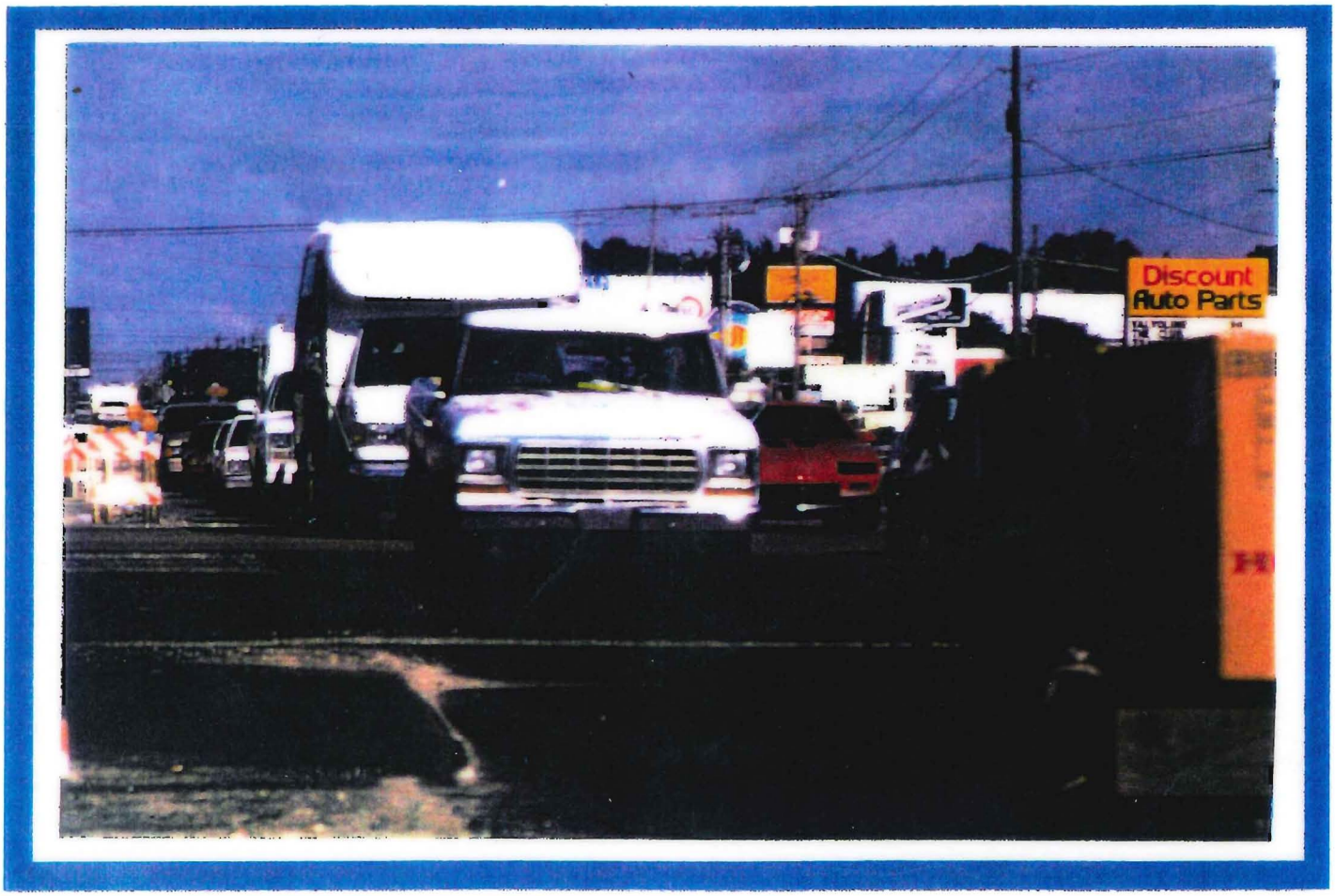
METRO-DADE

The Post Hurricane Short Range Transportation Study West Dade Area Task

Final Recommendations



Prepared For
The Dade County Metropolitan Planning Organization
August, 1995

The Post Hurricane
Short Range Transportation Study
West Dade Area Task

Final Recommendations

Prepared For
The Dade County Metropolitan Planning Organization
August, 1995

The Dade County Post Hurricane Short Range Transportation Study
West Dade Area Task

Final Recommendations

Prepared For

The Dade County Metropolitan Planning Organization
111 NW 1st Street, Suite 910
Miami, Florida

By

Barton-Aschman Associates
Fort Lauderdale, Florida

August, 1995

This study was prepared for the Dade County Metropolitan Planning Organization and funded by the Florida Department of Transportation and Federal Highway Administration, U.S. Department of Transportation.

TABLE OF CONTENTS

Figures

Page

Tables

EXECUTIVE SUMMARY

The West Dade Task Area is located in the west-central portion of Dade County, Florida. It is bounded by NW/SW 72nd Ave. (Milam Dairy Road) on the east, SW 8th St. (Tamiami Trail) on the south, the Homestead Extension of Florida's Turnpike (SR 821) on the west, and NW 74th St. on the north.

This area of approximately 27 square miles has shown a rapid rate of low density growth since Hurricane Andrew struck southern Dade County in August of 1992. Many businesses that were once located in the southern portion of the County have decided to relocate to West Dade which is further inland from the coast line. The tremendous growth, especially in employment, has exacerbated the traffic congestion on the roadway network in the study area. Although there are three limited access highways that traverse the region, the internal grid network of arterials is incomplete and creates a funnel through which most traffic must travel.

To add to the traffic woes, 24 new large developments have received vested rights to construct warehouses, offices, retail space, single family, and multi-family structures in the West Dade Area. The vestment allows these developments to bypass the level of service (LOS) standards required by the Dade County Comprehensive Development Master Plan (CDMP). These standards have been raised from LOS E to LOS D beginning in January 1, 1995. This means that many roadways in the study area, which were near the threshold of maximum acceptable capacity, are now considered to have unacceptable levels of congestion, even without the previously mentioned developments.

It is also important to mention that many small developments and existing business expansions have already been approved for the West Dade area as well. These developments do not generate as many trips but the 133 different activities have at least some impact on the area's roadway network. Combined with the vested rights developments, there are expected to be more than 22,000 new PM peak hour trips generated over the next five years just from the approved sites. These trips would add to the existing 136,000 PM peak hour trips. (These numbers do not reflect the trips on the three expressways in the study area.) This analysis was structured to address only the needs of existing and other regulated or permitted new trips over the next five years. It is, of course, possible and likely that other new developments will be proposed and will make application for development approval. Such projects are not included in the analysis database for this project.

As may be obvious by now, such a large increase in new trips along with stricter level of service standards will require some major roadways enhancements to improve the capacity of the network. This study has examined 40 arterial segments and 11 expressway segments to trace where the congestion problems currently exist and where potential congestion problems may arise due to the additional trips expected in the area.

The first aspect of the study involving collecting appropriate roadway data and summarizing it to determine where capacity is available and where it is not. With the new development trips considered, 18 out of the 40 segments were shown to be overcapacity. Only one expressway segment was considered by be overcapacity but only by a few percent. Most of the capacity problems result from one of three reasons:

- The roadway segment is already deficient without the addition of any new trips.
- The new trips cause the segment to exceed its maximum capacity
- The stricter LOS standards shift the roadway segment over the maximum capacity threshold.

Often, it is a combination of the three reasons that leads to the overcapacity. The 1995 and 1996 Metro-Dade Metropolitan Planning Organization's Transportation Improvement Programs (TIP) indicate a few projects that will help correct some of these deficient segments.

The two tables on the next three pages show a summary of the existing operational levels of service for the major arterials and freeway segments in the West Dade area. The tables also show the number of new trips which will be added to each roadway segment during the next five years as calculated from already approved vested right determinations, and from assessed impact fees.

The new level of service provided in the tables also considers the effects of any future roadway capacity improvements that are listed in either the 1995 or 1996 Transportation Improvement Program. The New Volume column can then be compared to the standard LOS definition maximum volume to determine the capacity or deficiency that each roadway segment will experience in the year 2000.

It is noteworthy to observe that most of the overcapacity segments lie in Sectors 2 or 3 (Transportation Analysis Districts 17 and 30, respectively). These Sectors are bounded by SR 826 (Palmetto Expressway), SR 836 (Dolphin Expressway), SR 821 (H.E.F.T.), and NW 58th Street. Coincidentally, more than 75% of all of the new approved developments will occur in this subarea.

The emphasis for the remainder of this study was to concentrate on cost effective short-term improvements that can alleviate as many of the congestion problems as necessary. Using the arterial planning software, Art_Plan, as the testing tool for all improvements, a list of 63 projects were suggested for implementation in the West Dade Area. These projects are in addition to those listed in the 1995 and 1996 TIPs.

The projects consist primarily of the following types of improvements:

- Restripe existing lane configurations
- Modify signal timings
- Install new signals
- Add right turn lanes
- Add left turn lanes
- Add through lanes

Apart from the roadway improvements, one minor Metro-Dade bus route improvement was also suggested for implementation. The improvement consists of increasing the frequency of Route 87 to 20 minutes from its current headway of 30 minutes. This would require an additional three buses during the PM peak period. In addition, a modification in the route is also recommended. All of the roadway and transit adjustments are presented following the tables.

ART_PLAN LOS SUMMARY INCLUDING NEW TRIPS

SECTOR NUMBER	STATION NUMBER	ARTERIAL	SEGMENT LOCATION	PEAK DIR. OFF-PEAK DIR.	EXISTING VOLUME	EXISTING OPERATIONAL LOS	ADDITIONAL TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
1	452	NW 58th Street	From NW 87th Avenue	EB	1864	C	73	1937	C	LOS D	3210	1273
			To SR 826 (Palmetto) East	WB	1243	F	49	1292	F	LOS D	***	-1292
1	454	NW 58th Street	From 87th Avenue	WB	2268	B	522	2790	F	LOS D	2580	-210
			To NW 97th Avenue	EB	23	B	5	28	B	LOS D	1340	1312
1	481	NW 74th Street	From NW 87th Avenue	EB	702	B	824	1526	B	LOS D	5240	3714
			To SR 826 (Palmetto) East	WB	702	D	823	1525	D	LOS D	2650	1125
2	406	NW 25th Street	From NW 97th Avenue	WB	1943	E	636	2579	F	LOS D	1940	-639
			To NW 107th Avenue	EB	1093	A	357	1450	A	LOS D	2750	1300
2	440	NW 41st Street	From NW 97th Avenue	WB	2300	B	169	2469	B	LOS D	3260	791
			To NW 107th Avenue	EB	71	B	5	76	B	LOS D	3180	3104
2	442	NW 41st Street	From NW 107th Avenue	WB	4396	D	223	4619	E	LOS D	4570	-49
			To NW 117th Avenue	EB	231	B	12	243	B	LOS D	1540	1297
2	494	NW 97th Avenue	From NW 12th Street	NB	204	B	1010	1214	B	LOS D	4610	3396
			To NW 25th Street	SB	160	B	794	954	B	LOS D	1460	506
2	508	NW 107th Avenue	From NW 12th Street	SB	4151	B	401	4552	C	LOS E*	5100	548
			To SR 836 (Dolphin) Street	NB	2438	B	235	2673	B	LOS E*	6800	4127
2	510	NW 107th Avenue	From NW 25th Street	SB	2956	F	398	3354	F	LOS D	2380	-974
			To NW 12th Street	NB	1039	C	140	1179	C	LOS D	3630	2451
2	512	NW 107th Avenue	From NW 41st Street	SB	1455	C	325	1780	D	LOS D	1880	100
			To NW 25th Street	NB	1191	A	266	1457	A	LOS D	3580	2123
3	162	NW 87th Avenue	From NW 25th Street	SB	4831	F	1942	6773	F	LOS D	2170	-4603
			To NW 12th Street	NB	1208	D	486	1694	D	LOS D	1930	236
3	164	NW 87th Avenue	From NW 41st Street	SB	2112	C	1422	3534	E	LOS D	3520	-14
			To NW 25th Street	NB	1137	C	766	1903	C	LOS D	3410	1507
3	166	NW 87th Avenue	From NW 58th Street	SB	2632	A	26	2658	A	LOS E	4390	1732
			To NW 41st Street	NB	1128	B	11	1139	B	LOS E	2480	1341
3	358	NW 12th Street	From NW 72nd Avenue	EB	1218	E	595	1813	F	120% OF LOS E*	1572	-241
			To NW 87th Avenue	WB	1124	D	550	1674	E	120% OF LOS E*	2112	438
3	402	NW 25th Street	From NW 87th Avenue	EB	3240	E	1962	5202	F	LOS D	350	-4852
			To SR 826 (Palmetto) West	WB	1596	D	966	2562	E	LOS D	2180	-382
3	404	NW 25th Street	From NW 97th Avenue	EB	1431	E	352	1783	F	LOS D	1050	-733
			To NW 87th Avenue	WB	1321	B	325	1646	B	LOS D	3310	1664
3	432	NW 36th Street	From NW 87th Avenue	EB	3020	F	839	3859	F	LOS E	1870	-1989
			To NW 79th Avenue	WB	2373	B	659	3032	B	LOS E	4790	1758
3	434	NW 36th Street	From NW 97th Avenue	EB	2978	F	469	3447	D	LOS D	3580	133
			To NW 87th Avenue	WB	740	A	117	857	A	LOS D	5150	4293
3	482	NW 79th Avenue	From NW 58th Street	SB	1000	F	16	1016	F	LOS E	***	-1016
			To NW 36th Street	NB	818	D	13	831	C	LOS E	2820	1989
3	484	NW 79th Avenue	From NW 25th Street	NB	817	E	936	1753	E	LOS D	1580	-173
			To NW 36th Street	SB	480	n/a	550	1030	n/a	LOS D	n/a	-1030

ART_PLAN LOS SUMMARY INCLUDING NEW TRIPS

SECTOR NUMBER	STATION NUMBER	ARTERIAL	SEGMENT LOCATION	PEAK DIR. OFF-PEAK DIR.	EXISTING VOLUME	EXISTING OPERATIONAL LOS	ADDITIONAL TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
4	44	SW 87th Avenue	From Flagler Street	SB	2280	F	1	2281	F	LOS D	1320	-961
			To SW 8th Street	NB	1998	F	1	1999	F	LOS D	1560	-439
4	90	SW 8th Street	From SW 107th Avenue	WB	1633	A	0	1633	A	LOS D	4940	3307
			To SR 821 (H.E.F.T) West	EB	930	E	0	930	E	LOS D	910	-20
4	92	SW 8th Street	From SW 82nd Avenue	WB	1744	B	0	1744	B	LOS D	4190	2446
			To SW 87th Avenue	EB	1074	A	0	1074	A	LOS D	4440	3366
4	154	Flagler Street	From West 87th Avenue	WB	3289	C	27	3316	C	LOS E	4230	914
			To West 97th Avenue	EB	1548	F	12	1560	F	LOS E	***	-1560
4	156	Flagler Street	From West 97th Avenue	WB	1592	A	10	1602	A	LOS E	5190	3588
			To West 107th Avenue	EB	1153	B	7	1160	B	LOS E	4310	3150
4	158	Flagler Street	From West 107th Avenue	WB	2147	C	23	2170	C	LOS E	4310	2140
			To West 114th Avenue	EB	1261	F	13	1274	F	LOS E	***	-1274
4	589	SW 8th Street	From SW 87th Avenue	WB	1554	A	0	1554	A	LOS D	5710	4156
			To SW 107th Avenue	EB	912	C	0	912	C	LOS D	3630	2718
4	1141	Flagler Street	From SR 826 (Palmetto) West	WB	2552	D	66	2618	D	LOS E	4640	2022
			To West 87th Avenue	EB	2154	E	56	2210	E	LOS E	2700	490
4	1211	NW 87th Avenue	From SR 836 (Dolphin) South	SB	3263	B	168	3431	C	LOS E*	4680	1249
			To Flagler Street	NB	1403	F	73	1476	F	LOS E*	220	-1256
4	1218	West 107th Avenue	From SR 836 (Dolphin) Street	SB	3414	F	59	3473	F	LOS E	2880	-593
			To SW 8th Street	NB	2534	D	45	2579	D	LOS E	2920	341
5	39	Milam Dairy Road	From NW 58th Street	NB	1474	F	49	1523	B	120% OF LOS E*	4092	2569
			To NW 74th Street	SB	708	B	23	731	B	120% OF LOS E*	2964	2233
5	400	NW 25th Street	From SR 826 (Palmetto) West	EB	1667	E	378	2045	E	LOS E	2790	745
			To Milam Dairy Road	WB	1602	F	364	1966	F	LOS E	***	-1966
5	1173	NW 36th Street	From Milam Dairy Road	WB	2758	D	52	2810	C	120% OF LOS E	5424	2614
			To NW 79th Avenue	EB	1788	E	34	1822	D	120% OF LOS E	3408	1586
5	1202	Milam Dairy Road	From NW 25th Street	SB	2607	C	67	2674	B	120% OF LOS E*	6432	3758
			To NW 12th Street West	NB	968	B	25	993	B	120% OF LOS E*	5220	4227
5	1204	Milam Dairy Road	From NW 25th Street	NB	1870	C	37	1907	C	120% OF LOS E*	4128	2221
			To NW 36th Street	SB	1468	B	29	1497	B	120% OF LOS E*	3264	1767
5	1205	Milam Dairy Road	From NW 58th Street	SB	2146	C	73	2219	B	120% OF LOS E*	4920	2701
			To NW 36th Street	NB	1423	B	49	1472	B	120% OF LOS E*	3804	2332
6	5	SW 8th Street	From West of SW 72nd Avenue	WB	1949	A	0	1949	A	LOS E	5300	3351
			To SW 82nd Avenue	EB	1334	B	0	1334	B	LOS E	3120	1786
6	1140	Flagler Street	From West 72nd Avenue	WB	2346	B	1	2347	B	120% OF LOS E	6480	4133
			To SR 826 (Palmetto) West	EB	1783	E	0	1783	E	120% OF LOS E	3540	1757
6	1200	Milam Dairy Road	From NW 12th Street West	SB	2071	B	0	2071	B	LOS E	4130	2059
			To NW 7th Street South	NB	624	C	0	624	C	LOS E	4300	3676
8	1201	NW 72nd Avenue	From NW 12th Street East	SB	719	D	117	836	D	120% OF LOS E*	2304	1468
			To Flagler Street	NB	400	D	65	465	D	120% OF LOS E*	2340	1875
			TOTAL		135,774		22,193	157,967				92,737

* Future headway improvements or new bus service

*** No threshold exists

n/a T-intersection with no south leg

FREE TAB LOS SUMMARY INCLUDING NEW TRIPS

SECTOR NUMBER	STATION NUMBER	FREEWAY	SEGMENT LOCATION	# OF LANES	EXISTING PM PEAK 2-WAY VOLUME	EXISTING OPERATIONAL LOS	ADDITIONAL TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
1	572	S.R. 826 (Palmetto)	From NW 58th Street To NW 74th Street	8	11,770	D	0	11,770	D	LOS E	14,280	2,510
2	2242	S.R. 836 (Dolphin)	From NW 107th Avenue To SR 821 (H.E.F.T.)	6	5,987	D	0	5,987	D	LOS D	6,660	673
2	2243	S.R. 836 (Dolphin)	From NW 87th Avenue To NW 107th Avenue	6	7,116	D	0	7,116	D	120% OF LOS E*	9,996	2,880
2	2272	S.R. 821 (H.E.F.T.)	From SR 836 (Dolphin) To Northern Study Limits	4	3,065	C	32	3,097	C	LOS D	4,940	1,843
3	2244	S.R. 836 (Dolphin)	From SR 826 (Palmetto) To NW 87th Avenue	6	7,413	D	0	7,413	D	120% OF LOS E*	10,140	2,727
4	2250	S.R. 821 (H.E.F.T.)	From SR 836 (Dolphin) To SW 8th Street	6	7,627	D	21	7,648	D	LOS D	8,870	1,222
5	570	S.R. 826 (Palmetto)	From NW 36th Street To SR 836 (Dolphin)	8	12,202	E	0	12,202	E	LOS E	12,860	658
5	571	S.R. 826 (Palmetto)	From NW 36th Street To NW 58th Street	8	12,329	D	0	12,329	D	LOS E	15,260	2,931
6	568	S.R. 826 (Palmetto)	From West Flagler Street To SW 8th Street	8	12,675	F	0	12,675	F	LOS E	11,920	-755
6	569	S.R. 826 (Palmetto)	From SR 836 (Dolphin) To West Flagler Street	8	11,861	D	0	11,861	D	LOS E	13,470	1,609
6	2188	S.R. 836 (Dolphin)	From NW 72nd Avenue To SR 826 (Palmetto)	6	9,967	F	0	9,967	F	150% OF LOS E*	14,700	4,733
			TOTAL		**102,012**		**53**	**102,065**			**123,096**	**21,031**

* Future Metro-Dade express bus service

SUMMARY OF PROPOSED IMPROVEMENT ACTIONS

■ *Intersections*

NW 58th Street at	NW 97th Ave:	Add EB/WB through lanes
		Add EB LT lane
		Install signal
	NW 87th Ave.	Modify WB roadway for WB-SB dual LT
		Modify signal and timing
	NW 84th Ave.	Add WB RT lane
	NW 82nd Ave.	Add WB RT lane
	NW 79th Ave.	Add EB through lane from W approach to SR 826
		Modify WB roadway for WB-SB dual left turn
		Restripe NB approach for dual RT
		Modify signal and timing
	SR 826 East	Add EB through lane past intersection
		Modify signal and timing
NW 36th Street at	NW 107th Ave.	Modify signal and timing
	NW 87th Ave.	Add EB through lane
		Add WB through lane
		Add SB RT lane
		Modify signal and timing
	NW 79th Ave.	Add EB through lane from W approach to SR 826
		Add WB auxiliary lane from SR 826 to NW 79th Ave.
		Restripe SB approach for exclusive dual LT
		Add NB RT lane
		Modify signal and timing

SUMMARY OF PROPOSED IMPROVEMENT ACTIONS (Continued)

■ *Intersections (continued)*

NW 25th Street at	NW 107th Ave.	Add 2nd through lane on EB approach Modify signal and timing
	NW 87th Ave.	Restripe and re-sign EB RT as EB through lane Add SB through lane past intersection Add WB through lane past intersection Modify signal and timing
	NW 82nd Ave.	Modify N approach for SB dual LT Add SB RT lane Add 3rd WB through lane past intersection Add 4th WB through lane past intersection Modify signal and timing
	NW 79th Ave.	Add 3rd WB through lane past intersection Add 4th EB through lane past intersection Modify signal and timing
	SR 826	Await results of FDOT study of NW 25th Ave.
	NW 75th Ave.	Add WB auxiliary lane from RR to SR 826 Modify signal timing
NW 12th Street at	NW 87th Ave.	Add three lanes to WB approach to provide: o 3 LT lanes o 2 through lanes o 1 RT lane Add 4th SB through lane past intersection Modify signal and timing
	NW 78th St.	Add SB RT lane and restripe for dual LT SB-EB Modify signal timing
	NW 72nd Ave.	Modify SB approach: 2 LT, 1 shared LT/T, 1 shared T/RT Modify signal and timing NOTE: Tentative TSM Proposal as part of SR 836 EIS
SR 836 at	NW 87th Ave.	Extend access to NE loop and egress from NW loop via ramps under the end spans with junctions at the SR 836 South Ramp/NW 87th Ave. signal
Flagler Street at	NW 107th Ave.	Add SB through lane Add SB RT lane Add NB through lane Widen WB roadway for EB-NB and WB-SB dual LT Modify signal and timing

SUMMARY OF PROPOSED IMPROVEMENT ACTIONS (Continued)

■ *Segments*

NW 25th Street	SR 826-NW 82nd Ave.	Add 3rd WB through lane Add 4th EB through lane Modify affected signals and timing
NW 87th Ave.	NW 25th St.-NW 12th St.	Add 4th SB through lane Modify affected signals and timing
NW 107th Ave.	NW 14th St.-NW 12th St.	Add 3rd SB through lane Modify affected signals and timing
NW 97th Ave.	NW 37th St.-NW 25th St. NW 25th St.-NW 12th St. NW 12th St.-Fontainebleau Blvd. At Flagler St.	Widen from 2 lanes to 4 lanes Widen from 2 lanes to 4 lanes Construct 4 lane overpass and approaches Add turn lanes

■ *Transit*

Route 87: Decrease existing headways from 30 minutes to 20 minutes. Reroute from NW 87th Ave. between NW 36th St. and NW 25th St., to utilize NW 36th St., NW 79th Ave., and NW 25th St., before returning back to NW 87th Ave.

Most of the roadway improvements are slated for the critical north-south and east-west arterials such as NW 58th, NW 36th, NW 25th, NW 12th Streets; and NW 79th, NW 87th, and NW 107th Avenues. However, the most important improvement suggested is the extension of NW 97th Avenue across the Dolphin Expressway. A four-lane cross-section is proposed from NW 12th Street to Fountainebleau Blvd. Even if no interchange is included, the extension should provide enormous relief to the parallel NW 107th and NW 87th Avenue corridors.

The total construction costs are estimated to be approximately $20,000,000 of which half is associated with a new NW 97th Avenue bridge over the Dolphin Expressway. Fortunately, this bridge and approach lanes may be partially financed by a large development firm to increase accessibility to their future site.

The improvements that were proposed for West Dade were carefully selected in order to maximize capacity increases and yet minimize costs, especially right-of-way costs. Unfortunately, these costs were unavoidable for approximately half of the roadway segments slated for improvement. Considering only property appraisal values, the right-of-way costs will range between $5 and $6 million dollars. This estimate does not include any business damages that sometimes lead to litigation and expensive monetary settlements.

All in all, the short-term improvements will increase the future available capacity by over 30% and meet the strict new level of service standards for all except two intersections. These two intersections are at NW 36th Street/NW 79th Avenue and at NW 25th Street/SR 826 (Palmetto Expressway). Incidentally, both of these intersections have an existing operational level of service F, even without the burden of any additional trips. Physical limitations at these intersections will require long-term solutions that cannot be implemented in the next five years. In addition, the recommended improvements will alleviate congestion for only this five-year period. After that, further improvements will need to be made if the projected growth rate is accurate.

With the noted improvements, the West Dade Area will accommodate the projected approved developments and allow for more growth, albeit at a slower pace. More importantly, this study provides a mechanism for quickly testing the effects of any new trips or any new capacity enhancements in the study area. Such a mechanism will be invaluable for all future projects in the West Dade area.

1.0 INTRODUCTION

This document defines the existing transportation conditions as well as the mobility options and/or enhancements that are required in order to maintain acceptable levels of service on roadways in the West Dade Area. This study area is located in Dade County, Florida and is bounded by Milam Dairy Road (NW/SW 72nd Avenue) on the east, the Homestead Extension of Florida's Turnpike (H.E.F.T.) on the west, SW 8th Street (Tamiami Trail) on the south, and NW 74th Street on the north. Figure 1 shows the location of this area within the Dade County.

Many roadways in this study area of approximately 27 square miles are currently operating at unacceptable levels of congestion and do not meet Dade County's Concurrency Standards. Traffic conditions have deteriorated rapidly since Hurricane Andrew struck Southern Dade County in August of 1992. The rapid growth of relocated businesses and residences from South Dade to West Dade has exceeded the expansion of transportation capacity in this area. In addition, over the past few years, several large projects have received vested rights determinations and are exempt from meeting the Concurrency Standards. Based on the vested rights status of these and other projects, additional trips will be added to the already deficient roadways.

Beginning January 1, 1995, the new Dade County Comprehensive Development Master Plan (CDMP) went into effect with a stricter level of service causing many West Dade roadways to have unacceptable levels of congestion. The CDMP states that the minimum operating level of service standard needs to be maintained at a LOS D rather than at LOS E. The only exceptions are those roadways with frequent transit service.

This document is divided into a number of sections. Chapters 2 through 5 examine the existing transportation conditions in West Dade. The existing levels of service on the major freeway, arterial, and collector roadways within the study area are addressed and LOS D and LOS E maximum PM peak hour traffic volumes are established for each one of these roadways. Programmed roadway capacity improvements and transit headway improvements for West Dade are also discussed in this first section. The data that is compiled provides a detailed description of where the traffic congestion problems are most severe in the study area.

The second section, consisting of Chapter 6, defines the current land uses in West Dade and also examines anticipated potential short-term growth opportunities over the next few years. Employment and population growth trends are analyzed for the study area to see where potential development may occur.

The last section of this document consists of four chapters which are primarily devoted to the development of recommended improvements based upon the data assembled and described in the first two sections. Chapters 7, 8, and 9 provide a detailed analysis of the proposed roadway improvements along with a description of the methodology supporting the conclusions reached. Other long-term strategies are provided because the nature of the congestion problems in the study area often require a longer time frame to resolve.

L. RIOS

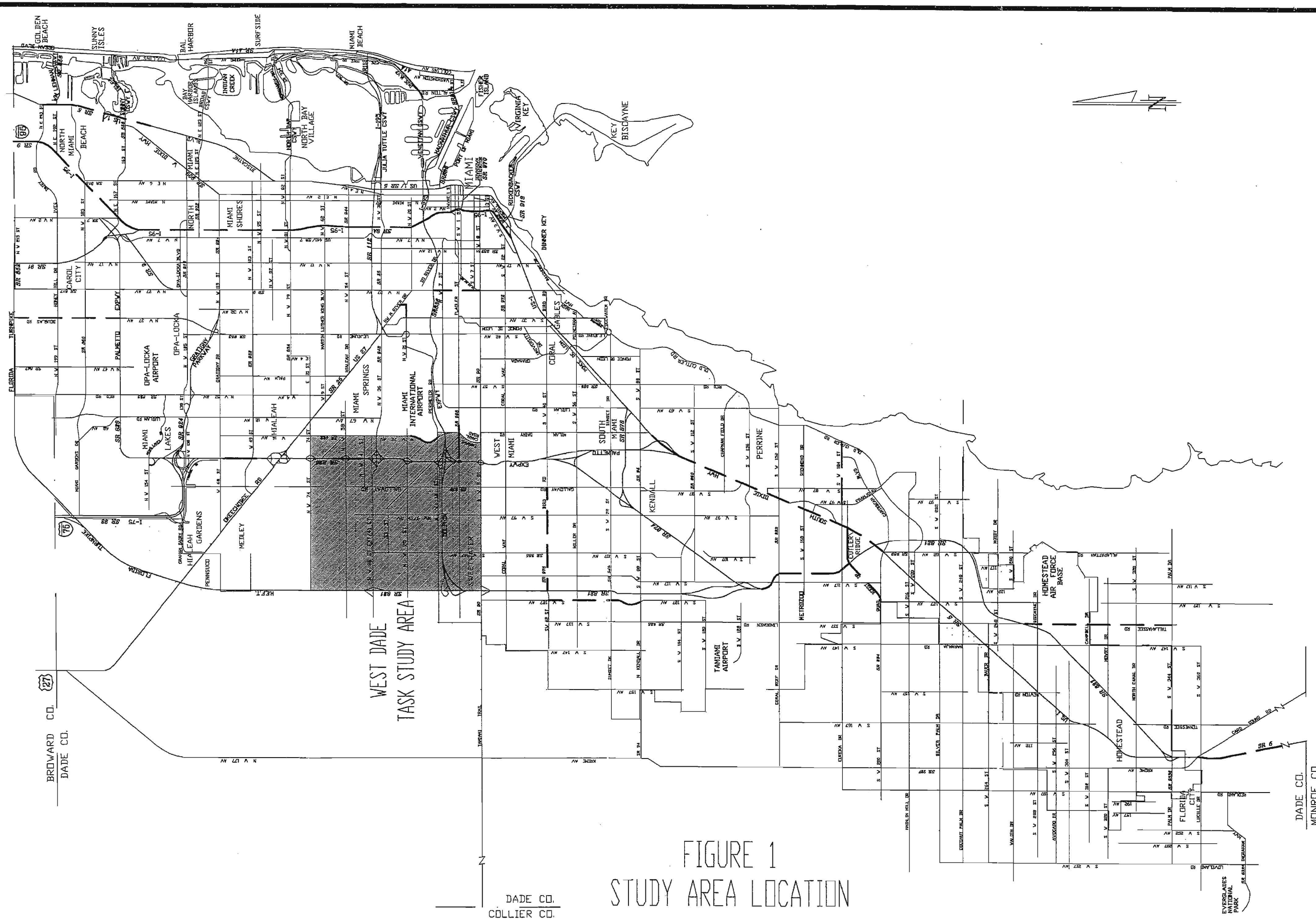


FIGURE 1
STUDY AREA LOCATION

Finally in Chapter 10, the improvements described previously are assigned benefits and costs on an individual project basis. The difficulty in ascertaining right-of-way costs is expanded upon and some clear directions are suggested for further analysis of any of the improvement projects, if they are selected for implementation.

2.0 ROADWAY AND SIGNAL DATA

The collection of roadway and signal data in this task was initiated for the main purpose of calculating roadway levels of services using the Florida Department of Transportation Arterial and Freeway LOS Estimates. These estimates are based on the 1985 Highway Capacity Manual and are performed by using Art_Plan Version 1.2 and Free_Tab Version 1.0 LOTUS spreadsheet software programs. These two worksheets require various roadway and traffic signal characteristics as input parameters -- all of which will be described shortly.

Figure 2 shows the West Dade study area as defined in Chapter One. The roadway segments which are analyzed using either Art_Plan or Free_Tab are indicated on this figure. Each roadway segment is identified by a unique permanent traffic count station number which is located along that segment, usually near one of the endpoints.

Figure 2 also depicts some arterial segments which were not selected for analysis. Most of these roadways were excluded because they did not have signalized intersections which are necessary to use Art_Plan. Some of the roadway segments also lack properly functioning traffic counters. These counters provide the Average Annual Daily Traffic, peak hour factor (PHF), directional distribution (D), and percent of daily traffic during the peak hour (K). Even with these missing segments, enough of the West Dade study area is covered in order to allow for a systematic evaluation of the levels of service.

To better evaluate the existing roadway conditions, the study area is divided into six different sectors as indicated on Figure 2. These sectors represent the different Traffic Analysis Districts (TADs) in the West Dade area. The corresponding TADs are given below:

Sector	TAD
1	16
2	17
3	30
4	43
5	31
6	44,51

A Traffic Analysis District is comprised of a group of Traffic Analysis Zones (TAZs) and is primarily segregated by land use or population characteristics. The division of the study area into the six sectors will be more relevant in later chapters which spell out where anticipated short-term growth opportunities will occur.

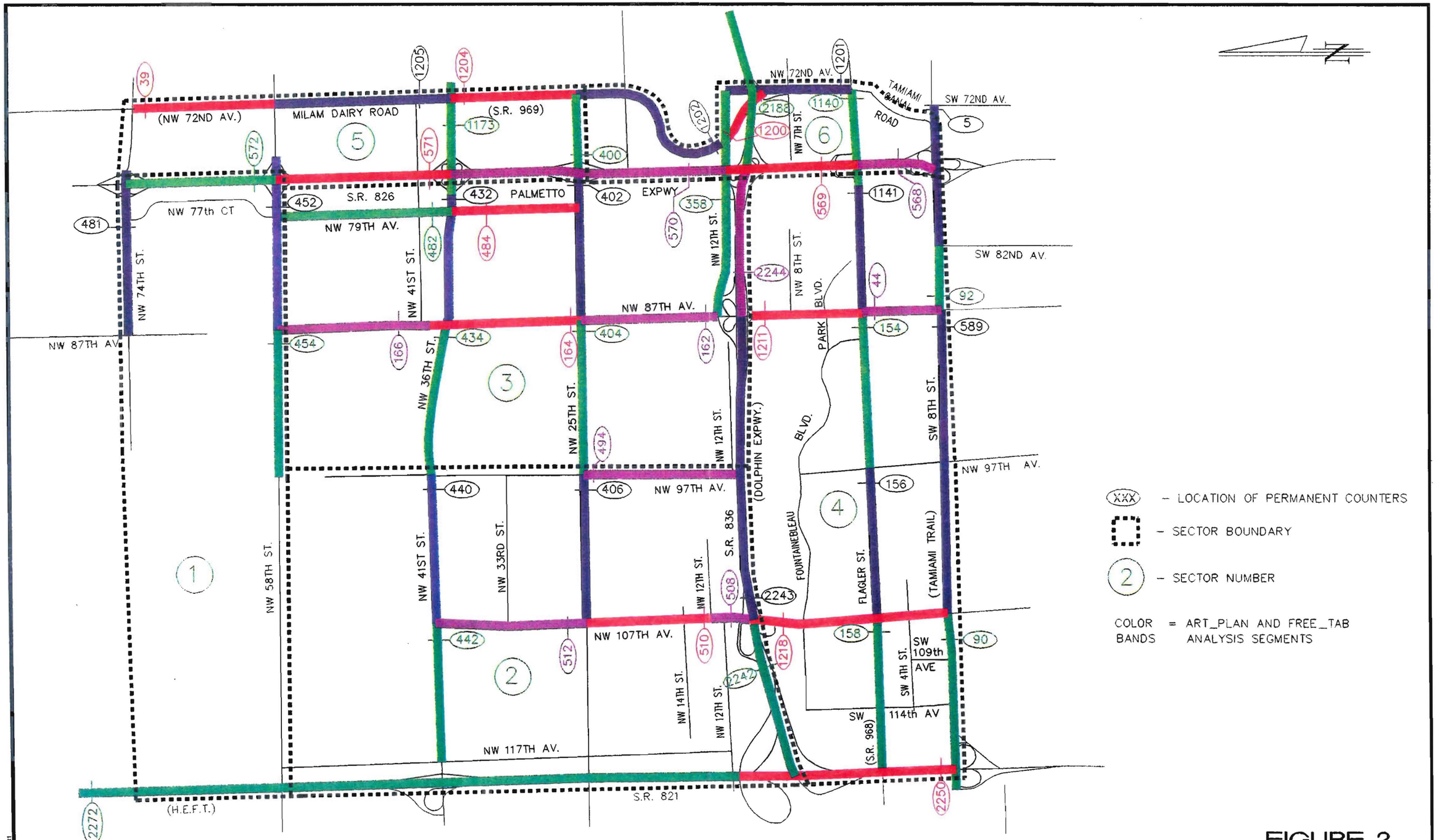


FIGURE 2

BARTON-ASCHMAN ASSOC., INC.
Ft. LAUDERDALE, FLORIDA

LOCATION OF COUNT STATIONS

Table 1 shows, in greater detail, a description of each arterial segment by count station number. Table 1 also provides peak hour factors, K and D factors, peak directions, existing segment speed limits, and the average number of through lanes in both directions for all count stations. This table is further divided into state and county maintained count stations. Of course, the freeway segments are also maintained by the state.

The twenty-four (24) county arterial and sixteen (16) state arterial segments are comprised of signalized intersections. These are shown in Tables 2 and 3, respectively. Each intersection has a corresponding signal ID by which Dade County Public Works Department can download appropriate cycle length and signal timing information for utilization in the Art_Plan runs. In Tables 2 and 3, the primary street (as determined by traffic volumes) is shown in the third column, while the less major cross-street is shown in the last column.

Prior to performing the arterial level of service analyses, it was helpful to place as much of the needed input information as possible in a spreadsheet format to facilitate Art_Plan data entry. These spreadsheets are included as Tables 4 through 16 in this chapter. A description will be given for all fields that may not be self-explanatory.

The station number for each cross street (i.e. signalized intersection) is listed in the first column. Two station numbers are provided for cross-streets which form the endpoints for two roadway segments. Similarly, the sequence number is displayed in the second column. The order of these numbers increases for signalized intersections in the peak direction of travel during the PM peak period (as defined in Table 1) for each Art_Plan segment.

The three columns under the "Signal Data" heading were obtained from signal timing sheets provided by Dade County Public Works. The cycle lengths and effective green time (g/C) ratios are average measurements for representative PM peak periods taken during select weekdays in the Autumn of 1994. It is important to understand that these values are <u>not</u> the optimum signal timing plans which are predefined for the intersections. (There exist a few exceptions which will be discussed later.) The signal data values shown in the spreadsheet will vary slightly on a daily basis because of the semi-actuated signal type in use, whereas the timing plans remain constant.

Although most of the signals in the study area are part of the larger Dade County coordinated signal system, Tables 4 through 16 indicate that a few of the intersections are isolated and operate as fully actuated rather than semi-actuated signals. The spreadsheets also include a few stop-controlled intersections because these intersections form endpoints for some Art_Plan links. The cycle lengths and g/C ratios for these intersections are assumed to be similar to the other (signalized) link endpoints, but all of the approach traffic at a stop-controlled intersection is assumed to be through traffic.

TABLE 1 COUNT STATION DATA

COUNTY

STATION NUMBER	SECTOR NUMBER	ARTERIAL	SEGMENT	PHF 1994	PHF 1993	K	D	PEAK DIR.	SPEED LIMIT	THRU LANES
154	4	Flagler Street	West 87th Avenue to West 97th Avenue	0.9626		0.110	0.680	WB	40	6
156	4	Flagler Street	West 97th Avenue to West 107th Avenue		0.9549	0.080	0.580	WB	40	6
158	4	Flagler Street	West 107th Avenue to West 114th Avenue	0.9540		0.100	0.630	WB	40	6
162	3	NW 87th Avenue	NW 25th Street to NW 12th Street	0.9709		0.140	0.800	SB	45	6
164	3	NW 87th Avenue	NW 41st Street to NW 25th Street		0.9500	0.090	0.650	SB	45	6
166	3	NW 87th Avenue	NW 58th Street to NW 41st Street	0.9308		0.150	0.700	SB	40	4
358	3	NW 12th Street	NW 72nd Avenue to NW 87th Avenue	0.8984		0.090	0.520	EB	40	6
400	5	NW 25th Street	SR 826 (Palmetto) West to Milam Dairy Road	0.9202		0.070	0.510	EB	40	6
402	3	NW 25th Street	NW 87th Avenue to SR 826 (Palmetto) West		0.9588	0.100	0.670	EB	40	5
404	3	NW 25th Street	NW 97th Avenue to NW 87th Avenue	0.9500		0.090	0.520	EB	40	4
406	2	NW 25th Street	NW 97th Avenue to NW 107th Avenue		0.8897	0.140	0.640	WB	40	4
432	3	NW 36th Street	NW 87th Avenue to NW 79th Avenue	0.8335		0.090	0.560	EB	40	4
434	3	NW 36th Street	NW 97th Avenue to NW 87th Avenue	0.9380		0.150	0.800	EB	45	6
440	2	NW 41st Street	NW 97th Avenue to NW 107th Avenue	0.9188		0.170	0.970	WB	40	6
442	2	NW 41st Street	NW 107th Avenue to NW 117th Avenue	0.9268		0.260	0.950	WB	40	4
452	1	NW 58th Street	NW 87th Avenue to SR 826 (Palmetto) East		0.9132	0.080	0.600	EB	40	4
454	1	NW 58th Street	NW 87th Avenue to NW 97th Avenue	0.7698		0.150	0.990	WB	40	4
481	1	NW 74th Street	NW 87th Avenue to SR 826 (Palmetto) East	0.9472		0.100	0.500	EB	45	2
482	3	NW 79th Avenue	NW 58th Street to NW 36th Street		0.9571	0.090	0.550	SB	35	2
484	3	NW 79th Avenue	NW 25th Street to NW 36th Street		0.8789	0.110	0.630	NB	35	2
494	2	NW 97th Avenue	NW 12th Street to NW 25th Street		0.9286	0.090	0.560	NB	35	2
508	2	NW 107th Avenue	NW 12th Street to SR 836 (Dolphin) South	0.9665		0.120	0.630	SB	40	4
510	2	NW 107th Avenue	NW 25th Street to NW 12th Street	0.8444		0.120	0.740	SB	40	4
512	2	NW 107th Avenue	NW 41st Street to NW 25th Street	0.9500		0.090	0.550	SB	40	4

STATE

STATION NUMBER	SECTOR NUMBER	ARTERIAL	SEGMENT	PHF 1994	PHF 1993	K	D	PEAK DIR.	SPEED LIMIT	THRU LANES
5	6	SW 8th Street	West of SW 72nd Avenue to SW 82nd Avenue		0.9648	0.076	0.594	WB	35	4
39	5	Milam Dairy Road	NW 58th Street to NW 74th Street		0.8943	0.083	0.675	NB	45	4
44	4	SW 87th Avenue	Flagler Street to SW 8th Street		0.9665	0.129	0.533	SB	40	4
90	4	SW 8th Street	SW 107th Avenue to SR 821 (H.E.F.T.) West		0.9273	0.077	0.637	WB	45	8
92	4	SW 8th Street	SW 82nd Avenue to SW 87th Avenue		0.9737	0.072	0.619	WB	45	6
589	4	SW 8th Street	SW 87th Avenue to SW 107th Avenue		0.9529	0.144	0.630	WB	45	8
1140	6	Flagler Street	West 72nd Avenue to SR 826 (Palmetto) West		0.9517	0.077	0.568	WB	30	4
1141	4	Flagler Street	SR 826 (Palmetto) West to West 87th Avenue		0.9801	0.070	0.542	WB	40	6
1173	5	NW 36th Street	Milam Dairy Road to NW 79th Avenue		0.9100	0.069	0.607	WB	30	6
1200	6	Milam Dairy Road	NW 12th Street West to NW 7th Street South		0.8922	0.102	0.769	SB	40	6
1201	6	NW 72nd Avenue	NW 12th Street East to Flagler Street		0.8651	0.085	0.643	SB	35	4
1202	5	Milam Dairy Road	NW 25th Street to NW 12th Street West		0.8928	0.099	0.729	SB	45	6
1204	5	Milam Dairy Road	NW 25th Street to NW 36th Street		0.9141	0.085	0.560	NB	40	4
1205	5	Milam Dairy Road	NW 58th Street to NW 36th Street		0.9332	0.091	0.601	SB	45	4
1211	4	NW 87th Avenue	SR 836 (Dolphin) South to Flagler Street		0.9701	0.090	0.699	SB	40	6
1218	4	West 107th Avenue	SR 836 (Dolphin) South to SW 8th Street		0.9250	0.093	0.574	SB	40	4

EXPRESSWAY

STATION NUMBER	SECTOR NUMBER	ARTERIAL	SEGMENT	PHF 1994	PHF 1993	K	D	PEAK DIR.	SPEED LIMIT	THRU LANES
568	6	SR 826 (Palmetto)	West Flagler Street to SW 8th Street		0.9125	0.074	0.612	SB	55	8
569	6	SR 826 (Palmetto)	SR 836 (Dolphin) to West Flagler Street		0.9767	0.084	0.580	SB	55	10
570	5	SR 826 (Palmetto)	NW 36th Street to SR 836 (Dolphin)		0.9755	0.114	0.607	SB	55	8
571	5	SR 826 (Palmetto)	NW 36th Street to NW 58th Street		0.9614	0.124	0.504	NB	55	8
572	1	SR 826 (Palmetto)	NW 58th Street to NW 74th Street		0.9355	0.102	0.524	NB	55	8
2188	6	SR 836 (Dolphin)	NW 72nd Avenue to SR 826 (Palmetto)		0.9735	0.070	0.596	WB	55	6
2242	2	SR 836 (Dolphin)	NW 107th Avenue to SR 821 (H.E.F.T.)		0.9177	0.084	0.769	WB	55	6
2243	2	SR 836 (Dolphin)	NW 87th Avenue to NW 107th Avenue		0.9547	0.074	0.688	WB	55	6
2244	3	SR 836 (Dolphin)	SR 826 (Palmetto) to NW 87th Avenue		0.9352	0.075	0.664	WB	55	6
2250	4	SR 821 (H.E.F.T.)	SR 836 (Dolphin) to SW 8th Street		0.9892	0.078	0.622	SB	55	6
2272	2	SR 821 (H.E.F.T.)	SR 836 (Dolphin) to Northern Study Limits		0.9259	0.127	0.697	NB	55	4

