MIAMI LAKES
Growing Beautifully

TOWN OF MIAMI LAKES

COMMUTE TRIP REDUCTION PROGRAM

Prepared By:

ASHA
PLANNING CONSULTANCY

September 2013

EXECUTIVE SUMMARY

The hometown character of the Town, the proximity to major transportation corridors, and the Town's strategic location within Miami-Dade County has led to rapid residential growth since incorporation and has placed a strain on the Town's transportation system. As the Town approaches build-out, there is very little room for expansion of roadways. It is neither possible nor desirable to build enough roadways to keep pace with travel demand. The Town recognizes that the development of a comprehensive system of transit, bicycle and pedestrian infrastructure combined with Transportation Demand Management (TDM) strategies will play a crucial role in maintaining mobility and reducing automobile dependency.

The 2004 Transportation Master Plan recommended adoption of a TDM Plan as a means to reduce peak hour congestion and reliance on single occupancy vehicles. This study will provide the basis for adoption of the Town's Commute Trip Reduction Program as part of the overall transportation improvement strategy.

The Commute Trip Reduction Program identifies a comprehensive set of strategies that will encourage Town residents and employees to utilize ridesharing (carpooling/vanpooling), transit, walking and bicycling as an alternative to driving alone. The program is aimed at creating a partnership between the Town and the employers within the Town to motivate and encourage employees to consider alternative travel modes.

The established goals of the Commute Trip Reduction Program include the following:

1) Reduce dependence on single occupancy vehicles;
2) Reduce peak hour traffic congestion on Town roadways;
3) Increase efficiency of the existing transportation system;
4) Offer mobility choices through provision of multimodal transportation infrastructure;
5) Provide sustainable lifestyle choices to residents of the community; and
6) Improve the livability of the Town of Miami Lakes.

The tasks involved in developing the Town's Commute Trip Reduction Program include an evaluation of 2010 Census and Journey-to-Work information, review of the Town's existing and planned infrastructure improvements, development and administration of Commuter Travel Pattern Survey of employees within the Town, review of commonly implemented commute trip reduction strategies, identification of a selected list of strategies, and the Implementation and Monitoring Plan. The highlights of these analyses are summarized below.

RESIDENT AND EMPLOYEE TRAVEL CHARACTERISTICS

In order to develop a meaningful Commute Trip Reduction Program that is tailored to the needs of the Town, it is important to understand the travel characteristics of residents and workers. Two sources of data were used. First, the 2010 US Census and Journey-to-Work information was evaluated to identify the socioeconomic, employment and commuting characteristics of Town residents. Second, Commuter Travel Pattern Surveys were administered to employees working within the Town to gain an understanding of the commuting patterns of employees to and from the Town, and internally within the Town. Based on the findings of the census data and employee surveys, a travel profile of Town residents and employees was developed, as summarized below.

Census Data Highlights

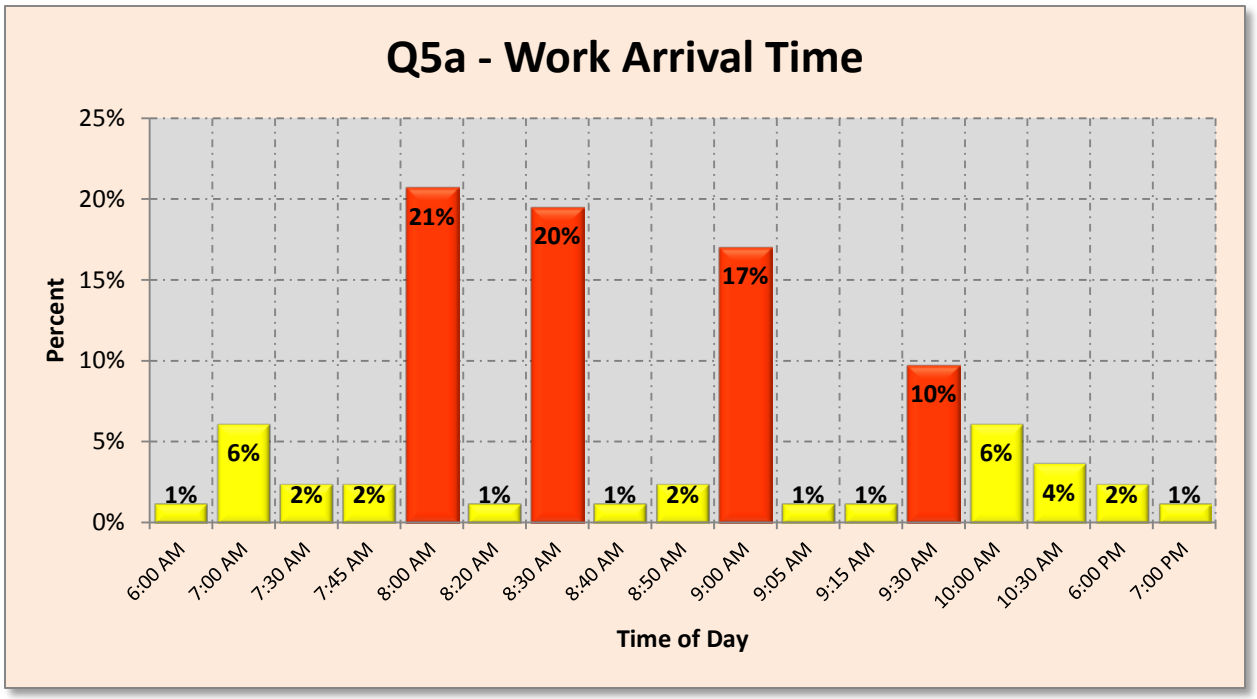
The census data provided information and insight on income characteristics, distribution of workers by occupation and industry, percentage of residents working within the Town, daytime population within the Town, travel time to work, travel mode to work, and vehicle availability.

