	40.0	40.0
NHB	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
ALL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

B. Transit Trip Household Vehicle Distribution

	Company							
HH Vehicle	Metro Rail	Tri Rail	Palm Tran	Metro Bus	BCT	**ALL**	**PalmTran & BCT**	**Buses**
zero	17.0	13.0	40.0	35.0	45.0	37.0	44.0	37.0
one	41.0	36.0	37.0	39.0	36.0	38.0	36.0	38.5
two+	42.0	51.0	23.0	26.0	19.0	25.0	20.0	24.5
ALL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Results are based on analysis of 1999 South Florida Transit On-Board Survey.

Table G-2: **Transfer Rates and Peak and Off-Peak Distribution of Transit Trips for Transit Mode Targets**
Southeast Regional Planning Model VI

A. Transfer Rates for Mode Targets (see Note 1)

	HH Vehicles	HBW	HBNW	NHB	Total
BUSES	zero	1.867	1.813	1.844	1.835
	one	1.791	1.701	1.767	1.751
	two+	1.754	1.636	1.684	1.684
Metro-Rail	zero	1.020	1.020	1.020	1.020
	one	1.005	1.005	1.005	1.005
	two+	1.005	1.005	1.005	1.005
Tri-Rail	zero	1.000	1.000	1.000	1.000
	one	1.000	1.000	1.000	1.000
	two+	1.000	1.000	1.000	1.000

B. Peak & Off-Peak Distribution of Transit Trips (see Note 2)

	Purpose	Peak Period	Off-Peak Period
BUSES	HBW	60.0%	40.0%
	HBNW	42.0%	58.0%
	NHB	50.0%	50.0%
Metro-Rail	HBW	62.7%	37.3%
	HBNW	38.8%	61.2%
	NHB	49.8%	50.2%
Tri-Rail	HBW	75.0%	25.0%
	HBNW	45.0%	55.0%
	NHB	55.0%	45.0%

Note 1. Transfer Rates are initially taken directly from Transit Survey and then adjusted to account mode preferences in model.
Note 2. Metro-Rail data are derived from a recent survey, other data are estimated values reflecting nationwide experiences.

Table G-3: **Mode of Access of Bus Transit Trips for Mode Choice Targets**
Southeast Regional Planning Model VI

A. Peak Period Buses

HH Vehicle	Access	Purpose		
		HBW	HBNW	NHB
zero	walk	100.00%	100.00%	100.00%
	pnr			
	knr			
	Total	**100.00%**	**100.00%**	**100.00%**
one	walk	95.45%	96.75%	96.10%
	pnr	2.60%	1.95%	2.28%
	knr	1.95%	1.30%	1.63%
	Total	**100.00%**	**100.00%**	**100.00%**
two+	walk	94.15%	96.75%	96.10%
	pnr	3.25%	1.95%	2.28%
	knr	2.60%	1.30%	1.63%
	Total	**100.00%**	**100.00%**	**100.00%**

B. Off-Peak Period Buses

HH Vehicle	Access	Purpose		
		HBW	HBNW	NHB
zero	walk	100.00%	100.00%	100.00%
	pnr			
	knr			
	Total	**100.00%**	**100.00%**	**100.00%**
one	walk	96.75%	97.40%	97.08%
	pnr	1.95%	1.63%	1.79%
	knr	1.30%	0.98%	1.14%
	Total	**100.00%**	**100.00%**	**100.00%**
two+	walk	96.10%	97.40%	97.08%
	pnr	2.28%	1.63%	1.79%
	knr	1.63%	0.98%	1.14%
	Total	**100.00%**	**100.00%**	**100.00%**

Notes:

1. Results are based on analysis of 1999 South Florida Transit On-Board Surveys.
2. Survey results are dampened to produce realistic results since not all auto access trips will be realized in model.

Table G-4: **Mode of Access of Rail Transit Trips for Mode Choice Targets**
Southeast Regional Planning Model VI

A. Peak Period Rails

HH Vehicle	Access	Purpose		
		HBW	HBNW	NHB
zero	walk	100.0%	100.0%	100.0%
	pnr			
	knr			
	Total	**100.0%**	**100.0%**	**100.0%**
one	walk	38.0%	49.0%	46.0%
	pnr	43.0%	26.0%	27.0%
	knr	19.0%	25.0%	27.0%
	Total	**100.0%**	**100.0%**	**100.0%**
two+	walk	23.0%	34.0%	32.0%
	pnr	60.0%	38.0%	42.0%
	knr	17.0%	28.0%	26.0%
	Total	**100.0%**	**100.0%**	**100.0%**

B. Off-Peak Period Rails

HH Vehicle	Access	Purpose		
		HBW	HBNW	NHB
zero	walk	100.0%	100.0%	100.0%
	pnr			
	knr			
	Total	**100.0%**	**100.0%**	**100.0%**
one	walk	48.0%	57.0%	55.0%
	pnr	37.0%	22.0%	23.0%
	knr	15.0%	21.0%	22.0%
	Total	**100.0%**	**100.0%**	**100.0%**
two+	walk	31.0%	44.0%	39.0%
	pnr	55.0%	32.0%	39.0%
	knr	14.0%	24.0%	22.0%
	Total	**100.0%**	**100.0%**	**100.0%**

Note:

1. Results are based on analysis of 1999 South Florida Transit On-Board Surveys.

Table G-5: **Year 2000 Transit Ridership Summary by Modes**
Southeast Regional Planning Model VI

Description	PT Mode	TrnBuild Mode	OBS 2000 Ridership	Total 2000 OBS Ridership
Palm Beach Local Bus	4	4	18,802	
Tri-Rail Shuttle (PB)	12	12	149	
Palm Beach Subtotal:				**18,951**
Broward Local Bus	4	14	93,426	
Tri-Rail Shuttle (BO)	12	12	752	
Broward Express Bus	6	6	186	
Broward Subtotal:				**94,364**
Miami-Dade Local Bus	5	5	210,121	
Miami-Dade Express Bus	6	15	4,246	
Limited Stop Buses (MD)	13	13	5,985	
Metro-Mover	9	9	15,619	
Metro-Rail	**7**	**7**	**49,622**	
Miami-Dade Subtotal:				**285,593**
Tri-Rail	**8**	**8**	**7,959**	**7,959**
ALL MODES:				**406,867**

Table G-6: **Year 2000 Peak Period Mode Choice Target Linked Transit Trips**
Southeast Regional Planning Model VI

Transit Mode/Access	Peak Transit Linked Trips				Peak Transit Shares			
	HBW-Pk	HBNW-PK	NHB-Pk	Pk-TOTAL	HBW-Pk	HBNW-Pk	NHB-Pk	Pk-TOTAL
Walk to Transit - Zero Car Households	22,380	13,182			100.0%	100.0%		
Walk to Transit - One Car Households	22,424	13,944			78.8%	88.6%		
Walk to Transit - Two+ Car Households	14,472	9,325			19.8%	23.1%		
Total:	59,275	36,452	16,510	112,237	81.2%	90.2%	86.4%	84.7%
BRT/LRT Transit	-	-	-	-				
MetroRail Transit	16,984	5,733	3,679	26,396	23.3%	14.2%	19.3%	19.9%
TriRail Transit	3,582	895	657	5,134	4.9%	2.2%	3.4%	3.9%
PNR to transit - Zero Car Households	-	-						
PNR to transit - One Car Households	4,081	951			14.3%	6.0%		
PNR to transit - Two+ Car Households	5,815	1,259			26.2%	10.9%		
Total:	9,897	2,210	1478	13,585	13.6%	5.5%	7.7%	10.3%
KNR to transit - Zero Car Households	-	-						
KNR to transit - One Car Households	1965	839			6.9%	5.3%		
KNR to transit - Two+ Car Households	1869	916			8.4%	8.0%		
Total:	3,834	1,755	1,115	6,705	5.3%	4.3%	5.8%	5.1%
Total Peak Transit Person Trips - Auto Access	13,731	3,965	2,593	20,289	18.8%	9.8%	13.6%	15.3%
Total Peak Transit Person Trips - Walk Access	59,275	36,452	16,510	112,237	81.2%	90.2%	86.4%	84.7%
Total Peak Transit person Trips	73,006	40,417	19,103	132,526	100.0%	100.0%	100.0%	100.0%
0 CAR	22,380	13,182			30.7%	32.6%		
1 CAR	28,470	15,735			39.0%	38.9%		
2+CAR	22,156	11,500			30.3%	28.5%		
Total-Pk	73,006	40,417	19,103	132,526	100.0%	100.0%	100.0%	100.0%

Table G-7: **Year 2000 Off-Peak Period Mode Choice Target Linked Transit Trips**
Southeast Regional Planning Model VI

Transit Mode/Access	Off-Peak Transit Linked Trips				Off-Peak Transit Shares			
	HBW-Op	HBNW-Op	NHB-Op	Op-TOTAL	HBW-Op	HBNW-Op	NHB-Op	Op-TOTAL
Walk to Transit - Zero Car Households	14,536	18,404			100.0%	100.0%		
Walk to Transit - One Car Households	15,191	19,952			84.3%	89.9%		
Walk to Transit - Two+ Car Households	9,917	13,570			21.5%	23.8%		
Total:	39,644	51,926	16,848	108,418	85.9%	91.2%	88.6%	88.8%
BRT/LRT Transit	-	-	-	-				
MetroRail Transit	10,104	9,043	3,709	22,855	21.9%	15.9%	19.5%	18.7%
TriRail Transit	1,194	1,094	537	2,825	2.6%	1.9%	2.8%	2.3%
PNR to transit - Zero Car Households	-	-						
PNR to transit - One Car Households	1,957	1,198			10.9%	5.4%		
PNR to transit - Two+ Car Households	2,874	1,591			21.1%	9.7%		
Total:	4,831	2,789	1280	8,900	10.5%	4.9%	6.7%	7.3%
KNR to transit - Zero Car Households	-	-						
KNR to transit - One Car Households	862	1,040			4.8%	4.7%		
KNR to transit - Two+ Car Households	823	1,164			6.0%	7.1%		
Total:	1,685	2,204	889	4,778	3.7%	3.9%	4.7%	3.9%
Total Off-Peak Transit Person Trips - Auto Access	6,516	4,993	2,169	13,678	14.1%	8.8%	11.4%	11.2%
Total Off-Peak Transit Person Trips - Walk Access	39,644	51,926	16,848	108,418	85.9%	91.2%	88.6%	88.8%
Total Off-Peak Transit person Trips	46,160	56,920	19,016	122,096	100.0%	100.0%	100.0%	100.0%
0 CAR	14,536	18,404			31.5%	32.3%		
1 CAR	18,010	22,190			39.0%	39.0%		
2+CAR	13,614	16,326			29.5%	28.7%		
Total-Op	46,160	56,920	19,016	122,096	100.0%	100.0%	100.0%	100.0%