TABLE 2 COUNTY INTERSECTIONS

NUMBER	SIGNAL ID	INTERSECTION LOCATION	
1	3954	NW 36th Street	@ NW 79th Avenue
2	4121	Flagler Street	@ West 92nd Avenue
3	4176	NW 58th Street	@ NW 79th Avenue
4	4332	NW 41st Street	@ NW 87th Avenue (Galloway Road)
5	4333	NW 87th Avenue (Galloway Road)	@ NW 25th Street
6	4337	Flagler Street	@ Fountainebleau Boulevard
7	4338	NW 87th Avenue (Galloway Road)	@ NW 12th Street
8	4423	Flagler Street	@ West 112th Avenue
9	4477	NW 87th Avenue (Galloway Road)	@ NW 36th Street
10	4501	NW 58th Street	@ S.R. 826 East
11	4502	NW 58th Street	@ S.R. 826 West
12	4520	Flagler Street	@ West 97th Avenue
13	4533	NW 74th Street	@ S.R. 826 East
14	4534	NW 74th Street	@ S.R. 826 West
15	4569	NW 36th Street	@ NW 82nd Avenue
16	4571	NW 36th Street	@ NW 84th Avenue
17	4575	NW 79th Avenue	@ NW 41st Street
18	4592	NW 107th Avenue	@ NW 12th Street
19	4596	NW 58th Street	@ NW 87th Avenue (Galloway Road)
20	4599	NW 107th Avenue	@ NW 14th Street
21	4659	NW 12th Street	@ NW 78th Avenue
22	4660	NW 12th Street	@ NW 82nd Avenue
23	4667	NW 87th Avenue (Galloway Road)	@ NW 53rd Street
24	4668	NW 58th Street	@ NW 97th Avenue
25	4697	NW 107th Avenue	@ NW 25th Street
26	4732	NW 87th Avenue (Galloway Road)	@ NW 13th Terrace
27	4734	NW 79th Avenue	@ NW 53rd Street
28	4792	Flagler Street	@ West 102nd Avenue
29	4856	NW 79th Avenue	@ NW 48th Street
30	4864	NW 87th Avenue (Galloway Road)	@ NW 33rd Street
31	4885	NW 41st Street	@ NW 97th Avenue
32	4887	NW 41st Street	@ NW 107th Avenue
33	4918	NW 25th Street	@ S.R. 826 East
34	4919	NW 25th Street	@ S.R. 826 West
35	4985	Flagler Street	@ West 114th Avenue
36	4991	NW 25th Street	@ NW 91st Avenue
37	5048	NW 58th Street	@ NW 84th Avenue
38	5111	NW 25th Street	@ NW 79th Avenue
39	5112	NW 25th Street	@ NW 97th Avenue
40	5113	NW 82nd Avenue	@ NW 25th Street
41	5115	NW 12th Street	@ NW 86th Avenue
42	5144	NW 87th Avenue (Galloway Road)	@ NW 17th Street
43	5154	NW 41st Street	@ SR 821 East
44	5155	NW 41st Street	@ SR 821 West
45	5188	NW 25th Street	@ NW 89th Place
46	5200	NW 25th Street	@ NW 75th Avenue
47	5252	Flagler Street	@ West 109th Avenue
48	5381	NW 41st Street	@ NW 102nd Avenue
49	5382	NW 41st Street	@ NW 94th Avenue
50	5436	NW 107th Avenue	@ NW 33rd Street

TABLE 3 STATE INTERSECTIONS

NUMBER	SIGNAL ID	INTERSECTION LOCATION	
1	2634	SW 8th Street	@ SW 74th Avenue
2	2897	Milam Dairy Road (NW 72nd Avenue)	@ NW 25th Street
3	3085	NW 12th Street East	@ NW 72nd Avenue
4	3163	NW 36th Street	@ Milam Dairy Road (NW 72nd Avenue)
5	3362	SW 8th Street	@ SW 87th Avenue (Galloway Road)
6	3483	NW 72nd Avenue	@ S.R. 836 North
7	3547	Flagler Street	@ West 79th Avenue
8	3618	Flagler Street	@ West 72nd Avenue
9	3620	Flagler Street	@ SR 826 East
10	3621	S.R. 826 West	@ Flagler Street
11	3709	SW 8th Street	@ SW 107th Avenue
12	3743	SW 8th Street	@ SW 97th Avenue
13	3747	Flagler Street	@ West 87th Avenue (Galloway Road)
14	3879	SW 8th Street	@ SW 112th Street
15	3894	West 107th Avenue	@ Flagler Street
16	3975	Milam Dairy Road (NW 72nd Avenue)	@ NW 74th Street Connector
17	4187	NW 87th Avenue (Galloway Road)	@ Park Boulevard
18	4238	SW 8th Street	@ SR 821 East
19	4239	SW 8th Street	@ SR 821 West
20	4315	Milam Dairy Road (NW 72nd Avenue)	@ NW 58th Street
21	4350	Milam Dairy Road (NW 72nd Avenue)	@ NW 22nd Street
22	4421	Flagler Street	@ West 74th Avenue
23	4489	Milam Dairy Road	@ NW 12th Street West
24	4510	SW 8th Street	@ SW 102nd Avenue
25	4528	Milam Dairy Road (NW 72nd Avenue)	@ NW 74th Street
26	4554	NW 107th Avenue	@Fountainebleau Boulevard (NW 7th Street)
27	4560	SW 107th Avenue	@ SW 4th Street
28	4562	NW 87th Avenue (Galloway Road)	@ SR 836 South
29	4563	SW 8th Street	@ SW 94th Avenue
30	4565	SW 8th Street	@ SW 82nd Avenue
31	4577	Milam Dairy Road (NW 72nd Avenue)	@ NW 7th Street North
32	4608	NW 107th Avenue	@ S.R. 836 South
33	4708	Milam Dairy Road (NW 72nd Avenue)	@ NW 19th Street
34	4818	NW 87th Avenue (Galloway Road)	@ NW 8th Street
35	4850	NW 87th Avenue (Galloway Road)	@ NW 7th Street
36	4859	Flagler Street	@ West 82nd Avenue
37	4860	Flagler Street	@ West 84th Avenue
38	4974	SW 8th Street	@ SW 117th Avenue
39	4992	Milam Dairy Road (NW 72nd Avenue)	@ Corporate Way
40	5164	SW 8th Street	@ SW 92nd Avenue
41	5175	NW 72nd Avenue	@ S.R. 836 South
42	5183	Milam Dairy Road (NW 72nd Avenue)	@ NW 7th Street South

TABLE 4 MILAM DAIRY ROAD (NW 72ND AVENUE): NW 74TH STREET TO NW 7TH STREET SOUTH

Station Number	Seq.	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
39	3	NW 74th Street	NB	141	0.55	Sys.	S. Act.	300	2	45	4	244	556	4	0.50	25,746	0.97	1.006	26,384	0.89
39	2	NW 74th Street Ext.	NB	141	0.38	Sys.	S. Act.	5,003	1	45	80	1,575	617	697	30.68	25,746	0.97	1.006	26,384	0.89
39/1205	1/1	NW 58th Street	NB	120	0.35	Sys.	S. Act.	6,100	2	45	384	941	5	384	28.87	36,978	0.97	0.974	39,139	0.93
1205/1204	2/2	NW 36th Street	NB	162	0.25	Sys.	S. Act.	4,500	2	40	292	636	503	795	55.56	36,926	0.97	0.974	39,084	0.91
1204/1202	1/1	NW 25th Street	NB	119	0.39	Sys.	S. Act.	1,100	3	45	325	1,012	118	325	22.34	35,418	0.97	1.014	36,009	0.89
1202	2	NW 22nd Street	NB	120	0.82	Sys.	S. Act.	600	3	45	52	952	13	52	5.11	35,418	0.97	1.014	36,009	0.89
1202	3	NW 19th Street	NB	120	0.76	Sys.	S. Act.	2,300	3	45	8	898	0	8	0.88	35,418	0.97	1.014	36,009	0.89
1202	4	Corporate Way	NB	120	0.73	Sys.	S. Act.	2,500	3	45	63	844	0	63	6.95	35,418	0.97	1.014	36,009	0.89
1202/1200	5/1	NW 12th Street West	NB	134	0.55	Sys.	S. Act.	2,800	3	40	155	349	16	155	29.81	25,060	0.97	0.974	26,525	0.89
1200	2	NW 7th Street South	NB	136	0.39	Sys.	S. Act.	n/a	3	40	0	742	775	0	0.00	25,060	0.97	0.974	26,525	0.89
39	3	NW 74th Street	SB	141	0.55	Sys.	S. Act.	n/a	2	45	342	191	119	342	52.45	25,746	0.97	1.006	26,384	0.89
39	2	NW 74th Street Ext.	SB	141	0.38	Sys.	S. Act.	300	2	45	63	488	88	42	6.57	25,746	0.97	1.006	26,384	0.89
39/1205	1/1	NW 58th Street	SB	120	0.35	Sys.	S. Act.	5,003	2	45	4	642	114	118	15.53	25,746	0.97	1.006	26,384	0.89
1205/1204	2/2	NW 36th Street	SB	162	0.25	Sys.	S. Act.	6,100	2	45	628	762	489	1,117	59.45	36,978	0.97	0.974	39,139	0.93
1204/1202	1/1	NW 25th Street	SB	119	0.39	Sys.	S. Act.	4,500	3	40	227	743	683	227	13.73	36,926	0.97	0.974	39,084	0.91
1202	2	NW 22nd Street	SB	120	0.82	Sys.	S. Act.	1,100	3	45	16	1,826	28	16	0.86	35,418	0.97	1.014	36,009	0.89
1202	3	NW 19th Street	SB	120	0.76	Sys.	S. Act.	600	3	45	0	1,840	64	0	0.00	35,418	0.97	1.014	36,009	0.89
1202	4	Corporate Way	SB	120	0.48	Sys.	S. Act.	2,300	3	45	0	1,940	3	0	0.00	35,418	0.97	1.014	36,009	0.89
1202/1200	5/1	NW 12th Street West	SB	134	0.55	Sys.	S. Act.	2,500	2	45	1,353	795	13	915	42.34	35,418	0.97	1.014	36,009	0.89
1200	2	NW 7th Street North	SB	134	0.55	Sys.	S. Act.	2,594	4	40	0	776	31	0	0.00	25,060	0.97	0.974	26,525	0.89
1200	3	NW 7th Street South	SB	136	0.74	Sys.	S. Act.	206	3	40	639	608	0	639	51.24	25,060	0.97	0.974	26,525	0.89

TABLE 5 NW/SW 72ND AVENUE: NW 12TH STREET EAST TO FLAGLER STREET

Station Number	Seq.	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
1201	1	NW 12th Street East	NB	135	0.17	Sys.	S. Act.	375	1	35	300	27	108	333	76.55	12,930	0.97	1.014	13,146	0.87
1201	2	SR 836 North	NB	133	0.17	Sys.	S. Act.	875	3	35	0	457	841	841	64.79	12,930	0.97	1.014	13,146	0.87
1201	3	SR 836 South	NB	133	0.58	Sys.	S. Act.	900	2	35	0	1,299	396	396	23.36	12,930	0.97	1.014	13,146	0.87
1201	4	NW 7th Street South	NB	136	0.39	Sys.	S. Act.	2,362	3	35	0	742	775	0	0.00	12,930	0.97	1.014	13,146	0.87
1201	5	Flagler Street	NB	135	0.04	Sys.	S. Act.	n/a	2	35	371	186	186	371	49.93	12,930	0.97	1.014	13,146	0.87
1201	1	NW 12th Street East	SB	135	0.05	Sys.	S. Act.	n/a	1	35	6	67	32	6	5.71	12,930	0.97	1.014	13,146	0.87
1201	2	SR 836 North	SB	133	0.85	Sys.	S. Act.	375	2	35	1,190	571	0	1,190	67.58	12,930	0.97	1.014	13,146	0.87
1201	3	SR 836 South	SB	133	0.58	Sys.	S. Act.	875	0	35	223	0	348	571	100.00	12,930	0.97	1.014	13,146	0.87
1201	4	NW 7th Street North	SB	135	0.50	Sys.	S. Act.	900	4	35	0	776	31	0	0.00	12,930	0.97	1.014	13,146	0.87
1201	5	NW 7th Street South	SB	136	0.74	Sys.	S. Act.	206	3	35	639	608	0	639	51.24	12,930	0.97	1.014	13,146	0.87
1201	6	Flagler Street	SB	135	0.15	Sys.	S. Act.	2,362	2	35	152	152	304	456	75.00	12,930	0.97	1.014	13,146	0.87

TABLE 6 NW 79TH AVENUE: NW 58TH STREET TO NW 25TH STREET

Station Number	Sect.	Cross Street	Dir.	SIGNAL DATA			ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type	Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
										LT	TH	RT							
482	1	NW 58th Street	NB	174	0.14	Sys. S. Act.	1,100	1	35	111	50	989	989	86.00	20,481	1.00	1.014	20,198	0.95
482	2	NW 53rd Street	NB	71	0.52	Sys. S. Act.	2,350	1	35	110	382	30	110	21.07	20,481	1.00	1.014	20,198	0.95
482	3	NW 48th Street	NB	91	0.58	Sys. S. Act.	1,824	1	35	0	571	34	0	0.00	20,481	1.00	1.014	20,198	0.95
482	4	NW 41st Street	NB	77	0.73	Sys. S. Act.	889	1	35	50	492	17	50	8.94	20,481	1.00	1.014	20,198	0.95
482/484	5/2	NW 36th Street	NB	170	0.12	Sys. S. Act.	4,300	1	35	60	119	281	341	74.13	11,959	1.00	1.014	11,794	0.95
484	1	NW 25th Street	NB	n/a	n/a	Sys. S. Act.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11,959	1.00	1.014	11,794	0.95
482	1	NW 58th Street	SB	174	0.18	Sys. S. Act.	n/a	1	35	499	84	38	371	59.74	20,481	1.00	1.014	20,198	0.95
482	2	NW 53rd Street	SB	71	0.52	Sys. S. Act.	1,100	1	35	22	382	62	84	18.03	20,481	1.00	1.014	20,198	0.95
482	3	NW 48th Street	SB	91	0.58	Sys. S. Act.	2,350	1	35	11	827	0	11	1.31	20,481	1.00	1.014	20,198	0.95
482	4	NW 41st Street	SB	77	0.71	Sys. S. Act.	1,824	2	35	7	1,177	180	7	0.61	20,481	1.00	1.014	20,198	0.95
482/484	5/2	NW 36th Street	SB	170	0.26	Sys. S. Act.	889	1	35	798	129	58	798	81.02	20,481	1.00	1.014	20,198	0.95
484	1	NW 25th Street	SB	141	0.21	Sys. S. Act.	4,300	0	35	510	0	196	706	100.00	11,959	1.00	1.014	11,794	0.95

TABLE 7 GALLOWAY ROAD (NW/SW 87TH AVENUE): NW 58TH STREET TO SW 8TH STREET

Station Number	Seq.	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
166	1	NW 58th Street	NB	78	0.22	Sys.	S. Act.	2,250	1	40	185	0	554	677	91.61	25,413	1.00	1.014	25,062	0.93
166	2	NW 53rd Street	NB	65	0.63	Sys.	S. Act.	3,000	2	40	0	712	111	0	0.00	25,413	1.00	1.014	25,062	0.93
166/164	3/1	NW 41st Street	NB	91	0.76	Sys.	S. Act.	890	2	45	155	756	252	155	13.33	36,110	1.00	1.000	36,110	0.95
164	2	NW 36th Street	NB	151	0.36	Sys.	S. Act.	2,200	2	45	459	541	295	754	58.22	36,110	1.00	1.000	36,110	0.95
164	3	NW 33rd Street	NB	160	0.57	Sys.	S. Act.	2,300	3	45	120	649	274	120	11.51	36,110	1.00	1.000	36,110	0.95
164/162	4/1	NW 25th Street	NB	160	0.57	Sys.	S. Act.	2,500	3	45	187	909	230	417	31.45	42,842	0.97	1.024	43,132	0.97
162	2	NW 17th Street	NB	130	0.90	Sys.	S. Act.	1,700	3	45	0	1,042	34	0	0.00	42,842	0.97	1.024	43,132	0.97
162	3	NW 13th Terrace	NB	130	0.69	Sys.	S. Act.	600	3	45	247	904	125	247	19.36	42,842	0.97	1.024	43,132	0.97
162	4	NW 12th Street	NB	130	0.58	Sys.	S. Act.	660	3	45	34	642	309	34	3.45	42,842	0.97	1.024	43,132	0.97
1211	1	SR 836 South	NB	130	0.23	Sys.	S. Act.	1,600	3	40	0	1,963	544	544	21.70	49,255	0.97	0.974	52,134	0.97
1211	2	NW 8th Street	NB	130	0.72	Sys.	S. Act.	315	3	40	0	2,351	431	0	0.00	49,255	0.97	0.974	52,134	0.97
1211	3	NW 7th Street	NB	130	0.74	Sys.	S. Act.	1,300	3	40	0	2,570	580	0	0.00	49,255	0.97	0.974	52,134	0.97
1211	4	Park Boulevard	NB	130	0.61	Sys.	S. Act.	1,322	3	40	155	1,153	158	155	10.57	49,255	0.97	0.974	52,134	0.97
1211/44	5/1	Flagler Street	NB	121	0.29	Sys.	S. Act.	2,357	2	40	325	731	311	636	46.53	31,331	0.97	0.974	33,162	0.97
44	2	SW 8th Street	NB	134	0.34	Sys.	S. Act.	n/a	2	40	464	1,127	0	464	29.16	31,331	0.97	0.974	33,162	0.97
166	1	NW 58th Street	SB	78	0.22	Sys.	S. Act.	n/a	1	40	8	2	0	0	0.00	25,413	1.00	1.014	25,062	0.93
166	2	NW 53rd Street	SB	65	0.63	Sys.	S. Act.	2,250	2	40	41	1,089	0	41	3.63	25,413	1.00	1.014	25,062	0.93
166/164	3/1	NW 41st Street	SB	91	0.77	Sys.	S. Act.	3,000	2	40	140	122	225	140	28.75	25,413	1.00	1.014	25,062	0.93
164	2	NW 36th Street	SB	151	0.36	Sys.	S. Act.	890	3	45	137	1,119	708	137	6.98	36,110	1.00	1.000	36,110	0.95
164	3	NW 33rd Street	SB	160	0.57	Sys.	S. Act.	2,200	3	45	148	621	467	148	11.97	36,110	1.00	1.000	36,110	0.95
164/162	4/1	NW 25th Street	SB	160	0.57	Sys.	S. Act.	2,300	3	45	178	1,317	220	178	10.38	36,110	1.00	1.000	36,110	0.95
162	2	NW 17th Street	SB	130	0.90	Sys.	S. Act.	2,500	3	45	37	2,909	0	37	1.26	42,842	0.97	1.024	43,132	0.97
162	3	NW 13th Terrace	SB	130	0.69	Sys.	S. Act.	1,700	3	45	90	1,962	11	90	4.36	42,842	0.97	1.024	43,132	0.97
162	4	NW 12th Street	SB	130	0.58	Sys.	S. Act.	600	3	45	87	2,239	652	739	24.82	42,842	0.97	1.024	43,132	0.97
1211	1	SR 836 South	SB	130	0.87	Sys.	S. Act.	660	3	40	1,064	1,471	0	1064	41.97	49,255	0.97	0.974	52,134	0.97
1211	2	NW 8th Street	SB	130	0.74	Sys.	S. Act.	1,600	3	40	284	3,650	4	284	7.21	49,255	0.97	0.974	52,134	0.97
1211	3	NW 7th Street	SB	130	0.74	Sys.	S. Act.	315	3	40	242	2,066	17	242	10.41	49,255	0.97	0.974	52,134	0.97
1211	4	Park Boulevard	SB	130	0.61	Sys.	S. Act.	1,300	3	40	238	1,636	848	238	8.74	49,255	0.97	0.974	52,134	0.97
1211/44	5/1	Flagler Street	SB	121	0.29	Sys.	S. Act.	1,322	3	40	211	641	211	211	19.85	49,255	0.97	0.974	52,134	0.97
44	2	SW 8th Street	SB	134	0.34	Sys.	S. Act.	2,357	2	40	88	783	85	88	9.21	31,331	0.97	0.974	33,162	0.97

TABLE 8 NW 97TH AVENUE: NW 25TH STREET TO NW 12TH STREET

Station Number	Seq	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
494	2	NW 25th Street	NB	61	0.36	Fully	Actuated	5,044	1	35	112	36	77	189	84.00	3,979	0.97	1.014	4,045	0.95
494	1	NW 12th Street	NB	61	0.70	No	Signal	n/a	1	35	0	36	0	0	0.00	3,979	0.97	1.014	4,045	0.95
494	2	NW 25th Street	SB	61	0.14	Fully	Actuated	n/a	1	35	31	22	67	0	0.00	3,979	0.97	1.014	4045	0.95
494	1	NW 12th Street	SB	61	0.70	No	Signal	5,044	1	35	0	22	0	0	0.00	3,979	0.97	1.014	4045	0.95

TABLE 9 NW/SW 107TH AVENUE: NW 41ST STREET TO SW 8TH STREET

Station Number	Seq.	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speeds (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
512	1	NW 41st Street	NB	110	0.36	Sys.	S. Act.	2,900	0	40	587	0	410	997	100.00	29,400	1.00	1.000	29,400	0.95
512	2	NW 33rd Street	NB	73	0.78	Sys.	S. Act.	2,400	2	40	0	996	211	211	17.48	29,400	1.00	1.000	29,400	0.95
512/510	3/1	NW 25th Street	NB	110	0.43	Sys.	S. Act.	3,900	2	40	117	1,025	465	582	36.22	33,064	0.97	1.024	33,288	0.84
510	2	NW 14th Street	NB	135	0.79	Sys.	S. Act.	740	2	40	217	672	246	463	40.79	33,064	0.97	1.024	33,288	0.84
510/508	3/1	NW 12th Street	NB	135	0.80	Sys.	S. Act.	2,200	3	40	0	1,074	468	468	30.35	54,533	0.97	1.024	54,902	0.97
508/1218	2/1	SR 836 South	NB	135	0.84	Sys.	S. Act.	930	2	40	0	1,983	0	0	0.00	64,333	1.00	1.006	63,949	0.93
1218	2	Fountainebleau Blvd.	NB	134	0.47	Sys.	S. Act.	2,570	2	40	80	881	175	80	7.04	64,333	1.00	1.006	63,949	0.93
1218	3	Flagler Street	NB	134	0.58	Sys.	S. Act.	1,300	2	40	197	1,009	232	197	13.70	64,333	1.00	1.006	63,949	0.93
1218	4	SW 4th Street	NB	132	0.82	Sys.	S. Act.	1,314	2	40	27	1,259	19	27	2.07	64,333	1.00	1.006	63,949	0.93
1218	5	SW 8th Street	NB	135	0.56	Sys.	S. Act.	n/a	2	40	179	1,357	110	289	17.56	64,333	1.00	1.006	63,949	0.93
512	1	NW 41st Street	SB	n/a	n/a	Sys.	S. Act.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	29,400	1.00	1.000	29,400	0.95
512	2	NW 33rd Street	SB	73	0.78	Sys.	S. Act.	2,900	2	40	48	626	0	48	7.12	29,400	1.00	1.000	29,400	0.95
512/510	3/1	NW 25th Street	SB	110	0.43	Sys.	S. Act.	2,400	2	40	139	615	118	139	15.94	33,064	0.97	1.024	33,288	0.84
510	2	NW 14th Street	SB	135	0.79	Sys.	S. Act.	3,900	2	40	23	3,287	25	23	0.69	33,064	0.97	1.024	33,288	0.84
510/508	3/1	NW 12th Street	SB	135	0.80	Sys.	S. Act.	740	2	40	7	2,227	0	7	0.31	33,064	0.97	1.024	33,288	0.84
508/1218	2/1	SR 836 South	SB	135	0.84	Sys.	S. Act.	2,200	3	40	0	3,100	0	0	0.00	54,533	0.97	1.024	54,902	0.97
1218	2	Fountainebleau Blvd.	SB	134	0.47	Sys.	S. Act.	930	2	40	669	2,066	1,568	2,237	51.99	64,333	1.00	1.006	63,949	0.93
1218	3	Flagler Street	SB	134	0.58	Sys.	S. Act.	2,570	2	40	227	1,433	317	227	11.48	64,333	1.00	1.006	63,949	0.93
1218	4	SW 4th Street	SB	132	0.82	Sys.	S. Act.	1,300	2	40	27	602	16	27	4.19	64,333	1.00	1.006	63,949	0.93
1218	5	SW 8th Street	SB	135	0.56	Sys.	S. Act.	1,314	2	40	179	886	564	179	10.99	64,333	1.00	1.006	63,949	0.93

TABLE 10 NW 74TH STREET: NW 87TH AVENUE TO SR 826 EAST

Station Number	Seq.	Cross Street	Dir.	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
481	1	SR 826 West	EB	180	0.37	Sys.	S. Act.	640	2	45	0	1,176	65	0	0.00	14,387	1.01	1.014	14,048	0.95
481	2	SR 826 East	EB	180	0.89	Sys.	S. Act.	n/a	2	45	513	713	0	513	41.84	14,387	1.01	1.014	14,048	0.95
481	1	SR 826 West	WB	180	0.73	Sys.	S. Act.	n/a	2	45	804	529	0	804	60.32	14,387	1.01	1.014	14,048	0.95
481	2	SR 826 East	WB	180	0.56	Sys.	S. Act.	640	2	45	0	1,058	670	0	0.00	14,387	1.01	1.014	14,048	0.95

TABLE 11 NW 58TH STREET: NW 97TH AVENUE TO SR 826 EAST

Station Number	Seq	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
454	2	NW 97th Avenue	EB	78	0.75	Flashing	Signal	5,362	2	40	0	259	0	0	0.00	14,725	0.99	0.974	15,271	0.77
454/452	1/1	NW 87th Avenue	EB	78	0.41	Sys.	S. Act.	1,100	2	40	0	259	68	0	0.00	14,725	0.99	0.974	15,271	0.77
452	2	NW 84th Avenue	EB	111	0.41	Sys.	S. Act.	2,840	2	40	232	637	12	232	26.33	38,204	1.01	0.974	38,835	0.95
452	3	NW 79th Avenue	EB	174	0.45	Sys.	S. Act.	700	2	40	27	1,179	66	27	2.12	38,204	1.01	0.974	38,835	0.95
452	4	SR 826 West	EB	175	0.80	Sys.	S. Act.	1,100	2	40	0	1,942	502	502	20.54	38,204	1.01	0.974	38,835	0.95
452	5	SR 826 East	EB	175	0.30	Sys.	S. Act.	n/a	2	40	859	1,155	0	859	42.65	38,204	1.01	0.974	38,835	0.95
454	2	NW 97th Avenue	WB	78	0.75	Flashing	Signal	n/a	2	40	0	847	0	0	0.00	14,725	0.99	0.974	15,271	0.77
454/452	1/1	NW 87th Avenue	WB	78	0.68	Sys.	S. Act.	5,382	2	40	642	847	8	642	42.89	38,204	1.01	0.974	38,835	0.95
452	2	NW 84th Avenue	WB	111	0.41	Sys.	S. Act.	1,100	2	40	72	870	99	72	6.92	38,204	1.01	0.974	38,835	0.95
452	3	NW 79th Avenue	WB	174	0.45	Sys.	S. Act.	2,840	2	40	350	949	74	424	30.88	38,204	1.01	0.974	38,835	0.95
452	4	SR 826 West	WB	175	0.87	Sys.	S. Act.	700	2	40	215	916	0	215	19.01	38,204	1.01	0.974	38,835	0.95
452	5	SR 826 East	WB	175	0.30	Sys.	S. Act.	1,100	2	35	0	971	383	383	27.21	38,204	1.01	0.974	38,835	0.95

TABLE 12 NW 41ST/36TH STREET: SR 821 WEST TO MILAM DAIRY ROAD

Station Number	Seq.	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
442	3	SR 821 West	EB	56	0.52	Fully	Actuated	500	2	40	0	150	0	0	0.00	17,724	0.99	1.006	17,796	0.93
442	2	SR 821 East	EB	89	0.64	Sys.	S. Act.	5,280	2	40	49	80	0	0	0.00	17,724	0.99	1.006	17,796	0.93
442/440	1/3	NW 107th Avenue	EB	120	0.40	Sys.	S. Act.	2,600	2	40	0	216	85	0	0.00	17,724	0.99	1.006	17,796	0.93
440	2	NW 102nd Avenue	EB	87	0.54	Sys.	S. Act.	2,600	3	40	151	295	28	151	31.86	13,893	0.99	1.006	13,950	0.92
440/434	1/1	NW 97th Avenue	EB	85	0.56	Sys.	S. Act.	1,000	3	40	21	473	24	21	4.05	13,893	0.99	1.006	13,950	0.92
434	2	NW 94th Avenue	EB	164	0.88	Sys.	S. Act.	4,300	3	45	36	847	0	36	4.08	25,641	1.00	1.000	25,641	0.94
434/432	3/1	Galloway Road	EB	151	0.32	Sys.	S. Act.	1,100	2	45	235	589	300	535	47.60	25,641	1.00	1.000	25,641	0.94
432	2	NW 8400 Block	EB	354	0.95	Sys.	S. Act.	1,540	2.5	40	3	1,504	0	3	0.20	60,758	1.00	1.014	59,919	0.83
432	3	NW 82nd Avenue	EB	151	0.82	Sys.	S. Act.	1,584	2	40	0	1,177	86	0	0.00	60,758	1.00	1.014	59,919	0.83
432/1173	4/2	NW 79th Avenue	EB	170	0.40	Sys.	S. Act.	3,958	2	40	48	1,506	14	48	3.06	60,758	1.00	1.014	59,919	0.83
1173	1	Milam Dairy Road	EB	162	0.37	Sys.	S. Act.	n/a	2	30	531	1,944	170	701	26.50	65,426	0.99	1.006	65,693	0.91
442	3	SR 821 West	WB	56	0.52	Fully	Actuated	n/a	2	40	0	987	0	0	0.00	17,724	0.99	1.006	17,796	0.93
442	2	SR 821 East	WB	89	0.53	Sys.	S. Act.	500	2	40	0	1,122	1237	1237	52.44	17,724	0.99	1.006	17,796	0.93
442/440	1/3	NW 107th Avenue	WB	120	0.61	Sys.	S. Act.	5,280	2	40	619	1,785	0	619	25.75	13,893	0.99	1.006	13,950	0.92
440	2	NW 102nd Avenue	WB	87	0.54	Sys.	S. Act.	2,600	3	40	161	1,847	115	161	7.58	13,893	0.99	1.006	13,950	0.92
440/434	1/1	NW 97th Avenue	WB	85	0.56	Sys.	S. Act.	2,600	3	45	309	2,186	244	309	11.28	25,641	1.00	1.000	25,641	0.94
434	2	NW 94th Avenue	WB	164	0.88	Sys.	S. Act.	1,000	3	45	2	2,696	39	2	0.07	25,641	1.00	1.000	25,641	0.94
434/432	3/1	Galloway Road	WB	151	0.32	Sys.	S. Act.	4,300	2	40	529	1,210	135	664	35.43	60,758	1.00	1.014	59,919	0.83
432	2	NW 8400 Block	WB	354	0.95	Sys.	S. Act.	1,100	2	40	1	1,115	16	17	1.50	60,758	1.00	1.014	59,919	0.83
432	3	NW 82nd Avenue	WB	151	0.85	Sys.	S. Act.	1,540	2	40	201	1,475	0	201	11.99	60,758	1.00	1.014	59,919	0.83
432/1173	4/2	NW 79th Avenue	WB	170	0.56	Sys.	S. Act.	1,584	2	40	134	1,457	375	509	25.89	65,426	0.99	1.006	65,693	0.91
1173	1	Milam Dairy Road	WB	162	0.37	Sys.	S. Act.	3,958	2	30	710	2,045	555	710	21.45	65,426	0.99	1.006	65,693	0.91

TABLE 13 NW 25TH STREET: NW 117TH AVENUE TO MILAM DAIRY ROAD

Station Number	Seq	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
406	2	NW 107th Avenue	EB	110	0.13	Sys.	S. Act.	5,280	1	40	33	117	81	33	14.29	22,205	1.01	1.014	21,682	0.95
406/404	1/1	NW 97th Avenue	EB	61	0.64	Fully	Actuated	3,000	2	40	1	578	71	1	0.15	22,205	1.01	1.014	21,682	0.95
404	2	NW 9100 block	EB	117	0.86	Sys.	S. Act.	380	2	40	46	273	61	46	12.11	30,579	1.00	1.000	30,579	0.95
404	3	NW 89th Place	EB	100	0.79	Sys.	S. Act.	1,900	2	40	108	715	78	108	11.99	30,579	1.00	1.000	30,579	0.95
404/402	4/1	Galloway Road	EB	160	0.27	Sys.	S. Act.	2,640	2	40	132	534	175	307	36.50	30,579	1.00	1.000	30,579	0.95
402	2	NW 82nd Avenue	EB	140	0.40	Sys.	S. Act.	1,320	3	40	316	296	190	316	39.40	46,701	0.96	1.006	48,357	0.95
402	3	NW 79th Avenue	EB	141	0.70	Sys.	S. Act.	1,000	3	40	167	2,018	0	167	7.64	46,701	0.96	1.006	48,357	0.95
402/400	4/1	SR 826 West	EB	139	0.40	Sys.	S. Act.	500	4	40	0	806	575	575	41.64	46,701	0.96	1.006	48,357	0.95
400	2	SR 826 East	EB	139	0.74	Sys.	S. Act.	600	2	40	517	1,027	0	517	33.48	46,701	0.96	1.006	48,357	0.95
400	3	NW 75th Avenue	EB	140	0.58	Sys.	S. Act.	1,885	3	40	335	1,601	45	335	16.91	43,661	0.96	0.974	46,694	0.92
400	4	Milam Dairy Road	EB	119	0.27	Sys.	S. Act.	n/a	2	40	308	575	406	714	55.39	43,661	0.96	0.974	46,694	0.92
406	2	NW 107th Avenue	WB	110	0.29	Sys.	S. Act.	n/a	1	40	557	43	150	521	69.47	22,205	1.01	1.014	21,682	0.95
406/404	1/1	NW 97th Avenue	WB	61	0.64	Fully	Actuated	5,280	2	40	60	1,156	18	60	4.86	30,579	1.00	1.000	30,579	0.95
404	2	NW 9100 block	WB	117	0.88	Sys.	S. Act.	3,000	2	40	149	774	315	149	12.04	30,579	1.00	1.000	30,579	0.95
404	3	NW 89th Place	WB	100	0.79	Sys.	S. Act.	380	2	40	164	787	419	164	11.97	30,579	1.00	1.000	30,579	0.95
404/402	4/1	Galloway Road	WB	160	0.27	Sys.	S. Act.	1,900	2	40	278	589	213	491	45.46	46,701	0.96	1.006	48,357	0.95
402	2	NW 82nd Avenue	WB	140	0.40	Sys.	S. Act.	2,640	2	40	344	333	877	344	22.14	46,701	0.96	1.006	48,357	0.95
402	3	NW 79th Avenue	WB	141	0.70	Sys.	S. Act.	1,320	2	40	0	1,265	166	166	11.60	46,701	0.96	1.006	48,357	0.95
402/400	4/1	SR 826 West	WB	139	0.70	Sys.	S. Act.	1,000	2	40	756	1,031	0	756	42.31	46,701	0.96	1.006	48,357	0.95
400	2	SR 826 East	WB	139	0.54	Sys.	S. Act.	500	4	40	0	1,794	567	567	24.02	43,661	0.96	0.974	46,694	0.92
400	3	NW 75th Avenue	WB	140	0.58	Sys.	S. Act.	600	2	40	58	1,884	135	58	2.79	43,661	0.96	0.974	46,694	0.92
400	4	Milam Dairy Road	WB	119	0.27	Sys.	S. Act.	1,885	2	40	290	551	107	290	30.59	43,661	0.96	0.974	46,694	0.92

TABLE 14 NW 12TH STREET: GALLOWAY ROAD TO NW 72ND AVENUE

Station Number	Seq.	Cross Street	Dir	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
358	1	Galloway Road	EB	n/a	n/a	Sys.	S. Act.	500	n/a	n/a	n/a	n/a	n/a	n/a	n/a	25,845	0.97	1.024	26,020	0.90
358	2	NW 8600 block	EB	130	0.77	Sys.	S. Act.	2,200	2	40	0	437	0	0	0.00	25,845	0.97	1.024	26,020	0.90
358	3	NW 82nd Avenue	EB	136	0.74	Sys.	S. Act.	1,750	2	40	241	609	0	241	28.35	25,845	0.97	1.024	26,020	0.90
358	4	NW 78th Avenue	EB	135	0.59	Sys.	S. Act.	1,595	2	40	15	801	0	15	1.84	25,845	0.97	1.024	26,020	0.90
358	5	Milam Dairy Road	EB	134	0.24	Sys.	S. Act.	1,720	3	40	121	752	92	121	12.54	25,845	0.97	1.024	26,020	0.90
358	6	NW 72nd Avenue	EB	135	0.41	Sys.	S. Act.	n/a	2	40	16	90	36	40	28.17	25,845	0.97	1.024	26,020	0.90
358	1	Galloway Road	WB	130	0.35	Sys.	S. Act.	n/a	2	40	795	731	117	530	32.26	25,845	0.97	1.024	26,020	0.90
358	2	NW 8600 block	WB	130	0.77	Sys.	S. Act.	500	2	40	0	2,058	0	0	0.00	25,845	0.97	1.024	26,020	0.90
358	3	NW 82nd Avenue	WB	136	0.70	Sys.	S. Act.	2,200	2	40	0	984	206	0	0.00	25,845	0.97	1.024	26,020	0.90
358	4	NW 78th Avenue	WB	135	0.63	Sys.	S. Act.	1,750	2	40	0	1,164	123	0	0.00	25,845	0.97	1.024	26,020	0.90
358	5	Milam Dairy Road	WB	134	0.24	Sys.	S. Act.	1,595	2	40	19	597	868	596	40.22	25,845	0.97	1.024	26,020	0.90
358	6	NW 72nd Avenue	WB	135	0.30	Sys.	S. Act.	1,720	2	40	702	601	10	468	35.64	25,845	0.97	1.024	26,020	0.90

TABLE 15 FLAGLER STREET: WEST 114TH AVENUE TO WEST 72ND AVENUE

Station Number	Seq.	Cross Street	Dir	SIGNAL DATA			ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type	Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
										LT	TH	RT							
158	4	West 114th Avenue	EB	136	0.70	Sys. S. Act.	1,230	3	40	302	882	57	302	24.34	33,521	0.97	1.014	34,081	0.95
158	3	West 112th Avenue	EB	134	0.71	Sys. S. Act.	1,250	3	40	108	1,031	64	108	8.98	33,521	0.97	1.014	34,081	0.95
158	2	West 109th Avenue	EB	135	0.70	Sys. S. Act.	1,400	3	40	68	818	51	68	7.26	33,521	0.97	1.014	34,081	0.95
158/156	1/3	West 107th Avenue	EB	134	0.22	Sys. S. Act.	2,600	3	40	272	948	139	272	20.01	33,521	0.97	1.014	34,081	0.95
156	2	West 102nd Avenue	EB	120	0.78	Sys. S. Act.	2,700	3	40	179	1,307	188	179	10.69	33,141	0.96	1.006	34,316	0.95
156/154	1/4	West 97th Avenue	EB	120	0.60	Sys. S. Act.	2,500	3	40	199	792	105	199	18.16	33,141	0.96	1.006	34,316	0.95
154	3	West 92nd Avenue	EB	120	0.66	Sys. S. Act.	1,784	3	40	2	990	151	0	0.00	42,912	0.97	1.006	43,975	0.96
154	2	Fountainebleau Blvd.	EB	120	0.77	Sys. S. Act.	826	3	40	122	967	0	122	11.20	42,912	0.97	1.006	43,975	0.96
154/1141	1/5	West 87th Avenue	EB	121	0.40	Sys. S. Act.	1,320	3	40	439	1,775	343	782	30.58	42,912	0.97	1.006	43,975	0.96
1141	4	West 84th Avenue	EB	135	0.71	Sys. S. Act.	1,320	3	40	152	1,331	33	152	10.03	63,511	0.97	0.974	67,223	0.98
1141	3	West 82nd Avenue	EB	134	0.69	Sys. S. Act.	1,210	3	40	133	1,213	64	133	9.43	63,511	0.97	0.974	67,223	0.98
1141	2	West 79th Avenue	EB	136	0.65	Sys. S. Act.	887	3	40	223	1,585	15	223	12.23	63,511	0.97	0.974	67,223	0.98
1141/1140	1/4	SR 826 West	EB	127	0.64	Sys. S. Act.	859	2	40	102	247	108	102	22.32	63,511	0.97	0.974	67,223	0.98
1140	3	SR 826 East	EB	136	0.63	Sys. S. Act.	762	2	40	1,628	2,727	121	1,628	36.37	52,660	0.97	1.006	53,965	0.98
1140	2	West 74th Avenue	EB	254	0.94	Sys. S. Act.	1,542	2	30	29	1,518	21	29	1.85	52,660	0.97	1.006	53,965	0.95
1140	1	West 72nd Avenue	EB	135	0.50	Sys. S. Act.	n/a	2	30	182	1300	21	182	12.11	52,660	0.97	1.006	53,965	0.95
158	4	West 114th Avenue	WB	136	0.70	Sys. S. Act.	n/a	3	40	101	1,364	70	101	6.62	33,521	0.97	1.014	34,081	0.95
158	3	West 112th Avenue	WB	134	0.71	Sys. S. Act.	1,230	3	40	112	1,268	182	112	7.17	33,521	0.97	1.014	34,081	0.95
158	2	West 109th Avenue	WB	135	0.70	Sys. S. Act.	1,250	3	40	124	1,264	86	124	8.41	33,521	0.97	1.014	34,081	0.95
158/156	1/3	West 107th Avenue	WB	134	0.22	Sys. S. Act.	1,400	3	40	256	1,174	214	256	15.57	33,141	0.96	1.006	34,316	0.95
156	2	West 102nd Avenue	WB	120	0.78	Sys. S. Act.	2,600	3	40	135	1,378	178	135	7.98	33,141	0.96	1.006	34,316	0.95
156/154	1/4	West 97th Avenue	WB	120	0.60	Sys. S. Act.	2,700	3	40	337	1,461	119	337	17.58	42,912	0.97	1.006	43,975	0.96
154	3	West 92nd Avenue	WB	120	0.66	Sys. S. Act.	2,500	3	40	754	1,983	50	754	27.05	42,912	0.97	1.006	43,975	0.96
154	2	Fountainebleau Blvd.	WB	120	0.77	Sys. S. Act.	1,784	3	40	0	2,106	376	0	0.00	42,912	0.97	1.006	43,975	0.96
154/1141	1/5	West 87th Avenue	WB	121	0.40	Sys. S. Act.	826	3	40	202	705	143	202	19.24	63,511	0.97	0.974	67,223	0.98
1141	4	West 84th Avenue	WB	135	0.71	Sys. S. Act.	1,320	3	40	67	1,825	102	67	3.36	63,511	0.97	0.974	67,223	0.98
1141	3	West 82nd Avenue	WB	134	0.69	Sys. S. Act.	1,320	3	40	81	2,238	284	81	3.11	63,511	0.97	0.974	67,223	0.98
1141	2	West 79th Avenue	WB	136	0.65	Sys. S. Act.	1,210	3	40	64	2,492	740	804	24.39	63,511	0.97	0.974	67,223	0.98
1141/1140	1/4	SR 826 West	WB	127	0.64	Sys. S. Act.	887	3	40	382	533	684	1,048	66.24	52,660	0.97	1.006	53,965	0.98
1140	3	SR 826 East	WB	136	0.63	Sys. S. Act.	859	3	30	4	1,555	69	73	4.48	52,660	0.97	1.006	53,965	0.98
1140	2	West 74th Avenue	WB	254	0.94	Sys. S. Act.	762	2	30	27	1,872	24	27	1.40	52,660	0.97	1.006	53,965	0.95
1140	1	West 72nd Avenue	WB	135	0.45	Sys. S. Act.	1,542	2	30	27	1,848	225	252	12.00	52,660	0.97	1.006	53,965	0.95

TABLE 16 SW 8TH STREET: SR 821 WEST TO SW 74TH AVENUE

Station Number	Seq.	Cross Street	Dir.	SIGNAL DATA				ROADWAY VARIABLES			TRAFFIC VARIABLES									
				Cycle Length (sec.)	g/C Ratio	Signal Type		Signal Spacing (ft.)	No. of Through Lanes	Free Flow Speed (mph)	PM Peak Hour Traffic Volume 1994			Turns From Ex. Lanes	% Turns From Ex. Lanes	Raw Daily Count	Bi-Weekly Factor	Day of Week Factor	Adjusted AWDT Count	Pk. Hr. Factor (PHF)
											LT	TH	RT							
90	5	SR 821 West	EB	135	0.63	Sys.	S. Act.	1,570	3	45	0	1,119	153	153	12.03	31,377	0.97	0.974	33,211	0.93
90	4	SR 821 East	EB	135	0.75	Sys.	S. Act.	1,380	3	45	0	1,272	461	461	26.60	31,377	0.97	0.974	33,211	0.93
90	3	SW 117th Avenue	EB	135	0.76	Sys.	S. Act.	720	3	45	0	1,228	160	160	11.53	31,377	0.97	0.974	33,211	0.93
90	2	SW 112th Avenue	EB	127	0.78	Sys.	S. Act.	2,600	3	45	0	1,184	206	206	14.82	31,377	0.97	0.974	33,211	0.93
90/589	1/6	SW 107th Avenue	EB	135	0.24	Sys.	S. Act.	2,577	3	45	326	1,726	174	500	22.46	31,377	0.97	0.974	33,211	0.93
589	5	SW 102nd Avenue	EB	164	0.78	Sys.	S. Act.	2,685	4	45	0	1,117	89	0	0.00	16,735	0.97	1.006	17,150	0.95
589	4	SW 97th Avenue	EB	136	0.55	Sys.	S. Act.	1,285	4	45	138	1,605	134	272	14.49	16,735	0.97	1.006	17,150	0.95
589	3	SW 94th Avenue	EB	136	0.77	Sys.	S. Act.	1,350	4	45	22	2,226	6	22	0.98	16,735	0.97	1.006	17,150	0.95
589	2	SW 92nd Avenue	EB	134	0.66	Sys.	S. Act.	2,650	4	45	138	1,743	91	138	7.00	16,735	0.97	1.006	17,150	0.95
589/92	1/2	SW 87th Avenue	EB	134	0.46	Sys.	S. Act.	2,660	4	45	170	1,894	136	170	7.73	16,735	0.97	1.006	17,150	0.95
92/5	1/2	SW 82nd Avenue	EB	135	0.76	Sys.	S. Act.	4,066	3	45	0	1,407	123	0	0.00	38,146	0.97	1.006	39,091	0.97
5	1	SW 74th Avenue	EB	120	0.67	Sys.	S. Act.	n/a	2	35	167	1,402	98	167	10.02	42,719	0.97	1.014	43,432	0.96
90	5	SR 821 West	WB	135	0.67	Sys.	S. Act.	n/a	3	45	187	1,372	0	187	11.99	31,377	0.97	0.974	33,211	0.93
90	4	SR 821 East	WB	135	0.84	Sys.	S. Act.	1,670	3	45	210	1,559	0	210	11.87	31,377	0.97	0.974	33,211	0.93
90	3	SW 117th Avenue	WB	135	0.84	Sys.	S. Act.	1,380	3	45	220	1,641	0	220	11.62	31,377	0.97	0.974	33,211	0.93
90	2	SW 112th Avenue	WB	127	0.78	Sys.	S. Act.	720	3	45	189	1,722	0	189	9.89	31,377	0.97	0.974	33,211	0.93
90/589	1/6	SW 107th Avenue	WB	135	0.24	Sys.	S. Act.	2,600	3	45	262	991	162	424	29.96	16,735	0.97	1.006	17,150	0.95
589	5	SW 102nd Avenue	WB	164	0.78	Sys.	S. Act.	2,577	4	45	308	1,833	0	308	14.39	16,735	0.97	1.006	17,150	0.95
589	4	SW 97th Avenue	WB	136	0.55	Sys.	S. Act.	2,685	4	45	51	1,407	94	145	9.34	16,735	0.97	1.006	17,150	0.95
589	3	SW 94th Avenue	WB	136	0.77	Sys.	S. Act.	1,285	4	45	71	1,192	20	71	5.53	16,735	0.97	1.006	17,150	0.95
589	2	SW 92nd Avenue	WB	134	0.66	Sys.	S. Act.	1,350	4	45	75	1,408	88	163	10.38	16,735	0.97	1.006	17,150	0.95
589/92	1/2	SW 87th Avenue	WB	134	0.46	Sys.	S. Act.	2,650	4	45	203	1,234	16	219	15.07	38,146	0.97	1.006	39,091	0.97
92/5	1/2	SW 82nd Avenue	WB	135	0.76	Sys.	S. Act.	2,660	3	45	142	1,963	0	142	6.75	38,146	0.97	1.008	39,091	0.97
5	1	West of 72nd Avenue	WB	120	0.67	Sys.	S. Act.	4,066	2	35	63	1,447	34	97	6.28	42,719	0.97	1.014	43,432	0.96

The next three columns, under the heading "Roadway Variables", were collected and assembled by the Dade County Public Works and the Dade County Metropolitan Planning Organization. The signal spacing distances are approximate measurements between the signalized intersections. The number of lanes refers to the number of through and shared right-turn and/or left-turn lanes which approach the intersection in each direction. Finally, the free flow speed is taken as the speed limit for each approach direction at the cross streets.