The median household income of Town residents is substantially higher than the remainder of Miami-Dade County, with a majority of Town residents working in white collar jobs. This combined with the fact that more than 97% of residents have access to a personal automobile, makes driving alone as the most convenient choice for most residents. More than 80% of the Town residents drive alone in a personal automobile to work.

The Census journey-to-work data revealed that Miami Lakes experiences a 15% increase in population during the daytime work hours, corresponding to an additional 4,205 people coming into Town for work. This increases the Town's total population from approximately 28,000 to 32,300 and the employee population from 14,100 to 18,300 during the daytime. This influx of workers driving into Town puts additional strain on the Town's already over utilized roadways.

Employee Survey Highlights

A total of 119 employees within the Town took the Commuter Travel Pattern Survey. Of the survey respondents, approximately 62% reside and work within the Town. Based on the survey results, almost 75% the Town's employee population travel to work during the morning peak period of 8:00 a.m. to 9:30 a.m., as illustrated in the following graph.



The reverse commute results are similar with approximately 64% the Town's employee population travelling from work between the peak hours of 4:00 p.m. and 6:30 p.m.

Almost 95% of the employees surveyed reported driving a personal automobile to work. This is a significant number considering that 62% of the employees surveyed also lived in the Town. Based on this data, one of the targets of the Town's Commute Trip Reduction Program is to focus on providing attractive travel choices for residents through other modes such as the Town's shuttle system, county bus system, bicycling and walking. Almost half of the employees indicated a willingness to use to the Town's shuttle system to travel to work. Enhancing the Town's shuttle system and coordinating timed transfers between the Town's shuttle system and the Miami Dade County's bus system will greatly improve the desirability of transit.

PROPOSED INFRASTRUCTURE IMPROVEMENTS

The Town is committed to improving the quality of service for roadways, transit, bicycling and walking within the Town in order to provide multiple commuting choices for its residents, employees and visitors. The Town, in partnership with Miami Dade County, Miami Dade Transit, and the Florida Department of Transportation, has programmed several infrastructure improvements to improve the transit, bicycle and pedestrian infrastructure within the Town and to reduce traffic congestion on Town and regional roadways.

Transit Improvements

The following improvements have been funded and planned in MDT's 2014-2023 Transit Development Plan.

- Installation of bus shelters and/or enhancements at 11 bus stops within the Town;
- Proposed Park-and-Ride Lot at I-75 and Miami Gardens Drive Interchange;
- Palmetto Corridor Express Bus Service between the proposed park-and-ride lot at I-75 and Miami Gardens Drive interchange to the Palmetto Metrorail Station via SR 826;
- Real-time parking space counters and dynamic message signs at the Okeechobee Metrorail Station Park-and-Ride Facility by December 2014;
- Park-and-Ride/Transit Terminal Facility at NW 27th Avenue and NW 215th Street NW 27th Avenue and NW 215th Street;
- Palmetto Intermodal Center at Palmetto Expressway and NW 74th Street; and
- Transit Hub Location and Feeder Routes for Existing Bus Routes at the Golden Glades Multimodal Terminal and at NW 27th Avenue and NW 215th Street.