Appendix H

Time of Day Model Factors

[Compiled from …
Year 1999 Southeast Florida Household Travel Survey
And
Year 2000 Traffic Counts]

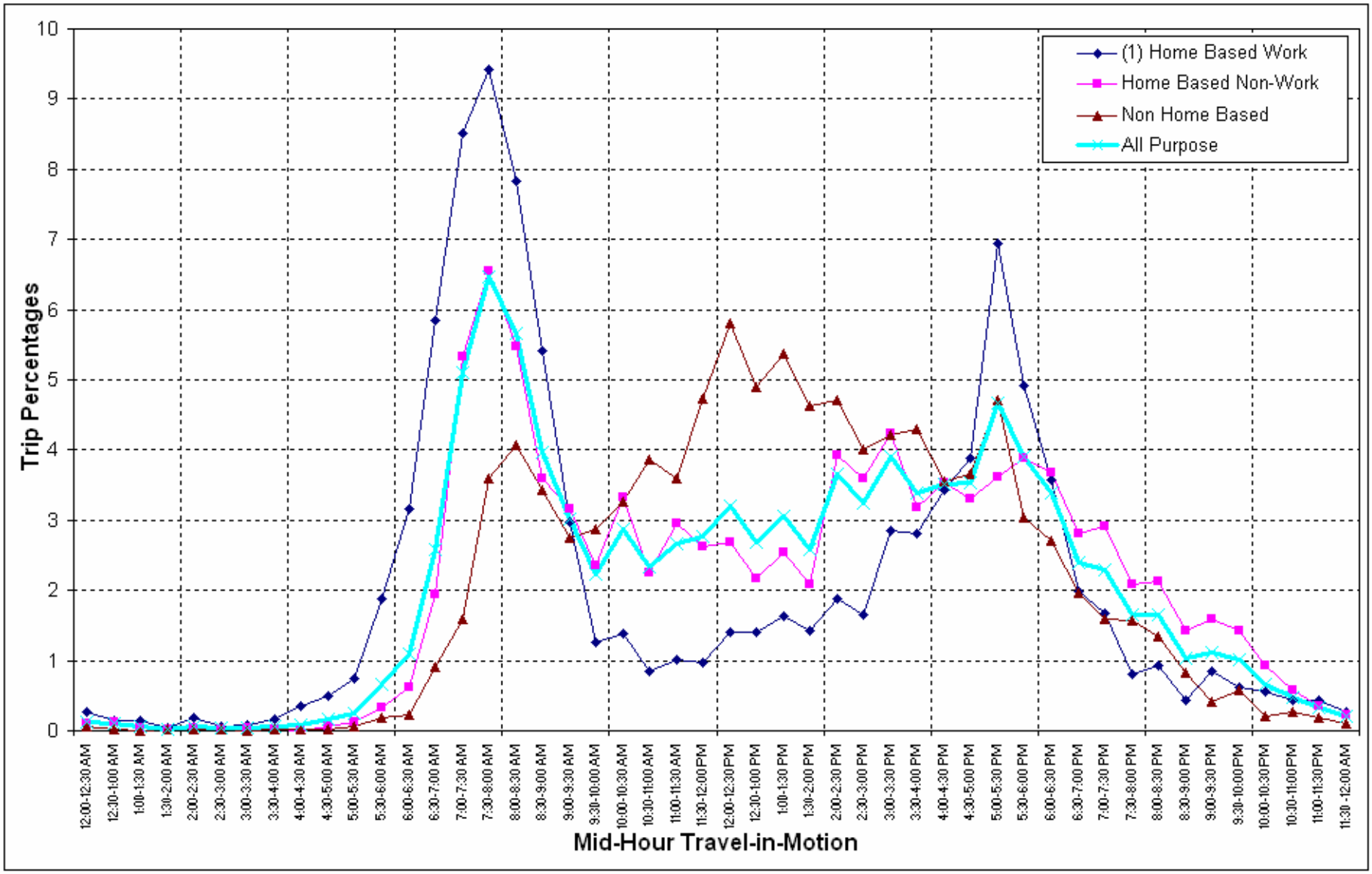
Figure H-1 Trip Frequencies by Half Hour Interval of Travel-in-Motion by Purposes
Figure H-2 Comparison of Distribution of Survey Trips and Traffic Counts by Time Period
Figure H-3 Comparison of Distribution of Period Traffic Counts by Region
Figure H-4 Frequencies of Classification Counts by Classification Categories and Time

Table H-1 Time-of-Day Model Period Factors by Purpose and Region
Table H-2 Time-of-Day Model Peak Hour Factors by Purpose and Region
Table H-3 HBW P-to-A and A-to-P Factors of Highway Trips
Table H-4 HBNW P-to-A and A-to-P Factors of Highway Trips

Table H-5 Traffic Count Distribution and Overall CONFAC Values by Model Period
Table H-6 A Derivation of Weighted Off-Peak Hours Overall CONFAC
Table H-7 Summary Statistics of CONFACS by Facility Type and Model Period

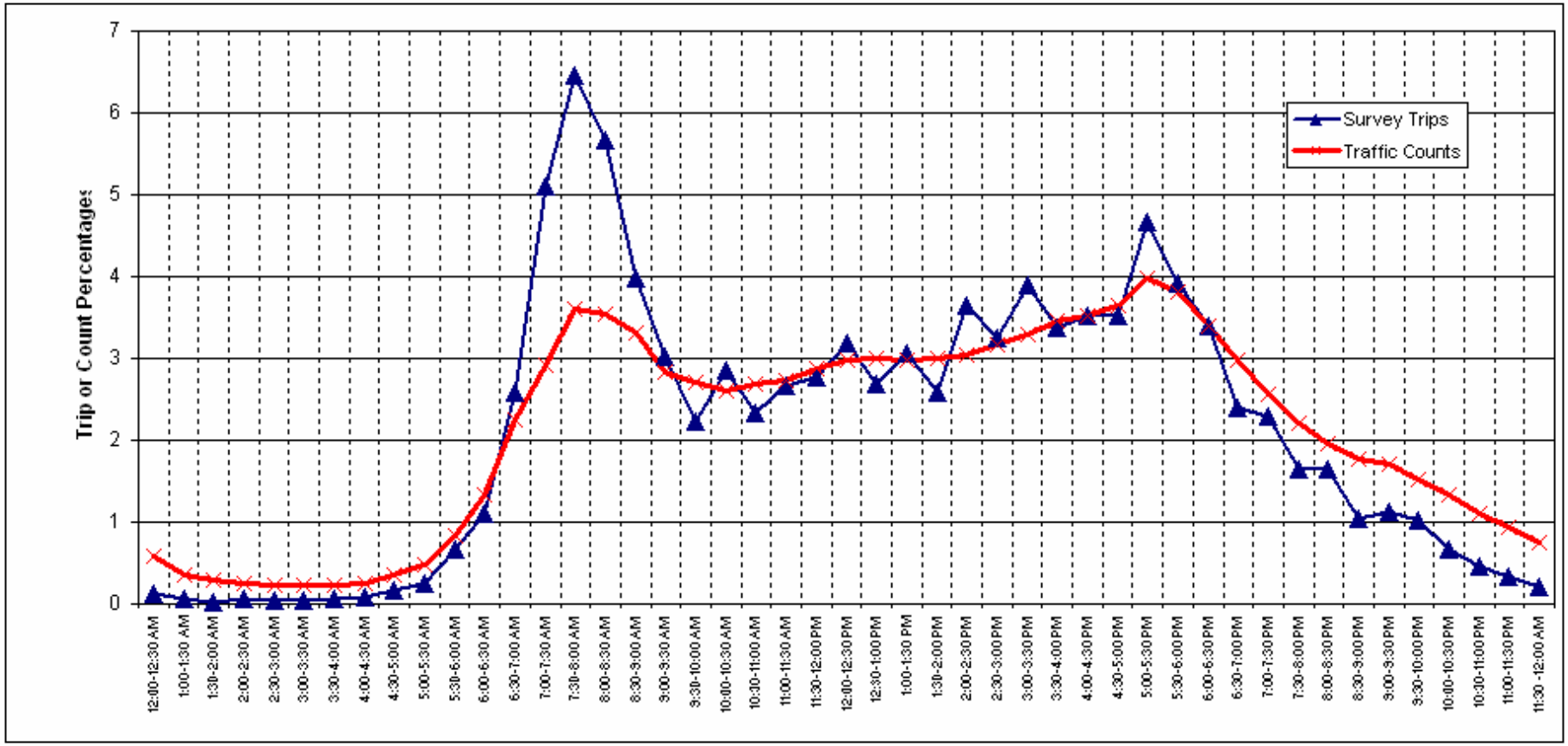
Table H-8 Truck Traffic Time-of-Day Model Period Factors by Purpose
Table H-9 Truck Traffic Time-of-Day Model Peak-Hour Factors by Purpose

Figure H-1: **Trip Frequencies by Half Hour Interval of Travel-in-Motion by Purposes**
Southeast Regional Planning Model VI