The 1994 PM Peak Hour Traffic Volumes were assembled by the Dade County Developmental

configurations, the number and percentage of vehicles utilizing exclusive turn lanes are calculated and displayed in the two adjacent columns.

For a variety of reasons, the County was not able to collect turning movement volumes for every signalized intersection included within the Art_Plan segments. However, the County did provide the results from a Development of Regional Impact (DRI) study and a Traffic Impact Analysis (TIA) study, both of which contained 1994 turning movement counts for a number of study area intersections. These counts were utilized to the extent possible. The remaining intersections for which no data was provided, are assumed to have approximately 12% turns from exclusive lanes (default Art_Plan value) while the traffic volumes are estimated by averaging adjacent intersections. The cycle lengths and g/C ratios for these intersections were obtained from optimum signal timing plans and not from actual PM peak period timings. These plans provide more conservative green time ratios for the Art_Plan calculations rather than actual timings; thus, their use may be justified as a substitute for the real timings.

The last five columns in Tables 4 through 16 represent the most critical elements in establishing the existing levels of service using Art_Plan. The "Raw Daily Count" values come directly from permanent machine counters located along the major arterials in West Dade. The state arterial count stations provide 1993 data while the county stations provide mostly 1994 data. This one year difference should not have a significant effect on the level of service analyses and can be ignored. The raw count is then modified by dividing it by both a bi-weekly factor and a daily factor in order to establish the adjusted AWDT count which is input into Art_Plan. Both of these factors were provided by the Public Works Department.

The final column on the spreadsheet is the Peak Hour Factor. This column is similar to the PHF columns on Table 1, with one exception. The 1993 PHF values for the County count stations were not calculated using the PM peak period (4:00 to 6:00 PM), but instead were based on a much longer "afternoon" period. In order to avoid any potential discrepancies, the Public Works department instructed that a default value of 0.95 be used for those particular cases. The K and D factors for the County count stations, however, were calculated using the 1994 machine counts.

Dade County has recently conducted Art_Plan and Art_Tab analyses on four of the count station segments in the study area. These count stations are 164, 404, 434, and 512. These prior studies are unrelated to the current study; however, the data provided in these earlier calculations are useful for this current evaluation. The West Dade Task Art_Plan results for the above count stations are slightly modified because the original AADT counts were assumed to be "Raw Daily Counts" and were adjusted accordingly. In addition, the DRI and TIA mentioned earlier provided updates on the turning movement volumes for these four segments.

This concludes the description of the spreadsheet variables and, coincidentally, the Art_Plan input parameters.

3.0 PROGRAMMED ROADWAY IMPROVEMENTS AND TRANSIT SERVICE

This chapter summarizes the listed roadway capacity improvements described in Dade County's 1995 and 1996 Transportation Improvement Programs (TIP) for the study area. These 5-year work programs are updated every year by the Metro-Dade Metropolitan Planning Organization. Also included in this chapter is a description of all current (November 1993) Metro-Bus routes serving the study area along with their headways. In addition, the 1994 Metro-Dade Transit Development Program was researched in order to determine future bus headway improvements as well as any rail projects that may affect the mobility of users in the West Dade Area.

3.1 Roadway Improvements

The capacity improvements that are scheduled to occur during the next five years in West Dade will have an impact by improving the level of service on major corridors in the study area. Table 17 and Figure 3 provide both a tabular summary and a map of the funded and unfunded capacity improvements which are listed in the 1995 and 1996 TIP. All of the unfunded elements are considered high priority items and will likely receive appropriate funding as the TIP is updated. As noted in the table, there are three major divisions in the work program -- each of which represents a major funding source for those roadway improvements. Some of the listings under the Secondary Work Program and Road Impact Fee Program do not indicate an effect on any analyzed count station. One reason for this is that some of these roadways are in the process of being constructed and thus no machine counters have been installed yet. Another reason is that no analysis was completed for those roadway segments which do not include signalized intersections. It is important to realize, however, that with any roadway capacity improvements, the future need for signalization becomes more probable.

Table 17 includes a special note concerning private sector roadway improvements which enhance the capacity of the study area. A more detailed analysis will be provided on other potential private sector roadway improvements in later chapters of this report. These other chapters will also describe a set of recommended improvements, other than those in the TIPs, which can adequately mitigate existing and projected levels of congestion in the study area.

3.2 Transit Service

Transit has played an increasingly important role in the movement of people throughout urbanized Dade County. The West Dade Area, being a rather new growth region, is targeted by the 1994 Metro-Dade Transit Development Program (TDP) as an area that will see definite improvements in transit service. Table 18 provides a summary of both the existing PM peak headways of bus routes servicing the study area, as well as recommended improvements to these headways in the short-term as suggested by the Metro-Dade Transit Agency (MDTA).

TABLE 17
WEST DADE AREA
TRANSPORTATION IMPROVEMENT PROGRAM CAPACITY IMPROVEMENTS

FDOT WORK PROGRAM

Count Stations Affected	Work Program Item Number	Name	From	To	Description Type of Work	Year
39,1202,1204,1205	6113700	Milam Dairy Road	NW 12th Street West	NW 74th Street	Add 2 through lanes for a total of 6 lanes	1994-1995
568,569,570	6113758	SR 826 (Palmetto)	SW 2nd Street	NW 25th Street	Add 2 through lanes for a total of 10 lanes	Unfunded
1140	6113785	Flagler Street	SR 826 (Palmetto)	W 71st Street	Add 2 through lanes for a total of 6 lanes	1994-1995
568,569	6113826	SR 826 (Palmetto)	SW 2nd Street	SW 8th Street	Add 2 through lanes for a total of 10 lanes	Unfunded
570,571	6113827	SR 826 (Palmetto)	NW 25th Street	NW 47th Street	Add 2 through lanes for a total of 10 lanes	Unfunded
571,572	6113828	SR 826 (Palmetto)	NW 47th Street	NW 62nd Street	Add 2 through lanes for a total of 10 lanes	Unfunded
1995 DADE COUNTY SECONDARY WORK PROGRAM						
482,484	662307	NW 79th Avenue	NW 58th Street	NW 25th Street	Widen to 5 lanes	1995-1998
400	n/a	NW 25th Street	SR 826 (Palmetto)	NW 72nd Avenue	Widen to 5 lanes	Unfunded
1996 DADE COUNTY SECONDARY WORK PROGRAM						
n/a	662214	NW 12th Street	NW 97th Avenue	NW 87th Avenue	Add 2 and 4 through lanes; RR crossing	1995-1996
1995 DADE COUNTY ROAD IMPACT FEE PROGRAM						
434,440	671103	NW 41st Street	NW 107th Avenue	NW 87th Avenue	Widen from 2 to 6 lanes (Completed 1994)	n/a
432,1173	671104	NW 36th Street	NW 87th Avenue	NW 77th Avenue	Widen from 4 to 6 lanes	1994-1995
1218	671105	SW 107th Avenue	Tamiami Canal	SW 8th Street	Add exclusive SB turn lanes at SW 8th Street	1994-1996
n/a	n/a	NW 12th Street	NW 104th Avenue	NW 97th Avenue	Construct new 4-lane roadway	1996-1999
n/a	n/a	SW 109th Avenue	SW 8th Street	Flagler Street	Construct new 4-lane roadway	1994-1995
n/a	n/a	Tamiami Canal Drive Tamiami Boulevard	SW 8th Street	Flagler Street	Widen to 3 lanes	1994-1998
1996 DADE COUNTY SECONDARY WORK PROGRAM						
n/a	n/a	NW 97th Avenue	Bridge over SR 836		Construct 4-lane bridge and approaches	1995-1997
n/a	671106	SW 109th Avenue	Bridge over Tamiami Canal		New 4-lane bridge and approaches	1995-1996

Special Note: The 1995 TIP also mentioned four private sector road improvements that will be implemented by Ryder System Inc. in order to accommodate the forecasted 685 PM peak hour trip ends that will be generated by their new facility in the study area. These improvements are listed below:

Count Station	
432	NW 36th Street between NW 82nd Avenue and SR 826 (Palmetto) will be widened from 4 to 6 lanes
n/a	A NB freeflow right turn lane will be added to the intersection of NW 36th Street and NW 82nd Avenue
482	A SB left turn lane will be added to the intersection of NW 36th Street and NW 79th Avenue
482	The SB right turn lane will be restriped for freeflow movement at the above intersection.

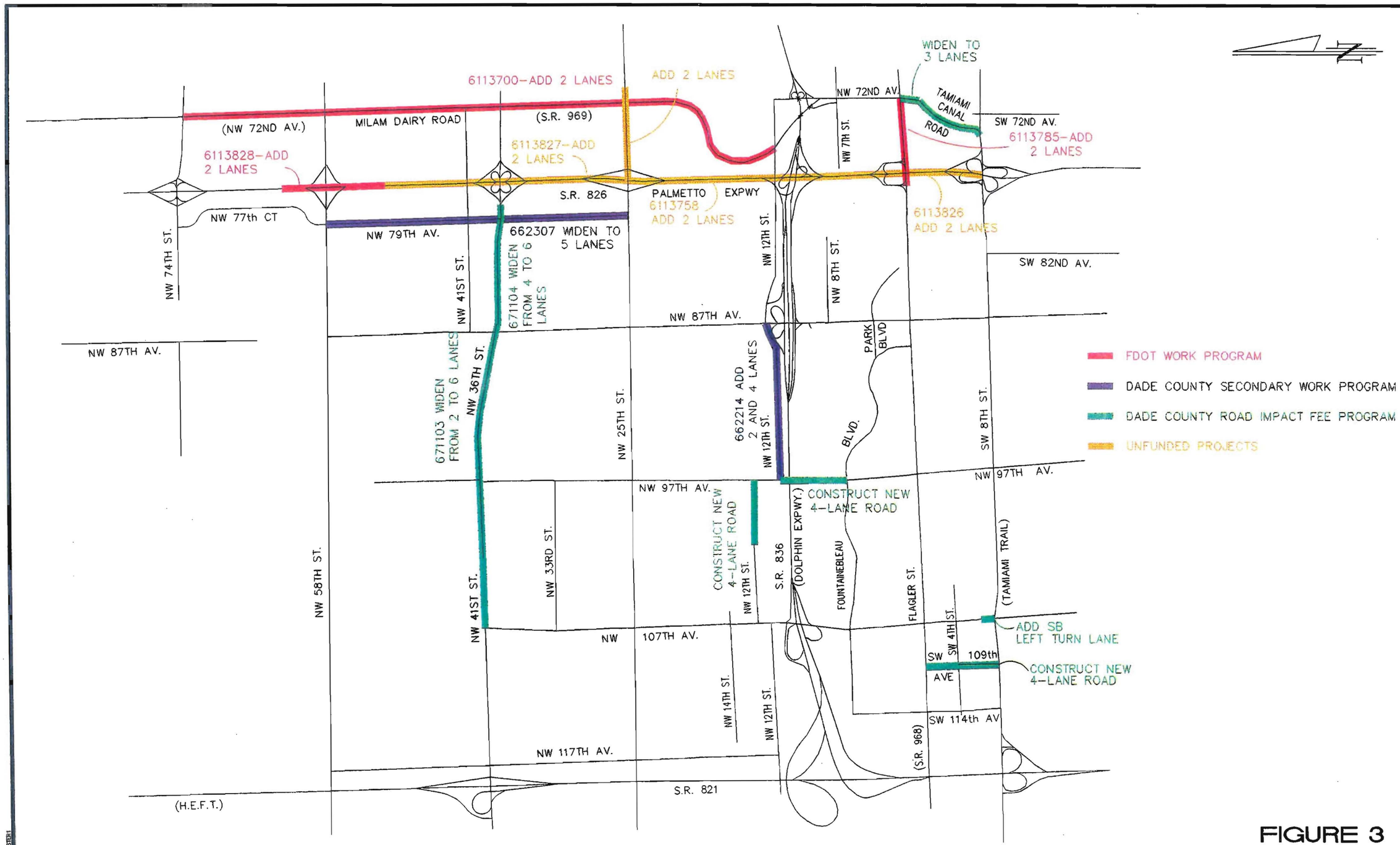


FIGURE 3

TIP IMPROVEMENTS IN WEST DADE AREA

BARTON-ASCHMAN ASSOC., INC.
Ft. LAUDERDALE, FLORIDA

TABLE 18
WEST DADE AREA
METRO-DADE BUS ROUTES

AFFECTED COUNT STATION	BUS ROUTE	ARTERIAL	BUS ROUTE SEGMENT	EXISTING PM PEAK HEADWAY	RECOMMENDED MDTA HEADWAY	TIMEFRAME OF RECOMMENDATION
5	8,8A	SW 8th Street	West of SW 72nd Avenue to SW 82nd Avenue	30 minutes	n/a	n/a
39	73	Milam Dairy Road	NW 58th Street to NW 74th Street	30 minutes	n/a	Within 1-2 years
	87	Milam Dairy Road	NW 58th Street to NW 74th Street	30 minutes	30 minutes	n/a
44	87	SW 87th Avenue	Flagler Street to SW 8th Street	30 minutes	30 minutes	n/a
92	8,8A	SW 8th Street	SW 82nd Avenue to SW 87th Avenue	30 minutes	n/a	n/a
154	Flag MAX	Flagler Street	West 87th Avenue to West 97th Avenue	15 minutes	n/a	n/a
	11	Flagler Street	West 87th Avenue to West 97th Avenue	12 minutes	5 minutes	Within 3-4 years
156	Flag MAX	Flagler Street	West 97th Avenue to West 107th Avenue	15 minutes	n/a	n/a
	11	Flagler Street	West 97th Avenue to West 107th Avenue	12 minutes	5 minutes	Within 3-4 years
158	Flag MAX	Flagler Street	West 107th Avenue to West 114th Avenue	15 minutes	n/a	n/a
	11	Flagler Street	West 107th Avenue to West 114th Avenue	12 minutes	5 minutes	Within 3-4 years
	71	Flagler Street	West 107th Avenue to West 112th Avenue	70 minutes	30 minutes	Within 1-2 years
162	87	NW 87th Avenue	NW 25th Street to NW 12th Street	30 minutes	30 minutes	n/a
164	87	NW 87th Avenue	NW 41st Street to NW 25th Street	30 minutes	30 minutes	n/a
	95	NW 87th Avenue	NW 41st Street to NW 25th Street	Once per day	n/a	n/a
166	Tri-Rail Bus	NW 87th Avenue	NW 53rd Street to NW 41st Street	n/a	n/a	n/a
	36	NW 87th Avenue	NW 53rd Street to NW 41st Street	20 minutes	15 minutes	Within 3-4 years
	87	NW 87th Avenue	NW 53rd Street to NW 41st Street	30 minutes	30 minutes	n/a
358	73	NW 12th Street	NW 72nd Avenue to Milam Dairy Road	30 minutes	n/a	Within 1-2 years
404	87	NW 25th Street	NW 92nd Avenue to NW 87th Avenue	30 minutes	30 minutes	n/a
	95	NW 25th Street	NW 92nd Avenue to NW 87th Avenue	Once per day	n/a	n/a
432	Tri-Rail Bus	NW 36th Street	NW 87th Avenue to NW 82nd Avenue	n/a	n/a	n/a
	36	NW 36th Street	NW 87th Avenue to NW 82nd Avenue	20 minutes	15 minutes	n/a
	95	NW 36th Street	NW 87th Avenue to NW 82nd Avenue	Once per day	n/a	n/a
434	Proposed	NW 41st Street	NW 97th Avenue to NW 87th Avenue	n/a	20 minutes	Within 3-4 years
440	Proposed	NW 41st Street	NW 97th Avenue to NW 107th Avenue	n/a	20 minutes	Within 3-4 years
452	87	NW 58th Street	NW 79th Avenue to SR 826 (Palmetto) East	30 minutes	30 minutes	n/a
482	Tri-Rail Bus	NW 79th Avenue	NW 53rd Street to NW 36th Street	n/a	n/a	n/a
	36	NW 79th Avenue	NW 53rd Street to NW 36th Street	20 minutes	15 minutes	n/a
	87	NW 79th Avenue	NW 58th Street to NW 53rd Street	30 minutes	30 minutes	n/a
508	7	NW 107th Avenue	NW 12th Street to SR 836 (Dolphin) South	40 minutes	20 minutes	Within 1-2 years
	71	NW 107th Avenue	NW 12th Street to NW 7th Street	70 minutes	30 minutes	Within 1-2 years
510	Proposed	NW 107th Avenue	NW 25th Street to NW 14th Street	n/a	20 minutes	Within 3-4 years
512	Proposed	NW 107th Avenue	NW 41st Street to NW 25th Street	n/a	20 minutes	Within 3-4 years
589	8A	SW 8th Street	SW 87th Avenue to SW 107th Avenue	30 minutes	n/a	n/a
1140	Flag MAX	Flagler Street	West 72nd Avenue to SR 826 (Palmetto) West	15 minutes	n/a	n/a
	7	Flagler Street	West 72nd Avenue to SR 826 (Palmetto) West	40 minutes	20 minutes	Within 1-2 years
	11	Flagler Street	West 72nd Avenue to SR 826 (Palmetto) West	12 minutes	5 minutes	Within 3-4 years
1141	Flag MAX	Flagler Street	SR 826 (Palmetto) West to West 87th Avenue	15 minutes	n/a	n/a
	11	Flagler Street	SR 826 (Palmetto) West to West 87th Avenue	12 minutes	5 minutes	Within 3-4 years
	87	Flagler Street	West 79th Avenue to West 87th Avenue	30 minutes	30 minutes	n/a
1173	Tri-Rail Bus	NW 36th Street	Milam Dairy Road to NW 79th Avenue	n/a	n/a	n/a
	36	NW 36th Street	Milam Dairy Road to NW 79th Avenue	20 minutes	15 minutes	n/a
	95	NW 36th Street	Milam Dairy Road to NW 79th Avenue	Once per day	n/a	n/a
1201	73	NW 72nd Avenue	NW 12th Street East to Flagler Street	30 minutes	n/a	n/a
1202	73	Milam Dairy Road	NW 25th Street to NW 12th Street West	30 minutes	n/a	n/a
1204	73	Milam Dairy Road	NW 25th Street to NW 36th Street	30 minutes	n/a	n/a
1205	73	Milam Dairy Road	NW 58th Street to NW 36th Street	30 minutes	n/a	n/a
1211	7	NW 87th Avenue	NW 7th Street to Park Boulevard	40 minutes	20 minutes	Within 1-2 years
	87	NW 87th Avenue	SR 836 (Dolphin) South to NW 7th Street	30 minutes	30 minutes	n/a
1218	Proposed	West 107th Avenue	SR 836 (Dolphin) South to SW 8th Street	n/a	15 minutes	Within 1-2 years
	7	NW 107th Avenue	SR 836 (Dolphin) South to Fountainebleau Blvd	40 minutes	20 minutes	Within 1-2 years
	11	SW 107th Avenue	SW 4th Street to SW 8th Street	12 minutes	5 minutes	Within 3-4 years
	71	SW 107th Avenue	Flagler Street to SW 8th Street	70 minutes	30 minutes	Within 1-2 years
2188	Proposed	SR 836 (Dolphin)	NW 72nd Avenue to SR 826 (Palmetto)	n/a	15 minutes	Within 1-2 years
2243	Proposed	SR 836 (Dolphin)	NW 87th Avenue to NW 107th Avenue	n/a	15 minutes	Within 1-2 years
2244	Proposed	SR 836 (Dolphin)	SR 826 (Palmetto) to NW 87th Avenue	n/a	15 minutes	Within 1-2 years

Source: 1994 Metro-Dade Transit Development Program; 1994 Metro-Dade bus schedules.

A number of proposed new routes are projected to start up during the next few years, mostly as extensions to existing routes. Figure 4 illustrates both the current and planned bus and commuter rail routes in the study area. This figure depicts the Group 1 proposed improvements (within 1-2 years) separately from those scheduled three to four years into the future (Group 2). This separation distinguishes between projects which are likely to be completed from those which do not have as high a probability of occurring.

Although many of the bus routes overlap each other on the major arterials, the network of buses and trains is comprehensive and will service more than 80% of the analyzed arterial roadway segments in West Dade within a few years. The impact of transit availability is of considerable importance when calculating the level of service thresholds for both the arterials and the freeways. Table 19 shows how the LOS thresholds can change due to transit.

The most important information provided by Table 19 is the definition of the Long-Term LOS Standards. These are new standards that went into effect beginning January 1, 1995 in Dade County. Most of the arterials and freeways in the West Dade Area lie between the Urban Infill Area (UIA) and the Urban Development Boundary (UDB). Only those arterials in Sectors 5 and 6 (see Figure 2) are considered to be within the Urban Infill Area. The UIA has a special exemption from the stringent concurrency requirements that are in effect outside of this area. An amendment addressing this exemption was approved by Dade County during the Spring of 1995. However, the County's LOS Standard (LOS E) for this area will continue to be monitored. The exemption from traffic concurrency requirements is only for the purpose of issuing development orders.

As Table 19 indicates, the Level of Service E threshold can be increased up to a maximum of 150% with the provision of extraordinary transit service. This table basically shows that certain arterial roadways can exceed their automobile capacity significantly without necessitating immediate physical (and expensive) roadway improvements. From Table 18, it is easy to determine which count stations have -- or will have -- headways of 20 minutes or less and/or extraordinary transit service. Those count station segments listed on Table 18 with multiple bus routes having varying headways were conservatively assumed to have adequate transit service only if at least one of the routes had a headway of 20 minutes or less.

It is important to note that only those routes proposed for implementation in 1-2 years (Group 1) will be considered when determining the arterial and freeway levels of service. The 3-4 year programs are more liable to change and are therefore not included in the analysis. These Group 2 improvements have, however, been shown in Figure 4. The Group 3 improvements (year 4-5 programs), have not been included in the analysis and are not shown in Figure 4 as these have a lower probability of implementation than Group 2 (3-4 year) improvements.

Two proposed additions to the Metro-rail network are shown on Figure 4. These additions will have an important effect upon the West Dade Area. First is the planned extension of the Metro-rail northern terminus from its current stop at Okeechobee Station to a new station located northwest of

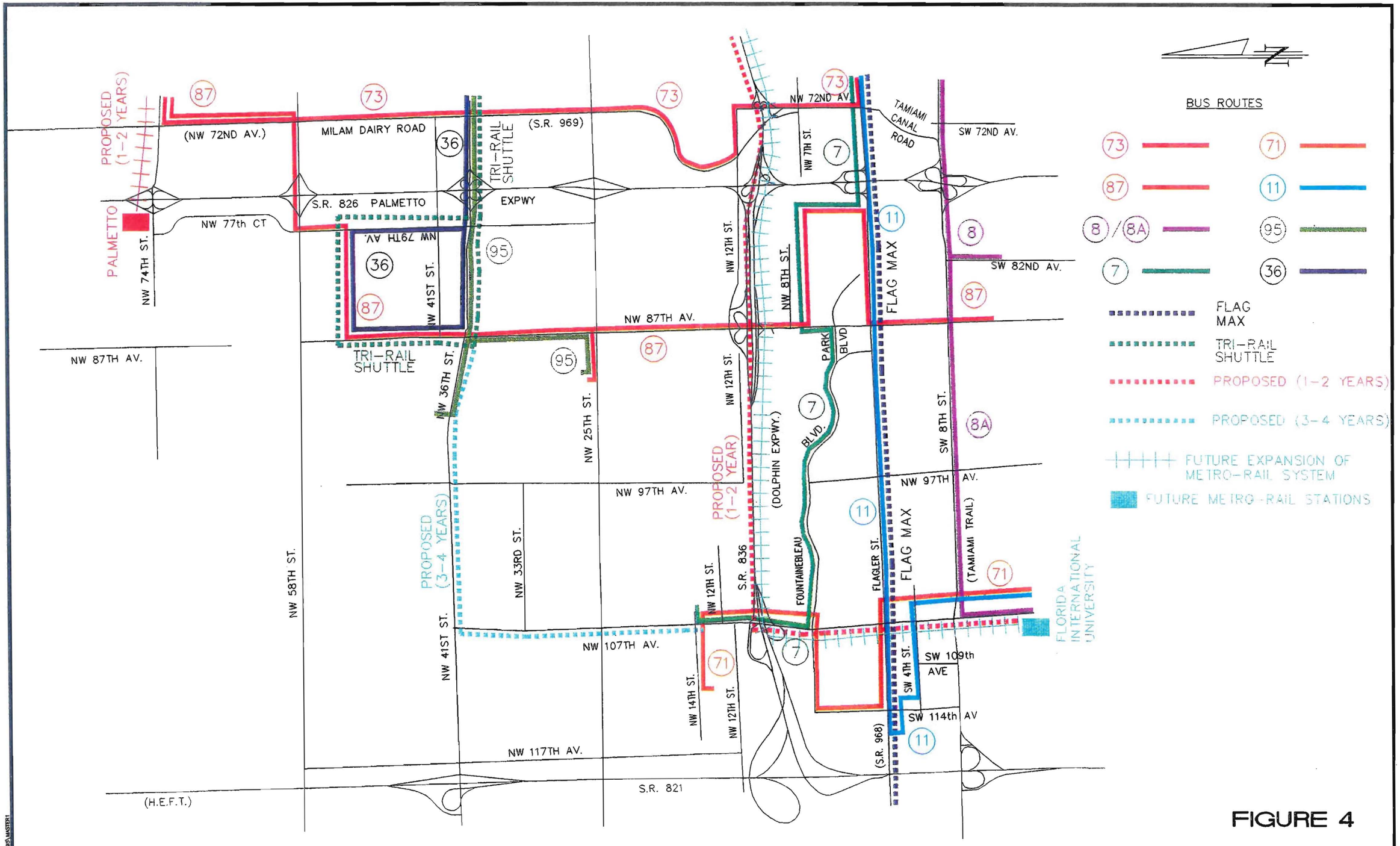


FIGURE 4

BARTON-ASCHMAN ASSOC., INC.
Ft. LAUDERDALE, FLORIDA

WEST DADE AREA
METRO-BUS AND METRO-RAIL ROUTES

TABLE 19
METRO-DADE COUNTY
TRAFFIC CIRCULATION LEVEL OF SERVICE STANDARD

Short-Term LOS Standard (1989-1994)

Outside UDB:

LOS D - State Minor Arterials*
LOS C - County Roads and State Freeways and Principal Arterials*

Inside UDB:

LOS E Except

Roads currently operating below E:
1) Between the UIA and UDB, 10% total additional peak-period trips allowed on such roads*.
2) Inside the UIA, 15% total additional peak-period trips allowed on such roads.

STAs -- 20% non-State roads below E.

Long-Term LOS Standard (Beginning 1995)

LOCATION	Transit Availability		
	No Transit Service	20 min. Headway Transit Service Within 1/2 Mile	Extraordinary Transit Service (Commuter Rail or Express Bus)
Outside UDB	LOS D - State Minor Arterials* LOS C - County Roads and State Freeways and Principal Arterials*		
Between UIA and UDB	LOS D (90% of Capacity) or LOS E on SUMAs (100% of Capacity)	LOS E (100% of Capacity)	120% of Capacity
Inside UIA or STAs	LOS E (100% of Capacity)	120% of Capacity	150% of Capacity

UIA = Urban Infill Area -- Area east of, and including, NW/SW 77 Avenue and SR 826 (Palmetto Expressway)
UDB = Urban Development Boundary
STA = Special Transportation Area
SUMA = State Urban Minor Arterial

---

* Peak-period means the average of the two highest consecutive hours of traffic volume during a weekday.

the NW 74th Street interchange with the Palmetto Expressway (SR 826). This 1.1 mile extension is currently undergoing a preliminary engineering study and is scheduled to be on-line as early as the year 2000. The new station may even include direct access ramps to and from SR 826 and parking for up to 1,000 vehicles. This is considered a "committed" project although completion will take at least five more years.

A major investment study is currently underway to expand the Metro-rail system along the Dolphin Expressway (SR 836), terminating at the Florida International University campus located near SW 8th Street and SW 107th Avenue. This expansion will significantly benefit SR 836 east of NW 107th Avenue, and West 107th Avenue between SR 836 and SW 8th Street. This is, unsurprisingly, a long-term project and therefore no completion dates were provided in the TDP. Because of the early development stage of this project, it will not be included when determining the levels of service for the West Dade roadways.

4.0 ARTERIAL LEVEL OF SERVICE (LOS) ANALYSES

As mentioned in Chapter 1, the main objective of this study is to define the transportation mobility options and/or enhancements that are required in order to maintain an acceptable level of service on roadways in the West Dade Area. This chapter addresses that objective by defining not only the existing service levels but also by establishing thresholds for meeting the stricter 1995 definitions for arterial levels of service.

4.1 Existing Operational Roadway Levels of Service

An analysis was conducted for every count station in the West Dade Area utilizing the data compiled by the County and described in Chapter 2. The roadway levels of service were calculated using the Florida Department of Transportation Arterial LOS Estimate, based on the 1985 Highway Capacity Manual Art_Plan Version 1.2. The Appendix of the West Dade Area Task Technical Memorandum A contains the Art_Plan outputs depicting existing conditions for the analyzed roadway segments. This Appendix is not replicated for this report.

The Art_Plan outputs may appear to differ slightly from normally accepted standards for using this software. This is due to two important details. The first one is the short lengths of most of the roadway segments being analyzed. Typically, in a non-CBD urban study area, the arterial segments are between two and four miles in length. The lengths of most segments analyzed in this study, however, average less than two miles between endpoints. A deliberate decision was made by the County to maintain these shorter distances because every Art_Plan run would then be specific to a unique count station and thus the levels of service can be more easily tracked when considering future land-use developments in the West Dade Area.

The use of shorter analysis segments often times leads to only one link per segment. The peak hour volume for this link -- and therefore, the segment -- is computed using the inputted Average Weekly Daily Traffic (AWDT), K, D, and peak hour factor (PHF). In a number of cases, there is more than one link per segment; but to be consistent, the calculations were performed the same way. This leads to a simplification of sorts by assuming that all of the links in a segment have the same peak volumes and the same off-peak volumes. The effect of this simplification is minimized, however, by the short segment lengths; thus, an assumption of uniform traffic volume per segment is reasonable.

Taking all of this into consideration, it is relevant to examine Table 20 which summarizes the level of service for all analyzed count stations. This table shows that there is quite a large variation in existing peak hour volumes and levels of service from LOS A through LOS F. This variation is evident even for adjacent roadway segments. The segment peak hour volumes and levels of service are illustrated in Figure 5.

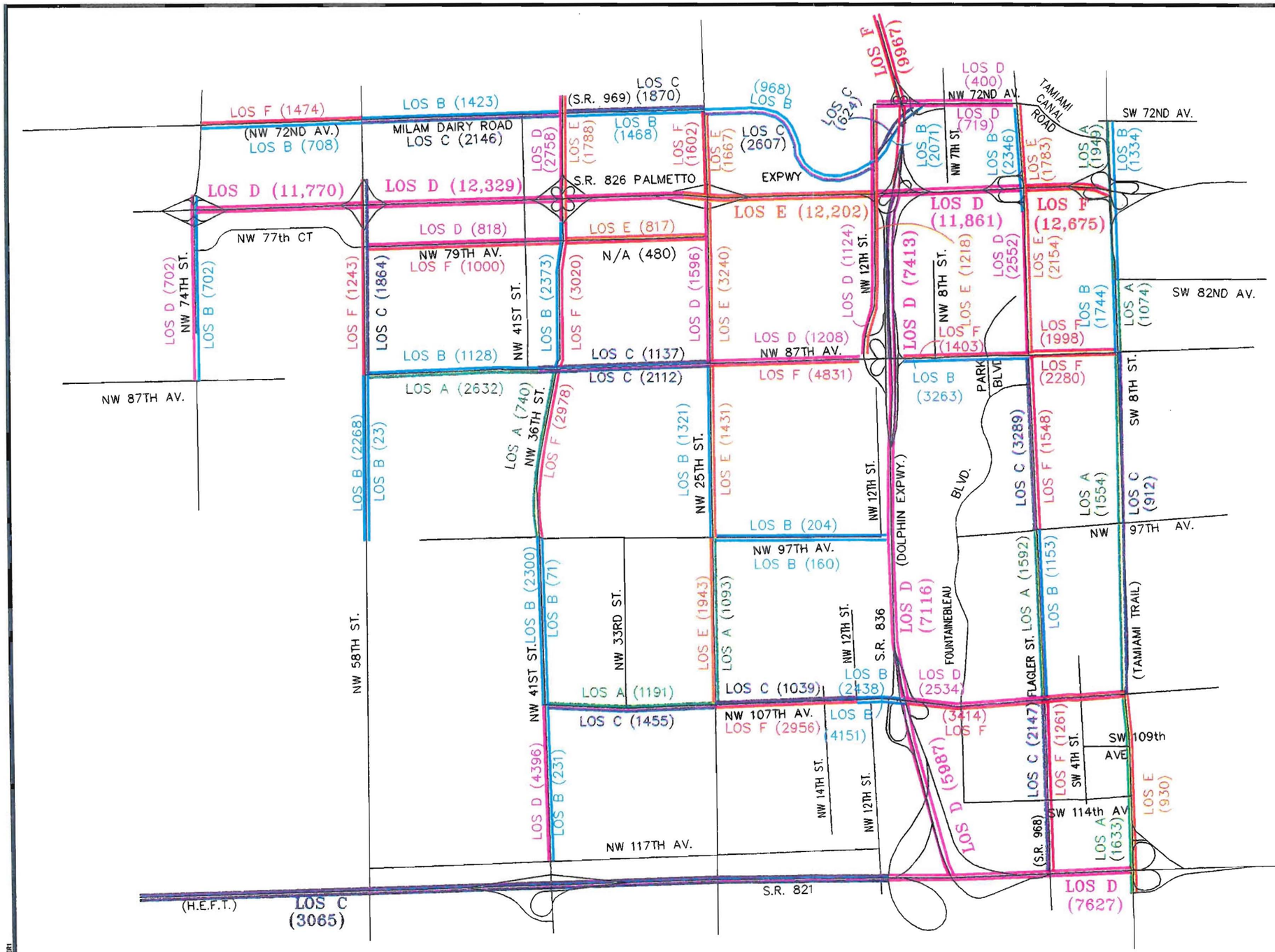
TABLE 20 ART_PLAN OPERATIONAL LEVEL OF SERVICE SUMMARY

SECTOR NUMBER	STATION NUMBER	ARTERIAL	LOCATION OF COUNT STATION	PEAK DIR. OFF-PEAK DIR.	EXISTING VOLUME	EXISTING OPERATIONAL LOS	MAX. PM PEAK HOUR VOLUME AT LOS D	MAX. PM PEAK HOUR VOLUME AT LOS E	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.
1	452	NW 58th Street	West of SR 826 (Palmetto)	EB	1864	C	3210	3500	LOS D	3210
				WB	1243	F	***	***	LOS D	***
1	454	NW 58th Street	West of NW 87th Avenue	WB	2268	B	2580	2720	LOS D	2580
				EB	23	B	1340	1430	LOS D	1340
1	481	NW 74th Street	West of NW 77th Court	EB	702	B	5240	5460	LOS D	5240
				WB	702	D	2650	5180	LOS D	2650
2	406	NW 25th Street	West of NW 97th Avenue	WB	1943	E	1940	2100	LOS D	1940
				EB	1093	A	2750	2930	LOS D	2750
2	440	NW 41st Street	West of NW 97th Avenue	WB	2300	B	3260	3440	LOS D	3260
				EB	71	B	3180	3330	LOS D	3180
2	442	NW 41st Street	West of NW 107th Avenue	WB	4396	D	4570	4890	LOS D	4570
				EB	231	B	1540	1650	LOS D	1540
2	494	NW 97th Avenue	South of NW 25th Street	NB	204	B	4610	4980	LOS D	4610
				SB	160	B	1460	1560	LOS D	1460
2	508	NW 107th Avenue	North of SR 836 (Dolphin)	SB	4151	B	4910	5100	LOS E*	5100
				NB	2438	B	6550	6800	LOS E*	6800
2	510	NW 107th Avenue	North of NW 12th Street	SB	2956	F	2380	2530	LOS D	2380
				NB	1039	C	3630	4060	LOS D	3630
2	512	NW 107th Avenue	North of NW 25th Street	SB	1455	C	1880	2000	LOS D	1880
				NB	1191	A	3580	3730	LOS D	3580
3	162	NW 87th Avenue	North of NW 12th Street	SB	4831	F	2170	3480	LOS D	2170
				NB	1208	D	1930	3890	LOS D	1930
3	164	NW 87th Avenue	North of NW 25th Street	SB	2112	C	3520	3730	LOS D	3520
				NB	1137	C	3410	3640	LOS D	3410
3	166	NW 87th Avenue	North of NW 41st Street	SB	2632	A	4190	4390	LOS E	4390
				NB	1128	B	2370	2480	LOS E	2480
3	358	NW 12th Street	West of SR 826 (Palmetto)	EB	1218	E	860	1310	120% OF LOS E*	1572
				WB	1124	D	1400	1760	120% OF LOS E*	2112
3	402	NW 25th Street	West of SR 826 (Palmetto)	EB	3240	E	350	3920	LOS D	350
				WB	1596	D	2180	2690	LOS D	2180
3	404	NW 25th Street	West of NW 87th Avenue	EB	1431	E	1050	1450	LOS D	1050
				WB	1321	B	3310	3440	LOS D	3310
3	432	NW 36th Street	West of SR 826 (Palmetto)	EB	3020	F	900	1230	LOS E	1230
				WB	2373	B	3060	3180	LOS E	3180
3	434	NW 36th Street	West of NW 87th Avenue	EB	2978	F	2370	2550	LOS D	2370
				WB	740	A	5560	5740	LOS D	5560
3	482	NW 79th Avenue	North of NW 36th Street	SB	1000	F	***	***	LOS E	***
				NB	818	D	1220	1360	LOS E	1360
3	484	NW 79th Avenue	South of NW 36th Street	NB	817	E	750	880	LOS D	750
				SB	480	n/a	n/a	n/a	LOS D	n/a
4	44	SW 87th Avenue	South of Flagler Street	SB	2280	F	1320	1450	LOS D	1320
				NB	1998	F	1560	1980	LOS D	1560
4	90	SW 8th Street	East of SW 109th Avenue	WB	1633	A	4940	5160	LOS D	4940
				EB	930	E	910	1650	LOS D	910
4	92	SW 8th Street	East of SW 87th Avenue	WB	1744	B	4190	4440	LOS D	4190
				EB	1074	A	4440	4620	LOS D	4440
4	154	Flagler Street	West of West 87th Avenue	WB	3289	C	4010	4230	LOS E	4230
				EB	1548	F	***	***	LOS E	***
4	156	Flagler Street	West of West 97th Avenue	WB	1592	A	4960	5190	LOS E	5190
				EB	1153	B	4100	4310	LOS E	4310
4	158	Flagler Street	West of West 107th Avenue	WB	2147	C	4100	4310	LOS E	4310
				EB	1261	F	***	***	LOS E	***
4	589	SW 8th Street	West of SW 87th Avenue	WB	1554	A	5710	6000	LOS D	5710
				EB	912	C	3630	3850	LOS D	3630
4	1141	Flagler Street	West of SR 826 (Palmetto)	WB	2552	D	3990	4640	LOS E	4640
				EB	2154	E	1500	2700	LOS E	2700
4	1211	NW 87th Avenue	North of NW 8th Street	SB	3263	B	4490	4680	LOS E*	4680
				NB	1403	F	***	220	LOS E*	220
4	1218	NW 107th Avenue	North of NW 7th Street	SB	3414	F	1530	2880	LOS E	2880
				NB	2534	D	2770	2920	LOS E	2920
5	39	Milam Dairy Road	South of NW 74th Street Extension	NB	1474	F	1040	1120	120% OF LOS E*	1344
				SB	708	B	1530	1640	120% OF LOS E*	1968
5	400	NW 25th Street	East of SR 826 (Palmetto)	EB	1667	E	1250	2790	LOS E	2790
				WB	1602	F	***	***	LOS E	***
5	1173	NW 36th Street	East of SR 826 (Palmetto)	WB	2758	D	2800	3010	120% OF LOS E	3612
				EB	1788	E	1700	1880	120% OF LOS E	2256
5	1202	Milam Dairy Road	North of NW 12th Street	SB	2607	C	3360	3560	120% OF LOS E	4272
				NB	968	B	4170	4350	120% OF LOS E	5220
5	1204	Milam Dairy Road	South of NW 36th Street	NB	1870	C	2100	2280	120% OF LOS E	2736
				SB	1468	B	2550	2720	120% OF LOS E	3264
5	1205	Milam Dairy Road	South of NW 41st Street	SB	2146	C	2510	2720	120% OF LOS E	3264
				NB	1423	B	1970	2110	120% OF LOS E	2532
6	5	SW 8th Street	East of SW 74th Avenue	WB	1949	A	5040	5300	LOS E	5300
				EB	1334	B	2960	3120	LOS E	3120
6	1140	Flagler Street	West of West 72nd Avenue	WB	2346	B	3510	3590	120% OF LOS E	4308
				EB	1783	E	930	1920	120% OF LOS E	2304
6	1200	Milam Dairy Road	South of NW 12th Street	SB	2071	B	3910	4130	LOS E	4130
				NB	624	C	4070	4300	LOS E	4300
6	1201	NW 72nd Avenue	North of Flagler Street	SB	719	D	1510	1920	120% OF LOS E*	2304
				NB	400	D	1600	1950	120% OF LOS E*	2340

* Future headway improvements or proposed new bus service

*** No threshold exists

n/a T-intersection with no south leg



(XX) – 1994 PM DIRECTIONAL PEAK HOUR VOLUME (ART_PLAN)

(XX) – 1994 PM 2-WAY PEAK HOUR VOLUME (FREE_TAB)

LEVELS OF SERVICE

- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F

FIGURE 5

WEST DADE AERA
EXISTING FREEWAY AND ARTERIAL LEVELS OF SERVICE

BARTON-ASCHMAN ASSOC., INC.
Ft. LAUDERDALE, FLORIDA

4.2 LOS D and LOS E Thresholds for Study Area

As Chapter 3 had indicated, the level of service standard has changed from a maximum LOS of E to a maximum LOS of D beginning in 1995 for those roadways without adequate transit service and outside the Urban Infill Area. Using the standards provided in Table 19, Table 20 has defined the maximum PM peak hour volumes (plus or minus ten vehicles) for both a LOS D and LOS E. These threshold values were calculated using an iterative procedure in both the peak and off-peak directions.

Only one link was iterated in both directions for every count station. The link that was chosen was the one which contains the permanent traffic counter. Remember that a link is defined as that part of a roadway between two adjacent traffic signals. If a different link had been chosen for iteration, the maximum threshold volumes would have likely been different. The thresholds, like the existing volumes, are sensitive to all of the parameters input into an Art_Plan run. Changing even one parameter by a small percentage may affect these thresholds. Therefore, some of the assumptions that were made about certain segments (e.g. 12% turns from exclusive lanes) may lead to artificial levels of service as compared to the actual conditions. However, as more accurate data is obtained about the links, Table 20 can certainly be used as a concise arterial roadway level of service summary for the West Dade Area.

The last column in Table 20 reflects the impact of transit service on some of the major arterials in the study area. Using Tables 18 and 19, a determination of the standard Level of Service was made for each segment. Depending on the location of the roadway segment and the availability of transit, the PM peak hour maximum volume ranged from a LOS D threshold to 120 percent of the LOS E threshold. As the footnote states, some of the count stations have higher levels of service based on future (within two years) transit improvements rather than on existing bus headways. One might be tempted to argue that no transit improvements should be considered because there are no equivalent roadway capacity improvements considered when establishing the thresholds. The transit conditions are included in Table 20 to illustrate the degree of additional capacity -- or deficit-- that the segments would have if no road improvements were to occur. This capacity (deficit) is obtained by subtracting the existing peak hour volume from the standard LOS maximum volume. The third section of this report will specifically address those segments which have deficits and propose capacity improvements to correct the problems. The inclusion of roadway improvements will be discussed in this forthcoming section.

Some of the count stations listed in Table 20 do not have threshold levels of service at LOS D or LOS E. These particular count stations, denoted by triple asterisks, show either the peak or off-peak direction of travel as having an existing LOS of F. No thresholds could be established for the links representing these count station segments. A closer examination of the Art_Plan input parameters, however, can shed some light as to why no maximum volumes can be identified.

The segments are listed below along with a brief explanation of the primary reason for failure.

Count Station	Direction	Reason Why No Threshold Can Be Reached
154	EB	Low g/C ratio of 0.40.
158	EB	Low g/C ratio of 0.22.
400	WB	Low g/C ratio of 0.54.
		Short signalized intersection spacing of 600 feet.
452	WB	Low g/C ratio of 0.45.
		Short signalized intersection spacing of 700 feet.
482	SB	Low g/C ratio of 0.26.
1211	NB	Low g/C ratio of 0.23.

Adjusting the input parameters listed above will allow thresholds to be established and will also increase the validity of Art _Plan calculations for these segments.

5.0 FREEWAY LEVEL OF SERVICE ANALYSES

The final task completed as part of this first section was an analysis of the freeways that are within the study area. Portions of three freeways, consisting of eleven count stations, were analyzed using Free_Tab which provides a level of service table based only on the K factor, D factor and peak hour factor. The Appendix of the West Dade Area Task Technical Memorandum A contains the Free_Tab outputs for all eleven count stations while Table 21 provides a summary of the results.

This table indicates that the highway segments currently range between LOS C and F with the most determining factor being the total number of lanes. The portions of the Dolphin Expressway, east of NW 107th Avenue have standard LOS maximum volumes defined higher than the current LOS E thresholds because of the planned express bus service along this corridor. With this transit improvement, all except for one freeway segment in the study area are within the standard level of service and therefore meet the Dade County concurrency requirements. Some of the TIP elements reviewed earlier may alleviate the congestion experienced along the remaining over-capacity segment. These improvements will be analyzed in more detail in later sections of the report.

TABLE 21 FREE TAB OPERATIONAL LEVEL OF SERVICE SUMMARY

SECTOR NUMBER	STATION NUMBER	FREEWAY	LOCATION OF COUNT STATION	# OF LANES	EXISTING PM PEAK 2-WAY VOLUME	EXISTING OPERATIONAL LOS	MAX. PM PEAK HOUR VOLUME AT		STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.
							LOS D	LOS E		
1	572	S.R. 826 (Palmetto)	North of NW 58th Street	8	11,770	D	13,280	14,280	LOS E	14,280
2	2242	S.R. 836 (Dolphin)	West of NW 107th Avenue	6	5,987	D	6,660	7,160	LOS D	6,660
2	2243	S.R. 836 (Dolphin)	East of NW 107th Avenue	6	7,116	D	7,750	8,330	120% OF LOS E*	9,996
2	2272	S.R. 821 (H.E.F.T.)	South of Okeechobee Road	4	3,065	C	4,940	5,310	LOS D	4,940
3	2244	S.R. 836 (Dolphin)	East of NW 87th Avenue	6	7,413	D	7,860	8,450	120% OF LOS E*	10,140
4	2250	S.R. 821 (H.E.F.T.)	North of SW 8th Street	6	7,627	D	8,870	9,540	LOS D	8,870
5	570	S.R. 826 (Palmetto)	North of NW 12th Street	8	12,202	E	11,960	12,860	LOS E	12,860
5	571	S.R. 826 (Palmetto)	North of NW 36th Street	8	12,329	D	14,190	15,260	LOS E	15,260
6	568	S.R. 826 (Palmetto)	North of SW 8th Street	8	12,675	F	11,090	11,920	LOS E	11,920
6	569	S.R. 826 (Palmetto)	North of Flagler Street	8	11,861	D	12,530	13,470	LOS E	13,470
6	2188	S.R. 836 (Dolphin)	East of S.R. 826	6	9,967	F	9,110	9,800	150% OF LOS E*	14,700

* Future Metro-Dade express bus service

6.0 EXISTING AND FUTURE LAND USE CONDITIONS

The study area, as described in Chapter 1, is bounded by NW/SW 72nd Avenue (Milam Dairy Road) on the east, the Homestead Extension of Florida's Turnpike (H.E.F.T.) on the west, NW 74th Street to the north, and SW 8th Street (Tamiami Trail) to the south. For purposes of analysis, all land use data collected and utilized for this study was aggregated to both the traffic analysis zone (TAZ) and traffic analysis district (TAD) level.