The Town of Miami Lakes has programmed improvements for the Town's shuttle system, the Miami Lakes Mover. The Town recently purchased two new larger buses to enhance the shuttle service and to promote transit ridership. A grand re-launch of Miami Lakes Mover Services is expected to occur over the next few months. The Miami Lakes Mover route alignments are being evaluated to reduce headways and improve transfers to the County bus system.

Bicycle Facility Improvements

The Town has secured grant funding to develop the next phase of the NW 170th Street Greenway which will consist of improvements from NW 82nd Avenue to NW 77th Court. The Town has also received a grant from Miami-Dade County to prepare a Town-wide Greenways and Trails Master Plan to develop an interconnected bicycle system including pedestrian pathways, bicycle trails, shared-use paths, recreational greenways, and connections to transit.

The Florida Department of Transportation has programmed construction of bicycle lanes along NW 154th Street in the vicinity of the Palmetto Expressway interchange, connecting the eastern and western portions of the Town. Additionally, the NW 87th Avenue construction project between NW 154th Street and NW 186th Street will include bicycle lanes and sidewalks.

Pedestrian Facility Improvements

The Town has recently applied for a Town of Miami Lakes Transportation Alternatives Program (TMLTAP) grant with the Florida Department of Transportation that will include construction, planning and design of on-road and off-road trail facilities, sidewalks, bicycle paths/lanes, crosswalk improvements, safety-related infrastructure, linkages to parks, greenways and transit,

and ADA compliant improvements. The project will connect neighborhoods to a Town-wide bicycle and pedestrian network that will link to key destinations, such as Main Street, schools, corporate centers, businesses and parks, as well as the County's greenways and trails network and transit system. The primary focus area for the project is within a ¼-mile of transit stops throughout the Town, improvements would create vital linkages to large employment centers and educational facilities within Town. In addition, the Town-wide Greenways and Trails Master Plan will evaluate pedestrian connections to transit stops within the Town.

The following projects are programmed for construction of sidewalks – NW 154th Street in the vicinity of the Palmetto Expressway interchange, NW 154th Street from NW 83rd Ave to NW 87th Ave and NW 87th Avenue between NW 154 Street and NW 186 Street.

COMMUTE TRIP REDUCTION IMPLEMENTATION PLAN

A review of commonly implemented commute trip reduction strategies from around the country was performed to identify strategies suitable for implementation in the Town. A set of 25 preliminary strategies were identified for evaluation. These strategies were screened based on a set of criteria to determine applicability within the Town. Based on the screening test, a final list of 13 strategies was selected for further evaluation. These strategies were reviewed to determine conditions within the Town that could have an impact on the implementation of the strategies, the potential for application within the Town, implementation steps and monitoring measures. The final list of recommended strategies is summarized in the following table.

RECOMMENDED STRATEGIES FOR IMPLEMENTATION

	Selected TDM Strategies	Strategy Group	Type of Strategy	Lead Agency	Implementation Time Frame
1	Carpooling	SG 1	Employer-based	Town/SFCS	Short
2	Vanpooling	SG 1	Employer-based	Town/SFCS	Short
3	Emergency Ride Home	SG 1	Employer-based	SFCS	Short
4	Telecommuting	SG 2	Employer-based	Employer	Medium
5	Flexible/Compressed Work Week	SG 2	Employer-based	Employer	Medium
6	Commuter Tax Incentives	SG 2	Employer-based	SFCS/ Employer	Medium
7	Bicycle Master Planning	SG 3	Area-wide	Town	Medium
8	Pedestrian Master Planning	SG 3	Area-wide	Town	Medium
9	Public Outreach	SG 4	Area-wide	Town	Short- Medium
10	Employer Outreach	SG 4	Area-wide	Town/SFCS	Short- Medium
11	TDM Marketing and Promotion	SG 4	Area-wide	Town/SFCS	Short- Medium
12	Employer Transportation Coordinator	SG 4	Employer	Town/ Employer	Short- Medium
13	Commute Trip Reduction Ordinance	SG 5	Area-wide	Town	Medium/Long

A 10-year implementation and monitoring plan was developed which groups the selected strategies for implementation in the immediate, short, medium and long terms. The Plan recommends an approach that involves maximizing existing resources with relatively minimal financial investment.