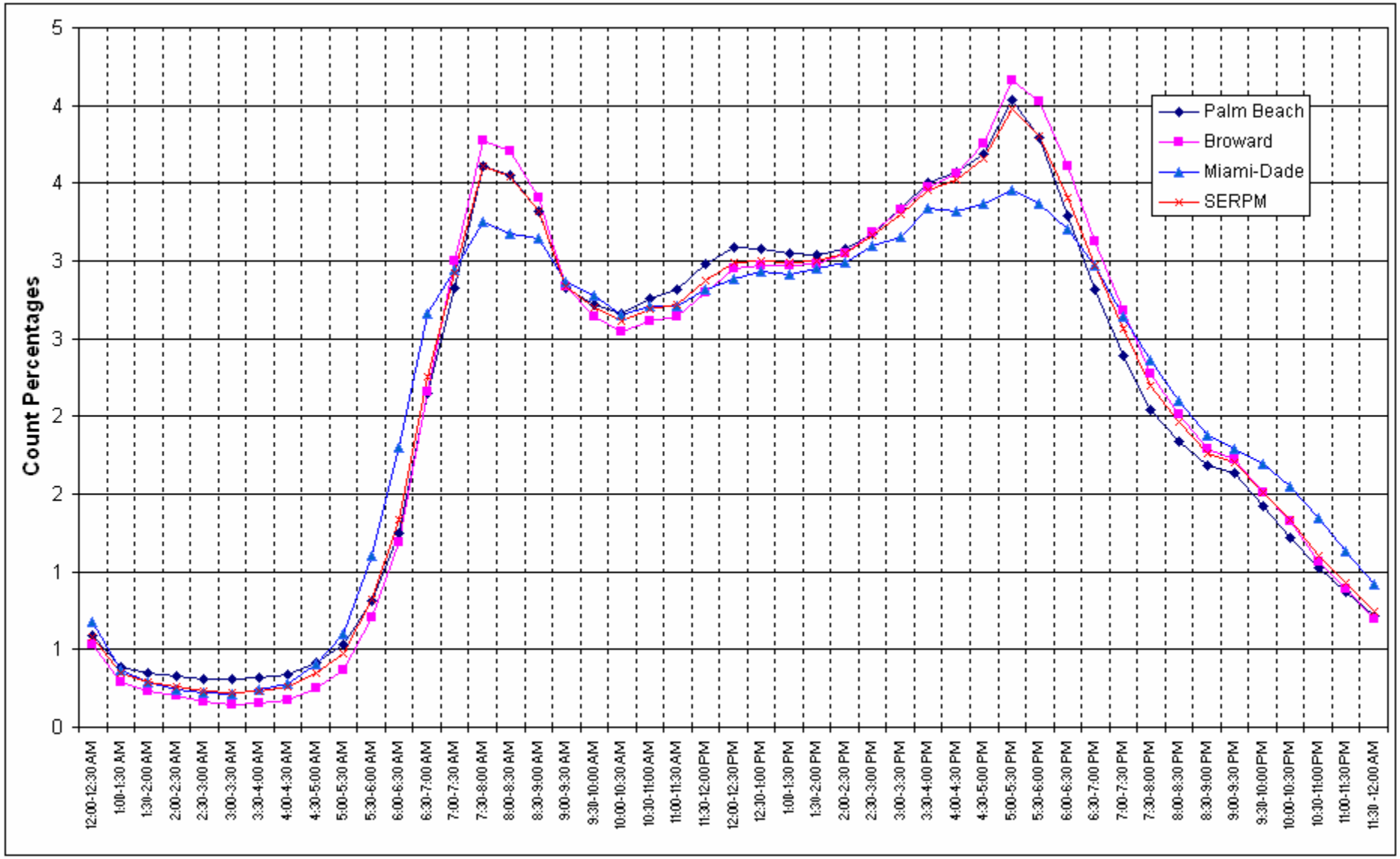
Note: Compiled from 1999 Southeast Florida Travel Characteristics Survey.

Figure H-2: **Comparison of Distribution of Survey Trips and Traffic Counts by Time Period**
Southeast Regional Planning Model VI



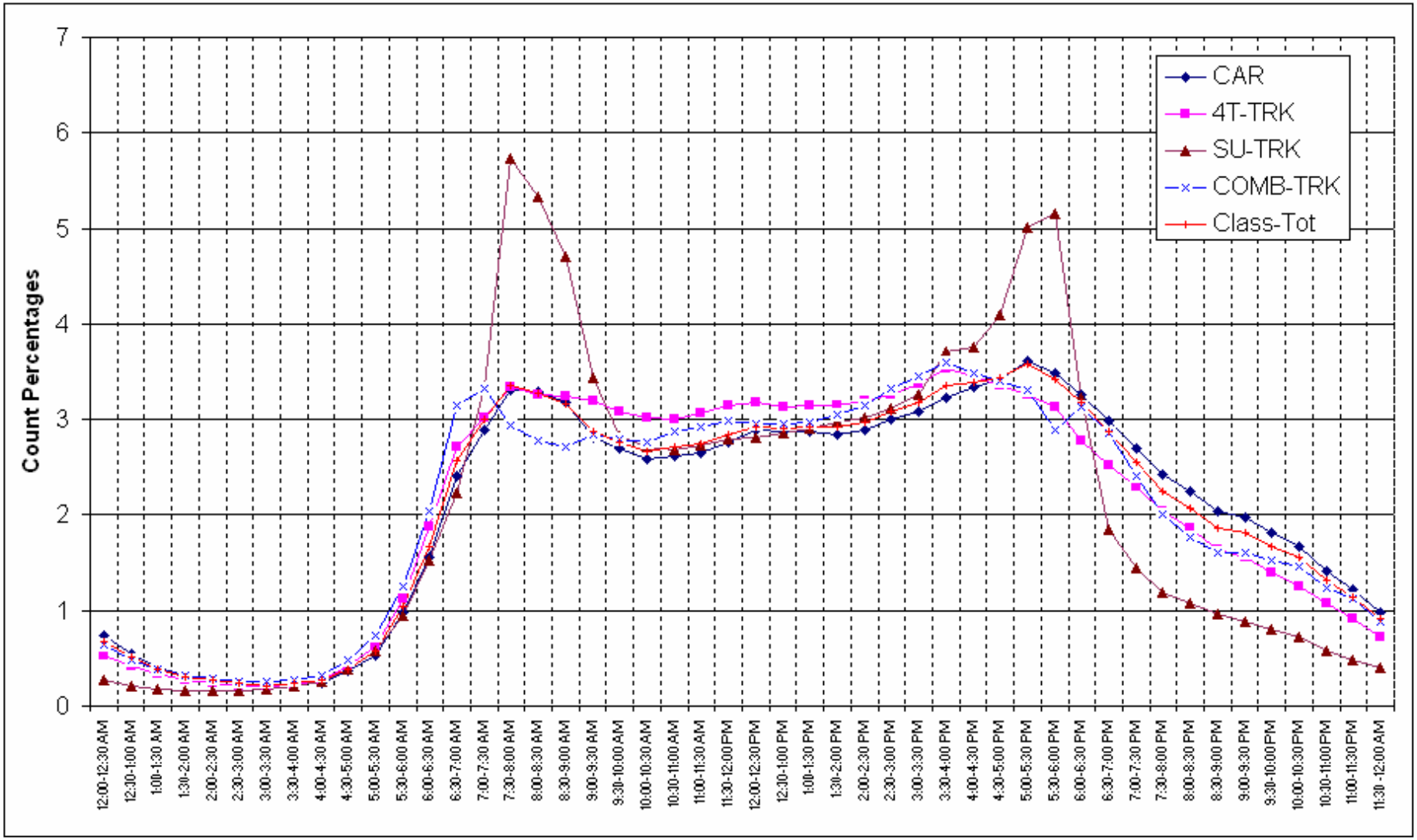
Note: Compiled from 2000 SEFTCS and FDOT 15-Minutes Total Count Data.

Figure H-3: **Comparison of Distribution of Period Traffic Counts by Region**
Southeast Regional Planning Model VI



Note: Compiled from 2000 FDOT 15-Minutes Total Count Data.

Figure H-4: **Frequencies of Classification Counts by Classification Categories and Time**
Southeast Regional Planning Model VI



Note: Compiled from 2000 FDOT 15-Minutes Traffic Classification Data

Table H-1: **Time-of-Day Model Period Factors by Purpose and Region**
Southeast Regional Planning Model VI

County/Region	Trip Frequency (in percent)									
	(1) Home Based Work	*Home Based Non-Work*	(2) Home Based Shopping	(3) Home Based Social Recreation	(4) Home Based School	(5) Home Based Other	(6) Non Home Based Work	(7) Non Home Based Other	*Non Home Based*	**All Purpose**
AM-Peak Period [6:30-9:30AM] ==> 3 Hours										
Palm Beach	39.74	***24.12***	11.05	15.73	55.37	24.73	22.83	12.07	***15.44***	**24.86**
Broward	39.24	***25.17***	8.80	13.18	49.32	26.07	19.21	12.77	***15.24***	**26.02**
Miami-Dade	41.06	***29.43***	7.75	9.43	54.53	30.01	23.41	16.29	***18.99***	**30.03**
Region	40.00	***26.06***	9.41	13.48	52.96	26.75	21.63	13.40	***16.33***	**26.81**
Off-Peak/MIDDAY Period [9:30AM-3:30PM] ==> 6 Hours										
Palm Beach	17.76	***37.43***	51.40	33.02	22.99	36.31	51.64	55.47	***54.27***	**38.11**
Broward	16.96	***34.23***	47.42	25.27	30.20	33.02	50.62	54.22	***52.84***	**34.85**
Miami-Dade	18.56	***32.07***	45.25	24.53	25.51	31.71	46.68	48.22	***47.64***	**32.17**
Region	17.74	***34.76***	48.42	28.53	26.46	33.84	49.82	53.16	***51.97***	**35.21**
PM-Peak Period [3:30-6:30PM] ==> 3 Hours										
Palm Beach	27.26	***20.79***	20.74	22.81	18.64	20.66	21.78	20.40	***20.83***	**22.09**
Broward	27.02	***21.85***	23.26	23.23	15.57	23.53	25.21	20.95	***22.59***	**23.30**
Miami-Dade	22.41	***20.96***	25.12	26.62	14.79	21.16	24.22	21.67	***22.64***	**21.72**
Region	25.55	***21.19***	22.76	23.79	16.08	21.77	23.78	20.92	***21.93***	**22.40**
Off-Peak/Night Period [6:30PM-6:30AM] ==> 12 Hours										
Palm Beach	15.24	***17.66***	16.81	28.44	2.99	18.30	3.75	12.07	***9.46***	**14.94**
Broward	16.79	***18.75***	20.53	38.32	4.91	17.38	4.96	12.06	***9.33***	**15.82**
Miami-Dade	17.97	***17.54***	21.88	39.41	5.18	17.13	5.68	13.81	***10.73***	**16.08**
Region	16.71	***17.99***	19.41	34.19	4.51	17.64	4.76	12.52	***9.76***	**15.59**

Table H-1 (Continued)