A literature search and review of previous studies and data files available on the West Dade Area was undertaken as an initial step for this second section of the report. The list below identifies those documents which were collected and reviewed for this study:

- Recommended West Dade Area Neighborhood Plan, Fall 1986
- Long Range Transportation Plan Update, Technical Report #1, Data Compilation and Review Data Supplement, Gannett-Fleming, LRP ZDATA file for 1990, 1993, 2000, 2005, 2010, 2015 and 2020
- 1990 Census Tract Profiles for Tracts: 90.03, 90.04, 90.05 and 90.06
- Measures of Income and Labor Force Status by Census Tract
- Concurrency Impact Newsletter, December/January 1995
- Adopted Components Comprehensive Development Master Plan, Revised April 1994
  Self-Adhesive Land Use Map Amendments:
  October 1990-91 & April 1991-1992
  October 1991-92
  October 1992-93 & April 1993
- November 1993 Applications to Amend the CDMP
- November 1993 Applications to Amend the CDMP, Initial Recommendations
- May 1994 Applications to Amend the CDMP, Initial Recommendations
- May 1994 Applications to Amend the CDMP, Appendix Study Area Descriptions
- Summary of Final Actions, Small-Scale Amendments to the CDMP, #94-214, 11/29/94
- Metro-Dade Road Impact Fee Manual, January 19, 1990
- Concurrency Management Spreadsheets for State and County Roads
- Data files for the study showing Transportation Impact Fees paid since 1989
- Plat maps and aerial photographs of the study area

6.1 Historical Trends

During the literature search, a preliminary analysis of historical trends was also undertaken which involved a review of 1990, 1993, and 2000 traffic zone (TAZ) data used in the Dade County travel forecasting model. This data was developed by the Dade County Planning Department Research Division. Table 22 provides population and employment totals for each TAZ covering most of the West Dade Area, along with the growth experienced prior to 1993 and projected to 2000. From

Table 22

West Dade Traffic Zone Data

TAZ	1990 Total Pop.	1993 Total Pop.	Change 1990 -1993	2000 Total Pop.	Change 1990 -2000	1990 Total Emp.	1993 Total Emp.	Change 1990 -1993	2000 Total Emp.	Change 1990 -2000
190	0	250	250	3,716	3,716	3,897	3,812	-85	4,091	194
191	0	0	0	0	0	0	0	0	0	0
192	0	0	0	0	0	24	23	-1	25	1
193	16	24	8	18	2	3,359	3,237	-122	3,457	98
455	0	0	0	0	0	6,899	6,832	-67	7,335	436
456	0	338	338	0	0	3,286	3,192	-94	3,398	112
457	0	0	0	0	0	2,315	2,251	-64	2,413	98
458	2,906	3,421	515	2,918	12	8,599	8,310	-289	8,774	175
459	336	382	46	422	86	4,768	4,625	-143	4,888	120
460	0	0	0	978	978	98	93	-5	99	1
461	0	0	0	0	0	491	479	-12	507	16
462	0	0	0	0	0	192	180	-12	193	1
463	0	0	0	0	0	0	0	0	0	0
464	1,578	2,529	951	4,541	2,963	428	430	2	462	34
465	0	0	0	10,104	10,104	10	9	-1	10	0
466	0	0	0	2,477	2,477	0	0	0	0	0
477	10,653	11,580	927	11,044	391	847	836	-11	890	43
478	9,055	10,666	1,611	9,886	831	1,385	1,351	-34	1,432	47
479	80	85	5	88	8	1,400	1,364	-36	1,447	47
480	0	0	0	0	0	250	249	-1	267	17
481	1,474	1,955	481	3,055	1,581	521	505	-16	535	14
482	13	12	-1	0	-13	2,022	2,064	42	2,110	88
483	0	0	0	0	0	3,128	3,372	244	3,494	366
484	8,353	8,593	240	8,747	394	737	715	-22	757	20
485	4,283	4,415	132	4,535	252	435	427	-8	453	18
486	5,415	5,491	76	5,875	460	4,767	4,761	-6	4,661	-106
487	12,082	12,857	775	14,069	1,987	1,197	1,178	-19	1,254	57
488	51	60	9	38	-13	6,889	6,875	-14	7,367	478
489	0	0	0	0	0	2,962	2,863	-99	3,021	59
490	0	0	0	0	0	3,545	3,439	-106	3,635	90
491	0	0	0	0	0	6,912	6,777	-135	7,206	294
492	0	0	0	0	0	2,150	2,137	-13	2,287	137
493	4	5	1	0	-4	4,996	4,972	-24	5,324	328
494	5,864	5,988	124	6,144	280	115	112	-3	118	3
495	0	0	0	0	0	1,278	1,307	29	1,409	131
496	0	0	0	0	0	5,029	4,915	-114	5,210	181
497	2,462	2,906	444	2,994	532	553	540	-13	573	20
498	2,390	2,427	37	2,605	215	1,377	1,357	-20	1,445	68
Total	67,015	73,984	6,969	94,254	27,239	86,861	85,589	-1272	90,547	3,686

this table, it is evident that the 3.5% population growth rate between 1990 and 1993 is expected to increase slightly in order to provide for a 4.1% growth rate between 1990 and 2000. Similarly, the growth rate of employment is expected to change from -0.5%, prior to 1993, to 0.4% between 1990 and 2000.

Recent development trends by land use type for the study area were identified using the Transportation Impact Fee data base obtained from the Dade County Public Works Department. This data provides detailed information defined by ITE (Institute of Transportation Engineers) land type for all development in the area from 1989 to February 1995. This data was reviewed and condensed to reflect only the net change in development in that area by removing those entries that reflected a change in land use with no change in trips generated. Where the land use change did create a net increase or decrease in traffic, the data was adjusted to reflect that change. This impact fee data was reviewed and then converted to spreadsheet and tabular form. The records were then geo-coded to traffic analysis zones and traffic analysis districts. The tables and figures showing the results will be presented in Chapter 7.

Plat maps and aerial photographs of the study area were used to identify existing land use patterns in the area. Field surveys were also conducted in order to confirm the location and use of certain developments in the area.

6.2 Short-Term Growth Opportunities

Short term growth for purposes of this study is identified as new growth likely to occur over the next five years, or the period from 1995 to the year 2000. Figure 6 shows the increase in population from 1990 to 2000 and Figure 7 identifies the projected increase in employment for that same period. These two figures are graphic depictions of Table 22.

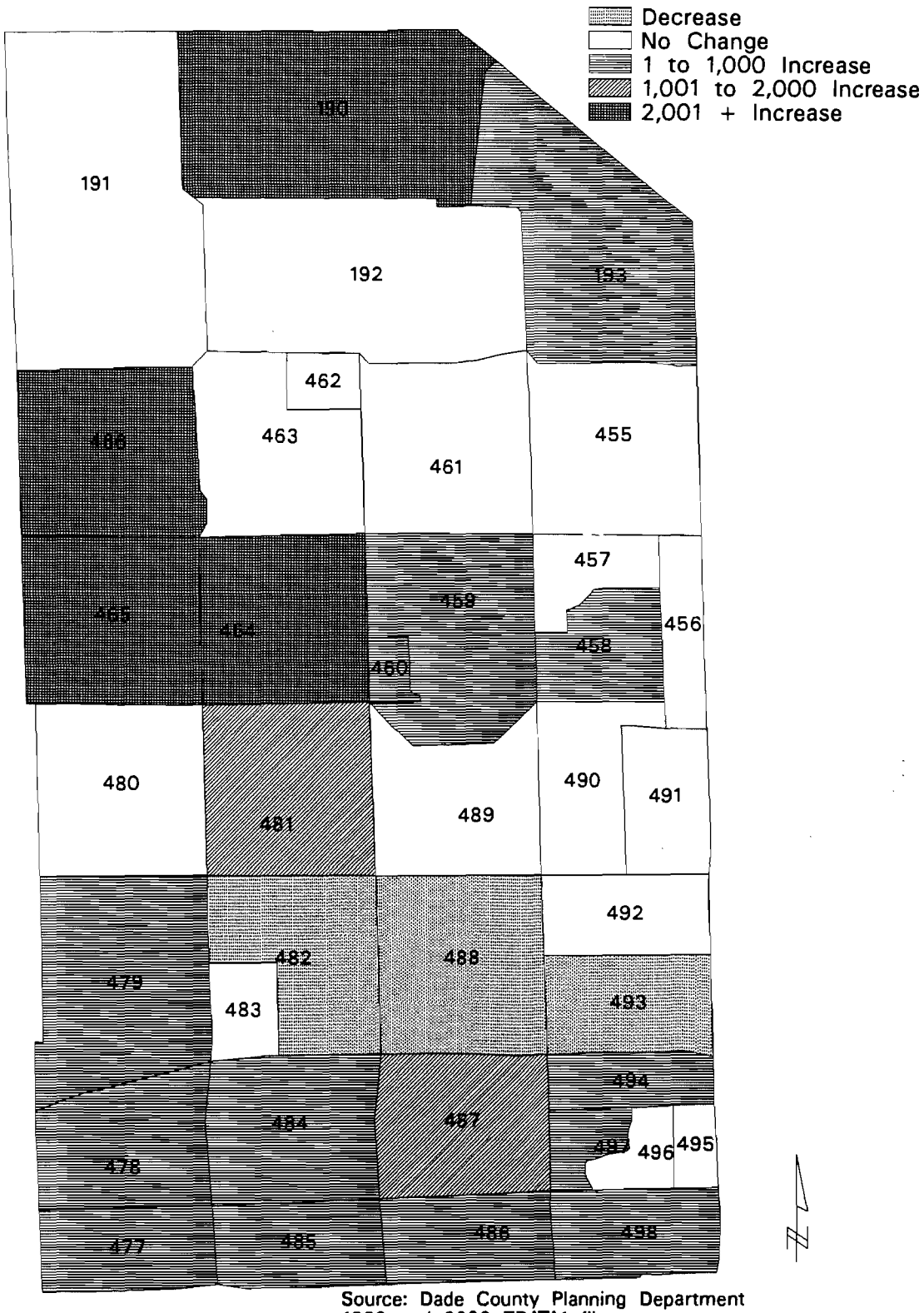
Figure 6 shows that the population in the West Dade Area will remain constant for 16 out of the 38 TAZs during the ten-year period ending in the year 2000. Another 3 TAZs show small declines in population. These latter TAZs are located primarily between the Dolphin Expressway, Palmetto Expressway, NW 25th Street, and NW 107th Avenue -- an area of mostly industrial and commercial land uses.

The other 19 TAZs show some increase in population during this ten-year period. Much of the low to moderate growth will occur south of the Dolphin Expressway, while the high growth TAZs will basically consist of the area bounded by H.E.F.T., NW 97th Avenue, NW 41st Street, and NW 74th Street. This area contains the Doral Park residential area as well as some vacant and agricultural lands.

Figure 7 differs from Figure 6 in that employment growth is more prevalent throughout the region. In fact, only one TAZ shows a decrease between 1990 and 2000, while four TAZs show no change. These TAZs are all located in the northwest section of the study area. The highest rates of employment growth are expected to be between the Dolphin Expressway, NW 25th Street, the

Figure 6

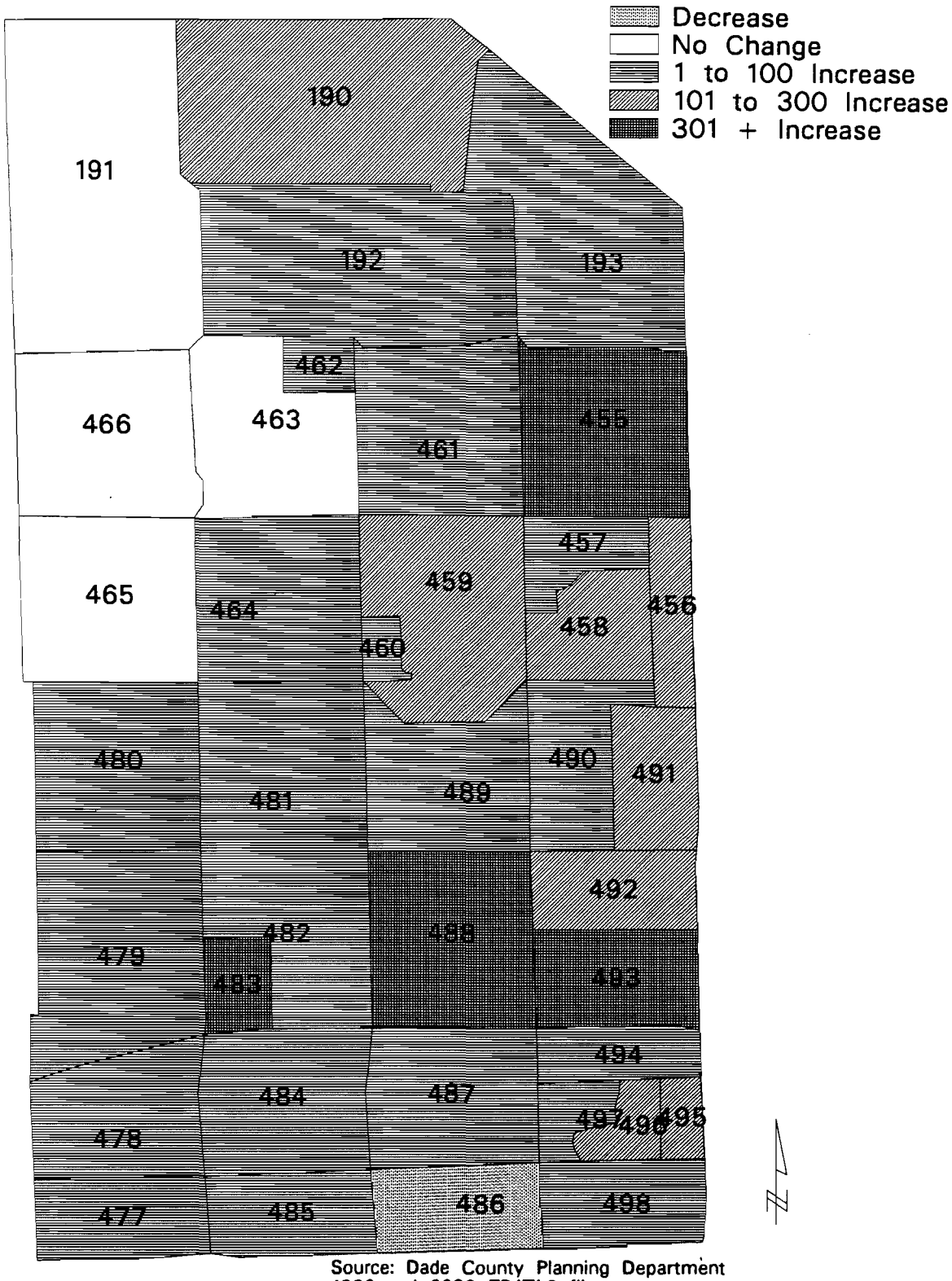
Population Change 1990 to 2000



Source: Dade County Planning Department
1990 and 2000 ZDATA1 files

Figure 7

Employment Change 1990 to 2000



Source: Dade County Planning Department
1990 and 2000 ZDATA2 files

Palmetto Expressway, and NW 107th Avenue. Another high growth area is between the Palmetto Expressway, NW 58th Street, NW 87th Avenue, and NW 74th Street.

Projected growth in the immediate future (i.e. 1-2 years) was developed using the transportation impact fee data described previously. Assuming an average of 2 years to complete construction of a project, impact fees (used in lieu of building permits) for 1993 through 1995 were used to identify growth for the more immediate future.

All materials related to approved development in the study area including vested rights were reviewed, cross referenced and summarized by TAZ and TAD in a table and spreadsheet. Plat maps and aerial photographs of the study area were also used to identify the location and access of each site. Again, these tables are presented in the next chapter. Information on land type (by ITE land use code), amount of development being proposed, and references to the development review and approval process are also included on these tables.

Building permits and impact fee data were used to determine what percentage of each project had been completed or was under construction. This was done to ensure against double counting of both existing development and the transportation impact fee information. There is a significant amount of additional development vested in the West Dade Study Area including 7.6 million square feet of industrial and warehouse space, over 5.9 million square feet of office, and 249,000 square feet of retail development. In addition, over 3,000 residential units are vested within the West Dade Study Area. In the next chapter, the extent of this tremendous amount of planned development will be discussed as it relates to potential new trips generated by these sites.

7.0 METHODOLOGY AND ANALYSIS CONSIDERATIONS

7.1 Background Conditions

The next three chapters address the analysis of identified road system capacity deficiencies, and discuss the process by which improvement strategies were formulated and tested for adequacy. From this process emerged a set of recommendation actions which are proposed to address the capacity shortfalls as identified under the traffic concurrency review methodology described in previous chapters.

In order to develop recommended transportation improvements for the West Dade Area Task, it is necessary to focus upon the critical links within the study area. These links can be identified as those roadway segments which currently do not provide satisfactory levels of service.

Table 23 lists the critical links based on 1994 data, which has been previously discussed in Chapters 4 and 5. The links are identified by count station numbers. Arterial segments with Art_Plan link levels of service of D, E, and F are listed. Also defined are critical freeway segments whose levels of service were determined using Free_Tab. The table indicates that there are approximately an equal amount of links critical in both the peak and off-peak directions.

The critical links are scattered throughout the study area; however, there are two corridors that are of particular interest because they both contain consecutive links with an existing level of service of F. These corridors are West 87th Avenue between NW 25th Street and SW 8th Street; and NW 36th Street between NW 79th Avenue and NW 97th Avenue. Both of these corridors lead directly towards interchanges with SR 826 (Palmetto), SR 836 (Dolphin) or SR 821 (H.E.F.T.). As this is the case, it is not surprising that these corridors carry large amounts of traffic.

In addition to critical link levels of service, Art_Plan can also provide intersection levels of service. Table 24 provides a list of existing critical intersections in the West Dade area. This table shows that the majority of intersections with an LOS of F are failing in the peak direction. A closer examination shows that one particular intersection can be considered the worst one in West Dade because three of the four approaches have an LOS of F. This intersection is Flagler Street and West 107th Avenue. Surprisingly, only one intersection with a highway interchange has an existing failing level of service and this happens to be the newest study area interchange at NW 41st Street and SR 821 (H.E.F.T.). All of the other interchanges showed acceptable intersection levels of service.

7.2 Level of Service Standards

As part of the approval of Dade County's Comprehensive Development Master Plan in 1989, the County developed traffic circulation concurrency regulations as required by Florida's Growth Management law. The adopted policy was two-tiered in its structure; that is, an initial set of standards was to govern traffic concurrency management in unincorporated Dade County from 1989

TABLE 23 EXISTING OPERATIONAL LINK LEVELS OF SERVICE					
SECTOR NUMBER	STATION NUMBER	ARTERIAL	DIR.	PEAK?	LINK LOS
1	**452**	**NW 58th Street**	**WB**	**No**	**F**
1	481	NW 74th Street	WB	No	D
1	572	S.R. 826 (Palmetto)	TWO-WAY	N/A	D
2	**510**	**NW 107th Avenue**	**SB**	**Yes**	**F**
2	*406*	*NW 25th Street*	*WB*	*Yes*	*E*
2	442	NW 41st Street	WB	Yes	D
2	2242	S.R. 836 (Dolphin)	TWO-WAY	N/A	D
2	2243	S.R. 836 (Dolphin)	TWO-WAY	N/A	D
3	**162**	**NW 87th Avenue**	**SB**	**Yes**	**F**
3	**432**	**NW 36th Street**	**EB**	**Yes**	**F**
3	**434**	**NW 36th Street**	**EB**	**Yes**	**F**
3	**482**	**NW 79th Avenue**	**SB**	**Yes**	**F**
3	*358*	*NW 12th Street*	*EB*	*Yes*	*E*
3	*402*	*NW 25th Street*	*EB*	*Yes*	*E*
3	*404*	*NW 25th Street*	*EB*	*Yes*	*E*
3	*484*	*NW 79th Avenue*	*NB*	*Yes*	*E*
3	162	NW 87th Avenue	NB	No	D
3	358	NW 12th Street	WB	No	D
3	402	NW 25th Street	WB	No	D
3	482	NW 79th Avenue	NB	No	D
3	2244	S.R. 836 (Dolphin)	TWO-WAY	N/A	D
4	**44**	**SW 87th Avenue**	**SB**	**Yes**	**F**
4	**44**	**SW 87th Avenue**	**NB**	**No**	**F**
4	**154**	**Flagler Street**	**EB**	**No**	**F**
4	**158**	**Flagler Street**	**EB**	**No**	**F**
4	**1211**	**NW 87th Avenue**	**NB**	**No**	**F**
4	**1218**	**West 107th Avenue**	**SB**	**Yes**	**F**
4	*90*	*SW 8th Street*	*EB*	*No*	*E*
4	*1141*	*Flagler Street*	*EB*	*No*	*E*
4	1141	Flagler Street	WB	Yes	D
4	1218	West 107th Avenue	NB	No	D
4	2250	S.R. 821 (H.E.F.T.)	TWO-WAY	N/A	D
5	**39**	**Milam Dairy Road**	**NB**	**Yes**	**F**
5	**400**	**NW 25th Street**	**WB**	**No**	**F**
5	*400*	*NW 25th Street*	*EB*	*Yes*	*E*
5	*570*	*S.R. 826 (Palmetto)*	*TWO-WAY*	*N/A*	*E*
5	*1173*	*NW 36th Street*	*EB*	*No*	*E*
5	571	S.R. 826 (Palmetto)	TWO-WAY	N/A	D
5	1173	NW 36th Street	WB	Yes	D
6	**568**	**S.R. 826 (Palmetto)**	**TWO-WAY**	**N/A**	**F**
6	**2188**	**S.R. 836 (Dolphin)**	**TWO-WAY**	**N/A**	**F**
6	*1140*	*Flagler Street*	*EB*	*No*	*E*
6	1201	NW 72nd Avenue	SB	Yes	D
6	1201	NW 72nd Avenue	NB	No	D
6	569	S.R. 826 (Palmetto)	TWO-WAY	N/A	D

TABLE 24 EXISTING OPERATIONAL INTERSECTION LEVELS OF SERVICE					
SECTOR NUMBER	ARTERIAL	APPROACHING CROSS STREET	DIR.	PEAK?	THRU LOS
1	**NW 58th Street**	**NW 79th Avenue**	**EB**	**Yes**	**F**
1	*NW 58th Street*	*SR 826 East*	*EB*	*Yes*	*E*
1	NW 58th Street	NW 79th Avenue	WB	No	D
1	NW 58th Street	NW 84th Avenue	EB	Yes	D
1	NW 58th Street	NW 84th Avenue	WB	No	D
1	NW 58th Street	NW 97th Avenue	WB	Yes	D
2	**NW 25th Street**	**NW 107th Avenue**	**WB**	**Yes**	**F**
2	**NW 41st Street**	**SR 821 East**	**WB**	**Yes**	**F**
2	**NW 41st Street**	**SR 821 West**	**WB**	**Yes**	**F**
2	**NW 107th Avenue**	**NW 12th Street**	**SB**	**Yes**	**F**
2	**NW 107th Avenue**	**NW 14th Street**	**SB**	**Yes**	**F**
3	**NW 36th Street**	**NW 79th Avenue**	**EB**	**Yes**	**F**
3	**NW 36th Street**	**NW 82nd Avenue**	**EB**	**Yes**	**F**
3	**NW 36th Street**	**NW 87th Avenue**	**WB**	**No**	**F**
3	**NW 41st Street**	**NW 87th Avenue**	**EB**	**Yes**	**F**
3	**NW 79th Avenue**	**NW 36th Street**	**NB**	**Yes**	**F**
3	**NW 79th Avenue**	**NW 58th Street**	**NB**	**No**	**F**
3	**NW 87th Avenue**	**NW 12th Street**	**SB**	**Yes**	**F**
3	**NW 87th Avenue**	**NW 13th Terrace**	**SB**	**Yes**	**F**
3	**NW 87th Avenue**	**NW 53rd Street**	**SB**	**Yes**	**F**
3	*NW 25th Street*	*NW 87th Avenue*	*EB*	*Yes*	*E*
3	*NW 25th Street*	*NW 87th Avenue*	*WB*	*No*	*E*
3	*NW 87th Avenue*	*NW 36th Street*	*SB*	*Yes*	*E*
3	NW 12th Street	NW 87th Avenue	WB	No	D
3	NW 25th Street	NW 82nd Avenue	EB	Yes	D
3	NW 25th Street	NW 82nd Avenue	WB	No	D
3	NW 79th Avenue	NW 36th Street	SB	Yes	D
3	NW 87th Avenue	NW 36th Street	NB	No	D
3	NW 87th Avenue	NW 58th Street	NB	No	D
4	**West Flagler Street**	**West 107th Avenue**	**WB**	**Yes**	**F**
4	**NW 87th Avenue**	**Flagler Street**	**SB**	**Yes**	**F**
4	**SW 87th Avenue**	**Flagler Street**	**NB**	**No**	**F**
4	**SW 87th Avenue**	**SW 8th Street**	**SB**	**Yes**	**F**
4	**NW 107th Avenue**	**Flagler Street**	**SB**	**Yes**	**F**
4	**SW 107th Avenue**	**Flagler Street**	**NB**	**No**	**F**
4	**NW 107th Avenue**	**Fountainebleau Boulevard**	**NB**	**No**	**F**
4	**SW 107th Avenue**	**SW 4th Street**	**SB**	**Yes**	**F**
4	**SW 107th Avenue**	**SW 8th Street**	**SB**	**Yes**	**F**
4	*West Flagler Street*	*West 107th Avenue*	*EB*	*No*	*E*
4	*SW 8th Street*	*SW 107th Avenue*	*EB*	*No*	*E*
4	*NW 87th Avenue*	*SR 836 South*	*NB*	*No*	*E*
4	West Flagler Street	West 87th Avenue	WB	Yes	D
4	West Flagler Street	West 87th Avenue	EB	No	D
4	SW 8th Street	SW 107th Avenue	WB	Yes	D
4	NW 107th Avenue	Fountainebleau Boulevard	SB	Yes	D
5	**Milam Dairy Road**	**NW 74th Street Extension**	**NB**	**Yes**	**F**
5	**NW 36th Street**	**Milam Dairy Road**	**EB**	**No**	**F**
5	*Milam Dairy Road*	*NW 36th Street*	*SB*	*Yes*	*E*
5	*Milam Dairy Road*	*NW 36th Street*	*NB*	*Yes*	*E*
5	*NW 36th Street*	*NW 79th Avenue*	*WB*	*Yes*	*E*
5	Milam Dairy Road	NW 25th Street	SB	No	D
5	Milam Dairy Road	NW 58th Street	NB	No	D
5	Milam Dairy Road	NW 58th Street	SB	No	D
5	Milam Dairy Road	NW 74th Street Extension	SB	No	D
5	NW 25th Street	Milam Dairy Road	EB	Yes	D
6	*Milam Dairy Road*	*Corporate Way*	*SB*	*Yes*	*E*
6	*NW 12th Street*	*Milam Dairy Road*	*WB*	*No*	*E*
6	*NW 72nd Avenue*	*SR 836 North*	*NB*	*No*	*E*
6	*NW 72nd Avenue*	*NW 12th Street East*	*NB*	*No*	*E*
6	West Flagler Street	West 72nd Avenue	EB	No	D
6	Milam Dairy Road	NW 25th Street	NB	No	D
6	NW 12th Street	Milam Dairy Road	EB	Yes	D
6	NW 72nd Avenue	Flagler Street	SB	Yes	D

through 1994. Beginning in 1995, a second set of standards would be in force. In suburban areas, these standards are more stringent and impose the requirement that a higher level of service be maintained. These two sets of criteria have been previously summarized in Table 19 (Chapter 3).

The implication of this change in standard is very significant because peak hour traffic service in the West Dade area had already deteriorated to a generally poor condition, with LOS E or F common on the principal entry/exit roads to the area. Only the recent opening of the NW 25th Street/SR 826 interchange and the NW 41st Street/SR 821 (H.E.F.T.) interchange served to dilute the commuting traffic. A limited number of other projects within the study area, including the widening of NW 36th Street west of NW 87th Avenue, and the new section of NW 107th Avenue from NW 25th Street to NW 41st Street served to improve traffic service internally. Meanwhile, traffic volumes on study area links grew at a fast rate, fed by commercial and industrial development in one of the most active subareas in the state. In addition, many of the approved developments were vested and were exempt from meeting traffic concurrency requirements.

When the new standards took force at the beginning of 1995, many links previously regulated at LOS E -- and usually operating near that level -- immediately became subject to a LOS D criterion. The addition of traffic from previously approved development served to further aggravate this situation. The only relief to this otherwise problematic situation was that development could still easily occur on the less congested interior streets of the study area since concurrency requirements could generally be satisfied at these locations.

As described in Chapter 3, there are a limited number of transit routes providing at least 20-minute headways traversing certain study area links which justify a LOS E standard on those links. High-frequency transit service can also reduce or eliminate capacity shortfalls on many study area links over the short-term period by allowing a lower LOS to be acceptable.

At present, the traffic LOS standards in effect will remain so until such time as they are modified with the approval of the Florida Department of Community Affairs. Already, the Department of Community Affairs and the Board of Dade County Commissioners have approved a Transportation Concurrency Exception Area (TCEA) in the Urban Infill Area (UIA) east of SR 826/Palmetto Expressway. Since this special area is now effective, it may potentially exacerbate traffic congestion in the areas west of the Urban Infill Area because of the adjacent TCEA where levels of service will be allowed to deteriorate from the standards.

There is yet another change to the concurrency regulation that has been proposed. This change would require that the regulatory impact distance used to evaluate traffic concurrency be increased. This modification would increase the number of links affected by a development, and in effect, make satisfaction of traffic concurrency more difficult to achieve. This proposal is still subject to considerable review and debate before it gains approval.

The Florida Department of Transportation (FDOT) LOS criteria are generally integrated into the Dade County criteria except that FDOT normally requires that its freeways and principal arterials

meet LOS D. Usually, Dade County's application of concurrency tests does not affect the freeway system.

Another planning approach related to transportation demand management was developed when the Florida Department of Community Affairs amended Chapter 9J-5 rules through Florida Statute 163.3180 to permit the use of the Transportation Concurrency Management Area (TCMA) as an alternative to meeting requirements for adequate public facilities and services concurrent with the impacts of development. Under this designation, interim level of service standards may be adopted for certain backlogged facilities which can incorporate multimodal strategies for demand. The area must be structured to correct existing deficiencies and set priorities for addressing backlogged facilities, and must be financially feasible and consistent with other portions of the adopted local plan. Under this approach, development permits could continue to be issued.

The purpose of TCMAs is to encourage development of geographically compact primary centers that contain an appropriate mix of land uses including facilities for residential, retail, recreational, cultural, educational, and institutional uses. The intent is to steer development into patterns that offer alternatives to single-occupant auto travel. Achieving this goal will likely require a long-term strategy coupling public transit service with traffic congestion management. It will also permit lowering of traffic service standards, provided that long-term development and mobility goals are balanced, realistic, and achievable.

A TCMA can be incorporated into the local Comprehensive Development Master Plan provided certain criteria are met. A TCMA would be implemented through a transportation mobility element within the comprehensive plan which integrates and replaces the traffic circulation and mass transit elements. While a transportation mobility element is being prepared, and formal TCMA adoption into the comprehensive plan is pursued, the rule allows interim TCMAs to help accelerate the process. Revised traffic service standards can be adopted during the interim period pending completion of the mobility element. It is the responsibility of the local jurisdiction to designate an area as a TCMA and then to comply with the adopted standards for the TCMA.

FDOT has recently adopted a policy governing its Florida Intrastate Highway System (FIHS). For designated corridors on this system -- which includes in the study area, SR 826/Palmetto Expressway, SR 836/Dolphin Expressway, and SR 821/(H.E.F.T.) -- LOS D must be maintained. An exception may be granted if "exclusive through/special use" lanes such as High Occupancy Vehicle (HOV) lanes in peak hours are found to be an acceptable accommodation of the FIHS policy. General use lanes may then operate at LOS E and the special use lanes at LOS D. Such special use lanes are being considered for both SR 826 and SR 836, but are years from actual implementation.

7.3 Preparation of Development Traffic Demands

As described earlier, the West Dade region is a rapidly growing area with many developments. Each of these new and expanding developments will generate traffic on roadways adjacent to the sites. Table 25 provides a comprehensive list of development projects in the study area which have received

Table 25 West Dade Area Vested Development Trips

Sector Number	TAZ	Map ID	Name	Location	Description	ITE Land Use Code	Size (sq. ft. or units)	Acres	Total Trips Generated Per PM Peak Hour of Adjacent Street Traffic	Percent Complete*	New Trips Yet to be Generated for Remaining Development
1	193	A	Vulcan Materials	NW 74th St.: NW 77th Ave. - NW 85th Ave.	Warehouse	150	1,630,000		870	25%	653
1	193	A	Vulcan Materials	NW 74th St.: NW 77th Ave. - NW 85th Ave.	Light Industrial	110	1,000,000		1270	25%	953
2	464	B	Doral Park	NW 102nd Ave. and NW 41st St.	Apartments	220	18		13		13
2	464	B	Doral Park	NW 102nd Ave. and NW 41st St.	Office	710	10,000		34		34
2	464	B	Doral Park	NW 102nd Ave. and NW 41st St.	Apartments	220	125		78	62%	30
2	464	C	Hanover Company	NW 97th Ave.: NW 45th St. - NW 48th St.	Apartments	220	520		295		295
2	465	D	Doral Landings	NW 112th Ave. and NW 117th Ave.	Apartments	220	1,440		758		758
2	481	E	Costa Verde	NW 97th Ave.: NW 29th St. - NW 33rd St.	Apartments	220	726		402	15%	342
2	482	F	International Corporate Park	NW 97th Ave. and NW 12th St.	Warehouse	150	4,000,000		2027		2027
2	482	F	International Corporate Park	NW 97th Ave. and NW 12th St.	Retail	820	95,000		635		635
3	488	G	A + Mini Storage	NW 15th St. and NW 87th Ave.	Mini-Warehouse	151	70,000	4.58	17		17
3	488	H	America's Gateway Park	NW 87th Ave. and NW 25th St.	Office	710	745,000	38.40	817	75%	204
3	488	H	Gateway Center	NW 87th Ave.: NW 21st Terr. - NW 25th St.	Retail	820	45,000		6		6
3	488	I	Youngone America	1500 NW 96th Ave.	Light Industrial	110	24,700		24	100%	0
3	489	J	Westpointe	NW 87th Ave.: NW 33rd St. - NW 37th St.	Hotel	310	158		118		118
3	489	J	Westpointe	NW 87th Ave.: NW 33rd St. - NW 37th St.	Branch Bank	912	3,000		131		131
3	489	J	Westpointe	NW 87th Ave.: NW 33rd St. - NW 37th St.	Office	710	480,000		591		591
3	489	J	Westpointe	NW 87th Ave.: NW 33rd St. - NW 37th St.	Rest. - Seats	831	430		105		105
3	489	J	Westpointe	NW 87th Ave.: NW 33rd St. - NW 37th St.	Warehouse	150	583,700		360		360
3	489	J	Westpointe	NW 87th Ave.: NW 33rd St. - NW 37th St.	Day Care Center	565	4,000	1.00	4		4
3	490	K	3655 NW 87th Ave.	NW 33rd St. and NW 87th Ave.	Office	710	225,000	10.00	338	100%	0
3	490	L	Ryder Systems Inc.	NW 82nd. Ave: NW 36th St. - NW 31st St.	Office	710	2,300,000	97.23	1874	30%	1312
3	490	M	Galloway Financial Center	NW 30th Terr.: NW 84th Ave. - NW 87th Ave.	Office	710	150,000		251	25%	188
3	490	M	Galloway Financial Center	NW 30th Terr.: NW 84th Ave. - NW 87th Ave.	Warehouse	150	350,000	20.41	246	25%	185
3	490	N	Transal Business Park	NW 25th St. and NW 87th Ave.	Warehouse	150	37,685		93		93
3	490	N	Transal Business Park	NW 25th St. and NW 87th Ave.	Wholesale	860	200,000		42		42
3	490	N	Transal Business Park	NW 25th St. and NW 87th Ave.	Office	710	2,032,744		1711		1711
3	490	N	Transal Business Park	NW 25th St. and NW 87th Ave.	Light Industrial	110	200,000	57.04	123		123
3	491	O	Blue Heron Lake	NW 79th Ave: NW 29th St. - NW 25th St.	Office	710	1,300,000	19.13	1231	75%	308
3	492	P	Beacon Center	NW 87th Ave.: NW 12th St. - NW 25th St.	Office	710	6,000,000		3800	75%	950
3	492	P	Beacon Center	NW 87th Ave.: NW 12th St. - NW 25th St.	Warehouse	150	578,636	152.11	357	50%	179
3	493	P	Beacon Center Plaza	NW 84th Ave. and NW 87th Ave.	Retail	820	435,110		1674	75%	419
4	478	Q	Bristol Park Subdivision	NW 114th Ave. and SR 836	Single Family	231	93		32	39%	20
4	496	R	Flagler Park Plaza	Flagler St.: NW 82nd Ave. - NW 84th Ave.	Single Family	210	930		807	100%	0
4	496	R	Flagler Park Plaza	Flagler St.: NW 82nd Ave. - NW 84th Ave.	Mini-Warehouse	151	40,000		8		8
4	496	R	Flagler Park Plaza	Flagler St.: NW 82nd Ave. - NW 84th Ave.	Apartments	220	325		190		190
4	496	R	Flagler Park Plaza	Flagler St.: NW 82nd Ave. - NW 84th Ave.	Office	710	520,164		627	100%	0
5	453	S	Export Business	NW 74th Ave. and NW 52nd St.	Industrial	110		7.79	145	75%	36
6	508	T	Cantel Center	NW 7th. St.: NW 72nd Ave. - NW 62nd Ave.	Warehouse	150	129,000		136	100%	0
6	508	T	Cantel Center	NW 7th. St.: NW 72nd Ave. - NW 62nd Ave.	Office	710	169,200		274		274
6	508	T	Cantel Center	NW 7th. St.: NW 72nd Ave. - NW 62nd Ave.	Light Industrial	110	54,000		53	100%	0
6	511	U	Airport Corporate Center	NW 75th Ave. and NW 19th St.	Office	710	937,742		967	100%	0
6	511	V	Airport Corporate Center West	NW 16th St.: NW 72nd Ave. - Palmetto Expy.	Warehouse	150	125,875		136		136

* Estimates are based on aerial photographs, impact fee documents and field review.

vested rights from Dade County. Many of these developments are large in size and generate a significant amount of trips. The values in the last column showing the number of trips during the PM peak hour are calculated by using the equation formula described in the ITE Trip Generation Manual (5th Edition) for the appropriate land use code. Approximately half of these developments are partially complete; in such cases, the number of trips generated was calculated by multiplying the site's total trips by the percent of the development that is still incomplete.

Figure 8 shows the location of the vested development sites in West Dade. The figure shows that most of these developments are located north of the Dolphin Expressway and south of NW 58th Street. The portion of the study area south of the Dolphin Expressway is relatively built-out and there are few large parcels of land awaiting development. In contrast, the portion of the study area north of NW 58th Street is mostly vacant or agricultural in nature. However, the roadway and utilities infrastructure is lacking in continuity and this area cannot yet support many new developments.

In addition to the large vested developments, there are many smaller new developments and expansions to existing developments that are also located within the study area. These smaller trip generators may be tabulated by the impact fees that are paid to the County based on the size of every new development or expansion. Table 26 provides a list of impact fee sites which are within the study area.

A few of the features of this table differ from Table 25 and require some explanation. First, the "Year Paid" column displays the years 1993, 1994, or 1995. After the impact fee is paid during one of these years, the development is then approved to occur anytime in the following two years. If no site improvements occur during this two-year period, the developer must reapply with the County and pay another impact fee. Since some of the development impact fees may have been paid early in 1993, the development may have already been partially or wholly completed before the end of 1994. Thus the trips generated by these sites may already be included in the base 1994 traffic counts collected at the end of that year. However, since information regarding the completion of the impact fee projects was unavailable, a conservative approach was taken and all impact fee generated trips are considered to be new trips.

Another difference between Tables 25 and 26 lies in the method of computing the generated trips. All of the trips in Table 25 and most of the trips in Table 26 are computed using the equation formula from the ITE Trip Generation Manual. However, for two particular ITE Land Use Codes, the use of the equation is unrealistic and thus the average rate method was used. These land uses are 150-Warehouse and 231-Low Rise Residential Condominium. In the first case, the equation clearly overstates how many trips will be generated by small warehouses. In the second case, the equation clearly understates the number of trips generated. Once again, however, two exceptions exist. Both of these concern warehouses which are over 300,000 square feet in size. The equation formula was utilized to calculate the trips because the average rate would have generated an excess number of trips. The two warehouses are Beacon Industrial Park (Sector 1, TAZ 480) and New World Partners (Sector 3, TAZ 493).

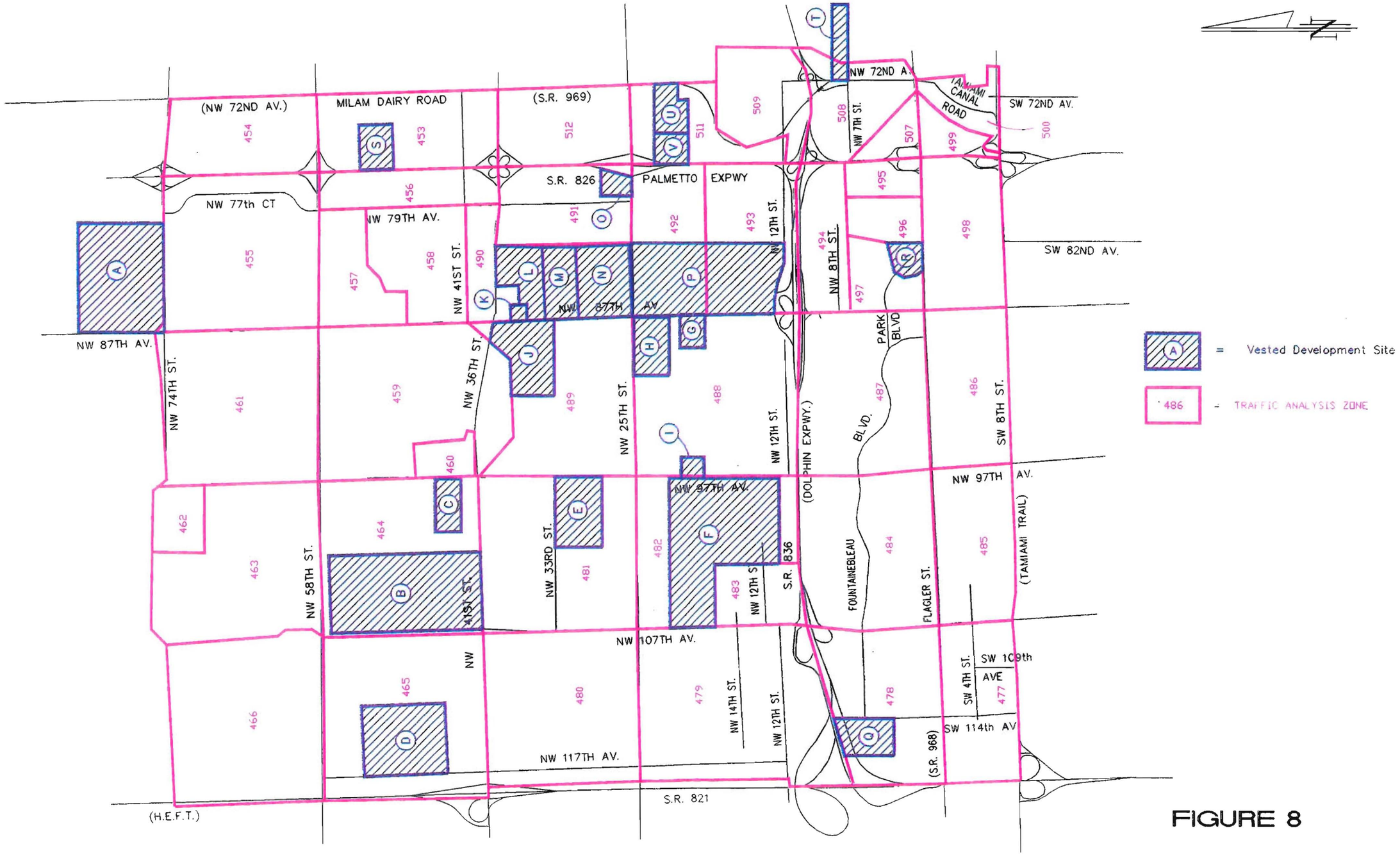


FIGURE 8

BARTON-ASCHMAN ASSOC., INC.
Ft. LAUDERDALE, FLORIDA

WEST DADE AREA
VESTED DEVELOPMENT SITES

Table 26 West Dade Area Impact Fee Trips

Sector Number	TAZ	Name	Location	Year Paid	Land Use Code	Description	Units or Sq. Ft.	Trips Generated Per PM Peak Hour of Adjacent Street Traffic
1	455	8465 REALTY PARTNERSHIP	8475 NW 61 ST	1994	150	Warehouse	11,720	9
1	455	APPROVED PERFORMANCE TIRE	8405 NW 66 ST	1993	150	Warehouse	720	1
1	455	ASH, SIMON	8497 NW 66 ST	1993	150	Warehouse	9,790	7
1	455	LOPEZ, CECILIO & MARIA	8600-8620 NW 64 ST	1995	150	Warehouse	16,216	12
1	455	RECIO, RICARDO	8045 NW 64 ST	1994	150	Warehouse	3,366	2
1	455	RECIO, RICARDO	8045 NW 64 ST	1994	710	Office	1,716	9
1	455	SANTIAGO, EUGENIO M.	7950 NW 64 ST	1994	150	Warehouse	880	1
1	455	SANTIAGO, EUGENIO M.	7950 NW 64 ST	1994	710	Office	1,760	9
1	455	STEPHENS, J.M.	7950 NW 64 ST	1993	150	Warehouse	6,400	5
2	479	DADE CTY EMPLOYEE CREDIT U.	1500 NW 107 AVE	1994	710	Office	21,547	60
2	479	DADE CTY EMPLOYEE CREDIT U.	1500 NW 107 AVE	1994	911	Walk-In Bank	8,027	139
2	479	GIANT EXPRESS	1500 NW 108 AVE	1994	150	Warehouse	10,500	8
2	479	MICROTECHNOLOGY, INC.	1460 NW 107 AVE	1993	710	Office	575	4
2	479	ORTEGA, JOSE A. OR LUC	1550-1630 NW 108 AVE	1994	150	Warehouse	155,234	115
2	480	BEACON INDUSTRIAL PARK	10813-11014 NW 30/33 ST	1994	150	Warehouse	531,200	334
2	480	CONDOR OVERSEAS INC.	10975 NW 29 ST	1994	150	Warehouse	15,615	12
2	480	DINO DI MILANO CORP.	2900 NW 112 AVE	1994	140	Manufacturing	80,951	61
2	480	GOTO'S MARBLE AND GRANITE	2520 NW 112 AVE	1994	150	Warehouse	29,128	22
2	480	JHAM INTERNATIONAL	10855 NW 27 ST	1994	150	Warehouse	25,150	19
2	481	APPLIANCE CENTER AIRPORT	3301 NW 107 AVE	1994	820	Retail	27,200	286
2	481	CLARO, FIOR & E.	9841 NW 26 ST	1995	210	Single Family Residential	1	2
2	481	CONSTRUCTION CANAHUATI	10475 NW 28 ST	1994	150	Warehouse	45,970	34
2	481	DIAZ, HECTOR M.	9711 NW 27 ST	1993	210	Single Family Residential	1	2
2	481	FESAN DEVELOPMENT CORP	9815-9875 NW 25 ST	1994	210	Single Family Residential	6	9
2	481	H.T. WHITEHEAD, INC.	10470-10900 NW 26/27 ST	1994	150	Warehouse	129,086	96
2	481	JIMENEZ, NELSON M.	9865 NW 27 ST	1994	210	Single Family Residential	1	2
2	481	LENNAR HOMES	NW 97 - 100 AVE & NW 29 TERR - NW 33 ST	1994	210	Single Family Residential	156	161
2	481	LENNAR HOMES	NW 97 - 100 AVE & NW 29 TERR - NW 33 ST	1995	210	Single Family Residential	77	85
2	481	LLEONART, VICTOR R.	9921 NW 26 ST	1994	210	Single Family Residential	1	2
2	481	MADERAL, IDALMIS	9940 NW 27 TERR	1995	210	Single Family Residential	1	2
2	481	MARTIN BROTHERS INC.	10005-10055 NW 26 ST	1994	210	Single Family Residential	2	3
2	481	PENA, JOSE	9880 NW 27 ST	1993	210	Single Family Residential	1	2
2	481	PEREZ, JESUS S.	9990 NW 28 TERR	1993	210	Single Family Residential	1	2
2	481	PEREZ, NOEL	9912 NW 27 ST	1993	210	Single Family Residential	1	2
2	481	RODRIGUEZ, ALEJANDRO	9795 NW 28 TERR	1994	210	Single Family Residential	1	2
2	481	RODRIGUEZ, JOSE E.	9850 NW 28 ST	1994	210	Single Family Residential	1	2
2	481	SINGH, RAM K. AND SARO	9889 NW 25 ST	1993	210	Single Family Residential	1	2
2	481	SOTOLONGO, AUGUSTO	9925-9965 NW 27 TERR	1993	210	Single Family Residential	2	3
2	481	SPARCO CORPORATION	3075 NW 107 AVE	1994	150	Warehouse	80,692	60
2	481	TRANSVIDEO CORPORATION	3295 NW 105 AVE	1994	150	Warehouse	11,871	9