CONCLUSION

The Town of Miami Lakes is undertaking an important effort at improving mobility through all modes of transportation and reducing peak hour traffic congestion by adopting this Commute Trip Reduction Program. This plan is a part of an overall program of interrelated improvements that are aimed at reducing single occupancy automobile travel and improving bicycle, pedestrian and transit travel. This ambitious program of interrelated improvements, of which the Commute Trip Reduction program is a part, will require comprehensive and coordinated effort with dedicated Town personnel focused on multimodal transportation and sustainability.

TABLE OF CONTENTS

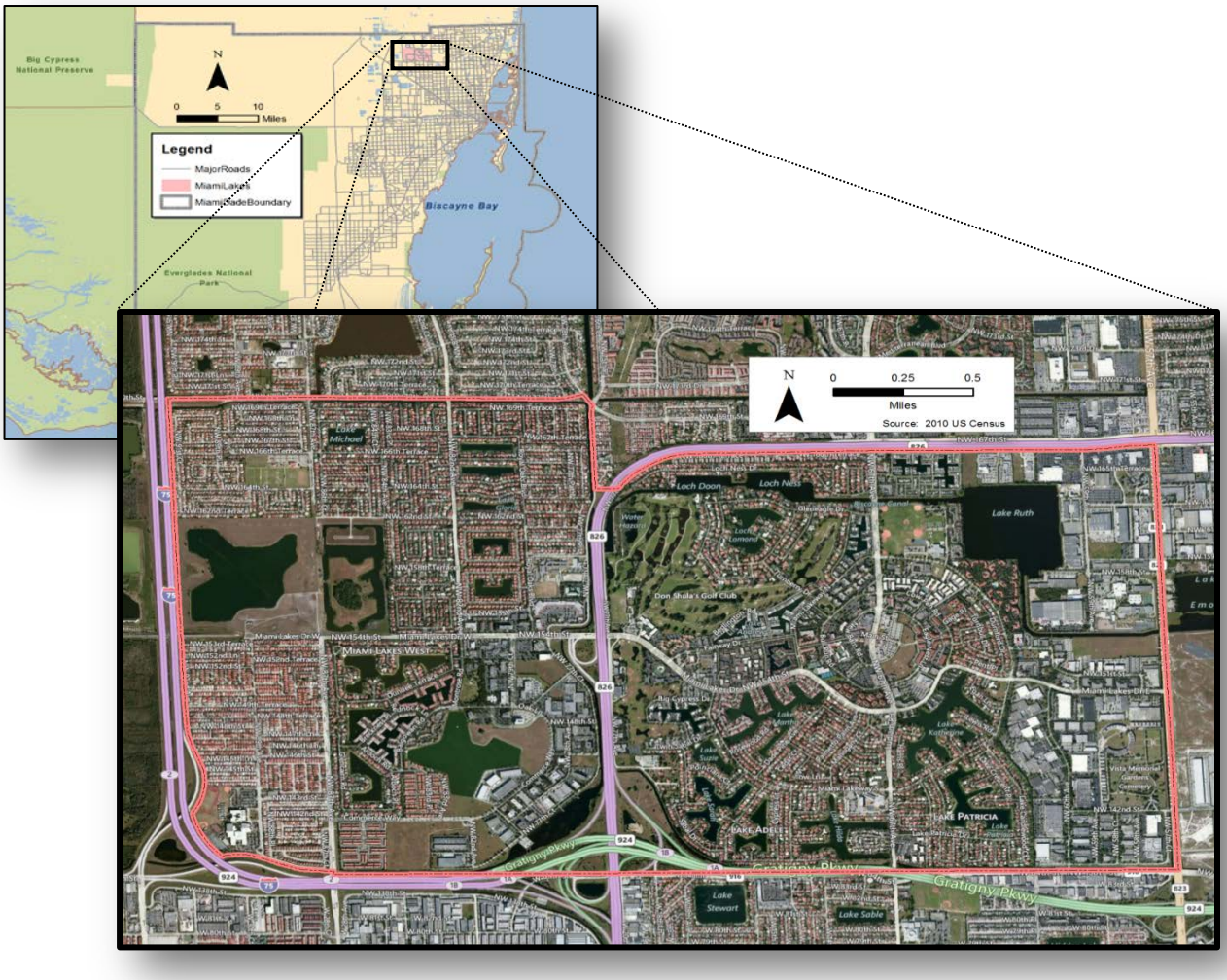
LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION

The Town of Miami Lakes is located in the northwestern portion of Miami-Dade County, north of Hialeah and west of Opa-Locka, as identified in Figure 1-1. The total calculated acreage for the Town of Miami Lakes, as identified in the Town's latest Evaluation and Appraisal Report, is 4,317 acres. The Town of Miami Lakes was formally incorporated as a municipality in 2000. In the last five decades, Miami Lakes has developed into a vibrant community recognized nationwide as one of the best examples of unique and innovative town planning.

FIGURE 1-1: GENERAL LOCATION MAP



PROJECT UNDERSTANDING

The hometown character of the Town, the proximity to major transportation corridors, and the Town's strategic location within Miami-Dade County has led to rapid residential growth over the years since incorporation. This has placed a strain on the Town's transportation system resulting in vehicular congestion that compromises the quality of life for residents and adversely impacts the business community.

The Town government recognizes that the predominant use of single occupancy personal automobiles as the primary mode of transportation by Town residents and employees is the biggest contributor to unacceptable levels of congestion during peak hours. As the Town approaches build-out, there is very little room for expansion of roadways. As such, it is neither possible nor desirable to build enough roadways to keep pace with travel demand. A majority of the collector roadways within the Town have narrower rights-of-way pursuant to the Town's desire to maintain community character and charm and promote walkability. The Town recognizes that the development of a comprehensive system of transit, bicycle and pedestrian infrastructure combined with Commute Trip Reduction (CTR) strategies such as ridersharing and High Occupancy Vehicle (HOV) Lanes will play a crucial role in maintaining mobility and reducing automobile dependency.

The Town government is committed to developing an efficient and effective multimodal transportation system to improve travel experiences within the Town. The Town is also committed to better coordinate land use and transportation decisions to shift shorter vehicular trips into walking or bicycling trips and to shift an increased share of longer trips to transit trips. Toward this end, the Town has progressively implemented measures to reduce traffic congestion and improve infrastructure for walking, bicycling and transit over the last decade.

The Town adopted a Transportation Master Plan in 2004 as a means to address local mobility needs. The Plan recommended a program of interrelated improvements to improve mobility and address traffic congestion. One of the recommendations of the Plan was to adopt a Commute Trip Reduction Program that will incorporate Transportation Demand Management (TDM) strategies to reduce peak hour congestion and reliance on single occupancy vehicles. This Study is intended to provide the basis for adoption of the Town's Commute Trip Reduction Program which will be a part of the overall transportation improvement strategy.

STUDY PURPOSE AND GOALS

The purpose of this study is to develop a TDM program for potential implementation within the Town. TDM is a term for strategies that achieve efficient use of the transportation system without requiring physical modifications to the transportation network. TDM strategies are

policies or programs intended to achieve shifts of travel to non-automobile modes, increase the number of persons per vehicle, and influence peak hour travel.

The following goals have been identified for the Town's Commute Trip Reduction program:

- Reduce dependence on single occupancy vehicles;
- Reduce peak hour traffic congestion on Town roadways;
- Increase efficiency of the existing transportation system;
- Offer mobility choices through provision of multimodal transportation infrastructure;
- Provide sustainable lifestyle choices to residents of the community; and
- Improve the livability of the Town of Miami Lakes.

Commute Trip Reduction Program Formulation

The focus of the Commute Trip Reduction program is to identify TDM strategies for implementation within the Town over the immediate, short and long term. The program will service as a manual for implementation as funding is identified. The steps used to develop the Town's Commute Trip Reduction program are listed below.

An understanding of the commuting patterns of residents and employees in, out, and within the Town is critical to developing an effective Commute Trip Reduction program. Hence a Commuter Travel Pattern Survey of employees within the Town was undertaken as the basis for developing the program. The survey effort will provide information on travel patterns and choices of the employees within the Town as well as gauge interest in implementation of TDM strategies.

In addition to the employee surveys, the 2010 Census and Journey-to-Work information was evaluated to identify the socioeconomic, employment and commuting characteristics of Town residents. The findings from the employee surveys and the census data were combined to create a profile of Town residents and employees. This was followed by a brief review of the Town's existing transportation infrastructure and programmed and planned infrastructure improvements.