County/Region	Trip Frequency (in percent)									
	(1) Home Based Work	*Home Based Non-Work*	(2) Home Based Shopping	(3) Home Based Social Recreation	(4) Home Based School	(5) Home Based Other	(6) Non Home Based Work	(7) Non Home Based Other	*Non Home Based*	**All Purpose**
(AM & PM)-Peak Period [6:30-9:30AM,3:30-6:30PM] ==> 6 Hours										
Palm Beach	67.00	***44.91***	31.79	38.54	74.01	45.39	44.61	32.46	***36.27***	**46.95**
Broward	66.26	***47.02***	32.05	36.41	64.89	49.60	44.42	33.72	***37.83***	**49.32**
Miami-Dade	63.47	***50.38***	32.87	36.06	69.32	51.17	47.63	37.97	***41.63***	**51.75**
Region	65.55	***47.25***	32.17	37.28	69.03	48.52	45.41	34.32	***38.27***	**49.21**
Off-Peak Period [9:30AM-3:30PM,6:30PM-6:30AM] ==> 18 Hours										
Palm Beach	33.00	***55.09***	68.21	61.46	25.99	54.61	55.39	67.54	***63.73***	**53.05**
Broward	33.74	***52.98***	67.95	63.59	35.11	50.40	55.58	66.28	***62.17***	**50.68**
Miami-Dade	36.53	***49.62***	67.13	63.94	30.68	48.83	52.37	62.03	***58.37***	**48.25**
Region	34.45	***52.75***	67.83	62.72	30.97	51.48	54.59	65.68	***61.73***	**50.79**
AM-Peak Period Splitting Factor of Total Peak Trips										
Palm Beach	0.5931	***0.5371***							***0.4257***	**0.5295**
Broward	0.5922	***0.5354***							***0.4029***	**0.5276**
Miami-Dade	0.6469	***0.5841***							***0.4562***	**0.5803**
Region	0.6102	***0.5515***							***0.4268***	**0.5449**

Note: Compiled from 1999 Southeast Florida Household Travel Characteristics Survey

Table H-2: **Time-of-Day Model Peak Hour Factors by Purpose and Region**
Southeast Regional Planning Model VI

County/Region	Trip Frequency (in percent)									
	(1) Home Based Work	*Home Based Non-Work*	(2) Home Based Shopping	(3) Home Based Social Recreation	(4) Home Based School	(5) Home Based Other	(6) Non Home Based Work	(7) Non Home Based Other	*Non Home Based*	**All Purpose**
AM-Peak Hour (7:30-8:30AM)										
Palm Beach	17.56	***10.37***	2.88	4.37	27.89	11.32	12.41	4.70	***7.11***	**10.90**
Broward	16.66	***11.81***	2.73	4.62	26.12	12.08	9.51	5.80	***7.23***	**11.80**
Miami-Dade	17.65	***14.29***	2.43	4.41	28.38	14.16	12.59	6.78	***8.98***	**13.94**
Region	17.26	***12.02***	2.71	4.46	27.47	12.41	11.36	5.62	***7.66***	**12.13**
MIDDAY-Peak Hour (2:30-3:30PM)										
Palm Beach	4.28	***8.02***	8.49	8.23	11.02	6.73	7.38	8.76	***8.32***	**7.36**
Broward	4.86	***7.40***	7.79	5.16	12.75	5.59	5.58	8.12	***7.15***	**6.71**
Miami-Dade	4.31	***8.05***	5.44	5.03	13.96	6.63	8.39	10.17	***9.50***	**7.42**
Region	4.50	***7.82***	7.41	6.49	12.76	6.32	6.99	8.91	***8.23***	**7.15**
PM-Peak Hour (5:00PM-6:00PM)										
Palm Beach	13.54	***7.01***	6.80	7.50	6.12	7.20	9.25	5.45	***6.63***	**8.20**
Broward	12.35	***8.09***	9.10	8.83	4.70	8.88	10.74	6.97	***8.41***	**9.22**
Miami-Dade	9.81	***7.45***	11.35	9.01	3.88	7.31	10.83	6.95	***8.42***	**8.29**
Region	11.86	***7.50***	8.81	8.29	4.76	7.80	10.27	6.34	***7.74***	**8.58**
Night-Peak Hour (6:30-7:30PM)										
Palm Beach	3.52	***5.91***	6.08	7.92	1.22	6.47	1.17	4.43	***3.41***	**4.75**
Broward	3.47	***6.26***	8.90	11.55	0.94	5.59	2.17	4.45	***3.57***	**4.88**
Miami-Dade	3.99	***4.87***	7.41	10.27	0.92	4.61	3.11	4.14	***3.75***	**4.38**
Region	3.66	***5.72***	7.35	9.66	1.01	5.62	2.11	4.36	***3.56***	**4.69**

Table H-2 (Continued)

County/Region	Trip Frequency (in percent)									
	(1) Home Based Work	***Home Based Non-Work***	(2) Home Based Shopping	(3) Home Based Social Recreation	(4) Home Based School	(5) Home Based Other	(6) Non Home Based Work	(7) Non Home Based Other	***Non Home Based***	**All Purpose**
(AM & PM)-Peak "Period" Hour										
Palm Beach	Same as AM Peak Hour									
Broward										
Miami-Dade										
Region										
Off-Peak (Midday & Night) "Period" Hour										
Palm Beach	Same as MIDDAY Hour									
Broward										
Miami-Dade										
Region										

Note: Compiled from 1999 Southeast Florida Household Travel Characteristics Survey

Table H-3: **HBW P-to-A and A-to-P Factors of Highway Trips**
Southeast Regional Planning Model VI

	ALL Counties		Palm Beach		Broward		Miami-Dade	
Period or Hour	HBW-PA	HBW-AP	HBW-PA	HBW-AP	HBW-PA	HBW-AP	HBW-PA	HBW-AP
P-to-A and A-to-P Factors (in percent) for Different Periods								
AM-Peak Period (6:30-9:30AM)	97.83	2.17	97.54	2.46	97.91	2.09	97.99	2.01
MIDDAY Period (9:30AM-3:30PM)	53.53	46.47	51.32	48.68	53.77	46.23	55.29	44.71
PM-Peak Period (3:30-6:30PM)	9.66	90.34	8.61	91.39	8.84	91.16	11.94	88.06
NIGHT Period (6:30PM-6:30AM)	46.93	53.07	46.62	53.38	43.56	56.44	50.67	49.33
PEAK Period (6:30-9:30AM, 3:30-6:30PM)	63.35	36.65	61.21	38.79	61.75	38.25	67.33	32.67
OFF-PEAK Period (9:30AM-3:30PM, 6:30PM-6:30AM)	50.30	49.70	49.14	50.86	48.64	51.36	52.99	47.01
P-to-A and A-to-P Factors (in percent) for Peak Hours								
AM-Peak Hour (7:30-8:30AM)	98.08	1.92	97.67	2.33	98.44	1.56	98.08	1.92
PM-Peak Hour (5:00-6:00PM)	6.32	93.68	5.99	94.01	6.97	93.03	5.85	94.15

Note: Compiled from the 1999 South Florida Household Travel Characteristics Survey

Table H-4: **HBNW P-to-A and A-to-P Factors of Highway Trips**
Southeast Regional Planning Model VI

	ALL Counties		Palm Beach		Broward		Miami-Dade	
Period or Hour	HBNW-PA	HBNW-AP	HBNW-PA	HBNW-AP	HBNW-PA	HBNW-AP	HBNW-PA	HBNW-AP
P-to-A and A-to-P Factors (in percent) for Different Periods								
AM-Peak Period (6:30-9:30AM)	89.00	11.00	87.28	12.72	88.67	11.33	91.20	8.80
MIDDAY Period (9:30AM-3:30PM)	51.68	48.32	51.10	48.90	49.76	50.24	54.94	45.06
PM-Peak Period (3:30-6:30PM)	40.78	59.22	38.77	61.23	41.04	58.96	42.96	57.04
NIGHT Period (6:30PM-6:30AM)	39.76	60.24	39.98	60.02	37.51	62.49	42.20	57.80
PEAK Period (6:30-9:30AM, 3:30-6:30PM)	66.30	33.70	64.00	36.00	65.65	34.35	69.63	30.37
OFF-PEAK Period (9:30AM-3:30PM, 6:30PM-6:30AM)	47.51	52.49	47.56	52.44	45.27	54.73	50.18	49.82
P-to-A and A-to-P Factors (in percent) for Peak Hours								
AM-Peak Hour (7:30-8:30AM)	88.76	11.24	86.50	13.50	87.65	12.35	91.94	8.06
PM-Peak Hour (5:00-6:00PM)	38.55	61.45	39.94	60.06	35.23	64.77	40.91	59.09

Note: Compiled from the 1999 South Florida Household Travel Characteristics Survey

Table H-5: **Traffic Count Distribution and Overall CONFAC Values by Model Period**
Southeast Regional Planning Model VI

Period/Hour	Palm Beach Co	Broward Co	Miami-Dade Co	ALL Counties
TOD "Period" Traffic Distribution (in percent)				
AMPK Period (6:30-9:30AM)	18.28	18.87	18.03	18.47
MD Period (9:30AM-3:30PM)	35.76	34.68	34.58	35.08
PMPK Period (3:30-6:30PM)	21.89	22.59	20.06	21.82
NT Period (6:30PM-6:30 AM)	24.08	23.86	27.33	24.63
(AM & PM)-Peak Period [6:30-9:30AM,3:30-6:30PM]	40.16	41.46	38.09	40.29
Off-Peak Period [9:30AM-3:30PM,6:30PM-6:30AM]	59.84	58.54	61.91	59.71
TOD "Peak-Hour" Traffic Distribution (in percent)				
AMPK Hour (7:30-8:30AM)	7.16	7.48	6.42	7.15
MD PKHR (2:30-3:30PM)	6.51	6.52	6.25	6.46
PMPK Hour (5:00-6:00PM)	7.83	8.19	6.83	7.78
NT PKHR (6:30-7:30PM)	5.21	5.80	5.61	5.54
TOD Model CONFAC Values				
AMPK Period (6:30-9:30AM)	0.3919	0.3965	0.3561	0.3870
MD Period (9:30AM-3:30PM)	0.1821	0.1880	0.1809	0.1843
PMPK Period (3:30-6:30PM)	0.3578	0.3624	0.3404	0.3566
NT Period (6:30PM-6:30 AM)	0.2164	0.2431	0.2052	0.2247
(AM & PM)-Peak Period [6:30-9:30AM,3:30-6:30PM]	0.1950	0.1975	0.1792	0.1931
Off-Peak Period [9:30AM-3:30PM,6:30PM-6:30AM]	0.1088	0.1113	0.1010	0.1083
All Periods - "24-Hour" Model	0.0783	0.0819	0.0683	0.07781

Note: Based on Analysis of 15-min Period Count Data (Year 2000).