Table 26 West Dade Area Impact Fee Trips

Sector Number	TAZ	Name	Location	Year Paid	Land Use Code	Description	Units or Sq. Ft.	Trips Generated Per PM Peak Hour of Adjacent Street Traffic
2	481	TRANSVIDEO CORPORATION	3295 NW 105 AVE	1994	710	Office	7,129	27
2	481	VAZQUEZ, EUDALDO V.	9754 NW 27 TERR	1993	210	Single Family Residential	1	2
2	481	VELAZQUEZ, TOMAS	9913 NW 26 ST	1995	210	Single Family Residential	1	2
2	481	BORREGO, RENE	10195 NW 26 ST	1994	210	Single Family Residential	1	2
2	481	BRITO, JORGE LUIS	10125 NW 26 ST	1994	210	Single Family Residential	1	2
2	482	CANTELOP PROPERTY INV.	2255 NW 102 PL	1994	150	Warehouse	41,500	31
2	482	ISSA HASSAIN	2100 NW 102 PL	1994	150	Warehouse	22,805	17
2	482	MERRITT, RALPH JR. TRUST	10201 NW 21 ST	1993	150	Warehouse	12,475	9
2	482	MERRIT, STEVEN R.	2105 NW 102 PL	1993	150	Warehouse	12,000	9
2	482	MERRIT, STEVEN R.	2325 NW 102 PL	1994	150	Warehouse	16,657	12
2	482	VALLE, AMALIA P	2315 NW 107 AVE	1994	150	Warehouse	515	0
2	482	VENDEX INTERNATIONAL	2250 NW 102 PL	1993	150	Warehouse	21,391	16
2	482	WESTWOOD DEVELOPMENT	2200-2201 NW 102 PL/AVE	1993	150	Warehouse	76,904	57
2	483	TSA MALL, LTD.	10698 NW 12 ST	1993	820	Retail	42,500	380
3	456	F. AND J. EQUIPMENT INC.	7801 NW 53 ST	1994	140	Manufacturing	3,880	3
3	456	GIMROCK CONSTRUCTION	3655 NW 78 AVE	1993	150	Warehouse	4,712	3
3	456	THE CHARLOTTESVILLE CO.	4851 NW 79 AVE	1994	130	Industrial	13,975	13
3	457	CARLOS MOREJON	8447 NW 54 ST	1993	140	Manufacturing	630	1
3	457	ORGANICA, U.S.A., INC.	8130 NW 56 ST	1993	150	Warehouse	5,712	4
3	457	SPEAR SAFER HARMON & CO.	5575 NW 87 AVE	1994	30	Truck Terminal	30,000	25
3	457	SUNSHINE BOTTLING CO.	8447 NW 54 ST	1993	140	Manufacturing	22,279	17
3	457	VOGLER EQUIPMENT COMPANY	5450 NW 82 AVE	1993	150	Warehouse	6,200	5
3	459	MATRA, INC.	9030 NW 58 ST	1993	710	Office	4,000	17
3	459	MATRA, INC.	9030 NW 58 ST	1993	150	Warehouse	6,000	4
3	459	NEW M.A. INVESTMENT, INC.	9100 NW 58 ST	1994	150	Warehouse	13,000	10
3	459	SUMAL, JR., KENNETH E.	5424 NW 94 AVE (DORAL PL)	1993	210	Single Family Residential	1	2
3	460	CROSSROAD 97-41, LTD.	4305 NW 97 AVE	1994	150	Warehouse	55,000	4
3	460	S & I HOMES, INC.	5124 NW 94 AVE (DORAL PL)	1995	210	Single Family Residential	1	2
3	460	SOUTH FLORIDA REGION	9501 NW 41 ST	1993	834	Fast Food with Drive Thru	3,494	128
3	460	ZINN, RICHARD	4405 NW 97 AVE	1994	150	Warehouse	55,000	41
3	488	CARIBBEAN EXPORT APPL.	9600 NW 12 ST	1994	150	Warehouse	31,885	24
3	488	JOHNSON ELECTRONICS	2355 NW 97 AVE	1994	150	Warehouse	9,170	7
3	488	PAK CHOI NG	1485 NW 96 AVE	1993	150	Warehouse	13,855	10
3	488	PEGO INTERNATIONAL CORP.	8725 NW 13 TERR	1994	150	Warehouse	12,680	9
3	488	TRANSCARIBBEAN INVESTMENT	1840 NW 94 AVE	1994	150	Warehouse	17,706	13
3	488	YOUNGGONE AMERICA, INC.	1460 NW 96 AVE	1994	150	Warehouse	24,700	18
3	489	AIRPORT WEST DEVELOPMENT	9590 NW 40 ST	1994	150	Warehouse	21,028	16
3	489	LENNAR HOMES	3026-3136 NW 95 CT	1994	210	Single Family Residential	5	7
3	490	AIRPORT WEST DEVELOPMENT	8500 NW 30 TERR	1995	150	Warehouse	12,108	9
3	490	AIRPORT WEST DEVELOPMENT	8600 NW 30 TERR	1993	150	Warehouse	24,013	18
3	490	AIRPORT WEST DEVELOPMENT	8530 NW 30 TERR	1994	150	Warehouse	8,762	6
3	490	AIRPORT WEST DEVELOPMENT	8530 NW 30 TERR	1994	710	Office	3,104	14
3	490	AIRPORT WEST DEVELOPMENT	8301 NW 30 TERR	1993	150	Warehouse	20,275	15

Table 26 West Dade Area Impact Fee Trips

Sector Number	TAZ	Name	Location	Year Paid	Land Use Code	Description	Units or Sq. Ft.	Trips Generated Per PM Peak Hour of Adjacent Street Traffic
3	490	AMERIC DISC INC.	8455 NW 30 TERR	1994	150	Warehouse	23,480	17
3	490	AMERIC DISC USA INC.	8455 NW 30 TERR	1995	150	Warehouse	40,914	30
3	490	ATLANTIC PUMP AND EQUIP.	3055 NW 84 AVE	1993	150	Warehouse	32,403	24
3	490	BARNETT TECHNOLOGIES I	3025 NW 87 AVE	1994	912	Drive-In Bank	7,642	333
3	490	CBN QUALITY DEVELOPMENT	8455 NW 29 ST	1994	150	Warehouse	52,520	39
3	490	CBN QUALITY DEVELOPMENT	2905 NW 87 AVE	1994	150	Warehouse	54,016	40
3	490	HEMISPHERE CENTRE PART.	8205 NW 30 ST	1993	150	Warehouse	42,921	32
3	490	HEMISPHERE CENTRE PART.	3030 NW 82 AVE	1993	150	Warehouse	21,609	16
3	490	NEW WORLD PARTNERS JOIN	8551 NW 30 TERR	1993	150	Warehouse	100,423	74
3	490	S. RANDALL MERRITT	8400-8450 NW 29 ST/30 TERR	1994	150	Warehouse	43,665	32
3	491	AIRPORT WEST DEVELOPMENT	SE CORNER OF NW 82 AVE & NW 29 ST	1995	150	Warehouse	13,000	15
3	491	AIRPORT WEST DEVELOPMENT	8180 NW 29 ST	1995	710	Office	2,700	13
3	491	C.B.B. MANAGEMENT CORP	7800 NW 29 ST	1993	820	Retail	129,494	774
3	491	C.B.B. MANAGEMENT CORP.	7800 NW 29 ST	1993	150	Warehouse	54,760	41
3	491	GOLDSTRON, INC.	8000-8100 NW 29 ST	1994	150	Warehouse	100,562	74
3	491	LOPEZ, CECILIO & MARIA	7815-7839 NW 29 ST	1994	710	Office	9,588	33
3	491	LOPEZ, CECILIO & MARIA	7815-7839 NW 29 ST	1994	150	Warehouse	19,120	14
3	491	PLAZA WEST ASSOCIATES	3037 NW 82 AVE	1993	150	Warehouse	34,030	25
3	491	PROPULSION TECHNOLOGY	8050 NW 31 ST	1993	150	Warehouse	15,244	11
3	491	RALPH MERRITT DEVELOPMENT	8050 NW 29 ST	1994	150	Warehouse	6,250	5
3	491	ROMPU CONSTRUCTION CORP.	3400 NW 78 AVE	1993	150	Warehouse	25,300	19
3	491	R&A FOOD SERVICES, INC.	8070 NW 36 ST	1994	834	Fast Food with Drive Thru	3,371	123
3	492	ADLER GROUP	2330 NW 82 AVE	1993	150	Warehouse	102,180	76
3	492	ADLER GROUP	8000 NW 25 ST	1994	710	Office	45,810	105
3	492	ADLER GROUP	8100 NW 21 ST	1993	150	Warehouse	86,611	64
3	492	AIRLINE PROFESSIONALS	2080 NW 79 AVE	1994	150	Warehouse	9,880	7
3	492	BURKE, ANTHONY J.	8290 NW 25 ST	1993	150	Warehouse	31,032	23
3	492	DINO INVESTMENT CORP.	1800 NW 79 AVE	1993	710	Office	5,558	22
3	492	DINO INVESTMENT CORP.	1800 NW 79 AVE	1993	150	Warehouse	8,063	6
3	492	EASTERN NATIONAL BANK	2495 NW 82 AVE	1994	912	Drive-In Bank	4,040	176
3	492	EXPORT PENINSULAR CORP.	2115 NW 84 AVE	1993	150	Warehouse	26,223	19
3	492	FIRE FIGHTERS MEMORIAL	8000 NW 21 ST	1994	820	Retail	904	33
3	492	JAXI BUILDERS, INC.	2101 NW 79 AVE	1993	710	Office	630	4
3	492	MUSICAL PRODUCTIONS, INC.	2090 NW 79 AVE	1994	150	Warehouse	9,283	7
3	492	MUSICAL PRODUCTIONS, INC.	2090 NW 79 AVE	1994	710	Office	4,278	18
3	492	NEW WORLD PARTNERS JOIN	8401-23 NW 17 ST	1993	150	Warehouse	15,641	12
3	492	NEW WORLD PARTNERS JOIN	1701 NW 87 AVE	1994	150	Warehouse	224,277	166
3	492	NEW WORLD PARTNERS JOIN	SW CORNER OF NW 23 ST & NW 84 AVE	1993	150	Warehouse	93,152	95
3	492	NEW WORLD PARTNERS JOIN	2205 NW 86 AVE	1993	150	Warehouse	91,396	68
3	492	P.M. CONSTRUCTION	2070 NW 79 AVE	1993	710	Office	2,952	14

Table 26 West Dade Area Impact Fee Trips

Sector Number	TAZ	Name	Location	Year Paid	Land Use Code	Description	Units or Sq. Ft.	Trips Generated Per PM Peak Hour of Adjacent Street Traffic
3	492	P.M. CONTRUCTION	2070 NW 79 AVE	1993	150	Warehouse	7,021	5
3	492	REAL STATE CONCEPTS, INC.	1730 NW 79 AVE	1994	150	Warehouse	11,645	9
3	493	BELCO CONSTRUCTION CORP.	7975 NW 12 ST	1993	832	High Turnover Sit Down Rest.	1,323	22
3	493	BRINKER RESTAURANT CORP.	1695 NW 87 AVE	1994	832	High Turnover Sit Down Rest.	7,084	115
3	493	EL POLLO TROPICAL, INC.	1555 NW 87 AVE	1994	834	Fast Food with Drive Thru	3,862	141
3	493	GIL HYATT INC.	8403 NW 12 ST	1994	834	Fast Food with Drive Thru	37	1
3	493	G.T. MCDONALD ENTERPRISE	8695 NW 12 ST	1994	834	Fast Food with Drive Thru	5,057	185
3	493	HOOTERS OF DORAL	8695 NW 13 TERR	1994	832	High Turnover Sit Down Rest.	4,478	73
3	493	NEW WORLD PARTNERS JOIN	8600 NW 13 TERR	1993	820	Retail	87,500	603
3	493	NEW WORLD PARTNERS JOIN	8500-8600 NW 17 ST	1994	150	Warehouse	437,092	288
3	493	NEW WORLD PARTNERS JOIN	1301-19 NW 84 AVE	1994	150	Warehouse	21,802	16
3	493	SANTA FE CONSTRUCTION	1325 NW 78 AVE	1993	150	Warehouse	51,423	38
3	493	WAL MART STORES	1477 NW 87 AVE	1993	820	Retail	126,224	761
4	478	GAMMA CONSTRUCTION INC.	N. OF NW 4 WAY/LN NEAR NW 115 - 116 CT	1993	231	Low-Rise Residential Condo.	24	20
4	478	GAMMA CONSTRUCTION INC.	N. OF NW 4 LN NEAR NW 114 - 116 CT	1994	231	Low-Rise Residential Condo.	30	25
4	478	VILLADIEGO, NETTY M.	11325 W FLAGLER ST	1993	820	Retail	467	21
4	487	MILTON, JOSE	9561-9631 FONTAINEBLEAU BLVD	1993	220	Apartment	468	267
4	496	YA-GAR CONSTRUCTION, INC.	7901 W FLAGLER ST	1994	834	Fast Food with Drive Thru	176	6
4	498	CERVERA, JAIME	8420 SW 5 ST	1994	210	Single Family Residential	1	2
4	498	SANTANA, ERNESTO M.	8330 SW 5 ST	1994	210	Single Family Residential	1	2
5	194	RECHTIEN INTERNATIONAL	7227 NW 74 AVE	1993	841	New Car Sales	1,200	6
5	452	PEXCO INC.	7101 NW 51 ST	1993	150	Warehouse	6,734	5
5	452	RECIO AND ASSOCIATES	7190 NW 52 ST	1995	150	Warehouse	16,293	12
5	452	REFRICENTER	7101 NW 43 ST	1993	150	Warehouse	39,017	29
5	453	ABC AVIATION BUSINESS	7501-7551 NW 52 ST	1993	150	Warehouse	56,800	42
5	453	E. RODRIGUEZ CONSTRUCTION	5300 NW 72 AVE	1994	150	Warehouse	4,370	3
5	453	GOLEN, SELIG	5100 NW 72 AVE	1993	150	Warehouse	31,500	23
5	453	GONZALEZ, J.A.	7577 NW 50 ST	1993	150	Warehouse	10,744	8
5	453	KOMATSU AMERICA CORP.	7650 NW 50 ST	1994	150	Warehouse	1,510	1
5	454	CKE GROUP, INC.	7401 NW 73 ST	1993	834	Fast Food with Drive Thru	3,028	111
5	454	HARRISON CONSTRUCTION	6900 NW 74 AVE	1994	150	Warehouse	2,500	2
5	454	WITHERS/SUDDATH VAN LI	6900 NW 74 AVE	1994	150	Warehouse	28,855	21
5	512	ANDIAN TRADING, INC.	3420 NW 73 AVE	1993	710	Office	600	4
5	512	BISCAY CONSTRUCTION CO.	3353 NW 74 AVE	1994	150	Warehouse	18,876	14
5	512	HERMAN ELECTRONICS	7356 NW 35 TERR	1995	710	Office	1,000	6
5	512	TECH REALTY & CONSTRUCTION	7306 NW 34 ST	1993	150	Warehouse	1,836	1
5	512	WHITEFIELD & BLOOM	3520 NW 72 AVE/7250 NW 35 TERR	1993	150	Warehouse	168,648	125
5	513	ART DESIGN & CONSTRUCTION	3201 NW 72 AVE	1995	150	Warehouse	2,661	2
6	507	MANSO, HECTOR	51 NW 75 AVE	1993	230	Condominium	2	1
6	511	AIRPORT KEY CORPORATION	7610-7630 NW 25 ST	1994	150	Warehouse	224,355	166
6	511	AIRPORT KEY CORPORATION	7500 NW 25 ST	1994	834	Fast Food with Drive Thru	3,340	122
6	511	OCEAN BANK	7500 NW 25 ST	1994	912	Drive-In Bank	9,400	410

After calculating the number of new trips that are added to the West Dade area, the next step was to somehow distribute these trips on the arterials and freeways in the study area. In order to have a reasonable distribution, a number of assumptions were made. First, the distribution was based on the cardinal directional trip distribution table provided in the Metro-Dade MPO's Long Range Transportation Plan Update (February 1995). Each Traffic Analysis Zone (TAZ) in the distribution table has a percentage of trips distributed among eight cardinal directions. These percentages were calculated using travel demand models for the entire Miami Urban Area and are assumed to be valid for any subsection of the Urban Area. Tables 27 and 28 show the distribution of trips in the West Dade Area for the vested developments and impact fee sites, respectively.

In order to simplify the distribution process for this task, a limit of four roadway segments was defined as the maximum number of segments that are initially impacted by the added trips. These segments are represented by the permanent count stations on the area roadways which is consistent with the Art_Plan and Free_tab techniques described earlier in this report. The use of count stations also allows for easier analyses and comparison in subsequent chapters. When no count station segment was found to be contiguous to a particular development site, the next nearest segment was chosen as being impacted.

In many instances, a decision had to be made to reduce to four, the number of segments to analyze. Usually, a reasonable choice could be made by studying a map and selecting those routes which were more likely to be traveled by potential trips. For example, a route that leads towards one of the Dolphin or Palmetto Expressway interchanges was a better choice than a route that led away from the highways. On occasion, the cardinal distribution assignment may seem skewed more favorably towards one or two segments as compared to other nearby segments. This situation arises when an examination of a 1994 street atlas of Dade County showed direct local street connections from the development site to the more favored segments, while no -- or poor -- connections existed with the other roadway segments. This explains why two sites within the same TAZ may have different trip assignments even though the same cardinal distribution percentages are utilized. However, in order to avoid variations within sites, the same assignment was always used for all of the land uses contained within each development.

In other instances, the assigned percentages shown in Table 27 and Table 28 do not add up to 100%. This occurs when a site is located near the perimeter of the study area, allowing some of the site's trips to avoid utilizing any of the count stations that are in West Dade. Only those trips likely to occur within the study area were considered.

Although no figure is provided showing the location and size of the sites listed in Table 28, the vast majority of these developments occur in Sectors 2 and 3, similar to the vested rights developments. A closer examination of Table 28 indicates that TAZs 481, 490, 491, 492, and 493 are most affected by the new developments. These TAZs are shown in Figure 8.

Table 27 Assignment of Vested Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
1	193	Vulcan Materials	Warehouse	481	100.00	653
1	193	Vulcan Materials	Light Industrial	481	100.00	953
2	464	Doral Park	Apartments	440	65.59	28
				454	34.05	15
2	464	Doral Park	Office	440	65.59	22
				454	34.05	12
2	464	Hanover Company	Apartments	434	91.46	270
				440	8.54	25
2	465	Doral Landings	Apartments	442	30.99	235
				454	61.97	470
				2272	4.23	32
				2250	2.81	21
2	481	Costa Verde	Apartments	404	42.30	145
				434	36.35	124
				440	1.85	6
				406	19.50	67
2	482	International Corporate Park	Warehouse	406	19.43	394
				494	50.12	1016
				508	23.89	484
				510	6.57	133
2	482	International Corporate Park	Retail	406	19.43	123
				494	50.12	318
				508	23.89	152
				510	6.57	42
3	488	A + Mini Storage	Mini--Warehouse	162	100.00	17
3	488	America's Gateway Park	Office	162	66.25	135
				404	33.76	69
3	488	Gateway Center	Retail	162	66.25	4
				404	33.76	2
3	488	Youngone America	Light Industrial	404	100.00	0
3	489	Westpointe	Hotel	404	23.84	28
				434	3.83	5
				164	72.33	85
3	489	Westpointe	Branch Bank	404	23.84	31
				434	3.83	5
				164	72.33	95
3	489	Westpointe	Office	404	23.84	141
				434	3.83	23
				164	72.33	427
3	489	Westpointe	Rest. - Seats	404	23.84	25
				434	3.83	4
				164	72.33	76
3	489	Westpointe	Warehouse	404	23.84	86
				434	3.83	14
				164	72.33	260
3	489	Westpointe	Day Care Center	404	23.84	1
				434	3.83	0
				164	72.33	3
3	490	3655 NW 87th Avenue	Office	164	33.43	0
				432	66.58	0
3	490	Ryder Systems Inc.	Office	164	25.24	331
				402	12.83	168
				432	44.07	578
				484	17.87	235
3	490	Galloway Financial Center	Office	164	33.43	63
				402	12.83	24
				432	22.25	42
				484	31.50	59

Table 27 Assignment of Vested Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
3	490	Galloway Financial Center	Warehouse	164	33.43	62
				402	12.83	24
				432	22.25	41
				484	31.50	58
3	490	Transal Business Park	Warehouse	164	33.43	31
				402	30.70	28
				432	22.25	21
				484	13.63	13
3	490	Transal Business Park	Wholesale	164	33.43	14
				402	30.70	13
				432	22.25	9
				484	13.63	6
3	490	Transal Business Park	Office	164	33.43	572
				402	30.70	525
				432	22.25	381
				484	13.63	233
3	490	Transal Business Park	Light Industrial	164	33.43	41
				402	30.70	38
				432	22.25	27
				484	13.63	17
3	491	Blue Heron Lake	Office	402	100.00	308
3	492	Beacon Center	Office	162	49.27	468
				358	14.73	140
				402	35.99	342
3	492	Beacon Center	Warehouse	162	49.27	88
				358	14.73	26
				402	35.99	65
3	493	Beacon Center Plaza	Retail	162	51.70	217
				358	17.45	73
				402	30.84	129
4	478	Bristol Park Subdivision	Single Family	158	41.49	8
				1218	58.51	12
4	496	Flagler Park Plaza	Single Family	1141	57.60	0
				1211	42.40	0
4	496	Flagler Park Plaza	Mini-Warehouse	1141	57.60	5
				1211	42.40	3
4	496	Flagler Park Plaza	Apartments	1141	57.60	109
				1211	42.40	81
4	496	Flagler Park Plaza	Office	1141	57.60	0
				1211	42.40	0
5	453	Export Business	Industrial	39	14.76	5
				452	14.44	5
				1205	70.80	26
6	508	Cantel Center	Warehouse	1201	66.45	0
6	508	Cantel Center	Office	1201	66.45	182
6	508	Cantel Center	Light Industrial	1201	66.45	0
6	511	Airport Corporate Center	Office	400	32.26	0
				1202	67.74	0
6	511	Airport Corporate Center West	Warehouse	400	32.26	44
				1202	67.74	92

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
1	455	8465 Realty Partnership	Warehouse	452	47.31	4
				481	27.59	3
				166	23.46	2
				454	1.65	0
1	455	Approved Performance Tire	Warehouse	452	47.31	1
				481	27.59	0
				166	23.46	0
				454	1.65	0
1	455	Ash,Simon	Warehouse	452	47.31	3
				481	27.59	2
				166	23.46	2
				454	1.65	0
1	455	Lopez, Cecilio & Maria	Warehouse	452	47.31	6
				481	27.59	3
				166	23.46	3
				454	1.65	0
1	455	Recio, Ricardo	Warehouse	481	43.10	1
				452	56.91	1
1	455	Recio, Ricardo	Office	481	43.10	4
				452	56.91	5
1	455	Santiago, Eugenio M.	Warehouse	481	43.10	0
				452	56.91	1
1	455	Santiago, Eugenio M.	Office	481	43.10	4
				452	56.91	5
1	455	Stephens, J.M.	Warehouse	481	43.10	2
				452	56.91	3
2	479	Dade County Employee Credit Union	Office	510	100.00	60
2	479	Dade County Employee Credit Union	Walk-In Bank	510	100.00	139
2	479	Giant Express	Warehouse	510	100.00	8
2	479	Microtechnology, Inc.	Office	510	100.00	4
2	479	Ortega, Jose A. or Luc	Warehouse	510	100.00	115
2	480	Beacon Industrial Park	Warehouse	512	100.00	334
2	480	Condor Overseas, Inc.	Warehouse	512	100.00	12
2	480	Dino Di Milano Corp.	Manufacturing	512	8.86	5
				406	46.96	29
				510	44.17	27
2	480	Goto's Marble and Granite	Warehouse	512	8.86	2
				406	46.96	10
				510	44.17	10
2	480	Jham International	Warehouse	512	100.00	19
2	481	Appliance Center Airport	Retail	512	44.12	126
				440	26.10	75
				406	29.78	85
2	481	Claro, Fior & E.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Construction Canahuati	Warehouse	512	13.06	4
				406	86.94	30
2	481	Diaz, Hector M.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Fesan Development Corp.	Single Family Residential	406	32.02	3
				512	1.85	0
				434	10.25	1
				404	55.88	5

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
2	481	H.T. Whitehead, Inc.	Warehouse	512	13.06	13
				406	86.84	83
2	481	Jiminez, Nelson M.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Lennar Homes	Single Family Residential	434	36.35	59
				440	1.85	3
				404	42.30	68
				494	19.50	31
2	481	Lennar Homes	Single Family Residential	434	36.35	31
				440	1.85	1
				404	42.30	36
				494	19.50	17
2	481	Lleonart, Victor R.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Maderal, Idalmis	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Martin Brothers, Inc.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	2
2	481	Pena, Jose	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Perez, Jesus S.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Perez, Noel	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Rodriguez, Alejandro	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Rodriguez, Jose E.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Singh, Ram K. and Saro	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Sotolongo, Augusto	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	2
2	481	Sparco Corporation	Warehouse	512	100.00	60
2	481	Transvideo Corporation	Warehouse	512	44.12	4
				440	26.10	2
				406	29.78	3

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
2	481	Transvideo Corporation	Office	512	44.12	12
				440	26.10	7
				406	29.78	8
2	481	Vazquez, Eudaldo V.	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Velazquez, Tomas	Single Family Residential	406	32.02	1
				512	1.85	0
				434	10.25	0
				404	55.88	1
2	481	Borrego, Rene	Single Family Residential	406	98.15	2
				512	1.85	0
2	481	Brito, Jorge Luis	Single Family Residential	406	98.15	2
				512	1.85	0
2	482	Cantelop Property Inv.	Warehouse	406	26.00	8
				494	74.01	23
2	482	Issa Hassain	Warehouse	406	26.00	4
				494	74.01	13
2	482	Merritt, Ralph Jr. Trust	Warehouse	406	26.00	2
				494	74.01	7
2	482	Merritt, Steven R.	Warehouse	406	26.00	2
				494	74.01	7
2	482	Merritt, Steven R.	Warehouse	406	26.00	3
				494	74.01	9
2	482	Valle, Amalia P.	Warehouse	510	100.00	0
2	482	Vendex International	Warehouse	406	26.00	4
				494	74.01	12
2	482	Westwood Development	Warehouse	406	26.00	15
				494	74.01	42
2	483	TSA Mall, Ltd.	Retail	406	26.00	99
				494	74.01	281
3	456	F. and J. Equipment Inc.	Manufacturing	482	100.00	3
3	456	Gimrock Construction	Warehouse	482	100.00	3
3	456	The Charlottesville Co.	Industrial	482	100.00	13
3	457	Carlos Morejon	Manufacturing	166	23.24	0
				452	42.49	1
				482	34.26	0
3	457	Organica, U.S.A., Inc.	Warehouse	482	38.06	2
				452	61.93	2
3	457	Spear Safer Harmon & Co.	Truck Terminal	166	100.00	25
3	457	Sunshine Bottling Co.	Manufacturing	166	23.24	4
				452	42.49	7
				482	34.26	6
3	457	Vogler Equipment Company	Warehouse	166	23.24	1
				452	42.49	2
				482	34.26	2
3	459	Matra, Inc.	Office	454	95.02	16
3	459	Matra, Inc.	Warehouse	454	95.02	4
3	459	New M.A. Investment, Inc.	Warehouse	454	95.02	10
3	459	Sumal, Jr., Kenneth E.	Single Family Residential	440	22.21	0
				434	77.78	2
3	460	Crossroad 97-41, Ltd.	Warehouse	440	1.96	0
				434	23.53	1
3	460	S & I Homes, Inc.	Single Family Residential	440	1.96	0
				434	23.53	0

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
3	460	South Florida Region	Fast Food with Drive Thru	440	1.96	3
				434	23.53	30
3	460	Zinn, Richard	Warehouse	440	1.96	1
				434	23.53	10
3	488	Caribbean Export Appl.	Warehouse	494	33.76	8
				162	66.25	16
3	488	Johnson Electronics	Warehouse	494	100.00	7
3	488	Pak Choi Ng	Warehouse	494	33.76	3
				162	66.25	7
3	488	Pego International Corp.	Warehouse	494	9.79	1
				162	90.22	8
3	488	Transcaribbean Investment	Warehouse	404	100.00	13
3	488	Youngone America, Inc.	Warehouse	494	33.76	6
				162	66.25	12
3	489	Airport West Development	Warehouse	443	31.90	5
				440	7.55	1
				494	20.12	3
				404	40.43	7
3	489	Lennar Homes	Single Family Residential	434	31.90	2
				404	40.43	3
				406	23.84	2
				440	3.83	0
3	490	Airport West Development	Warehouse	164	4.76	0
				432	44.07	4
				484	17.87	2
				402	33.31	3
3	490	Airport West Development	Warehouse	164	4.76	1
				432	44.07	8
				484	17.87	3
				402	33.31	6
3	490	Airport West Development	Warehouse	164	4.76	0
				432	44.07	3
				484	17.87	1
				402	33.31	2
3	490	Airport West Development	Office	164	4.76	1
				432	44.07	6
				484	17.87	2
				402	33.31	5
3	490	Airport West Development	Warehouse	164	4.76	1
				432	44.07	6
				484	17.87	3
				402	33.31	5
3	490	Americ Disc Inc.	Warehouse	164	4.76	1
				432	44.07	7
				484	17.87	3
				402	33.31	6
3	490	Americ Disc USA Inc.	Warehouse	164	4.76	2
				432	44.07	13
				484	17.87	5
				420	33.31	10
3	490	Atlantic Pump and Equipment	Warehouse	164	4.76	1
				432	44.07	11
				484	17.87	4
				402	33.31	8
3	490	Barnett Technologies, Inc.	Drive-in-Bank	164	33.43	111
				484	31.50	105
				432	22.25	74
				402	12.83	43

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
3	490	CBN Quality Development	Warehouse	164	4.76	2
				484	44.07	17
				432	17.87	7
				402	33.31	13
3	490	CBN Quality Development	Warehouse	164	4.76	2
				484	44.07	18
				432	17.87	7
				402	33.31	13
3	490	Hemisphere Centre Part.	Warehouse	164	4.76	1
				489	44.07	14
				432	17.87	6
				402	33.31	11
3	490	Hemisphere Centre Part.	Warehouse	164	4.76	1
				484	44.07	7
				432	17.87	3
				402	33.31	5
3	490	New World Partners Join	Warehouse	164	4.76	3
				484	44.07	33
				432	17.87	13
				402	33.31	25
3	490	S. Randall Merrit	Warehouse	164	4.76	1
				484	44.07	14
				432	17.87	6
				402	33.31	11
3	491	Airport West Development	Warehouse	484	55.31	8
				432	19.51	3
				402	25.17	4
3	491	Airport West Development	Office	484	55.31	7
				432	19.51	3
				402	25.17	3
3	491	C.B.B. Management Corp.	Retail	484	55.31	428
				432	19.51	151
				402	25.17	195
3	491	C.B.B. Management Corp.	Warehouse	484	55.31	23
				432	19.51	8
				402	25.17	10
3	491	Goldstron, Inc.	Warehouse	484	55.31	41
				432	19.51	14
				402	25.17	19
3	491	Lopez, Cecilio & Maria	Office	484	55.31	18
				432	19.51	7
				402	25.17	8
3	491	Lopez, Cecilio & Maria	Warehouse	484	55.31	8
				432	19.51	3
				402	25.17	3
3	491	Plaza West Associates	Warehouse	484	55.31	14
				432	19.51	5
				402	25.17	6
3	491	Propulsion Technology	Warehouse	484	55.31	6
				432	19.51	2
				402	25.17	3
3	491	Ralph Merritt Development	Warehouse	484	55.31	3
				432	19.51	1
				402	25.17	1
3	491	Rompu Construction Corp.	Warehouse	484	55.31	10
				432	19.51	4
				402	25.17	5

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
3	491	R&A Food Services, Inc.	Fast Food with Drive Thru	484	55.31	68
				432	19.51	24
				402	25.17	31
3	492	Adler Group	Warehouse	358	10.52	8
				162	29.41	22
				402	60.06	46
3	492	Adler Group	Office	402	100.00	105
3	492	Adler Group	Warehouse	358	43.88	28
				162	12.05	8
				402	44.06	28
3	492	Airline Professionals	Warehouse	402	44.06	3
				162	1.27	0
				358	54.66	4
3	492	Burke, Anthony J.	Warehouse	358	10.52	2
				162	29.41	7
				402	60.06	14
3	492	Dino Investment Corp.	Office	402	44.06	10
				162	1.27	0
				358	54.66	12
3	492	Dino Investment Corp.	Warehouse	402	44.06	3
				162	1.27	0
				358	54.66	3
3	492	Eastern National Bank	Drive-in-Bank	358	10.52	18
				162	29.41	52
				402	60.06	106
3	492	Export Peninsular Corp.	Warehouse	358	10.52	2
				162	29.41	6
				402	60.06	11
3	492	Fire Fighters Memorial Hall	Retail	358	43.88	14
				162	12.05	4
				402	44.06	15
3	492	Jaxi Builders, Inc.	Office	402	44.06	2
				162	1.27	0
				358	54.66	2
3	492	Musical Productions, Inc.	Warehouse	402	44.06	3
				162	1.27	0
				358	54.66	4
3	492	Musical Productions, Inc.	Office	402	44.06	8
				162	1.27	0
				358	54.66	10
3	492	New World Partners Join	Warehouse	162	38.75	5
				358	25.25	3
				402	35.99	4
3	492	New World Partners Join	Warehouse	162	100.00	166
3	492	New World Partners Join	Warehouse	162	29.41	28
				358	10.52	10
				402	60.06	57
3	492	New World Partners Join	Warehouse	162	41.20	28
				402	58.79	40
3	492	P.M. Construction	Office	402	44.06	6
				162	1.27	0
				358	54.66	8
3	492	P.M. Construction	Warehouse	402	44.06	2
				162	1.27	0
				358	54.66	3
3	492	Real State Concepts, Inc.	Warehouse	402	44.06	4
				162	1.27	0
				358	54.66	5

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
3	493	Belco Construction Corp.	High Turnover Sit Down Rest	358	100.00	22
3	493	Brinker Restaurant Corp.	High Turnover Sit Down Rest	162	51.70	60
				358	32.54	37
				402	15.75	18
3	493	El Pollo Tropical, Inc.	Fast Food with Drive Thru	162	51.70	73
				358	32.54	46
				402	15.75	22
3	493	Gil Hyatt Inc.	Fast Food with Drive Thru	162	51.70	1
				358	32.54	0
				402	15.75	0
3	493	G.T. McDonald Enterprise	Fast Food with Drive Thru	162	51.70	96
				358	32.54	60
				402	15.75	29
3	493	Hooters of Doral	High Turnover Sit Down Rest.	162	51.70	38
				358	32.54	24
				402	15.75	11
3	493	New World Partners Join	Retail	162	51.70	312
				358	32.54	196
				402	15.75	95
3	493	New World Partners Join	Warehouse	162	51.70	149
				358	32.54	94
				402	15.75	45
3	493	New World Partners Join	Warehouse	162	51.70	8
				358	32.54	5
				402	15.75	3
3	493	Sante Fe Construction	Warehouse	358	100.00	38
3	493	WalMart Stores	Retail	162	51.70	393
				358	32.54	248
				402	15.75	120
4	478	Gamma Construction Inc.	Low-Rise Residential Condo.	158	14.40	3
				1218	85.60	17
4	478	Gamma Construction Inc.	Low-Rise Residential Condo.	158	14.40	4
				1218	85.60	21
4	478	Villadiego, Netty M.	Retail	158	100.00	21
4	487	Milton, Jose	Apartment	1211	58.70	157
				154	14.69	39
				156	6.36	17
				1218	20.25	54
4	496	Ya-Gar Construction, Inc.	Fast Food with Drive Thru	1141	100.00	6
4	498	Cervera, Jaime	Single Family Residential	44	37.75	1
				1141	62.26	1
4	498	Santana, Ernesto M.	Single Family Residential	44	37.75	1
				1141	62.26	1
5	194	Rechtien International	New Car Sales	481	14.25	1
				39	57.92	3
5	452	Pexco Inc.	Warehouse	1205	100.00	5
5	452	Recio and Associates	Warehouse	1205	100.00	12
5	452	Refricenter	Warehouse	1205	100.00	29
5	453	ABC Aviation Business	Warehouse	1205	65.21	27
				452	34.79	15
5	453	E. Rodriguez Construction	Warehouse	1205	65.21	2
				452	34.79	1
5	453	Golen, Selig	Warehouse	1205	65.21	15
				452	34.79	8
5	453	Gonzalez, J.A.	Warehouse	1205	65.21	5
				452	34.79	3

Table 28 Assignment of Impact Fee Development Trips

Sector Number	TAZ	Name	Description	Roadway Segment Impacted	Assigned Percentage	Assigned Trips
5	453	Komatsu America Corp.	Warehouse	1205	65.21	1
				452	34.79	0
5	454	CKE Group, Inc.	Fast Food with Drive Thru	452	35.84	40
				481	16.03	18
				39	48.15	53
5	454	Harrison Construction	Warehouse	452	35.84	1
				481	16.03	0
				39	48.15	1
5	454	Withers/Suddath Van Li	Warehouse	452	35.84	8
				481	16.03	3
				39	48.15	10
5	512	Andian Trading, Inc.	Office	1173	57.46	2
				1204	42.53	2
5	512	Biscay Construction, Inc.	Warehouse	1173	57.46	8
				1204	42.53	6
5	512	Herman Electronics	Office	1173	57.46	3
				1204	42.53	3
5	512	Tech Realty & Construction	Warehouse	1173	57.46	1
				1204	42.53	0
5	512	Whitefield & Bloom	Warehouse	1173	57.46	72
				1204	42.53	53
5	513	Art Design & Construction	Warehouse	1204	100.00	2
6	507	Manso, Hector	Condominium	1140	100.00	1
6	511	Airport Key Corporation	Warehouse	400	100.00	166
6	511	Airport Key Corporation	Fast Food with Drive Thru	400	100.00	122
6	511	Ocean Bank	Drive-in-Bank	400	100.00	410

The described procedure for assigning trips accounts for all new trips generated within the study area and uniquely loads each trip to a road segment without double loading on other segments further from the site. This reflects the logic that trips cannot impact downstream roadway segments without first impacting the nearest segments to the site.

When all of the trips have been assigned to the different count stations, the next step is to analyze the effect of these additional trips on the transportation system in the West Dade study area. Table 29 provides an Art_Plan summary table which shows both the existing level of service and the new level of service after the additional trips are considered. In addition, this table includes any roadway improvements listed in the Short-Range Transportation Improvement Program for Dade County (see Table 17). Because of improvements, additional new trips can often be offset by additional roadway capacity. Therefore, it is not surprising to see that the new LOS matches the existing LOS for more than 75% of the directional roadway segments.

A few notes should be made about Table 29. The last row on the first page of the table shows an un available (n/a) level of service for NW 79th Avenue. This segment forms a T-intersection with NW 25th Street, with signals at this location and at NW 36th Street. There are no other signals along this segment. When using Art_Plan to analyze the levels of service, the program needs to have approaching thru traffic in each direction in order to determine the level of service for the arterial. When the southbound traffic reaches a T-intersection, there is no through traffic since 100% of the traffic must turn right or left; thus, Art_Plan cannot calculate a level of service.

The second observation about Table 29 is the triple asterisk denoting that no level of service threshold exists. This was explained in Chapter 4 and is primarily the result of low effective green times for the intersections along a particular arterial. For both the "no threshold" and "T-intersection" conditions, Table 29 assumes that the arterial in question has no available capacity. Therefore, six of the twenty-three deficient capacity segments may not really be deficient. A conservative approach is taken, however, until there is a more realistic measure of the level of service along these particular arterials.

The most critical measurement is shown in the last column of Table 29. The available capacity is computed by subtracting the new volume from the maximum volume as defined by the standard LOS formula. {The standard LOS definitions, maximum volume, and existing LOS are all defined in Chapter 4, and are used consistently in this report.} Most of the arterial segments have some future capacity available; others are significantly deficient. These deficient capacity segments are shown on Figure 9 and should be the primary focus of any immediate capacity improvements.