A literature review of commonly implemented TDM strategies from around the country was performed to identify the strategies suitable for potential application within the Town. These preliminary strategies were screened to develop a final list of recommended strategies for inclusion in the Town's Commute Trip Reduction Program. An implementation and monitoring plan was developed for the final list of recommended strategies.

CHAPTER 2: ANALYSIS OF CENSUS DATA

SOCIO-ECONOMIC CHARACTERISTICS

This chapter provides a descriptive overview of the community, including the demographic and socioeconomic conditions within the Town. The demographic and the socioeconomic characteristics of the Town have been largely derived from the 2010 Decennial Census and the American Community Survey (ACS). A description of each of these two data sources and their strengths and limitations are presented below.

2010 Decennial Census

The 2010 Decennial Census is the most comprehensive recent data available for evaluating the demographic and socioeconomic characteristics of the Town. Decennial Census figures are based on actual counts of persons residing in the United States. The Census data provide vital information about a community's demographic composition, including a description of traits such as age, sex, race, ethnicity, household income, auto-ownership, and age characteristics.

Beginning in 2010, the U.S. Census Bureau eliminated the census "long-form" questionnaire and instead distributed only the census "short-form" questionnaire. In the past, the U.S. Census Bureau sent the short-form questionnaire to most housing units and the long-form questionnaire to a sample of about 17% of households. In 2010, the long-form questionnaire, which historically collected detailed socioeconomic and housing data from a sample of the population, was replaced with the American Community Survey (ACS). The 2010 short-form questionnaire asked only for age, sex, race, and ethnicity of each person in the household, as well as the individual's relationship to the person filling out the form. The change from long-form data to ACS data has impacted the ability to collect data at the neighborhood level due to potential errors resulting from a smaller sample size of the ACS data compared to the historical long-form sample size. This report largely uses the 2010 Decennial Census data for demographic and socioeconomic indicators and supplements the information with the 2011 ACS data.

2011 American Community Survey

The U.S. Census Bureau has recognized the challenges faced by communities when demographic data are available only on a decennial basis. In response, the Census Bureau developed the American Community Survey (ACS) in 2005. ACS is a "continuous measurement" survey, sampling between 250,000 – 300,000 households per month from 2005 through 2011. ACS gathers largely the same data as its predecessor, the census long-form. Since the sample size for ACS is smaller than the sample size for the long-form, the data are aggregated at the municipal or county level. In December 2010, the first five-year averages ACS became available for areas from the most populous to those with fewer than 20,000 people. The

2007-2011 five-year ACS data has been used in this report to supplement the 2010 Decennial Census data.

The two above-listed data sources have been combined to provide a current demographic profile of the Town of Miami Lakes. While these sources may not necessarily be in agreement with the actual numbers, the data sources will be identified when discussing the detailed demographic conditions within the Town. It should also be noted that the population and employment estimates of the Town vary between the different Census tables, depending on the data source and the margins of error.

Population and Population Density

The U.S. Census reports the population for the Town of Miami Lakes as 29,361 in 2010. Between 2000 and 2010, the Town experienced a 29.2% increase in population from 22,717 to 29,361. In contrast, Miami-Dade County's population grew by 10.8% during the same time period. Table 2-1 shows the population comparison between the Town and Miami-Dade County and the percent change in population.

TABLE 2-1: 2010 POPULATION COMPARISONS

Year	Miami Lakes		Miami-Dade County	
	Population	% Increase (from 2000)	Population	% Increase (from 2000)
2000	22,717	--	2,253,362	--
2010	29,361	29.2%	2,496,435	10.8%
2011	28,702	26.3%	2,474,676	9.8%

Source: 2000 & 2010 Decennial Census; 2007-2011 ACS 5-Year Estimates

Table 2-2 shows a comparison of 2010 population densities between Miami Lakes, Miami-Dade County and the Miami-Dade County Urbanized Area. The Town's population density is much higher than the overall County average; but is lower than the population density of the County's Urbanized Area. The Town's population density of 7.1 persons per acre is less than the recommended transit supportive density of 8.8 persons per acre or 4 dwelling units per acre.