Table H-6: **A Derivation of Weighted Off-Peak Hours Overall CONFAC**
Southeast Regional Planning Model VI

Hours		SrvyTrp%	Cnts%	Cfacs_OfHrs	Cfacs_OfHrs*SrvyTrp%
1	11:30 PM-12:30 AM	0.33065	1.32715	0.022227	0.0073496
2	12:30-1:30 AM	0.16355	0.78300	0.013114	0.0021448
3	1:30-2:30 AM	0.09955	0.54566	0.009139	0.0009098
4	2:30-3:30 AM	0.07111	0.44914	0.007522	0.0005349
5	3:30-4:30 AM	0.14577	0.49424	0.008278	0.0012067
6	4:30-5:30 AM	0.40532	0.82545	0.013825	0.0056035
7	5:30-6:30 AM	1.75994	2.16112	0.036195	0.0637011
8	9:30 AM-10:30 AM	5.09493	5.31168	0.088962	0.4532529
9	10:30 AM -11:30 AM	5.00249	5.40818	0.090578	0.4531142
10	11:30-12:30 PM	5.96957	5.86268	0.098190	0.5861509
11	12:30-1:30 PM	5.74557	5.99108	0.100340	0.5765129
12	1:30-2:30 PM	6.23978	6.04058	0.101169	0.6312740
13	**2:30-3:30 PM**	**7.15352**	**6.46348**	**0.108252**	0.7743854
14	**6:30-7:30 PM**	**4.68606**	**5.53510**	**0.092703**	0.4344132
15	7:30-8:30 PM	3.29233	4.16120	0.069693	0.2294519
16	8:30-9:30 PM	2.15815	3.46669	0.058061	0.1253045
17	9:30-10:30 PM	1.67816	2.84423	0.047636	0.0799408
18	10:30-11:30 PM	0.79642	2.03694	0.034115	0.0271700
	Off-Peak Hours (9:30AM-3:30PM, 6:30PM-6:30AM) Sum =>	50.79286	59.70759		4.4524210
	WEIGHTED Off-Peak Confacs (Wt. By SrvyTrps):				**0.08766**
				Simple Ave:	**0.05556**

Table H-7: **Summary Statistics of CONFACS by Facility Type and Model Period**
Southeast Regional Planning Model VI

(1) 24-Hour Period:

FTC2	N	**Mean**	Std. Deviation	Std. Error of Mean	95% Confidence Interval Lower Limit	95% Confidence Interval Upper Limit	Minimum	Maximum	Range	Variance	Median
11	197	0.06976	0.00870	0.00062	0.06855	0.07098	0.05056	0.10126	0.05070	7.561E-05	0.06877
21	252	0.08534	0.01040	0.00066	0.08406	0.08663	0.04438	0.12885	0.08447	1.082E-04	0.08555
41	7,915	0.08392	0.01114	0.00013	0.08368	0.08417	0.04042	0.16031	0.11989	1.242E-04	0.08404
61	1,254	0.08609	0.01254	0.00035	0.08540	0.08678	0.05101	0.16257	0.11156	1.572E-04	0.08576
71	3	0.07536	0.00597	0.00345	0.06860	0.08212	0.06847	0.07901	0.01054	3.565E-05	0.07860
81	36	0.06809	0.00513	0.00085	0.06641	0.06976	0.04988	0.07711	0.02723	2.628E-05	0.06868
91	10	0.07266	0.00592	0.00187	0.06899	0.07632	0.06547	0.08267	0.01720	3.503E-05	0.07208
Total	**9,667**	**0.08388**	**0.01151**	**0.00012**	**0.08365**	**0.08411**	**0.04042**	**0.16257**	**0.12215**	**1.324E-04**	**0.08401**

(2) AM-Peak Period:

FTC2	N	**Mean**	Std. Deviation	Std. Error of Mean	95% Confidence Interval Lower Limit	95% Confidence Interval Upper Limit	Minimum	Maximum	Range	Variance	Median
11	197	0.35477	0.02224	0.00158	0.35167	0.35788	0.25776	0.44421	0.18645	4.948E-04	0.35522
21	252	0.38255	0.03632	0.00229	0.37807	0.38703	0.23765	0.49907	0.26142	1.319E-03	0.38327
41	8,095	0.39546	0.03371	0.00037	0.39472	0.39619	0.18617	0.49944	0.31327	1.136E-03	0.39641
61	1,278	0.40405	0.03780	0.00106	0.40198	0.40612	0.21522	0.49861	0.28339	1.429E-03	0.40370
71	3	0.37548	0.00878	0.00507	0.36554	0.38542	0.36550	0.38204	0.01654	7.717E-05	0.37890
81	36	0.36163	0.01033	0.00172	0.35826	0.36500	0.33398	0.38260	0.04862	1.067E-04	0.36161
91	10	0.37418	0.01218	0.00385	0.36664	0.38173	0.35345	0.39096	0.03751	1.483E-04	0.37572
Total	**9,871**	**0.39528**	**0.03482**	**0.00035**	**0.39459**	**0.39596**	**0.18617**	**0.49944**	**0.31327**	**1.212E-03**	**0.39614**

Table H-7 (Continued)

(3) PM-Peak Period:

FTC2	N	Mean	Std. Deviation	Std. Error of Mean	95% Confidence Interval Lower Limit	95% Confidence Interval Upper Limit	Minimum	Maximum	Range	Variance	Median
11	197	0.34265	0.01456	0.00104	0.34062	0.34469	0.31048	0.38006	0.06958	2.120E-04	0.34052
21	252	0.36064	0.02107	0.00133	0.35804	0.36324	0.25474	0.43188	0.17714	4.439E-04	0.36246
41	8,124	0.36106	0.02642	0.00029	0.36049	0.36164	0.05556	0.49335	0.43779	6.982E-04	0.36120
61	1,310	0.36521	0.03323	0.00092	0.36341	0.36701	0.15094	0.50000	0.34906	1.104E-03	0.36545
71	3	0.37311	0.01655	0.00955	0.35439	0.39183	0.35405	0.38377	0.02972	2.737E-04	0.38151
81	36	0.33472	0.01161	0.00194	0.33092	0.33851	0.29729	0.35697	0.05968	1.348E-04	0.33640
91	10	0.33976	0.01892	0.00598	0.32804	0.35149	0.30211	0.36965	0.06754	3.578E-04	0.33952
Total	**9,932**	**0.36112**	**0.02729**	**0.00027**	**0.36058**	**0.36166**	**0.05556**	**0.50000**	**0.44444**	**7.448E-04**	**0.36120**

(4) Off-Peak Period:

FTC2	N	Mean	Std. Deviation	Std. Error of Mean	95% Confidence Interval Lower Limit	95% Confidence Interval Upper Limit	Minimum	Maximum	Range	Variance	Median
11	195	0.10224	0.00785	0.00056	0.10114	0.10334	0.08198	0.14530	0.06332	6.166E-05	0.10286
21	252	0.11784	0.02003	0.00126	0.11537	0.12031	0.07742	0.29556	0.21814	4.012E-04	0.11476
41	7,909	0.11632	0.01557	0.00018	0.11597	0.11666	0.05390	0.34730	0.29340	2.423E-04	0.11493
61	1,252	0.11887	0.01795	0.00051	0.11788	0.11986	0.05514	0.21165	0.15651	3.224E-04	0.11695
71	3	0.09339	0.00448	0.00258	0.08833	0.09846	0.08916	0.09808	0.00892	2.005E-05	0.09294
81	36	0.10418	0.00428	0.00071	0.10278	0.10558	0.09206	0.11183	0.01977	1.832E-05	0.10455
91	9	0.11271	0.01089	0.00363	0.10559	0.11983	0.10219	0.13765	0.03546	1.186E-04	0.11018
Total	**9,656**	**0.11635**	**0.01605**	**0.00016**	**0.11603**	**0.11667**	**0.05390**	**0.34730**	**0.29340**	**2.577E-04**	**0.11482**

Table H-8: **Truck Traffic Time-of-Day Model Period Factors by Purpose**
Southeast Regional Planning Model VI

County/Region	Truck Traffic Frequency (in percent)				
	Cars	(9) Four-Tired Trucks	(10) Single-Unit Trucks	(11) Combination Trucks	All 13 Classification Categories
AM-Peak Period [6:30-9:30AM] ==> 3 Hours					
Palm Beach	18.02	19.59	20.19	17.95	18.28
Broward	18.12	20.39	30.85	17.54	18.71
Miami-Dade	17.80	18.14	19.72	19.98	17.96
Region	17.88	18.76	24.76	17.74	18.24
Off-Peak/MIDDAY Period [9:30AM-3:30PM] ==> 6 Hours					
Palm Beach	36.86	40.15	44.78	39.78	37.61
Broward	34.34	36.22	25.91	36.05	34.81
Miami-Dade	33.06	37.75	41.43	37.29	34.02
Region	33.73	37.71	34.69	36.20	34.61
PM-Peak Period [3:30-6:30PM] ==> 3 Hours					
Palm Beach	22.12	21.31	18.19	17.26	21.75
Broward	21.21	21.21	32.78	19.74	21.15
Miami-Dade	19.84	18.69	18.60	21.10	19.69
Region	20.35	19.50	24.95	19.81	20.36
Off-Peak/Night Period [6:30PM-6:30AM] ==> 12 Hours					
Palm Beach	23.00	18.95	16.85	25.00	22.36
Broward	26.33	22.18	10.45	26.67	25.32
Miami-Dade	29.30	25.42	20.24	21.62	28.33
Region	28.05	24.04	15.59	26.25	26.79
(AM & PM)-Peak Period [6:30-9:30AM,3:30-6:30PM] ==> 6 Hours					
Palm Beach	40.14	40.91	38.38	35.21	40.03
Broward	39.33	41.60	63.64	37.28	39.87
Miami-Dade	37.63	36.83	38.33	41.09	37.65
Region	38.23	38.25	49.72	37.55	38.60
Off-Peak Period [9:30AM-3:30PM,6:30PM-6:30AM] ==> 18 Hours					
Palm Beach	59.86	59.09	61.62	64.79	59.97
Broward	60.67	58.40	36.36	62.72	60.13
Miami-Dade	62.37	63.17	61.67	58.91	62.35
Region	61.77	61.75	50.28	62.45	61.40