The next table, Table 30 shows similar data for the freeway segments within the study area. The only insufficient capacity link shown on this table is along a portion of the Palmetto Expressway, just south of its interchange with the Dolphin Expressway. This particular link is not directly affected by any future study area development and indicates an existing poor level of service. According to the MPO

TABLE 29 ART_PLAN LOS SUMMARY INCLUDING NEW TRIPS

SECTOR NUMBER	STATION NUMBER	ARTERIAL	SEGMENT LOCATION	PEAK DIR. OFF-PEAK DIR.	EXISTING VOLUME	EXISTING OPERATIONAL LOS	ADDITIONAL TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
1	452	NW 58th Street	From NW 87th Avenue	EB	1864	C	73	1937	C	LOS D	3210	1273
			To SR 826 (Palmetto) East	WB	1243	F	49	1292	F	LOS D	***	-1292
1	454	NW 58th Street	From 87th Avenue	WB	2268	B	522	2790	F	LOS D	2580	-210
			To NW 97th Avenue	EB	23	B	5	28	B	LOS D	1340	1312
1	481	NW 74th Street	From NW 87th Avenue	EB	702	B	824	1526	B	LOS D	5240	3714
			To SR 826 (Palmetto) East	WB	702	D	823	1525	D	LOS D	2650	1125
2	408	NW 25th Street	From NW 97th Avenue	WB	1943	E	636	2579	F	LOS D	1940	-639
			To NW 107th Avenue	EB	1093	A	357	1450	A	LOS D	2750	1300
2	440	NW 41st Street	From NW 97th Avenue	WB	2300	B	169	2469	B	LOS D	3260	791
			To NW 107th Avenue	EB	71	B	5	76	B	LOS D	3180	3104
2	442	NW 41st Street	From NW 107th Avenue	WB	4396	D	223	4619	E	LOS D	4570	-49
			To NW 117th Avenue	EB	231	B	12	243	B	LOS D	1540	1297
2	494	NW 97th Avenue	From NW 12th Street	NB	204	B	1010	1214	B	LOS D	4610	3396
			To NW 25th Street	SB	160	B	794	954	B	LOS D	1460	506
2	508	NW 107th Avenue	From NW 12th Street	SB	4151	B	401	4552	C	LOS E*	5100	548
			To SR 836 (Dolphin) Street	NB	2438	B	235	2673	B	LOS E*	6800	4127
2	510	NW 107th Avenue	From NW 25th Street	SB	2956	F	398	3354	F	LOS D	2380	-974
			To NW 12th Street	NB	1039	C	140	1179	C	LOS D	3630	2451
2	512	NW 107th Avenue	From NW 41st Street	SB	1455	C	325	1780	D	LOS D	1880	100
			To NW 25th Street	NB	1191	A	266	1457	A	LOS D	3580	2123
3	162	NW 87th Avenue	From NW 25th Street	SB	4831	F	1942	6773	F	LOS D	2170	-4603
			To NW 12th Street	NB	1208	D	486	1694	D	LOS D	1930	236
3	164	NW 87th Avenue	From NW 41st Street	SB	2112	C	1422	3534	E	LOS D	3520	-14
			To NW 25th Street	NB	1137	C	766	1903	C	LOS D	3410	1507
3	166	NW 87th Avenue	From NW 58th Street	SB	2632	A	26	2658	A	LOS E	4390	1732
			To NW 41st Street	NB	1128	B	11	1139	B	LOS E	2480	1341
3	358	NW 12th Street	From NW 72nd Avenue	EB	1218	E	595	1813	F	120% OF LOS E*	1572	-241
			To NW 87th Avenue	WB	1124	D	550	1674	E	120% OF LOS E*	2112	438
3	402	NW 25th Street	From NW 87th Avenue	EB	3240	E	1962	5202	F	LOS D	360	-4842
			To SR 826 (Palmetto) West	WB	1596	D	966	2562	E	LOS D	2180	-382
3	404	NW 25th Street	From NW 97th Avenue	EB	1431	E	352	1783	F	LOS D	1050	-733
			To NW 87th Avenue	WB	1321	B	325	1646	B	LOS D	3310	1664
3	432	NW 36th Street	From NW 87th Avenue	EB	3020	F	839	3859	F	LOS E	1870	-1989
			To NW 79th Avenue	WB	2373	B	659	3032	B	LOS E	4790	1758
3	434	NW 36th Street	From NW 97th Avenue	EB	2978	F	469	3447	D	LOS D	3580	133
			To NW 87th Avenue	WB	740	A	117	857	A	LOS D	5150	4293
3	482	NW 79th Avenue	From NW 58th Street	SB	1000	F	16	1016	F	LOS E	***	-1016
			To NW 36th Street	NB	816	D	13	831	C	LOS E	2820	1989
3	484	NW 79th Avenue	From NW 25th Street	NB	817	E	936	1753	E	LOS D	1580	-173
			To NW 36th Street	SB	480	n/a	550	1030	n/a	LOS D	n/a	-1030

TABLE 29 ART_PLAN LOS SUMMARY INCLUDING NEW TRIPS

SECTOR NUMBER	STATION NUMBER	ARTERIAL	SEGMENT LOCATION	PEAK DIR. OFF-PEAK DIR.	EXISTING VOLUME	EXISTING OPERATIONAL LOS	ADDITIONAL TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
4	44	SW 87th Avenue	From Flagler Street	SB	2280	F	1	2281	F	LOS D	1320	-961
			To SW 8th Street	NB	1998	F	1	1999	F	LOS D	1560	-439
4	90	SW 8th Street	From SW 107th Avenue	WB	1633	A	0	1633	A	LOS D	4940	3307
			To SR 821 (H.E.F.T) West	EB	930	E	0	950	E	LOS D	910	-20
4	92	SW 8th Street	From SW 82nd Avenue	WB	1744	B	0	1744	B	LOS D	4190	2446
			To SW 87th Avenue	EB	1074	A	0	1074	A	LOS D	4440	3366
4	154	Flagler Street	From West 87th Avenue	WB	3289	C	27	3316	C	LOS E	4230	914
			To West 97th Avenue	EB	1548	F	12	1560	F	LOS E	***	-1560
4	156	Flagler Street	From West 97th Avenue	WB	1592	A	10	1602	A	LOS E	5190	3588
			To West 107th Avenue	EB	1153	B	7	1160	B	LOS E	4310	3150
4	158	Flagler Street	From West 107th Avenue	WB	2147	C	23	2170	C	LOS E	4310	2140
			To West 114th Avenue	EB	1261	F	13	1274	F	LOS E	***	-1274
4	589	SW 8th Street	From SW 87th Avenue	WB	1554	A	0	1554	A	LOS D	5710	4156
			To SW 107th Avenue	EB	912	C	0	912	C	LOS D	3630	2718
4	1141	Flagler Street	From SR 826 (Palmetto) West	WB	2552	D	66	2618	D	LOS E	4640	2022
			To West 87th Avenue	EB	2154	E	56	2210	E	LOS E	2700	490
4	1211	NW 87th Avenue	From SR 836 (Dolphin) South	SB	3263	B	168	3431	C	LOS E*	4680	1249
			To Flagler Street	NB	1403	F	73	1476	F	LOS E*	220	-1256
4	1218	West 107th Avenue	From SR 836 (Dolphin) Street	SB	3414	F	59	3473	F	LOS E	2880	-593
			To SW 8th Street	NB	2534	D	45	2579	D	LOS E	2920	341
5	39	Milam Dairy Road	From NW 58th Street	NB	1474	F	49	1523	B	120% OF LOS E*	4092	2569
			To NW 74th Street	SB	708	B	23	731	B	120% OF LOS E*	2964	2233
5	400	NW 25th Street	From SR 826 (Palmetto) West	EB	1667	E	378	2045	E	LOS E	2790	745
			To Milam Dairy Road	WB	1602	F	364	1966	F	LOS E	***	-1966
5	1173	NW 36th Street	From Milam Dairy Road	WB	2758	D	52	2810	C	120% OF LOS E	5424	2614
			To NW 79th Avenue	EB	1788	E	34	1822	D	120% OF LOS E	3408	1586
5	1202	Milam Dairy Road	From NW 25th Street	SB	2607	C	67	2674	B	120% OF LOS E*	6432	3758
			To NW 12th Street West	NB	968	B	25	993	B	120% OF LOS E*	5220	4227
5	1204	Milam Dairy Road	From NW 25th Street	NB	1870	C	37	1907	C	120% OF LOS E*	4128	2221
			To NW 36th Street	SB	1468	B	29	1497	B	120% OF LOS E*	3264	1767
5	1205	Milam Dairy Road	From NW 58th Street	SB	2146	C	73	2219	B	120% OF LOS E*	4920	2701
			To NW 36th Street	NB	1423	B	49	1472	B	120% OF LOS E*	3804	2332
6	5	SW 8th Street	From West of SW 72nd Avenue	WB	1949	A	0	1949	A	LOS E	5300	3351
			To SW 82nd Avenue	EB	1334	B	0	1334	B	LOS E	3120	1786
6	1140	Flagler Street	From West 72nd Avenue	WB	2346	B	1	2347	B	120% OF LOS E	6480	4133
			To SR 826 (Palmetto) West	EB	1783	E	0	1783	E	120% OF LOS E	3540	1757
6	1200	Milam Dairy Road	From NW 12th Street West	SB	2071	B	0	2071	B	LOS E	4130	2059
			To NW 7th Street South	NB	624	C	0	624	C	LOS E	4300	3676
6	1201	NW 72nd Avenue	From NW 12th Street East	SB	719	D	117	836	D	120% OF LOS E*	2304	1468
			To Flagler Street	NB	400	D	65	465	D	120% OF LOS E*	2340	1875
			TOTAL		**135,774**		**22,193**	**157,967**				**92,737**

* Future headway improvements or new bus service

*** No threshold exists

n/a T-intersection with no south leg

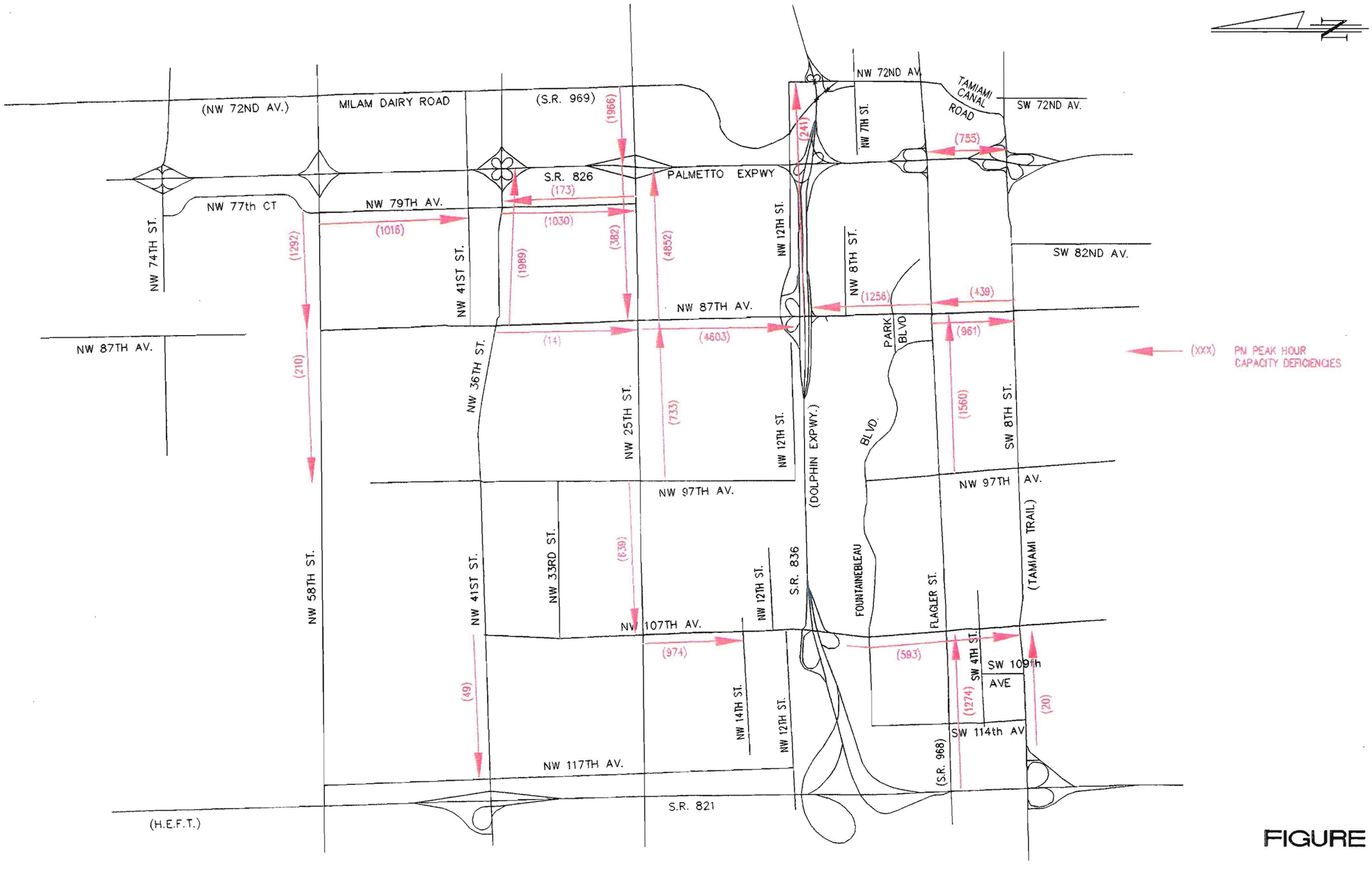


FIGURE 9

BARTON-ASCHMAN ASSOC., INC.
Ft. LAUDERDALE, FLORIDA

WEST DADE TASK AREA
DEFICIENT CAPACITY ROADWAY SEGMENTS

TABLE 30 FREE_TAB LOS SUMMARY INCLUDING NEW TRIPS

SECTOR NUMBER	STATION NUMBER	FREEWAY	SEGMENT LOCATION	# OF LANES	EXISTING PM PEAK 2-WAY VOLUME	EXISTING OPERATIONAL LOS	ADDITIONAL TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
1	572	S.R. 826 (Palmetto)	From NW 58th Street To NW 74th Street	8	11,770	D	0	11,770	D	LOS E	14,280	2,510
2	2242	S.R. 836 (Dolphin)	From NW 107th Avenue To SR 821 (H.E.F.T.)	6	5,987	D	0	5,987	D	LOS D	6,660	673
2	2243	S.R. 836 (Dolphin)	From NW 87th Avenue To NW 107th Avenue	6	7,116	D	0	7,116	D	120% OF LOS E*	9,996	2,880
2	2272	S.R. 821 (H.E.F.T.)	From SR 836 (Dolphin) To Northern Study Limits	4	3,065	C	32	3,097	C	LOS D	4,940	1,843
3	2244	S.R. 836 (Dolphin)	From SR 826 (Palmetto) To NW 87th Avenue	6	7,413	D	0	7,413	D	120% OF LOS E*	10,140	2,727
4	2250	S.R. 821 (H.E.F.T.)	From SR 836 (Dolphin) To SW 8th Street	6	7,627	D	21	7,648	D	LOS D	8,870	1,222
5	570	S.R. 826 (Palmetto)	From NW 36th Street To SR 836 (Dolphin)	8	12,202	E	0	12,202	E	LOS E	12,860	658
5	571	S.R. 826 (Palmetto)	From NW 36th Street To NW 58th Street	8	12,329	D	0	12,329	D	LOS E	15,260	2,931
6	568	S.R. 826 (Palmetto)	From West Flagler Street To SW 8th Street	8	12,675	F	0	12,675	F	LOS E	11,920	-755
6	569	S.R. 826 (Palmetto)	From SR 836 (Dolphin) To West Flagler Street	8	11,861	D	0	11,861	D	LOS E	13,470	1,609
6	2188	S.R. 836 (Dolphin)	From NW 72nd Avenue To SR 826 (Palmetto)	6	9,967	F	0	9,967	F	150% OF LOS E*	14,700	4,733
			TOTAL		**102,012**		**53**	**102,065**			**123,096**	**21,031**

* Future Metro-Dade express bus service

Transportation Improvement Program, the entire Palmetto Expressway corridor that lies within the West Dade study area boundaries is programmed to be widened with High Occupancy Vehicle Lanes (HOV) to ten lanes in the foreseeable future as part of the overall Palmetto Master Plan. However, because the TIP does not indicate approved construction funding for this widening project, a ten-lane cross section is not considered in this study.

7.4 Analysis Procedures

The philosophy of the needs analysis conducted for this study is based on the following considerations:

- accommodate accumulated approved trips
- resolve capacity deficiencies whether due to existing deficiencies or a change of standard
- develop remedial and improvement actions for this base case

The analysis procedures utilized for the purposes of this study are based on the Art_Plan framework for evaluating arterial segments as explained earlier in this report. The existing conditions Art_Plan analysis was reviewed to identify those segments with a capacity deficiency relative to the applicable LOS standard, and to identify those individual intersection approaches with capacity shortfalls, whether or not they significantly influenced the overall segment capacity shortfall. These locations were identified by a relatively low g/C ratio, by a reduced number of lanes, or by especially high through or turning volumes. The analyses for the PM peak periods were informally correlated with a field review of existing traffic operations.

Once these candidate or target sites were identified, then suitable improvement actions were considered and selected for their appropriate and positive impact on approach or segment capacity. Each improvement action was tested by modifying the Art_Plan data inputs to determine whether the improvements were effective in providing the minimum LOS required for that segment. Generally one of two strategies was employed:

1. Directly increase the capacity of the problem segment by adding through or turning lanes.
2. Indirectly increase the capacity of the problem segment by adding through or turning lanes to the intersecting street, reducing its g/C requirement, and transferring newly excess g/C to the problem segment.

An iterative process was followed wherein candidate improvements were identified, tested, and reformulated if still insufficient. Every effort was made to formulate improvement actions which were conceptually low in cost, which avoided right-of-way acquisition and which avoided unnecessary utility conflicts. Once the Art_Plan results confirmed acceptable traffic service, the improvement action was adopted.

It should be reiterated that the Art_Plan analysis structure was used for consistency with the County's standard practice for concurrency purposes. As noted previously, there are some quirks or limitations with the program which may yield results or conclusions not wholly compatible with the results of other intersection or segment traffic capacity analysis software. However, as will be discussed later, the needs in the study area are generally significant enough that such inconsistencies are not judged to alter the basic observation that large increases in network capacity are needed to maintain or attain the stipulated LOS standards.

It should also be noted that the County's traffic concurrency procedures do not account for all of the vehicle-miles of travel associated with a development; only those within the proximity of the site are regulated directly. Only when a new baseline traffic count is performed the following year is the unregulated portion of the site traffic recognized on all other affected links. For any analysis time frame, the unregulated traffic is not accounted for until the next traffic count, at which time it is recognized as new background traffic. Thus, until the next round of traffic counts, traffic volumes on adjacent links can be underrepresented.

The same is true of the five year window for this analysis in which permitted and regulated traffic impacts are accumulated onto the network, but only in the immediate vicinity of their contributing development sites. Consequently, while this study identifies improvements to meet the needs of 1995 background traffic plus those regulated portions of new traffic, there is a considerable amount of unaccounted new traffic on other segments, which in turn means that the actual network improvement needs may be understated and are considerably greater. Since the developments considered in this study are already approved, the anticipated traffic volumes at many of the study segments will occur at generally poor levels of service if various improvements are not made.

It should be recognized that in the case of a few links, the calculated deficiency as given by the Art_Plan software is very large, due to a relatively low calculated capacity. This is usually due to the penalty invoked by the program for close spacing of signals. Given that the arterials are handling more traffic presently than the program calculates, moderates the "paper" deficiencies significantly but not completely.

Even with this recognition, there are corridors which are so heavily loaded, such as eastbound NW 25th Ave. or southbound NW 87th Ave., that it is likely that some of the traffic will seek an alternate, less congested route, albeit perhaps more circuitous.

It is also likely that as some of the recommended improvements are implemented, traffic will redistribute itself and reach a new interim equilibrium. Casual research with commuters who traverse some of the most highly congested study corridors confirms that they are highly adaptive and creative in searching out minimum travel time paths on the arterial and local networks, and will change routes periodically in response to their perception of travel times on competing routes.

It is not possible to consider these equilibrium dynamics within the scope of this analysis. A compensating fact is that nearly all major access routes into and out of West Dade will be operating

at the limit, and regardless of the routes of individual commuters, all key links should load up in a relatively balanced manner.

7.5 Magnitude of Need

This analysis is structured to address the needs of existing and other regulated or permitted new trips over the next five years. It is, of course, possible and likely that other new developments will be proposed and will make application for development approval. Such projects are not included in the analysis database for this project. These projects, unless already vested, will likely occur on those segments with reserve capacity which tend to be to the north or west areas of West Dade. They may also occur on those segments which already have programmed roadway projects which, when implemented, will provide reserve capacity. The introduction of any new high-frequency transit service could also open up certain road segments to development activity if the LOS requirements were lowered.

As Table 29 had pointed out, certain segments in this study area experience a 50-80% increase in new, approved regulated traffic on an already congested segments. These kinds of increases often require wholesale capacity increases of one or more additional through lanes. Given that this analyses addresses only the regulated portion of new traffic, and that further growth in the study area is anticipated, it becomes evident that the inherent capacity needed on individual links is well beyond that originally anticipated in the long-range transportation planning for the area.

Due to the accumulation of traffic towards freeway interchanges, and because these same arterials connect to areas beyond the freeways, these particular routes are especially overloaded. The analyses discussed later will reveal that these arterials need to have up to 8 through lanes and multiple turn lanes in order to supply the required capacity for the stipulated LOS standard. Likewise, most interior arterials should have 6 travel lanes with maximum configurations at their major intersections. Even some of the minor arterials and collectors should have 4 lanes.

At freeway junctions, several of the interchange types are not optimal for the traffic patterns they handle, making attainment of LOS standards at ramp terminals problematic. There may be a long-term need to consider flyover ramps to directly load heavy movements onto the freeways. Some of the interior intersections within the study area may also be incapable of adequate traffic service. At these locations, it may be necessary to consider some form of urban interchange as a long-term solution.

Of course, many of these notions are beyond the five year purview of this study. Consideration of their role is worthwhile, however, from the perspective that the type of solutions that will have the most meaningful impact on traffic service goals be recognized up front, along with the understanding of the scale and cost of solutions that will be required to reach that end condition.

7.6 Role of Transit and Transportation Demand Management

The West Dade area has emerged as a major employment center in Dade County, and even regionally. This has evolved over a long period of time, beginning when the adjacent freeways were less congested. Now as the area has become more developed, the magnitude of its traffic needs is becoming more apparent and more recognized. Unfortunately, this area is relatively low density in terms of its compactness. The employment core of West Dade is spread over at least 12 square miles, and thus has reinforced the single occupant vehicle (SOV) as the dominant form of commuting. This coupled with its suburban location has deprived it of a larger share of scarce transit services, given the size of its activity.

In the future, and to some extent within the five year window of this study, transit and related services will need to play a greater role in meeting the travel needs of the study area. This is a two-edged sword initially, since the presence of high frequency transit serves to lower the required traffic LOS from D to E, yet buses have to operate on congested arterials. Likewise, a variety of strategies on the demand management side of the equation will need to be considered as a complementary program. To be successful, both will likely require some sort of preferential treatment and access to avoid the severe points of congestion within the network.

To meaningfully address travel needs in West Dade in relation to the cost-feasible level of transportation capacity that can be provided -- especially over the long term -- transportation demand management (TDM) strategies will become increasingly vital. The MPO recently concluded a consultant study focusing on this subject. The study identified recommended TDM strategies in several basic categories which have applicability to the West Dade Area. These are summarized as follows:

Low Cost Actions Directed at Existing Trips:

Carpool Programs
Subsidized or Reduced Transit Costs
Vanpool Programs
Increased Use of Park-and-Ride Lots
Flextime

Long-Term Actions Directed at Existing Trips:

Employee Paid Parking
Employee Travel Allowance
Congestion Pricing
Subscription Bus
Telecommuting

Actions Directed at New Trips:

Incorporate TDM as a DIC Alternative
Negotiated TDM Developer Agreements
Mixed Use Developments
Parking Supply Limitations
Pedestrian Amenities at Suburban Centers
Bicycle Facilities and Parking

Required Complementary Actions:

Marketing of TDM Resources
Transportation Management Associations
Trip Reduction Ordinance

The majority of these TDM measures have applicability to the West Dade study area. Their application should be considered as a suitable part of the overall County-level initiatives for TDM implementation.

8.0 IMPROVEMENT STRATEGIES

8.1 Overview of Problems and Needs

As a benchmark from which to develop suitable improvement concepts, it is useful to summarize briefly the character of the existing problems and needs. Table 29 previously provided a summary of traffic service and segment capacity surplus or deficiency for the study area. The overcapacity segments are further summarized in Table 31, which presents key analytical data including existing LOS, the number of new added trips, the resulting new LOS without any improvements, and the resulting percent overcapacity. In the last columns, the capacity deficiency is attributed to:

[1] Existing deficiency (without new traffic), where the existing LOS is worse than old pre-1995 LOS standard for the segment.
[2] New trips which degrade the existing LOS below the new 1995 standard (considering the added capacity of any committed improvements).
[3] New LOS standard which is higher than the old LOS standard (ignoring any new trips).

From a review of this table, the following observations can be made:

- Only a portion of baseline (existing plus added new trips) deficiencies in the employment core north of SR 836 are attributable to existing deficiencies.

- In contrast, nearly all of the deficient segments in the retail/residential area south of SR 836 are attributable to a pre-existing capacity shortfall.

- In this same area south of SR 836, the added trips per segment are generally low in magnitude, and in no case can a deficiency be blamed on added trips.

- In the employment core north of SR 836, the opposite is true. Nearly every deficiency can be partly attributed to the impact of added trips, which on most segments are at least moderate in magnitude and in some cases significant.

- As a result, most links in both areas exhibit sizable capacity shortfalls in relation to capacity. As will be noted later, this is useful in identifying the type and scale of candidate actions needed to remedy the deficiency.

- In terms of the impact of the new 1995 LOS standards in the retail/residential area south of SR 836, the existing capacity deficiencies are further exacerbated by the increase in the LOS standard, as shown in Table 31.

- In the employment core, the new LOS standard is a compounding factor for about half of the segments. That is, added trips were a more prevalent problem.

- Several of the segments or corridors providing primary access to and from SR 826 and SR 836 can assign their deficiency problem to all three considerations: existing condition, added trips, and the new LOS standards.

Table 31
SUMMARY OF OVERCAPACITY SEGMENTS

									Deficiency	Due	To:
Sector/Station	**Arterial**	**Segment**	**Dir.**	**Exist. LOS**	**Trips Added**	**New LOS**	**New LOS Standard**	**% Over Capacity**	**Existing Deficiency [1]**	**Added Trips [2]**	**New LOS Standard [3]**
1/452	NW 58th St.	NW 87th Ave. - SR 826 East	WB	F	49	F	D	X %	✓		✓
1/454	NW 58th St.	NW 87th Ave. - NW 97th Ave.	WB	B	522	F	D	8 %		✓	✓
2/406	NW 25th St.	NW 97th Ave. - NW 107th Ave.	WB	E	636	F	D	33 %		✓	✓
2/442	NW 41st St.	NW 107th Ave. - NW 117th Ave.	WB	D	223	E	D	1%			✓
2/510	NW 107th Ave.	NW 25th St. - NW 12th St.	SB	F	398	F	D	41 %	✓	✓	
3/162	NW 87th Ave.	NW 25th St. - NW 12th St.	SB	F	1942	F	D	212 %	✓	✓	✓
3/164	NW 87th Ave.	NW 41st St. - NW 25th St.	SB	C	1422	E	D	0.5%		✓	
3/358	NW 12th St.	NW 72nd Ave. - NW 87th Ave.	EB	E	595	F	120% of LOS E	15 %		✓	
3/402	NW 25th St.	NW 87th Ave. - SR 826 West	EB	E	1962	F	D	1390 %		✓	✓
3/402	NW 25th St.	NW 87th Ave. - SR 826 West	WB	D	966	E	D	18 %		✓	
3/404	NW 25th St.	NW 97th Ave. - NW 87th Ave.	EB	E	352	F	D	70 %		✓	✓
3/432	NW 36th St.	NW 87th Ave. - NW 79th Ave.	EB	F	839	F	E	106 %	✓	✓	✓
3/482	NW 79th Ave.	NW 58th St. - NW 36th St.	SB	F	16	F	E	X %	✓		✓
3/484	NW 79th Ave.	NW 25th St. - NW 36th St.	NB	E	936	E	D	11 %			✓
3/484	NW 79th Ave.	NW 25th St. - NW 36th St.	SB	N/A	550	N/A	D	X %		✓	
4/44	SW 87th Ave.	Flagler St. - SW 8th St.	SB	F	1	F	D	73 %	√		✓
4/44	SW 87th Ave.	Flagler St. - SW 8th St.	NB	F	1	F	D	28 %	✓		✓
4/90	SW 8th St.	SW 107th Ave.- SR 821/HEFT	EB	E	0	E	D	2 %			✓
4/154	Flagler St.	West 87th Ave. - W est 97th Ave.	EB	F	12	F	E	X %	✓		✓
4/158	Flagler St.	West 107th Ave.- West 114th Ave.	EB	F	13	F	E	X %	✓		✓
4/1211	NW 87th Ave.	SR 826 South - Flagler St.	NB	F	73	F	E	571 %	✓		✓
4/1218	West 107th Ave.	SR 836 - SW 8th St.	SB	F	59	F	E	21 %	✓		
4/568	SR 826	Flagler St. - SW 8th St.	NB/SB	F	0	F	E	6 %	✓		✓
5/400	NW 25th St.	SR 826 West - Milam Dairy Road	WB	F	364	F	E	X%	✓		

[1] Existing (without new traffic) LOS worse than old standard.
[2] New trips degrade existing LOS below 1995 standard (considering the added capacity of any committed improvements).
[3] New standard is higher than old standard ignoring any new trips.
NOTE: X% refers to instances where no threshold exists per Table 29 presented earlier in the report.

With respect to the degree that a segment is overcapacity, it is useful to note the extent of improvement likely to be needed to achieve the needed LOS improvement. These are listed in Table 32.

Table 32
TYPE OF IMPROVEMENT ACTION INDICATED

Percent Capacity Deficiency	Type of Suitable Improvement Action	Description
1 - 10%	Phasing and timing adjustments Lane reassignments Individual added exclusive turn lanes	Low cost Usually no ROW impact Short implementation timeframe (Up to 1-2 years)
11 - 25%	Above actions Multiple added exclusive turn lanes Added through lane on one approach	Moderate cost Low to moderate ROW impact Short implementation timeframe (Up to 2-3 years)
26 - 50%	Above actions Added through lanes on several approaches Added through lanes on segments	Higher cost Moderate to high ROW cost Moderate implementation timeframe (Up to 3-4 years)
Above 51%	Above actions Traffic diversion or redistribution Grade separations or flyovers	Higher cost Significant ROW impact likely Lengthy implementation timeframe (Up to 10 years)

8.2 Pending and Planned Transportation Improvement Projects

To reiterate, the traffic service analyses for the study area recognize those funded projects in the 1995 and 1996 5-Year Transportation Improvement Programs (TIP), as defined in the FDOT Work Program, the Dade County Secondary Work Program, and the Dade County Road Impact Fee Program. These consists of the individual projects that were shown in Table 17 previously. In addition, transit service improvements slated to occur in years 1-3 of the TDP are also included; those in years 4 and 5 are not included because they are considered somewhat uncertain.

There are a number of potential improvements being considered in and around the West Dade Study area which would have a positive impact on the roadway traffic service on a longer timeframe. Several of these are in the active or imminent planning and development phase, while numerous others are definitely in the beyond 10-year implementation timeframe. Presently, the Dade County Long Range Transportation Plan is being updated. A recently published revised draft list of candidate projects shows about 90 different projects. Nearly one-third of these lie within or on the boundary of the West Dade Study area, and there are several other adjacent projects which also relate to this area. Obviously, the traffic forecasting and network analysis process has reconfirmed some previous needs and has identified additional ones which will influence the study area.

As was discussed earlier, the circulation and access needs of this 22 square mile area are very significant. While the tentative list of projects does not appear to include extensive improvements to some of the problem corridors identified in this study, there are several improvements listed which are consistent, including the widening of NW/SW 107th Avenue to 6 lanes. Also, the list reflects several projects which will serve to disperse traffic over a great number of approach corridors. These projects, which may lessen burdens on several problem segments include:

- Development of the NW 12th Street corridor west of NW 87th Avenue and its extension west of the Turnpike.
- Construction of NW 7th Street under SR 826 and construction of NW 82nd Avenue under SR 836.
- Extension of NW 74th Avenue west to the Turnpike.
- Extension of NW 107th Avenue north to NW 106th Street.
- Extension of NW 87th Avenue north to Okeechobee Road.

There are other projects which are being explored but are not yet specifically recognized in any work programs due to their early stage of development. There is a concept study being sponsored by FDOT for the NW 25th Street Corridor from NW 67th Avenue to NW 87th Avenue, which is focusing on strategies to improve heavy vehicle traffic flow in this corridor. Another is the SR 836 Corridor EIS and Master Plan, which is in the process of identifying short term traffic improvement actions including possible improvement of interchanges in the West Dade study area. This SR 836 project will also envision, on a long-range basis, the addition of High Occupancy Vehicle (HOV) lanes and the development of a new east-west heavy rail transit line with several stations serving the study area.

8.3 Recommended Improvement Strategies

As noted previously, one objective of this report is to formulate improvement actions which will address the calculated and identified capacity deficiencies in the West Dade transportation network over a five year timeframe. To accomplish this, it is necessary to consider alternate strategies available to address both demand and capacity issues.

There are a number of candidate improvement strategies identified for potential application. These area summarized in Table 33. Furthermore, these strategies can be applied with an emphasis on either the supply or the demand side of the equation. To clarify these options, the following alternate strategies were identified and are explained as follows:

Table 33
POTENTIAL TRANSPORTATION NETWORK IMPROVEMENT STRATEGIES

A. Roadway Link Capacity
   1. Add through lane(s)
   2. Widen into median
   3. Convert median to reversible lane
   4. Improve/modify access control
   5. Restrict median openings
   6. Improve progression between adjacent traffic signals
   7. Modify freight train improvement schedule (if a problem)
   8. Add right turn lanes

B. Roadway Intersection Capacity (At-grade)
   1. Add left turn lane(s)
   2. Add right turn lane(s)
   3. Add through lanes(s)
   4. Reassign use of existing lanes
   5. Vary lane allocations by time of day with special signing
   6. Revise signal phasing or timing
   7. Restrict turns in the peak hour(s)
   8. Improve turning radius
   9. Implement limited ITS traffic control strategies

C. Roadway Intersection Capacity (Grade-separated)
   1. Develop urban interchange (usually a compact diamond)
   2. Develop a flyover ramp for critical movement
   3. Improve capacity of existing freeway interchange (especially for through arterial traffic)

D. Traffic Redistribution From Critical Links
   1. Construct new freeway interchange (e.g. NW 97th Ave. at SR 836)
   2. Construct "missing" link(s)
   3. Improve route parallel to critical link
   4. Eliminate south HEFT ramp tolls at NW 41st Street interchange
   5. Possible alternate route for MIA West Cargo Area truck traffic

E. Transit Service Alternatives
   1. Implement TDP Year 3-5 new bus routes
   2. Implement other new bus routes
   3. Install bust stop bays and amenities
   4. Implement TMA for West Dade
   5. Implement other TDM actions
   6. Develop arterial HOV lanes for buses and eligible HOVs
   7. Implement additional Tri-Rail shuttle services to Airport Station

- *Do Nothing*

This approach would involve taking no action to address capacity shortfalls. It would presume that the removal of any deficiencies would be undertaken by prospective private sector interests. Depending on the link affected, it would be necessary to improve segment capacity for the combined effect of baseline, added traffic already permitted, the effect of an increase in the LOS standard under the 1995 criteria, and the added traffic from the specific development. The effect would likely be what is referred to by the development industry as spot moratoria. Possibly, development would focus on those segments still holding reserve capacity. The implication would be that none of the developments considered in this study would be prevented from occurring as they are already permitted or otherwise vested. Should the pending rule change go into effect, the Urban Infill Area east of SR 826 would be exempt from existing traffic concurrency regulations, and development could still occur.

- *Street Capacity Supply Emphasis*

In this strategy, the focus would be placed on conventional capacity enhancements to the surface street system. Every effort would be made to remediate the deficient links as defined in this study with additional turn lanes, addition through lanes, signal improvements, and other actions. Under this approach, additional development could occur generally across the study area as most segments would carry a calculated surplus of capacity which could accommodate many typical projects. Of course, this is subject to the effect of updated Art_Plan calculations which would take into account some of the methodology issues discussed previously. Also, it is likely that the recommendations of this study, if implemented, would have involved first stage capacity enhancements with lesser costs and right-of-way impacts. Subsequent capacity enhancements would likely involve higher construction and/or right-of-way costs. As noted previously, the addition of other entry/exit points to the study area would serve to help disperse increasingly greater traffic levels destined to or from the West Dade area, with the result that traffic impacts would be moderated on some of the interior links.

- *Travel Demand Management Emphasis*

Under this concept, deficiencies would be addressed by implementing various transit capacity supply and demand management actions which would focus on non-SOV solutions to capacity deficiencies. Under current rules, any new or enhanced transit services providing high frequency coverage would result in reduced LOS criteria for the street segments which are affected. However, there are only eight problem segments with an LOS better than F under existing traffic, and only three when the effect of added trips are considered. Thus, relaxation of the standard would not provide a dramatic change in available segment capacity. The other effect presumably is that with added services in line with origin-destination patterns, transit ridership would improve significantly.

From a traffic demand management perspective, any combination of actions which tends to reduce reliance on SOV travel, and which tends to diminish peak hour SOV loads on the network, will also provide relief to the transportation network.

The downside to this strategy of transit and demand management is that components such as buses, carpools, and vanpools would be operating on the same congested links as the SOV traffic, and the incentive value would be diminished. It is true that premium transit is being planned along the SR 836 corridor and has recently been introduced as a planning concept for the SR 826 corridor as well. Also, HOV lanes are likely for both of these corridors. However, such high-occupancy preferential facilities, as well as premium transit services, are still years away. For these reasons, the prospects for these types of actions appear somewhat limited in the immediate future and do not have the potential to meet all additional travel needs in West Dade. However, recognizing that the West Dade employment core is a major, albeit lower density, activity center, should lead to strategies which enhance transit and reduce SOV demand for this area.

- *Hybrid Supply and Demand Emphasis*

Based on the preceding considerations an on strategy discussions concerning Dade County's overall future transportation needs, it has emerged that a multi-faceted approach offers the greatest potential for future development of cost-effective an balanced transportation solutions which extract the greatest value from established capacity and service systems, and permit better cost management of additional increments of system capacity. Still, the anticipated capital costs are great and an increased emphasis will need to be placed not only on transit service enhancement, but also other strategies on the demand management side. Street capacity, transit service expansion, or demand management by themselves appear incapable of meeting future needs. All such strategies would need to be incorporated under a integrated concept to address the needs of the study area.

Based on the preceding synopsis of alternative strategies to address network deficiencies, it is concluded that a hybrid approach dealing with both the supply and demand aspects of the equation be utilized in the development of solutions. It is recognized that at the system level, many of the strategic improvements that are oriented to demand management and enhanced transit utilization on the expressways are going to occur outside the five year window of this study. It is also recognized that initial short-term increments of deficiency remediation are likely to come in the form of roadway capacity enhancements. As has been noted, these seem to have their limit in term of costs for future increments incapacity because of capital and right-of-way costs and because of longer lead times for more costly projects.

However, in this initial five year period , the ground work should begin for laying the foundation of the hybrid, multi-modal approach to meeting the future needs of this area. Considering the preceding discussion, it is suggested that the following elements be considered in developing an initial five year transportation program for the West Dade area:

- Identification of reasonable, relatively cost-effective conventional surface street capacity enhancements to provide short-term SOV supply side solutions

- Selection of initial transit service enhancements on established routes, including the confirmed 1-3 years actions, and strong consideration for implementation of the potential year 4 and 5 actions, possibly on an accelerated basis. It would also be desirable to identify a funding source to support the implementation of strategic transit route improvements, in view that MDTA is limited in its ability to readily implement such services at present.

- In tandem with long-range planning efforts for the adjacent expressway corridors and other near-term or ongoing studies, identify strategic improvements which would begin to enhance opportunities for preferential access into and out of the West Dade area via transit or non-SOV travel, that would ultimately link to adjacent premium transit and HOV service corridors.

- Follow through on anticipated action to form a Transportation Management Association (TMA) in the West Dade area to serve as the mechanism for formulating transportation demand management strategies to address the demand side of the transportation equation.

- Utilize the TMA as a platform for the more aggressive identification and implementation of additional TDM strategies to augment the basic TMA programs and to expand upon them. Consider the development of a West Dade TCMA, which over the long-term, would be tied into proposed major corridor transit and HOV/express bus services currently being explored along SR 836 and SR 826.

- Identify funding strategies linked to both regular roadway and transit funding sources, and also to the development impact fee and concurrency management processes. This will help to create a flow of financial resources and possible incentives to help achieve the transportation planning objective for the West Dade area.

The next chapter presents the proposed improvement actions which respond to this hybrid planning strategy. In summary, the initial five year period would envision selected surface street improvements, additional transit service enhancements, establishment of a TMA to address demand management options and to monitor roadway and transit system improvements, and finally, identifying funding sources for future strategic improvements in the study area.

9.0 PROPOSED IMPROVEMENT ACTIONS

9.1 Highway Capacity Actions

As stated previously, the focus of the analysis is necessarily directed in large measure towards roadway capacity improvements of an incremental nature. Using the iterative Art_Plan methodology described previously, improvements were identified that resolved LOS deficiencies for both roadway segments and intersection approaches at almost all locations. Basically, all of the problem locations with capacity deficiencies were improved to provide a surplus in capacity, albeit in some cases, very small. Only two problem locations remain: NW 36th St. at NW 79th Ave. (EB and SB), and NW 25th St. (WB to SR 826). The latter case, it should be noted, would be exempt from concurrency under the rule change that would apply east of the SR 826 corridor. It should also be noted that there are numerous methodology elements and traffic variables and dynamics that could easily render borderline solutions as somewhat tenuous. New development would, of course, further load the system and alter prevailing LOS.

Tables 34 and 35 summarize the final Art_Plan results for the arterial and freeway segments, respectively. Freeway results are essentially unchanged since concurrency rules resulted in very few regulated trips reaching those segments. For the arterial segments, improvement strategies consisted of the following:

- Selected additional left turn, through, or right turn lanes.
- Modification of g/C ratios based on new geometry and added traffic.
- Modification of the frequency and routing of one transit route, which lowered LOS criteria on two problem segments.
- Addition of extended through lanes (NW 25th St. EB toward SR 826, and NW 87th Ave SB toward SR 836).
- Construction of NW 97th Ave. bridge over SR 836 and approach roadways.

The latter strategy had a significant impact in reducing improvement needs along NW 107th Ave. and NW 87th Ave. The Adjusted Trips column in Table 34 reflects the impact of a NW 97th Ave. bridge by showing a possible redistribution of new and existing trips. The traffic volumes on NW 107th Ave. and NW 87th Ave. are reduced significantly while NW 97th Ave. and some east-west corridors show a corresponding increase in their traffic volumes. Some segments may even have fewer trips in the future than they show presently, as indicated by the negative values in the Adjusted Trips column. This is only one of many possible redistribution scenarios; however, all redistributions should have approximately the same net effect in relieving some critically congested links in the study area.

The recommended improvement actions are summarized in Appendix A by count station location for each of the problem segments originally identified in Table 29 and Figure 9. In the end, several of them did not require any action but are still included. All improvements were assigned to segments to be consistent with the analysis methodology. While this splits up improvement actions at a single

TABLE 34 ART_PLAN LOS SUMMARY INCLUDING RECOMMENDED IMPROVEMENTS

SECTOR NUMBER	STATION NUMBER	ARTERIAL	SEGMENT LOCATION	PEAK DIR. OFF-PEAK DIR.	EXISTING VOLUME	EXISTING OPERATIONAL LOS	ADJUSTED TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
1	452	NW 58th Street	From NW 87th Avenue	EB	1864	C	73	1937	C	LOS E*	3630	1693
			To SR 826 (Palmetto) East	WB	1243	F	49	1292	E	LOS E*	1430	138
1	454	NW 58th Street	From 87th Avenue	WB	2268	B	522	2790	C	LOS D	2970	180
			To NW 97th Avenue	EB	23	B	5	28	B	LOS D	1520	1492
1	481	NW 74th Street	From NW 87th Avenue	EB	702	B	824	1526	B	LOS D	5240	3714
			To SR 826 (Palmetto) East	WB	702	D	823	1525	D	LOS D	2650	1125
2	406	NW 25th Street	From NW 97th Avenue	WB	1943	E	286	2229	B	LOS D	2780	551
			To NW 107th Avenue	EB	1093	A	507	1600	A	LOS D	2750	1150
2	440	NW 41st Street	From NW 97th Avenue	WB	2300	B	-181	2119	B	LOS D	3260	1141
			To NW 107th Avenue	EB	71	B	5	76	B	LOS D	3180	3104
2	442	NW 41st Street	From NW 107th Avenue	WB	4396	D	223	4619	D	LOS D	4660	41
			To NW 117th Avenue	EB	231	B	12	243	B	LOS D	1540	1297
2	494	NW 97th Avenue	From NW 12th Street	SB	204	B	2420	2624	A	LOS D	3480	856
			To NW 25th Street	NB	160	B	904	1064	B	LOS D	2890	1826
2	508	NW 107th Avenue	From NW 12th Street	SB	4151	B	-579	3572	B	LOS E*	5100	1528
			To SR 836 (Dolphin) Street	NB	2438	B	35	2473	B	LOS E*	4520	2047
2	510	NW 107th Avenue	From NW 25th Street	SB	2956	F	-302	2654	C	LOS D	3630	976
			To NW 12th Street	NB	1039	C	-60	979	C	LOS D	3630	2651
2	512	NW 107th Avenue	From NW 41st Street	SB	1455	C	-25	1430	D	LOS D	1640	210
			To NW 25th Street	NB	1191	A	66	1257	A	LOS D	3580	2323
3	162	NW 87th Avenue	From NW 25th Street	SB	4831	F	392	5223	E	LOS E*	5580	357
			To NW 12th Street	NB	1208	D	86	1294	C	LOS E*	4580	3286
3	164	NW 87th Avenue	From NW 41st Street	SB	2112	C	1122	3234	C	LOS D	4070	836
			To NW 25th Street	NB	1137	C	566	1703	C	LOS D	3410	1707
3	166	NW 87th Avenue	From NW 58th Street	SB	2632	A	26	2658	A	LOS E	4390	1732
			To NW 41st Street	NB	1128	B	11	1139	B	LOS E	2480	1341
3	358	NW 12th Street	From NW 72nd Avenue	EB	1218	E	595	1813	E	120% OF LOS E*	2496	683
			To NW 87th Avenue	WB	1124	D	550	1674	C	120% OF LOS E*	2868	1194
3	402	NW 25th Street	From NW 87th Avenue	EB	3240	E	1962	5202	E	LOS E*	5380	178
			To SR 826 (Palmetto) West	WB	1596	D	966	2562	D	LOS E*	3630	1068
3	404	NW 25th Street	From NW 97th Avenue	EB	1431	E	52	1483	D	LOS E*	2170	687
			To NW 87th Avenue	WB	1321	B	1085	2406	B	LOS E*	3440	1034
3	432	NW 36th Street	From NW 87th Avenue	EB	3020	F	839	3859	F	LOS E	2750	-1109
			To NW 79th Avenue	WB	2373	B	659	3032	B	LOS E	4790	1758
3	434	NW 36th Street	From NW 97th Avenue	EB	2978	F	169	3147	D	LOS D	3340	193
			To NW 87th Avenue	WB	740	A	-83	657	A	LOS D	5150	4493
3	482	NW 79th Avenue	From NW 58th Street	SB	1000	F	16	1016	F	LOS E	****	-1016
			To NW 36th Street	NB	818	D	13	831	C	LOS E	2820	1989
3	484	NW 79th Avenue	From NW 25th Street	NB	817	E	936	1753	E	LOS E*	1820	67
			To NW 36th Street	SB	480	n/a	550	1030	D	LOS E*	1180	150

TABLE 34 ART PLAN LOS SUMMARY INCLUDING RECOMMENDED IMPROVEMENTS

SECTOR NUMBER	STATION NUMBER	ARTERIAL	SEGMENT LOCATION	PEAK DIR. OFF-PEAK DIR.	EXISTING VOLUME	EXISTING OPERATIONAL LOS	ADJUSTED TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
4	44	SW 87th Avenue	From Flagler Street	SB	2280	F	-1259	1021	C	LOS E*	2470	1449
			To SW 8th Street	NB	1998	F	-199	1799	D	LOS E*	2800	1001
4	90	SW 8th Street	From SW 107th Avenue	WB	1633	A	0	1633	A	LOS D	4940	3307
			To SR 821 (H.E.F.T) West	EB	930	E	0	930	D	LOS D	1640	710
4	92	SW 8th Street	From SW 82nd Avenue	WB	1744	B	0	1744	C	LOS D	2690	946
			To SW 87th Avenue	EB	1074	A	0	1074	A	LOS D	4210	3136
4	154	Flagler Street	From West 87th AVenue	WB	3289	C	-153	3136	C	LOS E	4230	1094
			To West 97th Avenue	EB	1548	F	-192	1740	E	LOS E	2490	750
4	156	Flagler Street	From West 97th Avenue	WB	1592	A	290	1882	A	LOS E	5190	3308
			To West 107th Avenue	EB	1153	B	-373	780	B	LOS E	4310	3530
4	158	Flagler Street	From West 107th Avenue	WB	2147	C	23	2170	C	LOS E	4310	2140
			To West 114th Avenue	EB	1261	F	13	1274	E	LOS E	2280	1006
4	589	SW 8th Street	From SW 87th Avenue	WB	1554	A	420	1974	A	LOS D	5840	3866
			To SW 107th Avenue	EB	912	C	420	1332	D	LOS D	2420	1088
4	1141	Flagler Street	From SR 826 (Palmetto) West	WB	2552	D	66	2618	D	LOS E	4640	2022
			To West 87th Avenue	EB	2154	E	56	2210	E	LOS E	2700	490
4	1211	NW 87th Avenue	From SR 836 (Dolphin) South	SB	3263	B	-1652	1611	B	LOS E*	4680	3069
			To Flagler Street	NB	1403	F	-327	1076	E	LOS E*	3340	2264
4	1218	West 107th Avenue	From SR 836 (Dolphin) Street	SB	3414	F	-921	2493	E	LOS E	4410	1917
			To SW 8th Street	NB	2534	D	-155	2379	C	LOS E	2920	541
5	39	Milam Dairy Road	From NW 58th Street	NB	1474	F	49	1523	B	120% OF LOS E*	4092	2569
			To NW 74th Street	SB	708	B	23	731	B	120% OF LOS E*	2964	2233
5	400	NW 25th Street	From SR 826 (Palmetto) West	EB	1667	E	378	2045	E	LOS E	2790	745
			To Milam Dairy Road	WB	1602	F	364	1966	F	LOS E	***	-1966
5	1173	NW 36th Street	From Milam Dairy Road	WB	2758	D	52	2810	D	120% OF LOS E	3924	1114
			To NW 79th Avenue	EB	1788	E	34	1822	D	120% OF LOS E	3408	1586
5	1202	Milam Dairy Road	From NW 25th Street	SB	2607	C	67	2674	E	120% OF LOS E*	3312	638
			To NW 12th Street West	NB	968	B	25	993	B	120% OF LOS E*	5220	4227
5	1204	Milam Dairy Road	From NW 25th Street	NB	1870	C	37	1907	C	120% OF LOS E*	4128	2221
			To NW 36th Street	SB	1468	B	29	1497	B	120% OF LOS E*	3264	1767
5	1205	Milam Dairy Road	From NW 58th Street	SB	2146	C	73	2219	B	120% OF LOS E*	4920	2701
			To NW 36th Street	NB	1423	B	49	1472	B	120% OF LOS E*	3804	2332
6	5	SW 8th Street	From West of SW 72nd Avenue	WB	1949	A	0	1949	A	LOS E	5300	3351
			To SW 82nd Avenue	EB	1334	B	0	1334	B	LOS E	3120	1786
6	1140	Flagler Street	From West 72nd Avenue	WB	2346	B	1	2347	B	120% OF LOS E	6480	4133
			To SR 826 (Palmetto) West	EB	1783	E	0	1783	E	120% OF LOS E	3540	1757
6	1200	Milam Dairy Road	From NW 12th Street West	SB	2071	B	0	2071	B	LOS E	4130	2059
			To NW 7th Street South	NB	624	C	0	624	E	LOS E	990	366
6	1201	NW 72nd Avenue	From NW 12th Street East	SB	719	D	117	836	D	120% OF LOS E*	2304	1468
			To Flagler Street	NB	400	D	65	465	D	120% OF LOS E*	2340	1875
			TOTAL		135,774		13,539	149,697				123,267

* Future headway improvements or new bus service

*** No threshold exists

n/a T-intersection with no south leg

TABLE 35 FREE TAB LOS SUMMARY INCLUDING RECOMMENDED IMPROVEMENTS

SECTOR NUMBER	STATION NUMBER	FREEWAY	SEGMENT LOCATION	# OF LANES	EXISTING PM PEAK 2-WAY VOLUME	EXISTING OPERATIONAL LOS	ADDITIONAL TRIPS	NEW VOLUME	NEW LOS	STANDARD LOS DEFINITION	STANDARD LOS MAX. VOL.	AVAILABLE CAPACITY
1	572	S.R. 826 (Palmetto)	From NW 58th Street To NW 74th Street	8	11,770	D	0	11,770	D	LOS E	14,280	2,510
2	2242	S.R. 836 (Dolphin)	From NW 107th Avenue To SR 821 (H.E.F.T.)	6	5,987	D	0	5,987	D	LOS D	6,660	673
2	2243	S.R. 836 (Dolphin)	From NW 87th Avenue To NW 107th Avenue	6	7,116	D	0	7,116	D	120% OF LOS E*	9,996	2,880
2	2272	S.R. 821 (H.E.F.T.)	From SR 836 (Dolphin) To Northern Study Limits	4	3,065	C	32	3,097	C	LOS D	4,940	1,843
3	2244	S.R. 836 (Dolphin)	From SR 826 (Palmetto) To NW 87th Avenue	6	7,413	D	0	7,413	D	120% OF LOS E*	10,140	2,727
4	2250	S.R. 821 (H.E.F.T.)	From SR 836 (Dolphin) To SW 8th Street	6	7,627	D	21	7,648	D	LOS D	8,870	1,222
5	570	S.R. 826 (Palmetto)	From NW 36th Street To SR 836 (Dolphin)	8	12,202	E	0	12,202	E	LOS E	12,860	658
5	571	S.R. 826 (Palmetto)	From NW 36th Street To NW 58th Street	8	12,329	D	0	12,329	D	LOS E	15,260	2,931
6	568	S.R. 826 (Palmetto)	From West Flagler Street To SW 8th Street	8	12,675	F	0	12,675	E	LOS E	12,930	255
6	569	S.R. 826 (Palmetto)	From SR 836 (Dolphin) To West Flagler Street	8	11,861	D	0	11,861	D	LOS E	13,470	1,609
6	2188	S.R. 836 (Dolphin)	From NW 72nd Avenue To SR 826 (Palmetto)	6	9,967	F	0	9,967	F	150% OF LOS E*	14,700	4,733
			TOTAL		**102,012**		**53**	**102,065**			**124,106**	**22,041**

* Future Metro-Dade express bus service

intersection into several segments, it facilitated correlation of recommendations to the analyses.