Note: Compiled from Year 2000 Truck Traffic Classification Counts

Table H-9: **Truck Traffic Time-of-Day Model Peak-Hour Factors by Purpose**
Southeast Regional Planning Model VI

County/Region	Truck Traffic Frequency (in percent)				
	Cars	(9) Four-Tired Trucks	(10) Single-Unit Trucks	(11) Combination Trucks	All 13 Classification Categories
AM-Peak Hour [7:30-8:30AM]					
Palm Beach	6.89	6.97	6.99	6.35	6.89
Broward	6.99	8.00	16.14	5.54	6.87
Miami-Dade	6.45	6.12	6.91	7.50	6.45
Region	6.60	6.60	11.06	5.71	6.63
MIDDAY-Peak Hour [2:30-3:30PM]					
Palm Beach	6.75	7.42	7.79	6.61	6.86
Broward	6.20	6.55	5.33	6.78	6.46
Miami-Dade	5.93	6.51	7.14	6.71	6.06
Region	6.07	6.62	6.37	6.77	6.26
PM-Peak Hour [5:00-6:00PM]					
Palm Beach	7.88	6.95	5.57	5.72	7.63
Broward	7.68	7.55	15.43	6.11	7.35
Miami-Dade	6.82	5.96	5.91	7.27	6.69
Region	7.09	6.39	10.17	6.20	6.99
Night Peak-Hour [6:30-7:30PM]					
Palm Beach	5.51	4.58	3.59	3.53	5.27
Broward	5.61	4.61	2.31	5.34	5.22
Miami-Dade	5.72	4.93	4.17	4.79	5.55
Region	5.68	4.82	3.29	5.27	5.41
(AM & PM)-Peak "Period" Hour					
Palm Beach	Same as PM Peak Hour				
Broward					
Miami-Dade					
Region					
Off-Peak (Midday & Night) "Period" Hour					
Palm Beach	Same as MIDDAY Peak Hour				
Broward					
Miami-Dade					
Region					

Note: Compiled from Year 2000 Truck Traffic Classification Counts

Appendix I

ARCVIEW Based PCWALK Routine

ARCVIEW-BASED PERCENT WALK ROUTINE FOR THE SOUTHEAST FLORIDA NESTED LOGIT MODELS

(Dated: December, 2006)

I.1 OVERVIEW

The nested logit models used in Southeast Florida require for each TAZ an estimate of the percentage of trips that can walk to transit. Two estimates are needed: a "long walk," generally estimated as one mile, and a "short walk," generally estimated as 1/3 mile. Additionally, the nested logit model requires estimates of long and short walk percentages for productions and attractions. The traditional method has been to estimate the production TAZ walk percentage as the percentage of a TAZ's area inside a walk buffer drawn about the transit routes. An alternative method is to build buffers around bus stops. A common assumption has been to assume that attractions are more concentrated near transit service, and thus, the attraction walk percentage is twice the production percentage, capped at 100%. The method presented does not address the correctness of this method. There are a host of assumptions here, and that there may be better ways of estimating walk percentage, such as the "modified network ratio" method, but data and software for that method are not generally available.

Nevertheless, practitioners using the nested logit model need a manageable method for generating the PCWALK input file. The Corradino Group initially developed a PC-ARCINFO procedure for generating the PCWALK file, and this procedure is well documented in reports prepared for the Florida Department of Transportation. There were a few problems with the PC-ARCINFO procedure, however. Some agencies and consultants did not have access to ARCINFO, and some had access only to the workstation version. The Corradino Group has not tested the PCWALK procedure with workstation ARCINFO. Additionally, it was Corradino's experience that often the PC-ARCINFO buffer and overlay procedures would fail. The remedy was to "tweak" the ARCINFO tolerances. While this usually, worked, the procedure was not clean and straightforward.

To create a better and more reliable procedure, Corradino developed a procedure based on ArcView 3.2. The process was then further modified to address the changes to input files from the Cube-Voyager model. This paper documents the use of this procedure. It requires a Fortran program (CVLIN2AV) and the "CVWALK.APR" ArcView project.

I.2 SUMMARY

The Southeast Florida Regional Planning Model (SERPM) uses a nested logit model to subdivide the person trip tables among travel modes. One of the inputs of this model is a file specifying for each traffic analysis zone (TAZ):

- TAZ number
- Short walk percentage for peak period productions
- Short walk percentage for peak period attractions
- Long walk percentage for peak period productions
- Long walk percentage for peak period attractions
- Short walk percentage for midday productions
- Short walk percentage for midday attractions
- Long walk percentage for midday productions
- Long walk percentage for midday attractions

The idea behind the need for this file is that the mode choice logit equation should be applied only when there is a choice that can be estimated by the logit curve. If, for a given trip, either the origin or destination of a walk access trip is not within walking distance of transit service, then the trip cannot be a walk-to-transit

trip and so the logit equation does not apply. In such cases the choice of modes is determined by the access conditions alone. The authors of Florida's nested logit model have defined the long walk distance to be one mile, and the short walk distance to be one-third of a mile. These distances apply to the production end (home) of trips. For the attraction end, the percentage of activity within the walk area is assumed to be twice that of the production end on the assertion that trip attraction activities (like jobs and shopping) are more clustered, and that bus stops serve these areas directly.

Within the usual concept of transportation modeling input data, the idea of "percent walk" creates a dilemma, because it creates a set of zonal data that is dependent on the configuration of the transit network. This means that the percent walk zonal data should change if significant changes are made to the transit network service area. This situation occurred in SERPM4 when the 1990 Palm Beach and Broward transit networks were used. The percent walk files already existed for Dade County, which was already using the nested logit model, but did not exist for Broward and Palm Beach Counties. Thus, the consultant was faced with the challenge of developing these files.

I.3 METHOD

GIS spatial analysis techniques were employed to estimate the percentage walk file for Florida models using the nested logit model. The GIS software used was ArcView 3.3. There is no practical limit on the number of TAZs the procedure can handle.

This section outlines the steps used to develop the percent walk file. While this section provides a complete explanation of the process, it assumes the reader is familiar with ArcView, and GIS spatial analysis concepts.

I.3.1 DIGITIZED TAZ MAPS

TAZ maps in the same coordinate system as the networks are required to run the procedure. Coordinates must be expressed in state plane feet (not degrees). The TAZ maps can be either an ArcView shape file or ArcInfo coverage. The TAZs must have numerical fields called "area" with the polygon area, and "name" with the TAZ number. The TAZ polygons **should not** contain water area or other large non-developed areas. The ArcView shape file "FTAB" must be in ascending sort by the "name" field. If it is not, the PCWALK.OUT file will have to be sorted by TAZ before the nested logit model can use it.

I.3.2 TRANSIT MAPS

Station nodes and transit lines must be imported into ArcView as shape files. The consultant wrote a FORTRAN program, called CVLIN2AV that reads the model files, and writes files that can be read by ArcView to create shape files. CVLIN2AV is executed by the ArcView routine. The required input files are:

- Transit Route file (TROUTE_{YEAR}{ALT})
- Highway links (ILINKS2.TXT), a file written from CV based network
- Highway coordinates (IXY2.TXT), a file written from CV based network
- Station data (STATDATA_{YEAR}{ALT}.DAT), a file written from CV based network
- Control files read from the command line (AM.IN and MD.IN)

Input file names are specified in the control file read from the command line, and the transit modes and highway facility types that have transit walk access are specified in this file. For use with the ArcView buffering application, the control files must be named AM.IN and MD.IN. A listing of the input file is:

```
** Buffering links, not nodes                                {Comment}
** Buffering FT2=2x,3x(not really present),4x,6x             {Comment}
** Buffering modes 4,5,6,10,11,12,13                         {Comment}
&files fhud='ixy2.txt',flink='ilinks2.txt',fxy='newxy.dum',
       finet='TROUTE_30R.LIN',
       fsi='STATION_30R.DAT' /
&param perd='am',
       tmode=0,0,0,1,1,1,0,0,0,1,1,1,1
       tft= 0,1,1,1,0,1,0,0,0
       stops='F' /
```

The input is in Fortran namelist format with data as follows:

fhud = the coordinate (IXY2.TXT file) output by a CV script (see listing at the end)

flink = selected link attributes of CV highway network output by a CV script (see listing at the end)

fxy = transit coordinates not in the highway net

fsi = the station data file

finet = the Public Transport (PT) route card file

tmode = array of transit modes with walk access, 0=no access (e.g., can't walk to rail lines, only to stations), 1=access permitted

tft = array of valid walk access facility types (one-digit FTYPE), 0= no walk access, 1=walk access available (e.g. can't walk to a bus running on a freeway)

perd = 'AM' or 'MD'

stops = 'T' or 'F'

Thus, the three coverages (stations, AM lines, and midday lines) are created as ArcView shape files. CVLIN2AV must be run twice, once for AM and MD files. All output files are written to a single directory. The station coverage is generated by the AM run. Error files are output: AM.ERR for the AM period and MD.ERR for the MD period.

The program offers a choice of methods for generating the AM and MD route service areas (buffers). The traditional procedure is to draw buffers about the route lines. An alternative method is to draw circular buffers about stops – the nodes coded with a negative sign, indicating a bus stop. If the routes have been coded carefully, accurately noting which transit nodes are stops, the "stops" method (STOPS='T') is the preferred method because it more accurately represents the walk access area and will reflect the frequency of stops on the route. The model should ALWAYS be run the way it was calibrated. If the mode choice constants are calibrated with STOPS='F', always run it this way, because of the very different way the PCWALK file is generated. If STOPS='F', the output files are (buffers around lines):

- TNETAM.LIN for the AM period
- TNETMD.LIN for the MD period
- STATS.PTS for the AM period only.

If STOPS='T', the files are (buffers around bus stops):

- STOPAM.PTS for the AM period
- STOPMD.PTS for the MD period
- STATS.PTS for the AM period only.

As explained later, the ArcView file open dialog will ask you to specify the route coverage. If STOPS='F', you must select TNETAM.LIN. If STOPS='T', you must select STOPAM.PTS. This is a critical point.

It is also worth noting that when STOPS='T', ArcView routine takes much more processing time than the STOPS='F' option – on the order as two to three times as long.

The "Get Transit Net" button, which is the left button in the group of two in the CVWALK.APR ArcView application, runs CVLIN2AV and causes ArcView to read the output files.

The ArcView script will prompt you for the location of TNETAM.LIN or STOPAM.PTS and the location of the TAZ shape file. Again, if you specified STOPS='F', choose TNETAM.LIN. If you specified STOPS='T', choose STOPAM.PTS. Please remember that the TAZ file must have a numeric field called "name," which contains the zone number, and "area," which is the area of the TAZ.

I.3.3 CALCULATION OF PERCENTAGE WALK BY TAZ

To calculate percentage walk, the following must be accomplished:

- Construct station buffers
- Construct buffers around the routes or stops
- Merge station and route buffers
- Clip (overlay) the TAZs with the walk buffers to make PCWALK buffers
- Update the "area" field in the PCWALK buffers
- Summarize the data
- Write the PCWALK.OUT file

All of these tasks can be accomplished with one click of the right button from CVWALK.APR. Again, the ArcView script will prompt you for the location of TNETAM.LIN or STOPAM.PTS. Buffers will be created, and the intersection of the zones and buffers will be created for AMLONG, AMSHORT, MDLONG, and MDSHORT walk areas.

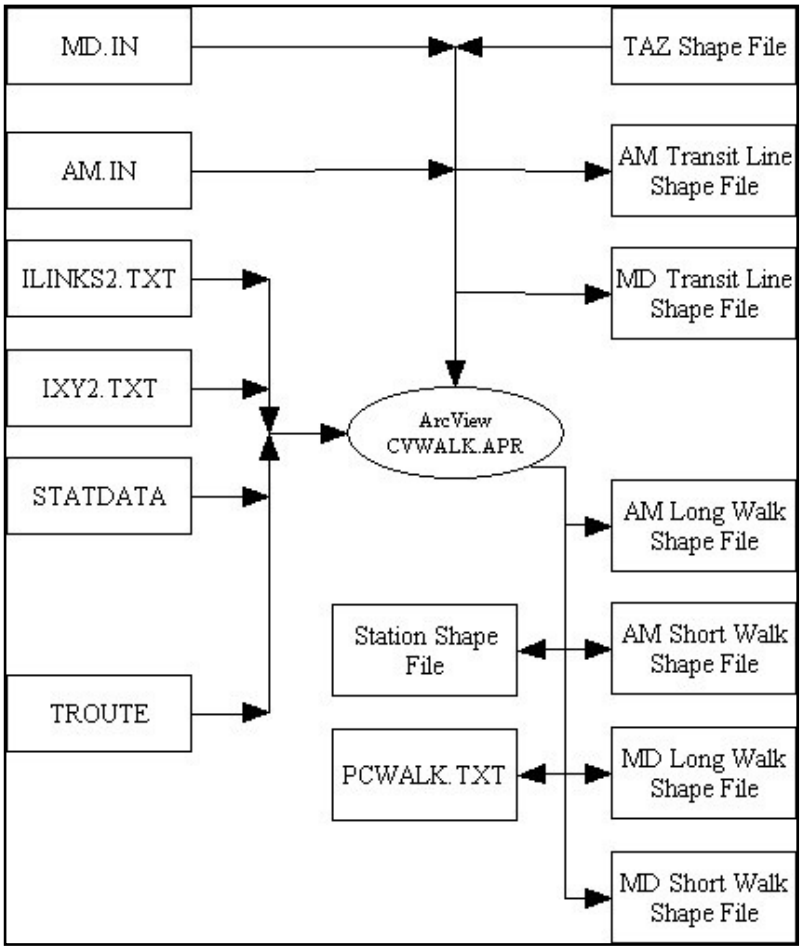
The ArcView routine will ask you to locate the CVLIN2AV.EXE file, the TNETAM.LIN or STOPAM.PTS file, and the TAZ shape file. You should keep CVWALK.APR, CVLIN2AV.EXE, AM.IN, MD.IN, and the other input data files in one single directory. The TAZ shape file can be located elsewhere. You also must enter the number of internal TAZs in your models, when prompted by the ArcView application.

I.3.4 APPLICATION STEPS

The steps for developing the PCWALK file are as follows:

1. Prepare the appropriate AM.IN and MD.IN files (samples follow).
2. Make sure you have run the Cube voyager scripts to create ILINKS2.TXT and IXY2.TXT files from the Cube-Voyager network.
3. Double-click the CVWALK.APR icon to start ArcView.
4. Click the left button and respond to the file open dialogs to point to CVLIN2AV.EXE, the TNETAM.LIN or STOPAM.PTS file and the TAZ file. It is important to NOT change the order of the themes. The TAZ theme should be listed first (top).
5. After the first ArcView routine completes, click the right button to build the buffer files.
6. Enter the number of internal TAZs when prompted. This is important because it makes sure that the routine creates one PCWALK record for every TAZ in your system.
7. When the ArcView routine is finished, and you've reviewed the walk buffers to make sure they appear reasonable, leave ArcView.
8. Rename PCWALK.OUT as appropriate, generally PCWALK.&ya. If the TAZ zone shape file was not in sort by "NAME," this file will have to be sorted.

The use of these procedures requires ArcView 3.2, CVLIN2AV.EXE, CVWALK.APR and the input data files. The routine was developed using ArcView 3.2a. Versions 3.1 and 3.2 should work, but were not tested.



SAMPLE INPUT FILES

These example input files are set up to build buffers around transit lines. If you want to build buffers around bus stops, set stops='T'.

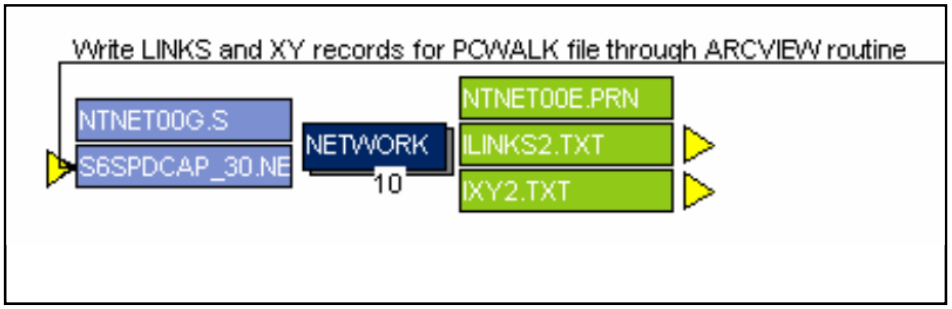
AM.IN:

```
** Buffering links, not nodes
** Buffering FT2=2x,3x(not really present),4x,6x
** Buffering modes 4,5,6,10,11,12,13
&files fhud='ixy2.txt',flink='ilinks2.txt',fxy='newxy.dum',
       finet='TROUTE_30R.LIN',
       fsi='STATION_30R.DAT' /
&param perd='am',
       tmode=0,0,0,1,1,1,0,0,0,1,1,1,1
       tft= 0,1,1,1,0,1,0,0,0
       stops='F' /
```

MD.IN:

```
** Buffering links, not nodes
** Buffering FT2=2x,3x(not really present),4x,6x
** Buffering modes 4,5,6,10,11,12,13
&files fhud='ixy2.txt',flink='ilinks2.txt',fxy='newxy.dum',
       finet='TROUTE_30R.LIN',
       fsi='STATION_30R.DAT' /
&param perd='md',
       tmode=0,0,0,1,1,1,0,0,0,1,1,1,1
       tft= 0,1,1,1,0,1,0,0,0
       stops='F' /
```

CV Scripts to create ILINKS2.TXT & IXY2.TXT Files



NTNET00G.S

```
; Do not change filenames or add or remove FILEI/FILEO statements using an editor. Use
Cube/Application Manager.
RUN PGM=NETWORK PRNFILE="E:\FSUTMS\D4\S6TRNBUILD\CUBE\NTNET00E.PRN" MSG='Write LINKS and XY records
for PCWALK file through ARCVIEW routine'
FILEO PRINTO[2] = "{OUTDIR}\TEMFILES\IXY2.TXT"
FILEO PRINTO[1] = "{OUTDIR}\TEMFILES\ILINKS2.TXT"
FILEI LINKI[1] = "{OUTDIR}\S6SPDCAP_{Year}.NET"


Phase=NodeMerge
  print CSV=T list=n(6.0),x(9.0),y(9.0),SECTIONID(4.0) PRINTO=2
endphase

Phase=LinkMerge
  _AT=int(AREA_TYPE/1)
  _FT=int(FTC2/10)

;if(_FT<>0)
;  if(a.SECTIONID<>0)
;    print CSV=T list=a(6.0),'EX'(2.0c),B(6.0),NUM_LANES(2.0),_AT(2.0),_FT(2.0) PRINTO=1
;  endif
;-sks 'EX' & 'AP' are related to Junction Modeling of signal approach (AP) and Exit (EX) links
;  if(b.SECTIONID<>0)
;    print CSV=T list=b(6.0),'AP'(2.0c),a(6.0),NUM_LANES(2.0),_AT(2.0),_FT(2.0) PRINTO=1
;  endif
;endif


;EX/AP are not needed and are used as XX, just for space holder
if(_FT<>0)
    print CSV=T list=a(6.0),'XX'(2.0c),B(6.0),NUM_LANES(2.0),_AT(2.0),_FT(2.0) PRINTO=1
endif


endphase

PHASE=SUMMARY
endphase


ENDRUN
```