For convenience, the principal improvement actions are also summarized in Table 36. All significant actions are grouped by intersection or segment on this table.

9.2 Transit Capacity Actions

As part of the short-range improvement program, one transit action was identified for implementation and incorporated into the network capacity analysis. It consists of the following:

Route 87:	Headways-	Existing PM Peak Period	30 Minutes
		Revised	20 minutes (1-2 years)
	Rerouting From:	NW 87th Ave. between NW 36th St. and NW 25th St.	
	To:	East on NW 36th St., south on NW 79th Ave., west on NW 25th Ave., and resume former routing on NW 87th Ave. Reverse trips using same routing.	
	Benefits-	NW 25th St. Corridor	
		NW 58th Ave. Corridor	Increased Transit Exposure for all
		NW 79th Ave. Corridor	Lowers LOS Standard for all
		NW 87th Ave. Corridor	

This adjustment assists in reducing capacity shortfalls at several locations by permitting lower LOS standards and by providing commuters with better transit service. This analysis has proposed only this one relatively modest service adjustment because transit resources for new services appear to be scarce -- such service does not benefit from impact fees -- and because it was considered inappropriate to recommend transit service expansion or frequency enhancement for the apparent purpose of lowering LOS performance thresholds. This is considered to be a legitimate strategy over the long-term once an integrated plan for transit service in West Dade is devised which provides a travel time advantage for bus (and possibly) HOV users to sidestep lengthy peak hour queues on many principal roads.

Serious consideration should be given to implementing those transit service frequency upgrades or new routes which have been contemplated in years 4-5 f the TDP. This implementation should be part of an overall Transit Demand Management plan in order to improve the effectiveness of transit to attract significant ridership.

9.3 Other Improvement Actions

Another action that needs to be considered is the establishment of the West Dade Transportation Management Association (TMA). Within five years, it could potentially become well-established and

Table 36
SUMMARY OF PROPOSED IMPROVEMENT ACTIONS

■ *Intersections*

NW 58th Street at	NW 97th Ave:	Add EB/WB through lanes
		Add EB LT lane
		Install signal
	NW 87th Ave.	Modify WB roadway for WB-SB dual LT
		Modify signal and timing
	NW 84th Ave.	Add WB RT lane
	NW 82nd Ave.	Add WB RT lane
	NW 79th Ave.	Add EB through lane from W approach to SR 826
		Modify WB roadway for WB-SB dual left turn
		Restripe NB approach for dual RT
		Modify signal and timing
	SR 826 East	Add EB through lane past intersection
		Modify signal and timing
NW 36th Street at	NW 107th Ave.	Modify signal and timing
	NW 87th Ave.	Add EB through lane
		Add WB through lane
		Add SB RT lane
		Modify signal and timing
	NW 79th Ave.	Add EB through lane from W approach to SR 826
		Add WB auxiliary lane from SR 826 to NW 79th Ave.
		Restripe SB approach for exclusive dual LT
		Add NB RT lane
		Modify signal and timing

Table 36 (Continued)
SUMMARY OF PROPOSED IMPROVEMENT ACTIONS

■ ***Intersections (continued)***

NW 25th Street at	NW 107th Ave.	Add 2nd through lane on EB approach Modify signal and timing
	NW 87th Ave.	Restripe and re-sign EB RT as EB through lane Add SB through lane past intersection Add WB through lane past intersection Modify signal and timing
	NW 82nd Ave.	Modify N approach for SB dual LT Add SB RT lane Add 3rd WB through lane past intersection Add 4th WB through lane past intersection Modify signal and timing
	NW 79th Ave.	Add 3rd WB through lane past intersection Add 4th EB through lane past intersection Modify signal and timing
	SR 826	Await results of FDOT study of NW 25th Ave.
	NW 75th Ave.	Add WB auxiliary lane from RR to SR 826 Modify signal timing
NW 12th Street at	NW 87th Ave.	Add three lanes to WB approach to provide: o 3 LT lanes o 2 through lanes o 1 RT lane Add 4th SB through lane past intersection Modify signal and timing
	NW 78th St.	Add SB RT lane and restripe for dual LT SB-EB Modify signal timing
	NW 72nd Ave.	Modify SB approach: 2 LT, 1 shared LT/T, 1 shared T/RT Modify signal and timing NOTE: Tentative TSM Proposal as part of SR 836 EIS
SR 836 at	NW 87th Ave.	Extend access to NE loop and egress from NW loop via ramps under the end spans with junctions at the SR 836 South Ramp/NW 87th Ave. signal
Flagler Street at	NW 107th Ave.	Add SB through lane Add SB RT lane Add NB through lane Widen WB roadway for EB-NB and WB-SB dual LT Modify signal and timing

Table 36 (Continued)
SUMMARY OF PROPOSED IMPROVEMENT ACTIONS

■ *Segments*

NW 25th Street	SR 826-NW 82nd Ave.	Add 3rd WB through lane Add 4th EB through lane Modify affected signals and timing
NW 87th Ave.	NW 25th St.-NW 12th St.	Add 4th SB through lane Modify affected signals and timing
NW 107th Ave.	NW 14th St.-NW 12th St.	Add 3rd SB through lane Modify affected signals and timing
NW 97th Ave.	NW 37th St.-NW 25th St.	Widen from 2 lanes to 4 lanes
	NW 25th St.-NW 12th St.	Widen from 2 lanes to 4 lanes
	NW 12th St.-Fontainebleau Blvd.	Construct 4 lane overpass and approaches
	At Flagler St.	Add turn lanes

■ *Transit*

Route 87: Decrease existing headways from 30 minutes to 20 minutes. Reroute from NW 87th Ave. between NW 36th St. and NW 25th St., to utilize NW 36th St., NW 79th Ave., and NW 25th St., before returning back to NW 87th Ave.

spearhead several initial programs, lay the groundwork for longer-term strategies, and serve as a coordinating unit for the consideration of transportation services and improvements in West Dade. The TMA would be patterned after those already established in Dade County, but would obviously be tailored to address the particular challenges of the West Dade area. Initial priorities would probably be directed in the area of education, publicity, area inventory and research, carpool matching, vanpooling, transit service expansion, and intermodal coordination (e.g. with Tri-Rail).

The five year window of interest for this study tends to direct improvement actions toward lower cost actions minimizing right-of-way acquisition and involving at-grade solutions. There is considerable facility planning underway with a somewhat longer horizon. Some of these projects include:

- SR 836 East-West Corridor Plan
- SR 826 Corridor Master Plan
- Turnpike Master Plan (presently deferred)
- NW 25th St. Concept Report
- NW 36th St. / NW 41st St. Smart Street Concept Study (SR 112 Extension Study)

In addition, the Long-Range Transportation Plan has identified tentatively other two dozen potential projects in and around the West Dade area. Given this level of planning activity in major corridors surrounding the West Dade study area, it would be extremely prudent to explore opportunities offered by these conceptual improvement plans and how they could be integrated into an overall transportation service strategy for West Dade which embraces a multi-modal approach. In this sense, the type of opportunities would seem to focus on preferential access strategies that would benefit bus service and HOV users.

For example, capacity analysis indicate that the NW 25th St. interchange with SR 826 is at capacity with its diamond configuration. Because of right-of-way constraints, flyover ramps would be one options. An FDOT concept study is underway in this area to review options for improved truck access and circulation to and from the SR 836 corridor. This study may point out some configuration alternatives which can address the study objectives of providing preferential access between proposed HOV lanes and West Dade employment centers, while avoiding congested approach routes such as NW 25th St. A similar opportunity might exist along the NW 36th St. / NW 41st St. Smart Street Corridor.

In addition to preferential access from the perimeter of the study area and to the interior, another option would be to consider some sort of preferential corridor internally for buses and HOV users. A brief review of the existing network suggest that perhaps NW 33rd St. is the only opportunity to develop such a corridor which would provide direct access to the expressway for the users. Direct or preferential access for transit vehicles to proposed premium transit service in both the SR 826 and SR 836 corridors is another long-term strategy relating to major facility planning.

A number of policy actions could also be considered to enhance various planning objectives for the West Dade area. Several mechanisms are already in place and may need reemphasis or reapplication

to the West Dade area. For example, the Comprehensive Plan would likely consider future East-West transit line stations as metropolitan activity centers, as are other existing Metro-Rail stations. Miami International Mall is already designated as a regional activity center in the existing plan. At these sites, high-density development would be encouraged.

Another arena where policy could be a strong influence is in the area of traffic concurrency policy. Based on this study analysis and the outlook for continued development demand -- combined with the likelihood that the road network cannot support the added traffic at the prevailing LOS criteria -- a conflict is looming in the years to come that will pit development pressures against restricted network capacity. Out of this conflict may be opportunities for creative strategies to move toward new or better approaches to growth management and growth channelling.

Such strategies might include the designation of part of the study area as a Transportation Concurrency Management Area as defined in Florida Statute 163.3180. Under this designation, in specially designated districts where backlog exists, interim LOS standards may be adopted for certain facilities, and may incorporate multimodal strategies of demand. The area must be structured to correct existing deficiencies and set priorities for addressing backlogged facilities, and must be financially feasible and consistent with other portions of adopted local plan. Under this approach, development permits could continue to be issued.

The last chapter of this report discusses the estimated implementation costs for the proposed transportation improvement actions as well as any resulting general economic benefits.

10.0 COST BENEFIT ANALYSIS

One of the fundamental characteristics of implementing any roadway improvement or transportation action is the funding requirement. There are numerous constraints regarding the allocation of these funds. These include fiscal constraints, tax resources, political issues, and proper timing of improvement actions. These constraints can either impede or accelerate the process. Budgetary or fiscal restraints may limit the needed action for road improvements. There are limited funds for improvements, and a myriad of entities continuously wrestle for their share of the resources. The resources come from a variety of sources in the public or private sector.

Federal, State and local tax revenues contribute to the resources of funds as well as developer impact fees and other developer contributions for site improvements. The need for road improvements in Dade County outweighs the available funding for these actions. Municipalities around the County as well as the State campaign for improvements in their jurisdiction. While the cost of each action and the benefits derived from each action may drive the improvement or alternative action, the ultimate goal is congestion management. There is a mandate to keep traffic flowing as specified by the level of service (LOS) for each road segment or intersection throughout Dade County.

Other factors that need to be addressed are the cost of the actions and the ultimate benefits derived by these actions. The cost of transportation improvements are comprised of the total cost of construction, and the cost of the right of way (ROW) acquisitions. The long term benefits of transportation improvements include the quality of life, the value to businesses and residents, and the potential increase in tax revenues to Dade County.

The cost estimates for the proposed West Dade improvements are provided in present day dollars and not in future dollar estimates. It is important to reiterate that these transportation improvements will ultimately take place in the future. Increases in construction costs due to availability of resources, cost of living adjustments for materials and labor, modifications in the source design of these improvements and ROW estimates, and any other changes may affect the results of this study.

10.1 Cost of Transportation Improvements

The cost of construction is defined as the initial capital costs of construction. Other annual or recurring costs such as for maintenance and operations are not discussed in this report. The detailed cost information for every roadway improvement is included in Appendix A.

In determining the cost of construction for the transportation improvements as outlined in the previous chapters, a number of resources were utilized. The sources for cost information included but were not limited to the following:

1) Florida Transportation Builders Association
   Bid information for various projects was analyzed for projects similar to the proposed improvements in the West Dade Study Area.

2) Florida Department of Transportation

Construction engineers were furnished with project descriptions. Unit cost information was obtained for comparison purposes. Additional cost information relating to design, inspection, traffic control and contingencies was gathered.

3) Independent Engineering Consultants

Construction engineers and cost estimators were furnished with project descriptions. Unit cost information was obtained for comparison purposes. Additional cost information relating to design, inspection, traffic control and contingencies was gathered.

4) Transportation Improvement Program

Similar projects were reviewed and categorized. This information was separated into construction costs, preliminary engineering design costs, planning, and construction engineering inspection costs.

5) Means Highway Construction Manual 1995 Edition

Various construction and cost information was obtained. This unit cost information was summarized for comparison purposes.

This information was converted to square foot, lineal foot, square yard and unit cost basis. To reflect the conservative nature of the study, the cost figures were selected to be above the median values derived from the source data. To these base cost figures were added applicable design/engineering costs, inspection costs, traffic control costs, and a contingency factor to account for project delays, overhead, project modifications, and other unknown factors. This information was used as a base for the following types of improvements:

- paving (adding or widening a lane)
- sidewalk construction
- milling (removing existing pavement or sidewalk)
- landscaping
- restriping a lane or intersection
- building a retaining wall
- replacing a guard rail
- shifting a median
- modifying a storm sewer

The following construction cost information was developed as a per item cost:

- a complete signal installation
- relocating or adding poles at intersections
- adding or replacing a mast arm
- relocating or adding street lights
- removal or relocation of palm trees

10.2 Right-of-Way Acquisitions

This section addresses the issue of the cost of Right-of-Way (ROW) acquisitions. The ROW process is a series of complex procedures and usually involves the use of a number of experts to perform an intensive investigation of legal findings, marketing and parking studies, real estate and inventory appraisals, financial and business analysis to appropriately address the issues of property value and business valuation (i.e. acquisition costs). In addition to the external experts involved in a case, there is often an extensive internal examination of issues within the FDOT and Attorney General's office to formulate a strategy. The primary objective is to maximize the benefit to the community through needed transportation improvements and to minimize costs to the local and state agencies.

The local municipality monitors traffic flow along road segments either through signal counters or via first hand investigation. The County, and in many instances the FDOT, evaluates the existing road layout and determines actions to mitigate congestion in these target areas. There may be existing ROW easements for future road enhancements along major road corridors that facilitate the planned improvements. There may also be zoning requirements and regulations that shape development along roadways and environmental restrictions that prohibit certain actions from occurring. The following text is a summary of the procedures involved in the ROW process:

A pre-acquisition study for each specific transportation improvement is performed by the appropriate agency. Preliminary transportation designs are formulated in conjunction with property appraisals. This information enables the agency to determine the amount of land needed by analyzing the alternatives for each design as well as providing a preliminary estimate of the potential cost of the ROW acquisition.

The next step is to notify the owner of the property and the owner of the business about the ROW acquisition. Occasionally this step involves an initial compensation to the owner and begins the lengthy process of the final monetary valuation of the site and business.

At this time, the business and/or land owner employs a set of financial, appraisal and legal professionals to provide the necessary expertise to determine the amount of total compensation due. The amount claimed is usually in excess of what the FDOT initially considered to be the value of the business or property during their pre-acquisition analysis.

The responsible agency then launches its own investigation to determine the ultimate compensation due for each parcel or site. The responsible agency employs its own set of financial, appraisal, design and marketing experts to help determine the value of the affected property and/or business.

After months of planning, investigation, and meetings, the case enters a mediation process. If the case is not settled during mediation, it typically enters the litigation phase and involves depositions of both the owners of the land and business and expert witness testimonies for both sides in the case. The process may enter the trial phase and end in a jury verdict that

determines the ultimate amount of money to be paid to the business and/or property owner. This amount can be much higher than the responsible agency originally estimated.

Construction of the transportation improvement may occur before, during, or after the compensation amount is settled. Depending on the case load and desire to settle, a compensation amount may be offered in excess of the original estimated sum.

There are a number of factors in determining the total cost of a ROW acquisition. For example, there can be temporary as well as permanent ROW costs. The temporary ROW acquisition costs that may require compensation include temporary construction easements and business interruptions during the construction process.

The temporary construction easements on designated parcels are needed to store equipment and materials, provide for traffic control, reconfiguration of ingress/egress to the site, construction of needed drainage facilities, and landscaping or road improvements. Temporary construction easements are normally treated as a rental based upon the typical rental value of vacant land. This compensation may be payable in advance.

Business interruptions occur during the construction phase of the process and an evaluation is needed to determine the compensation due to the business owner for an estimated loss of revenue during this period. The contract for construction may include incentives or clauses to complete these phases of a project in order to minimize the financial impact of the business interruption. The business interruption amount is calculated on a basis that includes a sales or revenue history, an estimate of the percentage of loss and a thorough analysis of at least five years of financial and tax records.

The permanent ROW acquisition costs that may require compensation include construction easements, business damages, and the cost of curing the take. The latter cost includes the expense of reconfiguring the parking lot or ingress/egress points to the business.

The permanent construction easements are typically taken to construct the improvement and provide for the necessary setback as required by the local jurisdiction. These easements may include land for future improvements on the road segment. An appraisal of the land and building are performed to provide a detailed analysis of the highest and best use or market value of the site.

Business damages are calculated after a thorough analysis of at least five years of financial, tax and business records in addition to a traffic, parking and marketing study to determine whether it is a partial permanent business loss or a complete business loss. A partial business loss compensates the business owner for permanent business damages that does not force the closure of the business, but permanently decreases the number of patrons frequenting the business. The loss of access or available parking to the site, in addition to the business valuation, determines the ultimate compensation. A permanent business loss results from the complete loss of the current business because the ROW acquisition severely hampers the ability to continue the business. A business must be in operation for at least five years before the ROW acquisition in order to qualify for business damages.

There are both partial and full ROW acquisitions. A partial ROW acquisition may include both land and business valuation compensation. In some cases, a partial ROW acquisition may cost more than a full ROW acquisition. This can occur when the total compensation calculation for the value of the land taken and the percentage loss of business damages is more than the total value of the business or the total value of the site. This is not a common occurrence, but it does happen.

A thorough pre-acquisition analysis, in conjunction with the preliminary roadway improvement design, may mitigate the total cost of a ROW acquisition. This can be accomplished by employing the appropriate experts during the initial phase of the process. Regulatory, zoning, environmental, and legislative issues, as well as political considerations, may affect the total cost of a ROW acquisition.

To properly estimate the value of a business, a history of financial, tax, license, and business information along with a traffic study for the particular parking lot and area would be necessary. The final cost for the total amount of a ROW acquisition depends largely upon the type of business and may be in the millions of dollars. For example, a retail banking operation may be valued on its customer deposits, the cash flow stream capitalized at an appropriate rate for this type of business, or a number of other methods. A total business valuation depending on the banking operations might range from $1,000,000 to $8,000,000. A service or gasoline station would have a different valuation. The basis for valuation may be based on a combination of factors and include a separate valuation for each business segment, such as, gasoline revenue, and service or repair revenue. A service station may carry a value between $500,000 and $1,500,000 depending on competition and the value of the site. A shopping center may have up to 50 (fifty) completely different business operations. A ROW acquisition affecting a large percentage of the total parking spaces may require an analysis of each business for compensation purposes. The total compensation for businesses in a shopping center in terms of business damages on a partial ROW acquisition may be greater than the cost of a full ROW acquisition of the site.

For purposes of this study, the ROW costs are also listed in Appendix A. In addition, Appendix B provides a narrative for all count station segments where right-of-way costs may be incurred. The following sources of information were utilized in obtaining the specific ROW costs for the West Dade Area road improvements:

- Dade County assessments for 1994
- Brokerage information on recent sales in the study area
- Owner information on undeveloped sites in the study area
- Private documentation for similar properties

Information collected from brokers and owners in the study area was compared with the 1994 assessed values. These assessed values of both developed and undeveloped parcels were typically lower than the market value of the same parcels. For this study, the higher of market or assessed value was consistently used. For parcels where market value information was unavailable, the assessed value was used. Based on information reviewed and site inspections for specific parcels, a

market value was added to the assessed value for those parcels. The source information was categorized by location, zoning, and property type (developed or undeveloped).

The location of a property affects the market value; for example, a corner parcel would typically have a greater value than an internal parcel. The zoning for a parcel -- whether it is residential, commercial, warehouse or retail -- affects the underlying value. A developed parcel may carry a higher ROW acquisition value, since it may involve landscaping or other post construction costs. The property type is another factor that may increase the ROW acquisition cost; for example, the landscaped area and signage around the Doral Country Club may have a high intrinsic value.

Using all of the above criteria, the cost of the ROW acquisitions was calculated. The ROW square foot value was then multiplied by either the identified area of the ROW take or the total square feet of the action as described in the Appendices.

Please note that no potential business damages were estimated for any of the ROW acquisitions. This would require an individual analysis of each business affected by a ROW acquisition. Estimates without a thorough analysis of the business and financial information would not be pragmatic or realistic for purposes of this study.

Based on the detailed cost estimates shown in Appendices A and B and summarized in Table 37, the total construction costs for the identified transportation improvements in the West Dade study area are approximately $14,000,000. This figure includes estimated developer contributions for NW 97th Avenue of approximately $6,000,000.

The total estimated right-of-way costs are approximately $5,100,000. This figure is land acquisition cost only and is based on current land values in each area. This figure may rise significantly if the land and business owners contest the underlying value.

Business damages were not included in this study and may affect up to eleven stations identified in this study. Business damage claims vary depending on the type of business and where it is located. These claims may result in a significantly higher cost.

There are three areas or corridors identified in this study that comprise most of the costs of the transportation improvements:

1) The intersection of Flagler Street and 107th Avenue: The identified right-of-way costs are approximately $2,650,000 and the construction costs are approximately $750,000 for a total of $3,400,000. This figure does not include potential business damages or contested land values. If included, the total costs for this intersection may range between $4,000,000 and $10,000,000.

   There are three established shopping centers that are situated on the northwest, southwest, and southeast corners of this intersection. The identified improvements will encroach upon each out parcel and existing parking as well as some existing structures. The improvements around this intersection in terms of land acquisition will be the most expensive. Proper planning and required set-backs may reduce the cost of future transportation improvements in targeted growth areas.

Table 37 Summary of Improvement Costs

Table #	Station #	Street	Intersection Limits	Construction Cost ($)	Right-of-Way Cost ($)	Business Damages	Total Cost ($)
A1	44	87th Ave	Flagler-8th St	None Identified			0
A2	90	87th Ave	SR 821-107th Ave	None Identified			0
A3	154	Flagler St	87th-97th Ave	None Identified			0
A4	156	Flagler St	107th Ave	129,500	63,000	Possible	192,500
A5	158	Flagler St	107th Ave	319,764	119,000	Possible	438,764
A6	162	87th Ave	12th-25th St	1,093,122	612,000	Possible	1,705,122
A7	164	87th Ave	25th-36th St	413,052	324,000	Possible	737,052
A8	358	12th St	72nd-87th Ave	1,027,929	261,000	Possible	1,288,929
A9	400	25th St	SR 826-75th Ave	72,745		None	72,745
A10	402	25th St	SR 826-87th Ave	1,075,156	576,000	Possible	1,651,156
A11	404	25th St	87th Ave	84,211		None	84,211
A12	406	25th St	107th Ave	35,774		None	35,774
A13	432	36th St	79th-87th Ave	398,530	260,400	Possible	658,930
A14	434	36th St	87th Ave	105,768	264,600	Possible	370,368
A15	442	NW 41st St	107th-117th Ave	None Identified			0
A16	452	58th St	SR 826-87th Ave	294,000		None	294,000
A17	454	58th St	87th-97th Ave	231,606		None	231,606
A18	482	79th Ave	36th-58th St	1,000		None	1,000
A19	484	79th Ave	36th St	43,008	108,000	Possible	151,008
A21	510	107th Ave	12th-25th St	245,146		None	245,146
A22	589	8th St	87th-107th Ave	None Identified			0
A23	1141	Flagler St	87th-826 Ave	None Identified			0
A24	1211	87th Ave	SR 836 Ramp	92,160		None	92,160
A25	1218	107th Ave	Flagler St	297,816	2,479,660	Possible	2,777,476
Subtotal				**$5,960,287**	**$5,067,660**		**$11,027,947**
A20	494	97th Ave	Flagler St-25th St	13,951,600		None Identified	13,951,600
		Estimated Developer Portion		(6,000,000)			(6,000,000)
		Sub-total		7,951,600			7,951,600
Grand Total				**$13,911,887**	**$5,067,660**		**$18,979,547**

Note: Business damages and contested land cost may result in a much higher number than this matrix presents.

2) The NW 87th Avenue corridor improvements, between SR 836 and NW 36th Street, will total more than $2,500,000. The cost of construction for these improvements are approximately $1,600,000 and the right-of-way acquisition cost is approximately $900,000. These figures do not include business damages which may result in a higher cost.

3) The 97th Avenue corridor as identified may cost Dade County approximately $8,000,000 in construction costs. Developers along this corridor will contribute approximately $6,000,000 for a total construction cost of $14,000,000. This transportation improvement is a complete construction of a new road and includes a four-lane bridge over SR 836.

These three improvements constitute approximately 62% of the total estimated cost of the identified transportation improvements as well as the majority of the potential business damages.

It was recommended in a previous chapter that Metro-Dade Bus Route 87 should have its current headway of 30 minutes reduced to 20 minutes. In addition, a rerouting in the West Dade portion of the route would add an additional 1.8 miles to the existing route.

An additional three buses are estimated to be needed to achieve this revised level of service. Capital costs per bus are approximately $225,000. This would add $750,000 in capital costs for this transit improvement. Current resources of excess buses were not considered in this estimate.

The operational costs regarding the transit improvement are difficult to ascertain. The re-routing and additional mileage would alter the total revenue miles, deadhead miles and platform miles in addition to potentially affecting other routes. This would require a more detailed study to determine the operational cost for the revised routing and scheduling.

10.3 General Economic Benefits

This section addresses the issue of general economic benefits brought about by the identified "candidate" transportation improvements described in previous chapters. Benefits are identified as either positive or negative to a designated area. These benefits are listed in Appendix B for each count station segment affected by a roadway improvement.

The primary goal derived from transportation improvements is congestion management which is to improve the LOS on various road segments. Most of the economic benefits from the types of improvements identified in this study will be long term gains.

There are three major benefits that are usually found in transportation project evaluations:

- Reduced cost of Vehicle Operations
- Reduction in Accidents
- Travel Time Savings

A change in the cost of vehicle operation will benefit all users of the transportation system. Gasoline consumption, vehicle maintenance, depreciation and vehicle wear are factors that should be included for a proper analysis. The vehicle mix, roadway design and traffic characteristics for each intersection and road segment can affect the operating cost of a vehicle. Warehouse, office and light industrial facilities appear to be the major current businesses and future developments in most of the study area. Through observation and random inquiries, it was ascertained that the movement of goods through the study area should improve with these transportation projects. Businesses in these areas may show increased activity from these transportation improvements.

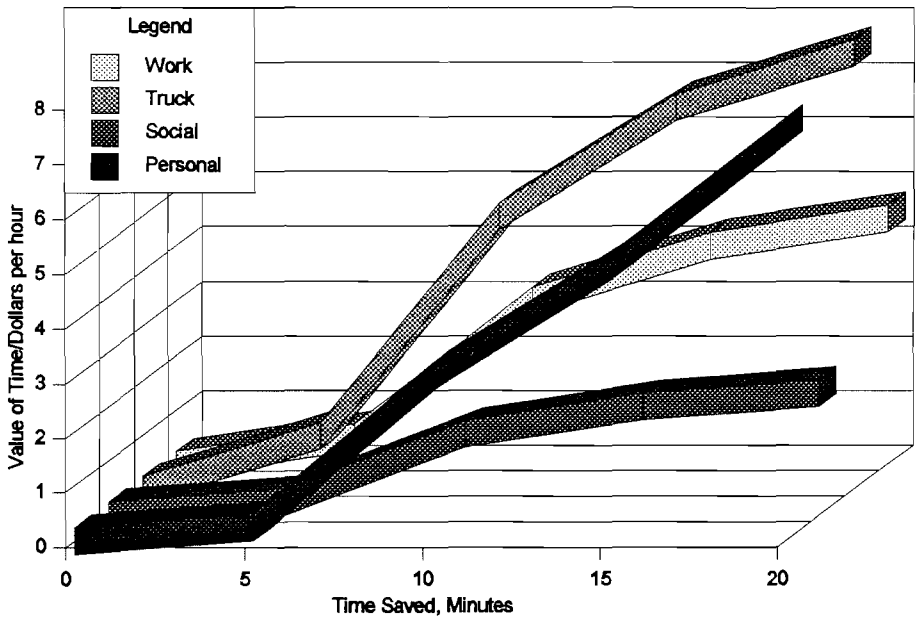
Research indicates that transportation improvements that mitigate congestion should have a positive effect on reducing the number of accidents occurring in an intersection or on a road segment. A critical step in estimating the cost of an accident is determining the factors used in calculating the cost. The cost of injuries, insurance outlays, and police and rescue response units are all components of the cost of an accident. An accident also causes delays in traffic movement. The cost of delays depends on the road or intersection configuration and the businesses affected by a road closure. An average cost per accident may be determined and multiplied by a frequency rate to arrive at a general estimation.

A reduction in travel time would translate to time spent for other activities. Depending on the activity, these savings can be measured in a variety of ways. For individuals traveling to and from work, time can be related to a travelers wage. Levels of income would affect a dollar per traveler value. For a truck driver making pickups or deliveries to the many warehouses in the study area, the average dollar value per vehicle hour saved would be much higher. A traveler to a restaurant or retail shopping center would carry a different value. An average dollar value per vehicle hour has been used in the past by the American Association of State Highway and Transportation Officials. This figure is not adjusted for inflation or regional area variances. The graphic representation for this average would have an estimated dollar value per traveler hour and time saved in minutes. The chart shown on the following page is a visual illustration of what the end result might look like. Obviously, in this scenario, the personal dollar of time increases as time is saved.

A majority of the transportation improvements in this study will occur near the warehouses and office complexes. The travel time savings may be beneficial to these businesses. The amount of data needed to analyze the three benefits mentioned above can be accumulated over time and used for future studies. Other intangible benefits would be quality of life, community values, and environmental issues.

Economic benefits measured in terms of economic output are typically found in transportation improvements in undeveloped regions that may induce large scale development in these areas. Specific businesses surrounding the improvements listed in this report are identified by station number in Appendix B. The average increase in employment in the majority of the TAZs is expected to be between 1 to 500 per TAZ, not taking into account any employment increases due to the suggested transportation improvements.

BENEFITS FROM TRAVEL TIME



The transportation improvements that have been identified, appear to be designed to alleviate congestion, and are not intended to spur future development or bring in new business. Additional growth from the actions identified may add to what is already planned in the major improvements identified in the Transportation Improvement Programs. The economic benefits associated with minor traffic reconfiguration are typically long-term and not immediate. Only general economic assumptions can be made regarding:

- Increased road capacity
- Increase in property values due to improved access to a particular site or area
- Accelerated development due to improved road conditions
- Temporary employment due to construction
- Permanent employment due to new businesses or general business growth
- Increase in disposable income
- Increase in sales and other revenues for each business
- Increase in spending for each business

The positive economic benefits outlined above may translate into increases in the following revenue categories for Dade County:

- Property tax revenues
- Business tax revenues
- Sales tax revenues
- Other tax revenues
- Licenses/Permits fees
- Development Impact fees

The overall effects of transportation improvements on business activity may be positive or negative, or a combination of both. A redistribution of business or sales activity can occur. In a region or an area, the positive effects on one business may adversely affect another business. The overall effect on a region or area may not be a net gain or loss. The West Dade Task Area transportation improvements may affect all sectors of business activity to the extent that there are impacts on employment and income. Types of effects generally found from the actions identified include:

- Changes in accessibility
- Displacement of land for transportation use
- Economic stimulus of new construction activity
- Negative effects of air and noise pollution

Changes in accessibility to an area, region, business complex, retail center or residential development during and after the construction period create positive and negative effects. During the construction period, access is usually hindered by right-of-way barriers and traffic diversion. These conditions may have a negative effect on revenues for a business, temperament of employees, and residents living along the construction corridor. Businesses affected by the right-of-way barriers may see a temporary loss of income. Residents and employees traveling in the affected area may become aggravated at the temporary congestion and delays caused by the construction. After the construction period, traffic flow should improve and the effects typically become positive.

Displacement of land for transportation use usually has a negative effect on the surrounding residential developments, office complexes, business/warehouses and retail centers. The aesthetic value associated with landscaping around these areas may be hurt when a new lane encroaches on an existing development.

Transportation improvements have a direct effect on expenditures for labor and materials used during the construction process. The positive construction impact is temporary and is limited to the time period in which the construction takes place.

Revenues for businesses and incomes for employees performing the construction projects should increase, but these revenues and income streams may not benefit the areas of construction if the businesses and employees are from another jurisdiction.

Business activity associated with transportation improvements are derived mainly from accessibility. Most of these improvements bring about positive economic changes to an area. The effect of opening

previously isolated areas for economic development, particularly when near thriving areas, have a tremendous economic benefit. Zoning regulations and the County's commitment to growth in these areas will play a major role in economic development. A reduction in the cost of moving goods and services to and from manufacturing facilities, wholesalers, retailers, importers and exporters is a positive benefit. These businesses may see an increase in traffic and in their underlying revenues because of increased accessibility. Road improvements also extend the potential effective market area by creating new linkages between businesses or markets. The proximity of the airport is a market advantage. Improved access to labor resources may benefit the cost side of a business. These aspects of business activity impacts may drive changes in employment and income and affect the decision process among businesses in the area and businesses moving to the area. In an area or region like Dade County that has a integral long term transportation plan, distributional effects may take place within the region, but individually proposed segment improvements are not likely to have a significant effect on the business growth of the region as a whole.

The majority of the residential developments appear to be in the western portion of the study area. The proposed construction activity along NW 97th Avenue and NW 107th Avenue should create improved accessibility to the existing and vested residential developments. The economic impact for future development should be positive. By enhancing the accessibility of land along the impacted corridor, a stimulation in residential construction in this area may alter the residential development pattern in the region. The ultimate need for new housing and the offsetting growth moratoriums in the area will affect the overall economic benefit from residential construction. Residential growth in a target area might also encourage the development of new retail and employment centers to take advantage of this new market.

Property taxes are the primary source of revenue for Dade County. Two ways to increase this revenue source are to raise taxes, or to increase property values. Raising taxes is not a popular option. An increase in property values will result in an increase in revenue for the County. The transportation improvements in this study can affect property tax revenues in several ways:

- Acquisition of the right-of-way will remove property from the tax rolls and potentially decrease tax revenues.

- Properties adjacent to the transportation improvement may experience negative spillovers from noise and air pollution and decreased property values, or they may experience improved access which result in a long term increase in property values.

- Public expenditures for new schools; fire and police protection; water, sewer, and solid waste facilities will be an offset to an increase in tax revenues.

In areas where growth occurs and property values increase, tax levels for the area may increase. This growth may result in the need for additional expenditures for public services or facilities. In some cases, it may result in a reduction in the quality of public services. Commercial and industrial growth generally provide positive economic benefits. Property tax impacts will vary greatly for various

locations along these proposed improvements. The transportation improvements identified in this study may not have a significant overall effect on the revenues to Dade County except in the undeveloped areas located in the region. The major construction projects identified in Appendix Table A20 should have the greatest effect on property values and new business growth.

In summary, budgetary restraints and obligations, fiscal resources, political considerations, and congestion management issues all affect the timing and allocation of transportation improvements. Limited funds, opposition to tax increases, and the cost of maintaining existing roadways influence the decision making process in Dade County. In addition, the County's commitment to manage growth affects the underlying economic benefits inherent in the development process. Existing zoning regulations may ultimately change when large scale transportation improvements are implemented. Major transportation improvements bring about real changes in economic development.

Economic output as an offset to the cost of improvements for congestion management issues is a very subjective value. A rating system of priority indices, which was not done for this study, may best serve the type of transportation improvements identified in this report. Overall criteria must be established and a point system to rate each priority needs to be determined. The following would be an example of such an index.

Priority	**Maximum Points**
Congestion Management/traffic improvements	35
Safety/reduction in accidents	20
Minimize Cost	15
Maintenance and Service	10
Social, Economic & Environmental Benefits	10
Intermodal Coordination	10

Each transportation improvement can be measured on this point system in addition to its estimated cost. In regions throughout Dade County, similar to the West Dade study area, this index might facilitate prioritizing needed improvements that can be tied into the Long Range Transportation Improvement Plan. An index, such as this one, may be a non-political methodology of allocating funds for transportation improvements.

This concludes the Final Recommendations Report for the West Dade Area Task. Although the study area is presently congested and will grow even more so during the next five years, this report offers some positive relief to these transportation problems. Short-term solutions designed to meet the strict concurrency regulations, combined with long-term regional accessibility solutions, will do much to enhance the viability of West Dade's Transportation System. Even with some potentially high right-of-way costs, the County is urged to proceed with as many of the suggested improvements as possible in order to sustain an acceptable service level on the area's arterial and freeway network.

Appendix A

Tables of Recommended Improvements

TABLE A1

STATION 44: SW 87TH AVE. FLAGLER ST. - SW 8TH ST.

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
	NO ACTION					
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.					

TABLE A2

STATION 90: SW 8TH ST. **SW 107TH AVE. - SR 821 (HEFT) WEST**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
	NO ACTION					
			NOTE: Actions on this segment may require FDOT PD&E study if improvements are considered significant.			

TABLE A3

STATION 154: FLAGLER ST. **W. 87TH AVE. - W. 97TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
	NO ACTION					
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.					

TABLE A4

STATION 156: FLAGLER ST. **W. 97TH AVE. - W. 107TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add new lane to north of existing roadway to permit installation of WB-NB dual left turn.	Signal at NW 107th Ave and Flagler.	Construct new lane on N side of existing roadway. Extend 400 ft. W of NW 107th Ave. (12 ft. wide, with 200 ft. taper) Relocate drainage facilities, and modify corner radii. Restripe roadway for realignment. ROW required. Will take open space area.	Do Nothing.	Dade County	Construction: $120,084 * ROW : $63,000
2	Modify signal installation.	Signal at NW 107th Ave. and Flagler.	Replace mast arms (2) on north corners. Modify signal timing.	Do Nothing.	Dade County	Construction: $9,416
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.		*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A5

STATION 158: FLAGLER ST. **W. 107TH AVE. - W 114TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add new lane to north of existing roadway to permit installation of EB-NB dual left turn.	Signal at NW 107th Ave.	Construct new lane on north side of existing roadway. Extend for 400 ft. west of NW 107th Ave. (12 ft. wide, with 200 ft. taper) Relocate drainage facilities, and modify corner radii. Reconstruct interior lane and shift median north one lane.	Do Nothing.	Dade County	Construction: $319,764
			Reconstruct interior lane and shift median north one lane. Restripe roadway for realignment. ROW required. Will clip service station canopy and will partially affect 25 retail parking spaces.			* ROW: $119,000
			*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A6

STATION 162: NW 87TH AVE. **NW 25TH ST. - NW 12TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Install 4th SB thru lane.	NW 25th St. - NW 12th St. Improvements	Add 12 ft lane from NW 25th St. to 300 ft. south of NW 12th St. plus 150 ft. taper. The total full width length is 5,000 ft. Modify west intersection radii at NW 12th St., NW 13th Terr., NW 15th St., NW 18th Terr., and NW 21st Terr.	Do Nothing	Dade County	Construction: $ 711,480 * ROW : $612,000
			Replace 2 mast arm poles on the west side at three signals. Modify storm sewer system along west curb line. Relocate utility poles (at utility expense.)			Construction: $289,482
			Some ROW needed, as summarized from north to south:			
			300 ft - Acquisition of landscaped area.			
			1500 ft - No ROW costs because of parallel service road.			
			1200 ft - Acquisition of undeveloped area.			
			1200 ft - No ROW costs as ROW is wider in this area.			
2	Modify traffic signal installation.	Signal at NW 12th St.	Estimate replacement of entire signal installation due to reconstruction of SB and WB approaches.		Dade County and FDOT	Construction: $92,160
	NOTE: This improvement has been coordinated with potential TSM improvement at NW 87th Ave. interchange with SR 836 presently under development.	NOTE: This improvement has considered the redistribution of traffic associated with the reconstruction of NW 97th Ave. over SR 836.	*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A7

STATION 164: NW 87TH AVE. **NW 41ST ST. - NW 25TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add SB right turn lane.	Signal at NW 36th St.	Use length of 250 ft. x 12 ft. plus 150 ft. taper. Will require relocation of 10 tall palm trees and sidewalk. ROW take from Doral (landscaped area) appears necessary. Replace mast arm pole on NW corner.	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County	Construction: $40,668 * ROW : $184,000
2	Add SB thru lane on approach to signal.	Signal at NW 25th St.	Use lane of 12 ft. x 300 ft. plus 150 ft. taper. Will require equal size ROW take; property undeveloped. Utility poles will require relocation at expense of utility company. Modify signal timing.	Do Nothing. Study of NW 25th St. corridor from NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $43,008
			Underground water main at canal crossing will require reconstruction at project cost. This should be done anyway as NW intersection radius is too short for truck traffic. Will require replacement of signal mast arm, and additional loop detector.			Construction: $329,376 * ROW : $140,000
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.		*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A8

STATION 358: NW 12TH ST. **NW 72ND AVE. - NW 87TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Widen WB approach. Add WB thru lane.	Signal at NW 87th Ave.	900 ft long east of 87th Ave plus 200 ft. taper. North side of existing road. Possible ROW.	Do Nothing	Dade County & FDOT	Construction: $131,604 * ROW : $261,000
2	Add WB right turn lane.	Signal at NW 87th Ave.	300 ft. long, east of 87th Ave. plus 150 ft taper. North side of new WB thru lane. Probable ROW taking of landscaped area.	Do Nothing	Dade County & FDOT	Construction: $43,008 * ROW : See above
3	Add WB lane to WB SR 836 on-ramp	Signal at NW 87th Ave.	Part of Action 1. Extend new lane on north side of existing ramp, west of 87th Ave. Established length of 1500 ft. plus 250 ft. taper.	Do Nothing	FDOT	Construction: $212,890
4	Create dual WB - SB left turn lanes.	Signal at NW 87th Ave.	Reconstruction of EB half of existing road from 87th Ave east to SR 836 WB exit ramp. Use removal of 800 ft. x 30 ft of existing pavement and new paving of 800 ft by 50 ft. All work occurs between 87th Ave & WB SR 836 exit ramp.	Do Nothing	Dade County & FDOT	Contruction: $545,968
5	Adjust signal pole at signal with WB SR 836 exit ramp.	Signal at NW 87th Ave.	Due to widening of Action 1, relocate and reinstall.	Do Nothing	Dade County & FDOT	Construction: $768
6	Modify SB approach.	NW 72nd Ave. signal. 700 ft. east of SR 826.	Add SB thru lane from SB - WB RT lane to NW 12th St. 100 ft. x 14 ft. at existing NW 72nd Ave. south leg. Estimate 200 ft x 14 ft lane and 150 ft taper. Rebuild sidewalk. This will modify the SB approach for 2 left turn lanes, 1 shared left turn/through lane and 1 shared through/right lane. No ROW needed.	Do Nothing. Note that pending policy change will make LOS E acceptable; therefore, no action would be needed.	Dade County	Construction: $62,771
7	Modify signal installation.	NW 72nd Ave. signal. 700 ft. east of SR 826.	Modify signal poles on west corners of intersection. Modify SB signal for triple left indications. Add SB loop. Modify signal timing.	In addition to the above, reconstruction of SR 836/NW 72nd Ave. interchange would redirect SB left turns from 12th St. to a new interchange where the bridge over SR 836 exists currently.	Dade County	Construction: $200
8	Modify SB approach.	NW 78th Ave. signal	Add SB right turn lane; Use length of 200 ft. plus 150 ft. taper. Modify g/C ratio. No ROW needed.	Do Nothing.	Dade County	Construction: $30,720
			*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A9

STATION 400: NW 25TH ST. **SR 826 WEST - MILAM DAIRY ROAD**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add WB thru lane beginning at RR crossing and extending to right turn lane at SR 826 east ramp signal.	NW 72nd Ave. - SR 826 Ramp West	East of NW 75th Ave., install 100 ft. x 12 ft lane with 100 ft. taper. Modify radii at NW 75th Ave. Extend lane another 350 ft. with 150 ft. taper. No ROW.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $72,745
2	Modify signal timing.	Signal at NW 75th Ave.		NOTE: Further modifications at NW 25th St./SR 826 interchange deferred to pending study as interchange type is at capacity due to turning patterns.	Dade County	No Cost. Dade County Staff will perform.
	NOTE: Further modifications at NW 25th St./SR 826 interchange deferred to pending study as interchange type is at capacity due to turning patterns.					

TABLE A10

STATION 402: NW 25TH ST. **NW 87TH AVE. - SR 826 WEST**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Install additional lane on north side of existing road on approach to signal to provide third thru lane and maintain right turn lane.	Signal at NW 87th Ave.	Estimate total length of 400 ft x 12 ft plus taper of 150 ft. Construct bulkhead for 350 ft. Extend culvert to the east 30 ft. Relocate utility crossing. Replace signal mast arm. Add loop detector.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $300,659
2	Modify signal timing.	Signal at NW 87th Ave.	Modify signal timing for revised geometrics.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $92,160
3	Add NB lane on north leg and restripe existing NB lane for second left turn lane.	Signal at NW 82nd Ave.	Add lane of 12 ft. x 200 ft. plus 150 ft. taper. No ROW.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $41,718
4	Add SB lane as right turn lane.	Signal at NW 82nd Ave.	Add lane of 12 ft. x 150 ft. plus 150 ft. taper.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $30,966
5	Add WB third thru lane from NW 79th Ave. to west of NW 82nd Ave.	NW 87th Ave. - SR 826 West	Add lane of 12 ft. x 1500 ft. plus taper of 150 ft. Modify north radii at NW 79th Ave. and NW 82nd Ave. Relocate north mast arms at these two locations also. Replace guard rail for length of new lane.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $252,767
6	Add EB fourth thru lane from west of NW 82nd Ave. to SR 826 West ramp signal.	NW 87th Ave. - SR 826 West	Add lane of 12 ft. x 2400 ft plus entry taper of 150 ft; lane begins west of NW 82nd Ave. Relocate street lights. Acquire ROW (mostly landscaped or vacant) from west of NW 82nd Ave. to NW 79th Ave. (1200 ft.). ROW available to east of NW 79th Ave.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $323,574 * ROW : $576,000
			Relocate south mast arms. Add loop detectors. Rebuild sidewalk for 2400 ft. Modify south radii at NW 82nd Ave.			Construction: $33,312
7	Modify signal timing.	Signals at NW 82nd Ave. and NW 79th Ave.	Modify signal timing per geometric changes.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	No Cost. Dade County staff will perform.
	NOTE: Further modifications at NW 25th St./SR 826 interchange deferred to pending study as interchange type is at capacity due to turning patterns.		*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A11

STATION 404: NW 25TH ST. **NW 97TH AVE. - NW 87TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Restripe and resign EB RT lane as thru/right lane	Signal at NW 87th Ave.	No significant cost.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $8,640
2	Extend added WB thru lane from NW 87th Ave. to west	Signal at NW 87th Ave.	Extend lane (12 ft) for length of 400 ft. west of intersection, with 150 ft taper. Replace signal mast arm on NW corner. No ROW cost due to canal.	Do Nothing. Study of NW 25th St. corridor from NW 87th Ave. to NW 67th Ave. just initiated by FDOT.	Dade County	Construction: $75,571
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.					

TABLE A12

STATION 406: NW 25TH ST. **NW 97TH AVE. - NW 107TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Widen EB approach to add second thru lane.	Signal at NW 107th Ave.	Add second thru lane to south side of existing roadway. Use lane of 150 ft x 12 ft, plus 150 ft. taper. Replace mast arm on SW corner. Add loop detector. Modify signal timing.	Do Nothing.	Dade County	Construction: $35,774 *Dade County Staff will modify signal timing at no additional cost.
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.					

TABLE A13

STATION 432: NW 36TH ST. **NW 87TH AVE. - NW 79TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add WB thru lane on the approach to the signal.	Signal at NW 87th Ave.	Lane should be 12 ft. x 300 ft. long plus 150 ft. taper. Replace sidewalk. ROW appears available.	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County	Construction: $52,008 * ROW : $140,400
2	Modify signal installation.	Signal at NW 87th Ave.	Replace mast arm on the NE corner. Revise signal timing.	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County	Construction: $4,608 *Dade County Staff will modify signal timing at no additional cost.
3	Install EB fourth thru lane on approach to signal.	Signal at NW 79th Ave.	Lane should be 12 ft. x 300 ft. long plus 150 ft. taper. County should plan revised signal plan to accomodate.	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County	Construction: $43,008
4	Install EB thru lane from intersection to SR 826 on-ramp.	Signal at NW 79th Ave.	Use length of 1000 ft. plus 500 ft. taper, as new pavement on south side of existing/committed. County should plan revised signal to accomodate. No ROW needed as FDOT owns parcel to south.	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County and FDOT	Construction: $193,536
5	Install added auxillary lane WB on north side of improved 6-lane typical section.	Signal at NW 79th Ave.	Use length of 700 ft. x 14 ft. to extend from NW 79th Ave. east onto SB exit ramp from SR 826. County should plan revised signal to accomodate. Estimated ROW takes of 2,000 sf of landscaped area and 2,000 sf of parking lot. (Loss of 8 spaces).	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County and FDOT	Construction: $105,370 * ROW : $120,000
6	Modify signal timing	Signal at NW 79th Ave.	Modify signal timing	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County	No Cost. Dade County Staff will perform.
	NOTE: This section is programmed for widening from 4 lanes to 6 lanes.		*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A14

STATION 434: NW 36TH ST. **NW 97TH AVE. - NW 87TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add right turn lane to EB approach to provide third thru lane.	Signal at NW 87th Ave.	Begin at a private drive and extend to intersection as auxillary lane (300 ft. x 12 ft.) with no taper entrance. Traffic pole on SW corner should be okay. Replace sidewalk. ROW take of landscaped area.	Do Nothing. Future concept for an E-W overpass is being studied.	Dade County	Construction: $48,600 * ROW : $108,000
2	Extend added fourth WB thru lane west of signal.	Signal at NW 87th Ave.	Extend added fourth WB thru lane west of signal for distance of 200 ft. plus 150 ft. taper. Estimated ROW take of landscaped area. Replace sidewalk. Replace mast arm on NW corner.	Same as above.	Dade County	Construction: $57,168 * ROW : $156,600
			*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A15

STATION 442: NW 41ST ST. **NW 107TH AVE. - NW 117TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Modify traffic signal timing at SR 821 intersection.		Modify traffic signal timing.	Do Nothing.	Dade County	No cost. Dade County staff will perform.

TABLE A16

STATION 452: NW 58TH ST. **NW 87TH AVE. - SR 826 EAST**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Install WB right turn lane at NW 82nd Ave.	Segment	Will improve traffic operations; need 200 ft. plus 150 ft. taper. No ROW needed.	Do Nothing	Dade County	Construction: $30,720
2	Install WB right turn lane at NW 84th Ave.	Segment	Will improve traffic operations; need 200 ft. plus 150 ft. taper. No ROW needed.	Do Nothing	Dade County	Construction: $30,720
3	Widen to north for WB through lane at NW 87th Ave.; restripe for WB-SB dual left	Signal at N.W. 87th Ave.	Widen to north w/ canal bulkhead. 200 ft. plus 150 ft taper. No ROW needed.	Do Nothing. Complete N.W. 97th Ave.	Dade County	Constuction: $64,440
4	Modify signal installation for widening	Signal at N.W. 87th Ave.	Relocate 2 poles on north side. Modify loop detectors. Modify g/C ratios.	Do Nothing. Complete N.W. 97th Ave.	Dade County	Construction: $1,536
5	Install EB added thru lane from west of NW 79th Ave. to SR 826 SB ramp.	Signal at N.W. 79th Ave.	On EB approach, need 300 ft. with 150 ft. taper. Install on south side. Coordinate with SR 826 project. ROW appears available.	Do Nothing	Dade County	Construction: $43,008
6	Widen to north for added WB thru lane at NW 79th Ave.; restripe for WB-SB dual left turn.	Signal at N.W. 79th Ave.	Widen to north w/ canal bulkhead. 200 ft. plus 150 ft taper. Coordinate with SR 826 project. No ROW needed.	Do Nothing	Dade County Coordinate with FDOT	Constuction: $64,440
7	Modify signal installation for widening.	Signal at N.W. 79th Ave.	Modify signal installation for new geometry. Modify loop detectors. Modify g/C ratios.	Do Nothing	Dade County Coordinate with FDOT	Construction: $1,536
8	Install EB added thru lane at SR 826 East signal.	Signal at SR 826 East ramp	Widen to south 300 ft. plus 150 ft taper; will likely require some slope work or small retaining wall. No ROW needed.	Do nothing (Note: Pending approval, traffic concurrency will not be an issue east of SR 826)	FDOT	Construction: $55,296
9	Modify signal installation for widening.	Signal at SR 826 East ramp	Relocate two signal poles and heads. Modify loop detectors. Modify g/C ratios.	See above	FDOT	Construction: $2,304

TABLE A17

STATION 454: NW 58TH ST. **NW 87TH AVE. - NW 97TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Extend second WB lane through intersection.	Signal at NW 97th Ave.	Extend 200 ft plus 150 ft. taper. No ROW needed.	Complete south leg of NW 97th Ave.	Dade County	Construction: $30,720
2	Extend second EB lane through intersection.	Signal at NW 97th Ave.	Extend 200 ft plus 150 ft. taper. No ROW needed.	Complete south leg of NW 97th Ave.	Dade County	Construction: $30,720
3	Complete signal installation if warranted.	Signal at NW 97th Ave.	Signal installation.	Complete south leg of NW 97th Ave.	Dade County	Construction: $92,160
4	Install EB left turn lane.	Signal at NW 97th Ave.	Minimum length of 150 ft. plus 150 ft taper. No ROW needed.	Complete south leg of NW 97th Ave.	Dade County	Construction: $30,966
5	Modify west leg to accept WB dual left turn.	Signal at NW 87th Ave.	Widen to north w/canal bulkhead. 200 ft. plus 150 ft taper. No ROW needed.	Do Nothing	Dade County	Construction: $47,040

TABLE A18

STATION 482: NW 79TH AVE. **NW 58TH ST. - NW 36TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Stripe NB approach for dual right turn layout.	Signal at NW 58th St.	Use lane layout of one left/through lane and two right turn lanes. No other physical changes. Timing modified under NW 58th Ave. improvements. Cost of this action is negligible.	Do Nothing	Dade County	Construction: $500
2	Stripe SB approach for exclusive dual left turn.	Signal at NW 36th St.	Use lane layout of one through/right lane and two left turn lanes. No other changes. Timing modified under NW 36th St. actions. Cost of this action is negligible. No ROW needed.	Do Nothing	Dade County	Construction: $500
	Note: NW 79th Ave. to be widenend as described in the County's TIP.					

TABLE A19

STATION 484: NW 79TH AVE. **NW 25TH ST. - NW 36TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add NB right turn lane	Signal at NW 36th St.	In addition to the programmed widening, add NB right turn lane to the east side of the proposed 5-lane widening for a length of 300 ft. plus 150 ft. taper. A strip ROW taking of a few feet may be needed on the east side.	Do Nothing	Dade County	Construction: $43,008 ROW: $108,000
	NOTE: NW 79th Ave. to be widened as described in the County's TIP.		**NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

TABLE A20

STATION 494: NW 97TH AVE. **NW 12TH ST. - NW 25TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Widen from two to four lane divided	NW 25th St. - NW 12th St.	To be funded by developer by 1996 at cost of $1,372,000	Do Nothing	Developer	Construction: $1,372,000
2	Construct bridges over SR 836	NW 25th St. - NW 12th St.	To be funded 50% by developer before 1996.	Do Nothing	Developer and Dade County	Construction: $10,000,000
3	Extend NW 97th Ave. from bridges to Fontainbleau Bl. and improve this intersection	NW 25th St. - NW 12th St.	To be funded partially (19%) by developer.	Do Nothing	Developer and Dade County	Construction: $578,000
4	Improvements at Flagler St. and SW 8th St.	Intersection	Lane additions (total cost of $576,000, 9% by developer)	Do Nothing	Developer and Dade County	Construction: $576,000
5	Widen from two lanes to four lanes from NW 37th St. south to NW 25th St.	NW 25th St. - NW 12th St.	1,400 lineal feet of 4 lane divided section, and 2,600 lineal feet of added 2-lane half section.	Do Nothing	Developers and Dade County	Construction: $1,425,600
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.					

TABLE A21

STATION 510: NW 107TH AVE. **NW 25TH ST. - NW 12TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add third SB lane by widening into the median.	NW 25th St.- NW 12th St.	Add pavement area of 1900 ft x 12 ft in median area. Relocate or remove palm trees. No ROW.	Do Nothing.	Dade County	Construction: $245,146
2	Modify traffic signal timing at NW 14th St. and NW 12th St.		Modify in accordance with added lane.	Do Nothing.	Dade County	No Cost. Dade County Staff will perform.
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.					

TABLE A22

STATION 589: SW 8TH ST. **SW 87TH AVE. - SW 107TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
	NO ACTION				Dade County	
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.		NOTE: Actions on this segment may require FDOT PD & E Study if improvements are considered significant.			

TABLE A23

STATION 1141: FLAGLER ST. **SR 826 WEST - WEST 87TH AVE.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
	NO ACTION				Dade County	
			NOTE: Actions on this segment may require FDOT PD & E Study if improvements are considered significant.			

TABLE A24

STATION 1211: NW 87TH AVE. **SR 836 SOUTH - FLAGLER ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Refer to TSM project under development as part of SR 836 East-West Study	Signal at SR 836 South ramp	Signal Installation.	Do Nothing.	FDOT	Construction: $92,160
	NOTE: This improvement has been coordinated with potential TSM improvement at NW 87th Ave. interchange with SR 836 presently under development.	NOTE: this improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.				

TABLE A25

STATION 1218: WEST 107TH AVE. **SR 836 SOUTH - SW 8TH ST.**

	ACTION	ASSOCIATED WITH	TYPE OF IMPROVEMENT	ALTERNATIVE ACTION	AGENCY	TOTAL ESTIMATED COSTS ($)
1	Add third SB thru lane and SB right turn lane.	Signal at Flagler St.	Add thru lane to west side of existing road (12 ft x 250 ft plus 100 ft taper) and add right turn lane to west of new thru lane (12 ft x 150 ft, plus 100 ft. taper).	Do Nothing.	FDOT and Dade County	Construction: $67,092
			Will require ROW affecting about 10 parking spaces, and may clip part of service station building.			* ROW : $1,616,000
2	Add NB thru lane exiting intersection.	Signal at Flagler St.	Add NB thru lane north of intersection. Extend for 400 ft. north (12 ft. wide) with 150 ft. taper. ROW will be needed from open space in front of Baxter.	Do Nothing.	FDOT and Dade County	Construction: $70,963 * ROW : $59,000
3	Replace signal mast arms on all four corners.	Signal at Flagler St.	Affected due to widening of all approaches. Add loop detectors to new lanes. Will constitute near full replacement.	Do Nothing.	FDOT and Dade County	Construction: $21,506
4	Modify signal timing	Signal at Flagler St.	Modify according to revised geometry and traffic.	Do Nothing.	FDOT and Dade County	Construction: $200
5	Add third SB thru lane and SB right turn lane.	Signal at Flagler St.	Add thru lane to east side of existing road (12 ft x 250 ft + 100 ft taper) and add right turn lane east of thru lane (12 ft x 150 ft, + 100 ft taper). Will require ROW affecting about 10 parking spaces. May clip part of service station building.	Do Nothing.	FDOT and Dade County	Construction: $67,092 * ROW : $804,660
6	Add SB thru lane exiting intersection.	Signal at Flagler St.	Add SB thru lane south of intersection. Extend for 400 ft. south (12 ft. wide) with 150 ft taper. ROW will be needed from retail parking area (25 spaces affected).	Do Nothing.	FDOT and Dade County	Construction: $70,963 * ROW : See (5) above.
	NOTE: This improvement has considered the redistribution of traffic associated with the construction of NW 97th Ave. over SR 836.		NOTE: Actions on this segment may require FDOT PD & E study if improvements are considered significant.			
			*** NOTE: The Right of Way (ROW) cost inserted in the above table is only an estimate of land value to be taken and does not include business damages.**			

Appendix B

Narrative Description of Benefits and ROW Costs

Table B4

Station 156: Flagler St. W 97th Ave. - W 107th Ave

Right of Way: **ROW affecting 10 parking spaces and may clip part of building for Mobil Service Station.**
ROW will be needed for open space in front of Baxter.

Actions: **1**

Add new lane to north of existing roadway to permit installation of WB - NB dual left turn. The subject properties are discussed below.

Dade International (Formerly Baxter)

Dade International (formerly Baxter Diagnostics Inc.) is located on the NE corner of this intersection. The land area for the ROW has been identified as approximately 12 ft by 400 ft plus 200 ft taper and will only involve landscaping. The higher of market value or assessed value for this parcel is approximately $6.25/sq ft; including the multiplier, the square foot cost of is approximately $10. This would put the land cost of the ROW at $63,000.

Dade International management may not agree with the assigned land value as discussed above and may claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of this Dade International and is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Total ROW costs

The total land ROW cost for the road improvements for Station 156 would be approximately $63,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions
Ease present traffic congestion, therefore reduced travelling time for motorists in the area.

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses locating in the area. The majority of the parcels in this project area are already developed . The area consists of food restaurants, strip shopping centers, a medical center and several gas stations.

Further north on SW 107th Ave is a shopping strip and apartment buildings. There is one parcel of undeveloped land on the right just before SR 826. West on Flagler, there are apartment buildings on the right, a mobile home park, and single family homes. On the left are more shopping strips. To the west, there is a vacant undeveloped property containing 1.76 acres for sale near SW 114th and Flagler. There is more development and building construction at Flagler and 118th Ave.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the county from these improvements may be an increase in sales, business and property tax.

Table B5

Station 158: Flagler St. W 107th Ave - W 114th St.

Right of Way: **Will Clip Mobil Service Station canopy. Will partially affect 25 retail parking spaces from the Laguna shopping center.**

Actions: **1**

Add new lane to north of existing roadway to permit installation of EB - NB dual left turn. The subject property is discussed below.

Mobil Gas Station

See discussion of the take at the Mobile Gas Station under Station 1218.

Laguna Shopping Plaza

This shopping plaza is located on the NW corner of the intersection of Flagler St. and NW 107th Ave. The plaza contains an Eckerd drug store, a Big City Liquors store, and a strip of other shops and restaurants.

The land area for the ROW has been identified as approximately 12 ft by 400 ft with a 200 ft taper. The higher of market value or assessed value for this parcel is approximately $12.50/sq ft; with the multiplier, the square foot cost is approximately $19/sq ft . This would put the land cost of the ROW at $119,000.

The shopping center management may not agree with the assigned land value as discussed above and may claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of this shopping center and is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Total ROW costs

The total land ROW cost for the road improvements for Station 158 would be approximately $119,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions
Ease present traffic congestion, therefore reduce travelling time for motorists in the area.

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses locating in the area. The majority of the parcels in this project area are already developed. The area consists of food restaurants, strip shopping centers, a medical center and several gas stations.

Further north on SW 107th Ave is a shopping strip and apartment buildings. There is a parcel of undeveloped land on the right just before SR 826. Going west on Flagler St., there are apartment buildings on the right, a mobile home park, and single family homes. On the left side are more shopping strips. Going further west, there is a vacant undeveloped property for sale containing 1.76 Acres near SW 114th Ave and Flagler St. There is more development and building construction at Flagler St. and 118th Ave.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the county from these improvements may be an increase in sales, business and property taxes.

Table B6

Station 162: NW 87th Ave. NW 25th St. - NW 12th St.

Right of Way:

Actions: 1 & 2

1) Add a 12 ft. southbound lane from NW 25th Street to 300 ft. south of NW 12th St. This action will cause various ROW takings from the west side of NW 87th Ave.
2) Modify the traffic signal at NW 12th St. The subject properties are discussed below. The properties are described beginning at the north end of NW 87th Ave. and proceeding south to NW 12th St.

Chevron Gas Station:

The Chevron Station is located on the southwest corner of NW 87th Ave. and NW 25th St. The ROW taking will involve a 12 ft. by 150 ft. strip along the eastern boundary of the property. This area consists solely of landscaping. The distance from the current ROW to the easternmost hedge outlining the property's paved area is approximately 15 ft.

The land area for the ROW is approximately 1800 sq. ft. The higher of market value or assessed value for this parcel is approximately $20/sq.ft; with the multiplier, the square foot cost is approximately $30. This would put the land cost of the ROW at $54,000.

The ROW take should not adversely affect the parking or flow of traffic at this location. A possible scenario for a partial taking of the paved area would be a failure to obtain a set back variance. The project's traffic engineers have indicated that such a variance would most likely be forthcoming. Should it be necessary to reduce some of the paved area, there may be an assertion of business damages. The potential business damages cannot be calculated without an intense analysis of the business and financial operations of the gas station and is therefore not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are not included in this cost estimate.

Wendy's International

A Wendy's fast food outlet is located just to the south of The Chevron Station. The ROW taking will involve a 12 ft. by 150 ft. strip along the eastern boundary of the property. This area consists solely of landscaping. The distance from the current ROW to the easternmost hedge outlining the property's paved area is approximately 23 ft.

Wendy's International (con't)

The land area for the ROW is approximately 1800 sq. ft. The higher of market value or assessed value for this parcel is approximately $9.50/sq.ft. With the multiplier, the square foot cost is approximately $15. This would put the land cost of the ROW at $27,000.

The ROW take should not adversely affect the parking or flow of traffic at this location. A possible scenario for a partial taking of the paved area would be a failure to obtain a set back variance. The project's traffic engineers have indicated that such a variance would most likely be forthcoming. Should it be necessary to reduce some of the paved area, there may be an assertion of business damages. The potential business damages cannot be calculated without an intense analysis of the business and financial operations of Wendy's and is therefore not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Gateway Center - North of NW 18th Terrace

South of Wendy's, the next 1650 ft. fronts on vacant land and an office and retail complex called America's Gateway Park. According to the traffic engineers, no ROW taking will be required in this area.

Gateway Center - South of NW 18th Terrace

The next 490 ft. fronts on vacant land owned by America's Gateway Park. According to the traffic engineers, a ROW taking will be required in this area.

The land area for the ROW is approximately 5880 sq. ft. The higher of market value or assessed value for this parcel is approximately $9.00/sq.ft. With the multiplier, the square foot cost is approximately $14. This would put the land cost of the ROW at $83,000.

Servitech, Inc.

The next 155 ft. fronts on vacant land owned by Servitech, Inc. According to the traffic engineers, a ROW taking will be required in this area.

The land area for the ROW is approximately 1860 sq. ft. The higher of market value or assessed value for this parcel is approximately $10.50/sq.ft. With the multiplier, the square foot cost is approximately $16. This would put the land cost of the ROW at $83,000.

Fraga Carpets

The next 175 ft. fronts on property owned by Lazaro and Marina Fraga. Situated on this land is a retail carpet outlet. The building contains 21,870 sq. ft. According to the traffic engineers, a ROW taking will be required in this area.

The land area for the ROW is approximately 2100 sq. ft. The higher of market value or assessed value for this parcel is approximately $10.50/sq.ft. With the multiplier, the square foot cost is approximately $16. This would put the land cost of the ROW at $34,000.

The ROW take should not adversely affect the parking or flow of traffic at this location. A possible scenario for a partial taking of paved area would be a failure to obtain a set back variance. The project's traffic engineers have indicated that such a variance would most likely be forthcoming. Should it be necessary to reduce some of the paved area, there may be an assertion of business damages. The potential business damages cannot be calculated without an intense analysis of the business and financial operations of Fraga Carpets and is therefore not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

A + Mini Storage

The next 330 ft. fronts on property owned by Mini - Warehouses of Kendall. Situated on this land is a U-Haul truck and trailer rental outlet. According to the traffic engineers, a ROW taking will be required in this area.

The land area for the ROW is approximately 3960 sq. ft. The higher of market value or assessed value for this parcel is approximately $10/sq.ft. With the multiplier, the square foot cost is approximately $15. This would put the land cost of the ROW at $60,000.

The ROW take will require relocation of fencing surrounding the lot containing the rental trucks and trailers. Such relocation should not encroach on any paved parking area within the lot. The area involved does not appear to be used for vehicle storage.

The above not withstanding, the property owners may still claim business damages as a result of the taking. The potential business damages cannot be calculated without an analysis of the business and financial operations of the rental business and is therefore not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included

in this cost estimate.

Galloway Real Estate, Inc.

The next 200 ft. fronts on vacant land owned by Galloway Real Estate, Inc. According to the traffic engineers, a ROW taking will be required in this area.

The land area for the ROW is approximately 2400 sq. ft. The higher of market value or assessed value for this parcel is approximately $10/sq.ft. With the multiplier, the square foot cost is approximately $15. This would put the land cost of the ROW at $36,000.

Israel and Tania Lapciuc

The next 400 ft. fronts on vacant land owned by Israel and Tania Lapciuc. According to the traffic engineers, a ROW taking will be required in this area.

The land area for the ROW is approximately 4800 sq. ft. The higher of market value or assessed value for this parcel is approximately $10/sq.ft. With the multiplier, the square foot cost is approximately $15. This would put the land cost of the ROW at $72,000.

Shell Gas and Service Station/Convenience Store

The Shell Station is located on the northwest corner of NW 87th Ave. and NW 13th Terrace. The ROW taking will involve a 12 ft. by 200 ft. strip along the eastern boundary of the property. This area consists of landscaping, signage, and possibly one parking space.

The land area for the ROW is approximately 2400 sq. ft. The higher of market value or assessed value for this parcel is approximately $18/sq.ft; with the multiplier, the square foot cost is approximately $27. This would put the land cost of the ROW at $65,000.

The ROW take may directly affect one parking space out of twenty spaces on the property. A possible scenario for the taking of additional paved parking area would be a failure to obtain a set back variance. The project's traffic engineers have indicated that such a variance would most likely be forthcoming. Should it be necessary to reduce some of the paved area, there may be an assertion of business damages. There is also the possibility of the property owner asserting business damages as a result of relocating their sign. The potential business damages cannot be calculated without an intense analysis of the business and financial operations of the businesses on this property and is therefore not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

United Tile Corporation

An office/showroom/warehouse building occupied by United Tile Corporation is located on the southwest corner of NW 87th Ave. and NW 13th Terrace. The ROW taking will involve a 12 ft. by 300 ft. strip along the eastern boundary of the property. This area consists solely of landscaping. The distance from the current ROW to the easternmost hedge outlining the property's paved parking area is approximately 27 ft.

The land area for the ROW is approximately 3600 sq. ft. The higher of market value or assessed value for this parcel is approximately $18/sq.ft; with the multiplier, the square foot cost is approximately $27. This would put the land cost of the ROW at $98,000.

The ROW take should not adversely affect the parking or flow of traffic at this location. A possible scenario for a partial taking of paved area would be a failure to obtain a set back variance. The project's traffic engineers have indicated that such a variance would most likely be forthcoming. Should it be necessary to reduce some of the paved area, there may be an assertion of business damages. The potential business damages cannot be calculated without an intense analysis of the business and financial operations of the tile company and is therefore not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Medical Center

A medical center owned by Digital Scanning Corp. is located on the small (16,117 sf) lot situated between the CSX railroad tracks and the on-ramp to SR 836 West. The traffic engineers have indicated that no taking will be required as a result of roadway modifications at this location.

There is the possibility that the property owner will assert that the roadway modifications in front of his property results in business damages. Since it is not possible to determine if such assertions will be made or if they will have any merit, there is no provision for any damage award in these cost estimates.

Total ROW costs

The total land ROW cost for the road improvements for Station 162 would be approximately $612,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses locating in the area. Some of the parcels in this project area are either already developed or planned developments. The area consists of warehouse and office space, retail outlets, food restaurants, and a gasoline station. Approximately seventy percent of the frontage on the southbound lanes of NW 87th Ave. between NW 12th and NW 25th streets consists of vacant land.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The warehouses may see increased revenue from ease of trucking operations to their sites. The offices may see an increase in occupancy because of improved access to their sites.

The vacant land may be developed more quickly than otherwise due to an increased southbound flow of traffic on NW 87th Ave. and a decrease in congestion at the intersection of NW 87th Ave. and NW 12th St.

The overall economic benefit to the county from these improvements may be an increase in sales, business and property tax.

Table B7

Station 164: NW 87th Avenue NW 41st St. - NW 25th St.

Right of Way:

Action: 1

Add a SB right turn lane at NW 36th St. This action would cause a ROW taking on the west side of NW 87th Ave. The subject property is discussed below.

Doral Country Club:

The Signature Sign (consisting of landscaping) for Doral Country Club is on the northwest corner of NW 87th Ave. and NW 36th St. The road widening will require taking of landscaping abutting the sign. It is therefore likely that the sign will have to be redesigned and relocated as a result of the taking.

The land area for the ROW has been identified as approximately 250 ft. by 12 ft. plus a 150 ft. taper. The market value or assessed value for corner parcels in this area is approximately $20/sq.ft. With the multiplier, the square foot cost would be approximately $30. Due to the specialized landscaping for the country club and the close proximity of the take to the "Doral" sign, an additional 1.5 multiplier has been applied to the $30 estimate to arrive at a total estimated square footage cost of $45. This would put the land cost of the ROW at $184,000.

Doral management may not agree with the assigned land value as discussed above and the may also claim business damages resulting from changes that may be required in their sign. Therefore any monetary effect of such claims is not reflected in the above cost estimate.

There may be a temporary disruption of ingress/egress to the country club during the construction period. Any damage claim resulting from such disruption is likewise not included in the cost estimate.

Action: 2

Add a SB through lane on approach to the signal at NW 25th St. This action would cause a ROW taking on the west side of NW 87th Ave. The subject property is undeveloped

Undeveloped property:

The land area for the ROW has been identified as approximately 300 ft. by 12 ft. plus a 150 ft. taper. The market value or assessed value for corner parcels in this area is approximately

$20/sq.ft. With the multiplier, the square foot cost would be approximately $30. This would put the land cost of the ROW at $140,000.

Total ROW costs

The total land ROW cost for the road improvements for Station 164 would be approximately $324,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

In the case of Action 1, increased southerly traffic flow past the Doral Country Club may positively affect this business during peak periods.

With respect to Action 2, increased southerly flow may positively affect the Westpointe Development at NW 36th St. This development contains warehouse, office, and retail facilities. The area just south of NW 33rd St. contains vacant land. Potential development of this land will be enhanced by increased southerly flow on NW 87th Ave.

Table B8

Station 358: NW 12th Street NW 72nd Ave - NW 87th Ave

Actions: 1,2,4

1) Add WB thru lane; 2) Add WB right turn lane; 4) Create dual WB - SB left turn lanes. This action would cause a ROW taking from the north side of NW 12th St. The subject properties are discussed below.

Miami Subs:

The Miami Subs Restaurant is located on the northeast corner of NW 87th Ave. and NW 12th St. The ROW taking will involve a 12 ft. by 200 ft. strip along the southern boundary of the property. This area consists solely of landscaping. The distance from the current ROW to the southernmost hedge outlining the property's paved area is approximately 25 ft.

The land area for the ROW is approximately 2400 sq. ft. The higher of market value or assessed value for this parcel is approximately $20/sq.ft; with the multiplier, the square foot cost is approximately $30. This would put the land cost of the ROW at $72,000.

The ROW take should not adversely affect the parking or flow of traffic at this location. A possible scenario for a partial taking of the taking of paved area would be a failure to obtain a set back variance. The project's traffic engineers have indicated that such a variance would most likely be forthcoming. Should it be necessary to reduce some of the paved area, there may be an assertion of business damages. Should a parking take be necessary, it is estimated that 11 out of a total 59 parking spaces (19%) would be eliminated. The potential business damages cannot be calculated without an intense analysis of the business and financial operations of the restaurant and is therefore not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Undeveloped Parcel:

There is undeveloped land east of the Miami Subs parcel which is identified as part of the ROW take. Approximately 700 feet by 12 feet of this undeveloped parcel may be taken. This amounts to 8400 sq. ft. Land values in the area range between $10/sq.ft. to $15/sq.ft.. Based on the highest assessment, and the multiplier, the approximate cost of the potential ROW is $189,000.

Action: 3

Add a WB lane to the SR 836 on-ramp. This action involves extending a new lane on the north side of the existing ramp west of NW 87th Ave.

Medical Center

A medical center owned by Digital Scanning Corp. is located on the small (16,117 sf) lot situated between the CSX railroad tracks and the on-ramp to SR 836. The traffic engineers have indicated that no taking will be required as a result of roadway modifications at this location.

There is the possibility that the property owner will assert that the roadway modifications in front of his property results in business damages. Since it is not possible to determine if such assertions will be made or if they will have any merit, there is no provision for any damage award in these cost estimates.

Actions: 5 thru 8

The traffic engineers have indicated that there will be no ROW takings involved in these actions.

Total ROW costs

The total land ROW cost for the road improvements for Station 358 would be approximately $261,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses locating in the area. The majority of the parcels in this project area are either already developed or planned developments.

In the area immediately to the north of NW 12 St. from NW 72nd Ave. to NW 87th Ave. and north to NW 25th St., there are many large office/warehouse complexes which would be favorably impacted by a smoother traffic flow west on NW 12th St. In addition there are several business

establishments fronting on NW 12th St. which will surely benefit from increased flow on NW 12th St. Some of these businesses are Thompson Aerospace, The Door Store, Eagle Bank, Adler Group Offices, Steak - Out Restaurant, Scandinavian Health Center, Fire Fighter's Medical Building, Marriott Residence Hotel, Village at Beacon Center (strip shopping center containing El Tropical Restaurant and some 15 retail outlets), Shell Service Station, McDonald's, Saturn Dealership (under construction), and Miami Subs.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The warehouses may see increased revenue from ease of trucking operations to their sites. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the county from these improvements may be an increase in sales, business and property tax.

Table B9

Station 400: NW 25th Street SR 826 West - Milam Dairy Road

Right of Way: N/A

Action:

Widen EB approach to add second through lane.

There is no ROW associated with this action.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

These benefits may translate into temporary construction jobs. The majority of the parcels in this project area are either already developed or planned developments. The area consists of businesses such as food restaurants, warehouse space, office space, Inter-Continental Bank, Dade Paper Company, Ocean Bank, and the Airport Corporate Center.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The warehouses may see increased revenue from ease of trucking operations to their sites. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the County from these improvements may be an increase in sales, business and property tax.

Table B10

Station 402: NW 25th Street NW 87th Avenue - SR 826 West

Right of Way: ROW available to the East of NW 79th Ave.

Action: 6

Add an EB fourth through lane from west of NW 82nd Ave. to SR 826 West ramp signal. The subject properties are discussed below.

Miami International Commerce Center

Miami International Commerce Center is an Office Park with Retail/Office and Showroom space. It is located on the SE corner of NW 82nd Ave and NW 25th St., and has good visibility. The action will require ROW taking of the landscaped area in front of the property facing 25th street.

The land area for the ROW has been identified as approximately 1,200 ft. by 12 ft. The higher of market value or assessed value for this parcel is approximately $25/sq ft. This would put the land cost of the ROW at $360,000. This number does not include potential litigation cost which may arise if the owner does not agree with the market value of the property as identified .

The ROW taking may result in both temporary construction and permanent valuation damages. Temporary damages may occur during the construction period and may have an adverse impact on the ingress/egress to the subject property. This may result in a temporary loss of business. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of Miami International Commerce Center, and is not included in this cost estimate.

Undeveloped Parcel:

There is undeveloped land east of the subject parcel, which is identified as part of the ROW take. Approximately 1,200 ft. by 12 ft. of this undeveloped parcel may be taken. If the take occurs before development, the value of the land may be the ultimate determination of the cost of the ROW take. Land values in the area range between $10/sq ft. to $15/sq ft. Based on the higher of the assessed or market value of the land, the approximate cost of the potential ROW is $216,000.

Total ROW costs

The total land ROW cost for the road improvements for Station 402 would be approximately $576,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses located in the area. The majority of the parcels in this project area are either already developed or planned developments. The area consists of businesses such as restaurants, strip shopping centers, warehouse space, Goodyear tire company, Federal Express, Eastern National Bank, Incredible Universe and an Amoco gas station.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The warehouses may see increased revenue from ease of trucking operations to their sites. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the county from these improvements may be an increase in sales, business and property tax.

Table B11

Station 404: NW 25th Street NW 97th Avenue - NW 87th Avenue

Right of Way: N/A

Action:

1) Restripe and resign EB right turn lane and 2) Extend an added West Bound through lane from NW 87th Ave. to the west.

There is no ROW associated with this action due to the canal which runs parallel to NW 25th Street.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

These benefits may translate into temporary construction jobs. The majority of the parcels in this project area are either already developed or planned developments. The area consists of businesses such as restaurants, strip shopping centers, warehouse space, Wendy's, El Pollo Supremo Restaurant, America's Gateway Park/Center, Westpointe Park, and Chevron gas station.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The warehouses may see increased revenue from ease of trucking operations to their sites. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the County from these improvements may be an increase in sales, business and property tax.

Table B12

Station 406: NW 25th Street NW 97th Ave. - NW 107th Ave.

Right of Way: N/A

Action:

Widen EB approach to add second through lane.

There is no ROW associated with this action.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential accelerated development due to improved road conditions

These benefits may translate into temporary construction jobs. The majority of the parcels in this project area are either already developed or planned developments. The area consists of businesses such as warehouse space, office space, Costa Verde Apartments, and the International Corporate Park.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the area. The warehouses may see increased revenue from ease of trucking operations to their sites. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the County from these improvements may be an increase in sales, business and property tax.

Table B13

Station 432: NW 36th St. NW 87th Ave - NW 79th Ave

Right of Way: ROW take of landscaped area from the Doral Country Club driveway.

Actions: 1 & 5

1) Add WB through lane on the approach to the signal.
5) Install added WB auxiliary lane on north side of improved 6-lane section.

The subject property is discussed below.

Sunbank/Royal Palm Executive Center/Symbiosis

The land area for the ROW take in Action 1 above has been identified as approximately 12 ft x 300 ft plus a 150 ft taper. The traffic engineers have indicated that the ROW may be available. However, in the interests of conservatism, the cost of this ROW is projected should a take become necessary.

Even though the assessed value of this parcel is $12.50/sq ft, corner parcel current market values for a site like this range between $20 - $30/sq ft. Using the higher value would put the land cost of the ROW at $140,400.

Should a take be required, the business owners along the line of the take may not agree with the assigned land value as discussed above and may claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of the businesses and is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Office Building/Courtyard by Marriott/Fairfield Inn

The land area for the ROW take in Action 5 above has been identified as approximately 4,000 sq ft Even though the assessed value of this parcel is $12.50/sq ft, corner parcel current market values for a site like this range between $20 - $30/sq ft. Again, using the higher market value would put the land cost of the ROW at $120,000.

It is estimated that the take will involve 2,000 sq ft of landscaping and 2,000 sq ft of parking area (8 parking spaces). The business owners may not agree with the assigned land value as discussed above and will most likely claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of the businesses along the line of take and is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Total ROW costs

The total land ROW cost for the road improvements for Station 432 would be approximately $260,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions
Ease present traffic congestion, therefore reduce travelling time for motorists in the area.

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses locating in the area. The majority of the parcels in this project area are already developed . The area consists of restaurants, strip shopping centers, warehouse space, office space, Transal Business Park, Galloway Financial Center, Ryder Systems Inc, and several gas stations.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the County from these improvements may be an increase in sales, business and property taxes.

Table B14

Station 434: NW 36th St. NW 97th Ave - NW 87th Ave

Right of Way: ROW take of landscaped area from the Doral Country Club driveway.

Actions: 1 & 2

1) Add right turn lane on EB approach to provide third through lane. 2) Extend added fourth WB through lane west of signal at the intersection of NW 36th St. and 87th Ave.

The subject properties are discussed below.

Doral Country Club

The Signature Sign (consisting of landscaping) for the Doral Country club is on the northwest corner of NW 87th Ave. and NW 36th St. The road widening will require taking of the landscaping. It is therefore likely that the sign will have to be redesigned and relocated as a result of the taking.

The land area for the ROW has been identified as approximately 200 ft plus a 150 ft taper. The market value or assessed value for corner parcels in this area is approximately $20/sq ft. With the multiplier, the square foot cost would be approximately $30. Due to the specialized landscaping for the Country Club and the close proximity of the take to the "Doral" sign, we have applied a further multiplier to the $30 estimate to arrive at a total estimated square footage cost of $45. This would put the land cost of the ROW at $157,000.

Doral management may not agree with the assigned land value as discussed above and may also claim business damages resulting from any changes required in their sign. Any monetary effect of such claims is not reflected in the above cost estimate.

There may be a temporary disruption of ingress/egress to the country club during the construction period. Any damage claim resulting from such disruption is likewise not included in the cost estimate.

CitiBank Building

The CitiBank building is located on the northeast corner of this intersection. The land area for the ROW has been identified as approximately 300 ft x 12 ft. The market value or assessed value for corner parcels in this area is approximately $20/sqft.

With the multiplier, the square foot cost would be approximately $30. This would put the land cost of the ROW at $108,000.

CitiBank management may not agree with the assigned land value as discussed above and may claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of this CitiBank Branch and is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Total ROW costs

The total land ROW cost for the road improvements for Station 434 would be approximately $265,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions
Ease present traffic congestion, therefore reduce travelling time for motorists in the area.

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses locating in the area. The majority of the parcels in this project area are already developed . The area consists of restaurants, strip shopping centers, warehouse space, office space, Transal Business Park, Galloway Financial Center, Ryder Systems Inc, and several gas stations.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the County from these improvements may be an increase in sales, business and property taxes.

Tables B16 & B17

Station 452/454: NW 58th Street NW 97th Ave - SR 826 East

Right of Way: N/A

Action:

Extend EB and WB through lanes, and complete signal installation at NW 97th Ave and NW 58th Street.
Install WB right turn lane at NW 82nd and 84th Ave intersections.
Widen to north for WB through lane at 87th Ave.
Install EB through lane at NW 79th Ave.
Install EB through lane at SR 826 East signal.
All of the above include additional minor work.

There is no ROW associated with any of these actions as most of the work is coordinated with the SR 826 project.

Economic Benefits for these stations are measured in a number of ways.

Increased traffic through these road segments
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

These benefits may translate into temporary construction jobs. The majority of the parcels in this project area are either already developed or planned developments. The area consists of businesses such as restaurants, warehouse space, office space, Doral Park offices, Doral Park Apartments, Doral Landing Apartments, Metro Dade Police Training Bureau, Dade County Public Works, Kelly Tractor Company, Tractor America and GoodYear Tire company.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The warehouses may see increased revenue from ease of trucking operations to their sites. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the County from these improvements may be an increase in sales, business and property tax.

Table B18

Station 482: NW 79th Avenue, NW 58th St. - NW 36th St.

Right of Way: N/A

Action:

1) Stripe NB approach for dual right turn at NW 58th Street, and 2) Stripe SB approach for dual left turn at NW 36th St.

There is no ROW associated with any of these actions as the cost of the work is negligible.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity

For restriping the roadway, no discernible economic benefits are evident other than easier flow of traffic in that general direction resulting in reduced travel time for motorists gaining access to the area. The area consists of businesses such as Brink Electrical equipment showroom, Ackerly Communication Outdoor Advertising, Sunshine Bottling Company, Tractor America, McDonalds, and the Koger Office Center.

Table B19

Station 484: NW 79th Ave NW 25th St. - NW 36th St.

Right of Way: A strip ROW taking of a few feet may be needed on the east side of the intersection of NW 36th St. and 79th Ave.

Action: 1

Action is to add a NB right turn lane at the intersection of NW 36th St. and 79th Ave.

Office Building/Courtyard by Marriott

There is an office building on the northeast corner of NW 36th Street and 79th Ave. There also is an entrance to a Courtyard by Marriot Hotel to the north of the intersection. The action may require ROW taking of the landscaped area in front of the property, facing NW 36th Street.

The land area for the ROW has been identified as approximately 300 ft. by 12 ft. The higher of market value or assessed value for this parcel is approximately $20/sq ft. With the multiplier, the square foot cost would be approximately $30. This would put the land cost of the ROW at $108,000.

The property owner may not agree with the assigned land value as discussed above and may claim business damages resulting from encroachment onto their property. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of the office and Courtyard by Marriott Hotel, and, therefore, is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Total ROW costs

The total land ROW cost for the road improvements for Station 402 would be approximately $576,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses located in the area. The majority of the parcels in this project area are either already developed or planned developments. The area consists businesses such as restaurants, strip shopping centers, warehouse space, Miami Subs, Milano Marble & Tile, Boykin Shopping Center, Ryder Systems Inc, Transal Business Park, Galloway Financial Center and a Shell gas station.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to area. The warehouses may see increased revenue from ease of trucking operations to their sites. The overall economic benefit to the county from these improvements may be an increase in sales, business and property taxes.

Table B21

Station 510: NW 107th Avenue NW 25th St. - NW 12th St.

Right of Way: N/A

Action:

Action here is to add a third SB lane by widening into the median.

There is no ROW associated with this action as it will entail relocating or removing palm trees in the already existing (wide) median.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential accelerated development due to improved road conditions

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses located in the area. The majority of the parcels in this project area are either already developed or planned developments. The area consists of businesses such as restaurants, Kids-R-Us, Miami International Mall, Dino Di Milano Corp, Dade County Employee Credit Union and Groto's Marble and Granite.

A positive long term general economic output may occur because of an increase in the flow of traffic while providing easier access for patrons to the area. The overall economic benefit to the county from these improvements may be an increase in sales, business and property taxes.

Table B24

Station 1211: NW 87th Avenue SR 836 South - Flagler St.

Right of Way: N/A

Action:

Signal installation at SR 836 South ramp.

There is no ROW associated with this action.

Economic Benefits for this station are measured in a number of ways.

For this signal installation, no discernible economic benefits other than regulating traffic flow, easing traffic congestion , and possibly reducing automobile accidents for motorists gaining access to the area. There are some apartment buildings in the area..

Table B25

Station 1218: NW 107th Ave SR 836 South - SW 8th Street

Right of Way: **ROW taking affecting 10 parking spaces and may clip part of Fina Gas Station and Mobil Gas Station buildings**
ROW will be needed for open space in front of Baxter.

Actions: **1 - 4**

1) Add a third SB through lane and a SB right turn lane 2) Add a NB through lane exiting the intersection. 3) Add a third NB through lane and a SB right turn lane 4) Add SB through lane exiting intersection of Flagler St. and 107th Ave. The subject properties are discussed below.

Luis Mobil Gas Station

Luis Mobil Gas Station is on the northwest corner of the intersection of Flagler St. and NW 107th Ave. The station, which is a corner lot, is highly visible and has three service bays. This property is in the Laguna Plaza shopping Center. There is an Eckerd drug store here, and a strip of shops and restaurants.

The land area for the ROW has been identified as approximately 12 ft by 150 ft plus a 100 ft taper. The ROW may clip part of the service station building. The higher of market value or assessed value for this parcel is approximately $12.50/sq ft. Even though the assessed value of this parcel is $12.50/sq ft, corner parcel current market values for a site like this ranges between $20 - $30/sq ft.

Although the total area used to construct the new through lane and turn lanes that affect this parcel is only 12 ft x 150 ft plus 100 ft taper, this taking will most likely render this business inoperable or completely damaged, and therefore, the total square footage for the parcel will be used in calculating the ROW acquisition cost. (This is considered a total take of the property).

This would put the land cost of the ROW at $771,000. Since the ROW take will affect a substantial portion of the business, the cost of the building needs to included. It is currently assessed at $100,914 and thus, the total assessed value of the business is approximately $872,000.

The owner of this business may not agree with the assigned land value as discussed above and will most likely claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of Luis Mobil Gas Station and is not included in this cost estimate.

First Union Bank

First Union bank is north of the Mobil Gas Station bordering SW 107th Ave. It is also part of the Laguna Plaza Shopping Center. The center contains an Eckerd drug store and a strip of shops and restaurants.

The land area for the ROW has been identified as approximately 12 ft by 150 ft with a 100 ft taper. The ROW will eliminate about 10 parking spaces. The higher of market value or assessed value for this parcel is approximately $12/sq ft; with the multiplier, the square foot cost of is approximately $18.

Although the total area used to construct the new through lane and turn lanes that affect this parcel is only 12 ft x 150 ft plus a 100 ft taper, this taking will most likely render the property unfit for its present operation as a full service banking facility and therefore using the total square footage for the parcel is appropriate in calculating the ROW acquisition cost. (This is considered a total take of the property).

This would put the land cost of the ROW at $478,188. Since the ROW take will affect a substantial portion of the business, the cost of the building, which is assessed at $266,900, is included with the land cost to arrive at a base minimum ROW cost. The total here is approximately $744,000.

First Union management may not agree with the assigned land value as discussed above and will most likely claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of this First Union branch and is not included in this cost estimate.

Dade International (Formerly Baxter)

Dade International (formerly Baxter Diagnostics Inc.) is located on the NE corner of this intersection. The land area for the ROW has been identified as approximately 12 ft by 400 ft plus a 150 ft taper and will only involve landscaping. The higher of market value or assessed value for this parcel is approximately $6.25/sq ft; with the multiplier, the square foot cost of is approximately $10. This would put the land cost of the ROW at $59,000.

Dade International management may not agree with the assigned land value as discussed above and may claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of Dade International and is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Fina Service Station

Fina Gas station is on the southeast corner of the intersection of Flagler St. and NW 107th Ave. Fina has a car wash and a service bays for car detailing services. Fina Gas station is the corner lot of the Holiday Plaza Shopping Center, which is a shopping strip of numerous shops and restaurants including Los Ranchos restaurant, La Hormiga de Oro restaurant, Creditour travel service and Auto Tire Paving Center. Fina has 10 parking spaces facing Flagler.

The land area for the ROW has been identified as approximately 12 ft by 250 ft plus 100 ft taper and 12 ft x 150 ft plus 100 ft taper. The higher of market value or assessed value for this parcel is approximately $18.50/sq ft; with the multiplier, the square foot cost is approximately $28.

Even though the total square footage used to construct the new through lane and turn lanes that affect this parcel is only 12 ft x 150 ft plus 100 ft taper and 12 ft x 250 ft plus 100 ft taper, this taking will most likely render this business as inoperable or completely damaged. Therefore, the total square footage for the parcel needs to be included in the ROW acquisition cost.

This would put the land cost of the ROW at $665,000. Since the ROW take will affect a substantial portion of the business, the cost of the building, which is assessed at $139,352, is included with the land cost to arrive at a base minimum ROW cost. The total is approximately $805,000.

The owner of this business may not agree with the assigned land value as discussed above and will most likely claim business damages resulting from the take. The total potential business damages cannot be calculated without an intense analysis of the business and financial operations of the Fina Service Station and is not included in this cost estimate.

The ROW taking may result in temporary damages during construction due to an adverse impact on the ingress/egress to the subject property. These damages are likewise not included in this cost estimate.

Total ROW costs

The total land ROW cost for the road improvements for Station 1218 would be approximately $2,480,000.

Economic Benefits for this station are measured in a number of ways.

Increased traffic through this road segment
Increase in roadway capacity
Potential increase in land values due to improved access to a particular site or area
Potential accelerated development due to improved road conditions
Ease present traffic congestion, therefore reduce travelling time for motorists in the area.

These benefits may translate into both temporary construction jobs and permanent employees for potential businesses locating in the area. The majority of the parcels in this project area are either already developed or planned developments. The area consists of restaurants, strip shopping centers, a medical center and several gas stations.

Traveling north on SW 107th Ave, there is a shopping strip and apartment buildings. There is a parcel of undeveloped land on the right just before SR 826. West on Flagler St., there are apartment buildings on the right, a mobile home park, and single family homes. On the left are more shopping strips. Further west, there is a vacant undeveloped property for sale containing 1.76 Acres near SW 114th Ave. and Flagler St. There is more development and building construction on Flagler St. and 118th Ave.

Traveling south on SW 107th Ave from Flagler St., there is another strip of office/retail uses on the right. On the left, there is an elementary school and a fire station. Further on the left are single family homes. Further on the right is an Amoco gas station and some apartment buildings near SW 5th St. At the south end of the segment is SW 8th St. which borders Florida International University and a Shell Service station.

A positive long term general economic output may occur because of an increase in the flow of traffic and patrons to the retail shops and restaurants. The offices may see an increase in occupancy because of improved access to their sites. The overall economic benefit to the county from these improvements may be an increase in sales, business and property taxes.