Listing of CVLIN2AV.FOR

```
c ---------------------------------------------
c  To parse the transit/bus line in SE Florida
c  Written  by KDK on
c  Modified by GCY on February 22, 1996
c  Write a file for ARcView Import -- KDK 3/1/99
c ----------------------------------------------
      program net2av
      integer*4 narg
      character*80 buf
      parameter (nmax=50000)
      integer i,j,xseq,nn,mode,t,k,aa,bb,sta
      integer x,y,kount,l,m,rg,c,a0,rl
      integer*2 a,b,ftype,nlist(400),n(400),line,ft,iz,istat,node
      real x1,x2,y1,y2,rx,ry,h,s
      character*32 fctl,fhud,flink,fout,ferr,fsi,fso,fxy,finet,id,fstp
      character*32 fltem
      integer*2 tmode(100),tft(100),period(2)
      character*2 perd
      logical exists,oneway
      integer headway(4),usera2,usera3,usera4,operator
      real xyspeed
      character*64 longname,name
      character*1 STOPS
      common /c1/ x(nmax)
      common /c2/ y(nmax)
      common /l1/ a(nmax)
      common /l2/ b(nmax)
      common /l4/ ftype(nmax)
      namelist /files/ fhud,flink,fsi,fxy,finet
      namelist /param/ tmode,tft,stops,perd
      namelist /lin/ mode,usera1,usera2,usera3,usera4,n,oneway,
     &               operator,headway,xyspeed,longname,name
c      namelist /lin/ m,l,n,oneway,id,h,rg,c,rl,s,period
c
c&LIN MODE= 4,NAME=M4L20PB,ONEWAY=F,
c  LONGNAME='RTE 91',
c       XYSPEED= 15,
c       USERA2=  4,
c       USERA3= 91,
c       USERA4=  1,
c       HEADWAY[1]= 30.0,
c       OPERATOR=  1,
c N=  9702,  9698, 11462,  9700,  9696,  5542,  9692, 11454, 11318,

c
      LOGICAL*1 ISSTOP(nmax),STP
c -----------------------------------
c INITIALIZE
c -----------------------------------
      perd='am'
      fsi='nul'
      fso='nul'
      kount=0
      xseq=1
      nn=0
      iz=0
      do 77 i=1,100
        tmode(i)= 0
        tft(i)  = 0
77    continue
      do 79 i=1,nmax
         isstop(i)=.false.
79    continue
c read namelist
      narg=NARGS()
      if(narg .ne. 2) then
        stop ' Put control file name on command line'
      endif
      call GETARG(1,fctl,istat)
      inquire(file=fctl,EXIST=exists)
      if(.not. exists) then
        write(*,63) fctl
```

```
63      format(1x,'Cannot find: ',a32)
        stop ' Put a valid control file name on the command line'
      endif
      open(7,file=fctl,status='old')
      read(7,files)
      write(*,files)
      read(7,param)
      write(*,772)
772   format(' TRANSIT MODES (1=true,0=false)')
      write(*,771) tmode
      write(*,773)
773   format(' ACCESSIBLE FACILITY TYPES (1=true,0=false)')
      write(*,771) tft
771   format(1x,40i1)
      close(7)

c .. set period
      if((perd .eq. 'am') .or. (perd .eq. 'AM')) then
         ferr='AM.ERR'
         fout='tnetam.lin'
         fstp='stopam.pts'
         fso='stat.pts'
         perd='am'
      else
         ferr='MD.ERR'
         fout='tnetmd.lin'
         fstp='stopmd.pts'
         perd='md'
      endif
      write(*,843) PERD
843   FORMAT(' PERIOD=',A2)

c ---------------
c   Translate CV line file to namelist.
c ---------------
      call namel(finet,perd)
c ---------------
      IF( (STOPS .EQ. 'T') .OR. (STOPS .EQ. 't') ) THEN
         STP=.TRUE.
      ELSE
         STP=.FALSE.
      ENDIF
      if(STP) then
           write(*,*) ' Writing stop nodes'
      else
           write(*,*) 'Writing transit lines'
      endif
c -----------------------------------
c OPEN FILES
c -----------------------------------
c     HUD TRANSIT NETWORK
      open(1,file= fhud)
C     UTPS HIGHWAY LINKS
c      open(4,file= flink)
      open(4,file= flink)
      IF(.NOT. STP) open(2,file= fout)
      open(9,file= ferr)
      if(STP) open(17,file=fstp)
c     HIGHWAY XY's
      open(5,file= fxy)
c     inet routes
      fltem='lines'//perd//'.tem'
      open(3,file=fltem, blocksize=4096)
c -----------------------------------
c BEGIN READ LOOP
c -----------------------------------
      write(*,*) 'Reading XYs'
5     read(5,500,end=598) node,rx,ry
      if(node .eq. 0) goto 5
      if(node .gt. nmax) then
         write(*,577) node,rx,ry
577      format(' **nmax exceeded: ',i6,2f9.0)
         pause
      endif
500   format(i6,2f9.0)
      x(node)=100.0*rx
```

```
      y(node)=100.0*ry
      goto 5
598   continue
      close(5)
c -----------------------------------
      write(*,*) 'Reading links'
4     read(4,200,end=199) a(xseq),b(xseq),ftype(xseq)
cdebug      write(*,*) a(xseq),b(xseq),ftype(xseq)
200   format(i6,4x,i6,8x,1i1)
      xseq = xseq + 1
      goto 4
199   continue
      close(4)
c -----------------------------------
c Read nodes
c -----------------------------------
      write(*,*) 'Reading nodes'
1     read(1,100,end=99) node,x(node),y(node)
100   format(i6,2(1x,i9))
      goto 1
99    continue
      rewind(1)
      write(*,*) 'Done reading nodes'
c -----------------------------------
c Read links
c -----------------------------------
      write(*,*) 'Processing lines'
      kount=0
2     continue
      do 131 i=1,400 ! -1 means end of node string
         n(i)=-1
         nlist(i)=-1
131   continue
      read(3,lin,end=599)
        if(perd .eq. 'am') then
          if(headway(1) .le. 0.01) goto 2
        else
          if(headway(2) .le. 0.01) goto 2
        endif
        m=mode
        l=usera3
        do 132 i=1,400
           if((n(i) .gt. 0).and.(STP)) then  ! write stop nodes
             sta=n(i)
             if(.not. isstop(sta)) then
                write(17,1201) sta,x(sta),y(sta)
                isstop(sta) = .true.
             endif
           endif
           if(n(i) .ne. -1) n(i)=abs(n(i))
132     continue
        nn=0
c -----------------------------------
c parse lines
c -----------------------------------
         do 50 i=1,400
           if(n(i) .ne. -1) then
             nn=nn+1
             if(nn .gt. 400) then
               write(*,593) m,l
593            format(' mode=',i2,' line=',i3,' Nodes exceeded 400')
               stop '******** FATAL ERROR *********'
             endif
             nlist(nn)=n(i)
           endif
50       continue
c
c ------- end of the line
c
           if( tmode(m) .ne. 0 ) then
c ..................................................................
            a0=0
            do 16 i = 1,nn-1
              aa=nlist(i)
              bb=nlist(i+1)
              if( (aa .ne. 0) .and. (bb .ne. 0)) then ! Skip reference lines
```

```
c ------------- find facility type
c               if not a highway link or fixed guideway mode
c               assume an arterial with ft=2
                ft=2
                do 18 j = 1,xseq
                  if((aa .eq. a(j)) .and. (bb .eq. b(j)) .or.
     &               (bb .eq. a(j)) .and. (aa .eq. b(j))) then
                        ft=ftype(j)
                        goto 19
                  endif
18              continue
c                write(9,846) aa,bb
846             format(' * ***link not found',2i6,' FT set to 2')
19              continue
                  x1=x(aa)
                  y1=y(aa)
                  x2=x(bb)
                  y2=y(bb)
                  if((x1.eq.0.0) .or. (y1.eq.0.0)) write(9,845) aa
                  if((x2.eq.0.0) .or. (y2.eq.0.0)) write(9,845) bb
845               format(' **** ERROR **** No Coordinates for: ',i6)
                if( tft(ft) .ne. 0 ) then
                  if(.not. STP) then
                    if(a0 .eq. 0) write(2,201) aa,x1,y1,m,l,ft
                    write(2,201) bb,x2,y2,m,l,ft
201                 format(i5,',',f10.0,',',f10.0,',',i6,',',i6',',i6)
                    a0=1
                  endif
                else
c                  write(9,477) m,l,ft
477               format(' WARNING: mode=',i2,' line=',i4,' ft=',i2)
                  if((a0 .ne. 0).and. (.not. STP)) write(2,202)
                  a0=0
                endif
              endif
16          continue
c ..............................................................
c           write END
            if(.not. STP) write(2,202)
           else
               write(9,727) l,m
727            format(' Line',i5,' is mode ',i5)
           endif
      goto 2
599   continue
      close(3)
      write(*,*) 'Done with lines'

c ------------------------------------
c END READ LOOP
c ------------------------------------
c write links
c ------------------------------------
202   format('END')
      if(.not. STP) write(2,204)
204   format('QUIT')
      IF(.NOT.STP) close(2)
      IF(.NOT.STP) write(*,*) 'Wrote links'
      close(9)
      if(STP) then
         write(17,204)
         close(17) ! STOP NODES
      endif
c ------------------------------------
c STATIONS
c ------------------------------------
      if( (fsi.ne.'nul') .and. (fso.ne.'nul') ) then
        open(11,file=fsi)
        open(12,file=fso)
c .. read station node and use flag, skip is use=0
88      read(11,1101,end=89) sta,iuse
1101    format(5x,i5,44x,i1)
        if(iuse .le. 0.001) goto 88
        write(12,1201) sta,x(sta),y(sta)
1201    format(i5,',',i10,',',i10)
        goto 88
```

```
89      continue
        write(12,204)
        close(11)
        close(12)
      else
        write(*,*) ' ... Skipping stations'
      endif
c -----------------------------------
c DONE
c -----------------------------------
      stop
      end
c +++++++++++++++++++++++++++++++++++++++++++++++++++
      subroutine namel(fi,perd)
c -- read a CV line file and reformat to name list
      integer*2 istat
      character*32 fi
      character*80 buf
      character*2 perd
      character*32 fltem
      fltem='lines'//perd//'.tem'
      open(18,file=fi)
      open(19,file=fltem)
      write(*,*) 'Translating to INET'
10    continue
      read(18,101,end=99) buf
101     format(a80)
        if(buf(1:4) .eq. 'LINE') buf(1:4)='&LIN'
        if(buf(1:5) .eq. ' LINE') buf(1:5)='&LIN '
        j=len(trim(buf))
        do 11 i=1,j
          if(buf(i:i) .eq. ';') buf(i:i)='/'
          if(buf(i:i) .eq. '[') buf(i:i)='('
          if(buf(i:i) .eq. ']') buf(i:i)=')'
11      continue
        write(19,101) buf
      goto 10
99    continue
      close(18)
      close(19)
      return
      end
```