TABLE 2-2: 2010 DENSITY COMPARISONS					
Study Area	**Population**	**Area (sq. mi.)**	**Density (sq. mi.)**	**Area (ac.)**	**Density (ac.)**
Miami Lakes	29,361	6.5	4,500	4,160	7.1
Miami-Dade County	2,496,435	2,431.2	1,027	1,555,968	1.6
Miami-Dade Urbanized Area[1]	2,476,320	420	5,896	268,800	9.2

Source: 2000 & 2010 Decennial Census; Note 1: Miami-Dade County FY 2011-12 Proposed Budget.

Figures 2-1 and 2-2 illustrate the 2010 population distribution and population densities by census block within the Town.

FIGURE 2-1: 2010 POPULATION

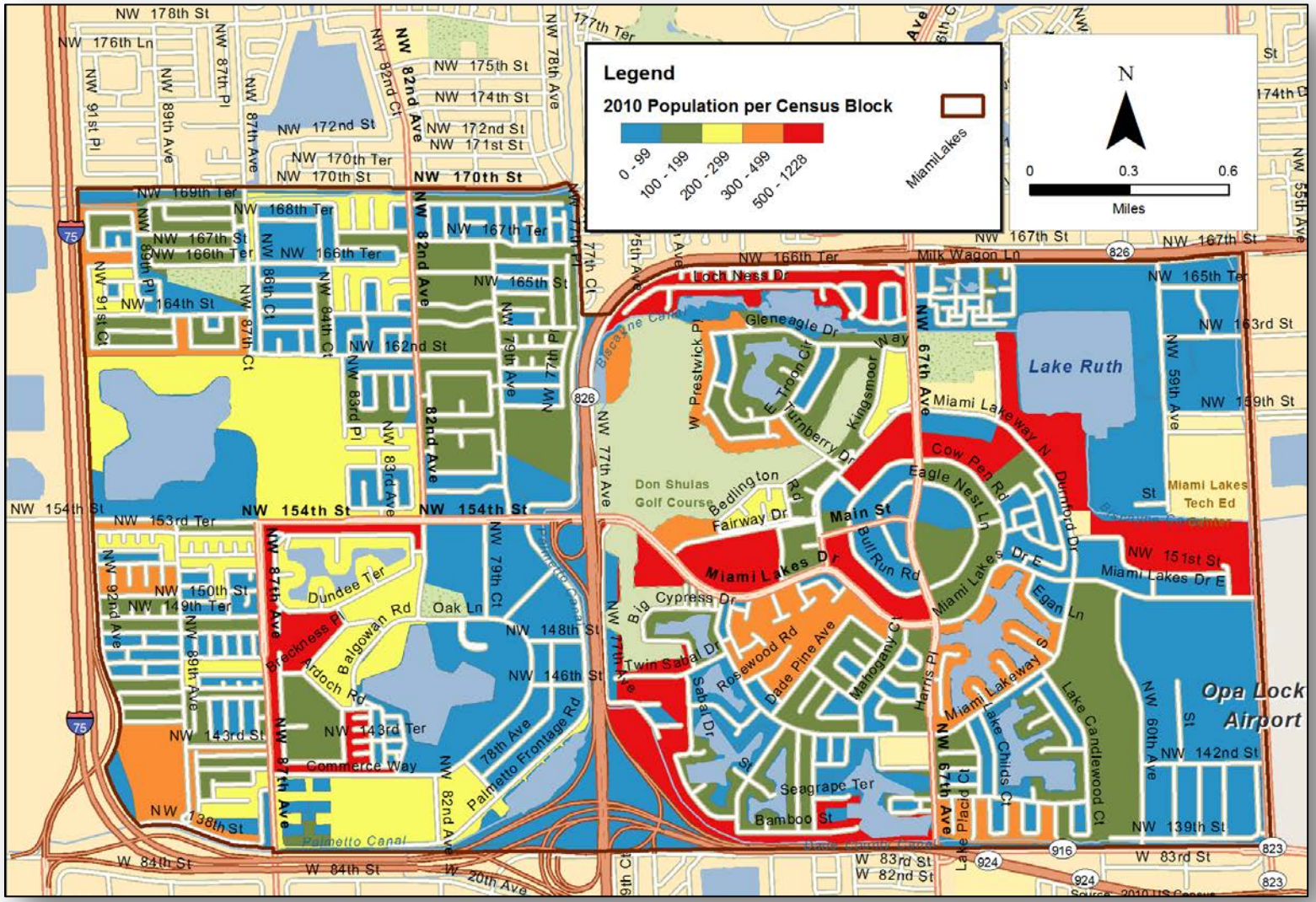
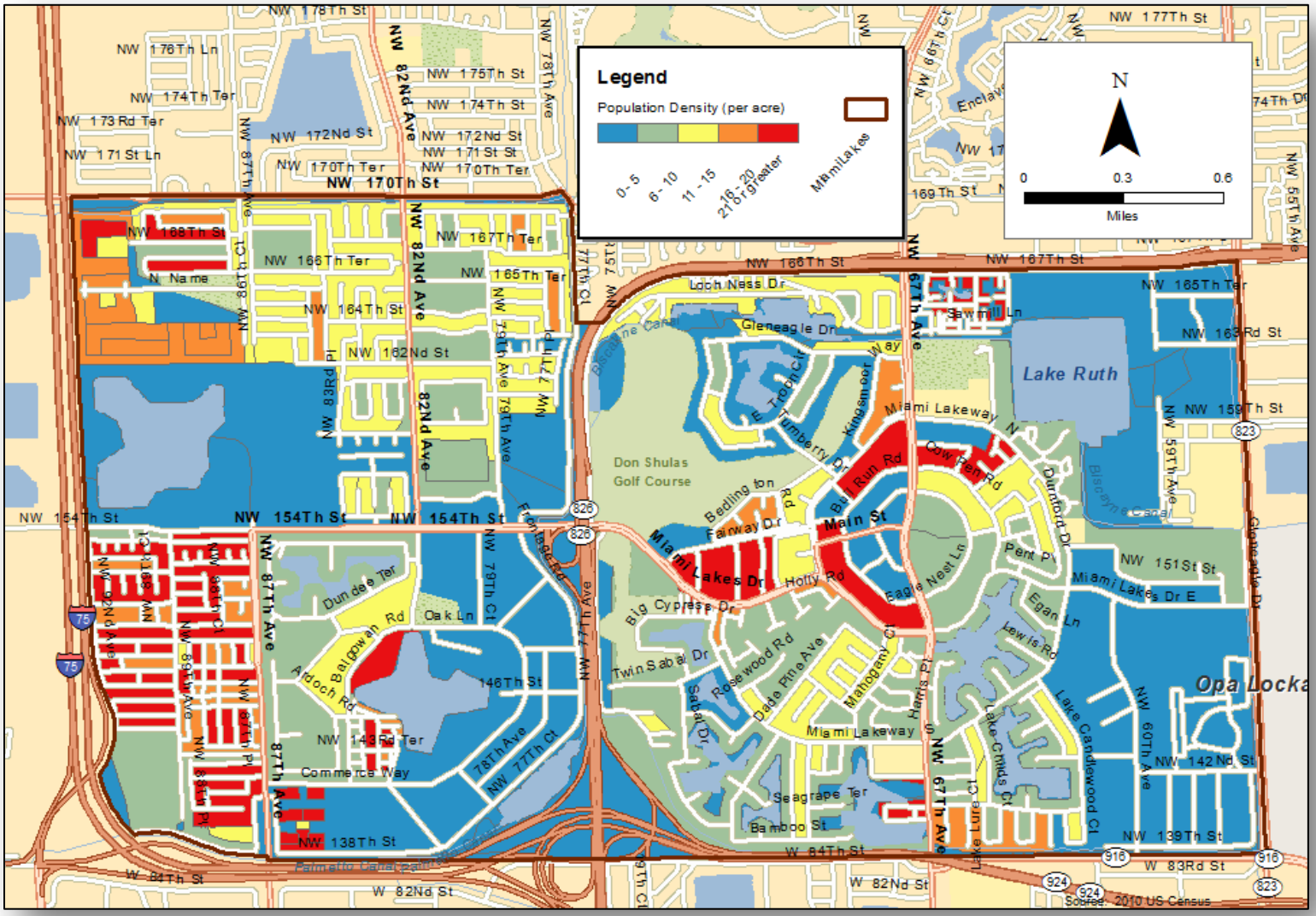


FIGURE 2-2: 2010 POPULATION DENSITY (PER ACRE)



Income Characteristics

The median annual household income within the Town is $63,794 and the average annual per capita income is $29,670. The annual per capita income as well as the median household income in Miami Lakes is higher than Miami-Dade County. Table 2-3 provides a summary of the income characteristics within the Town and Miami-Dade County.

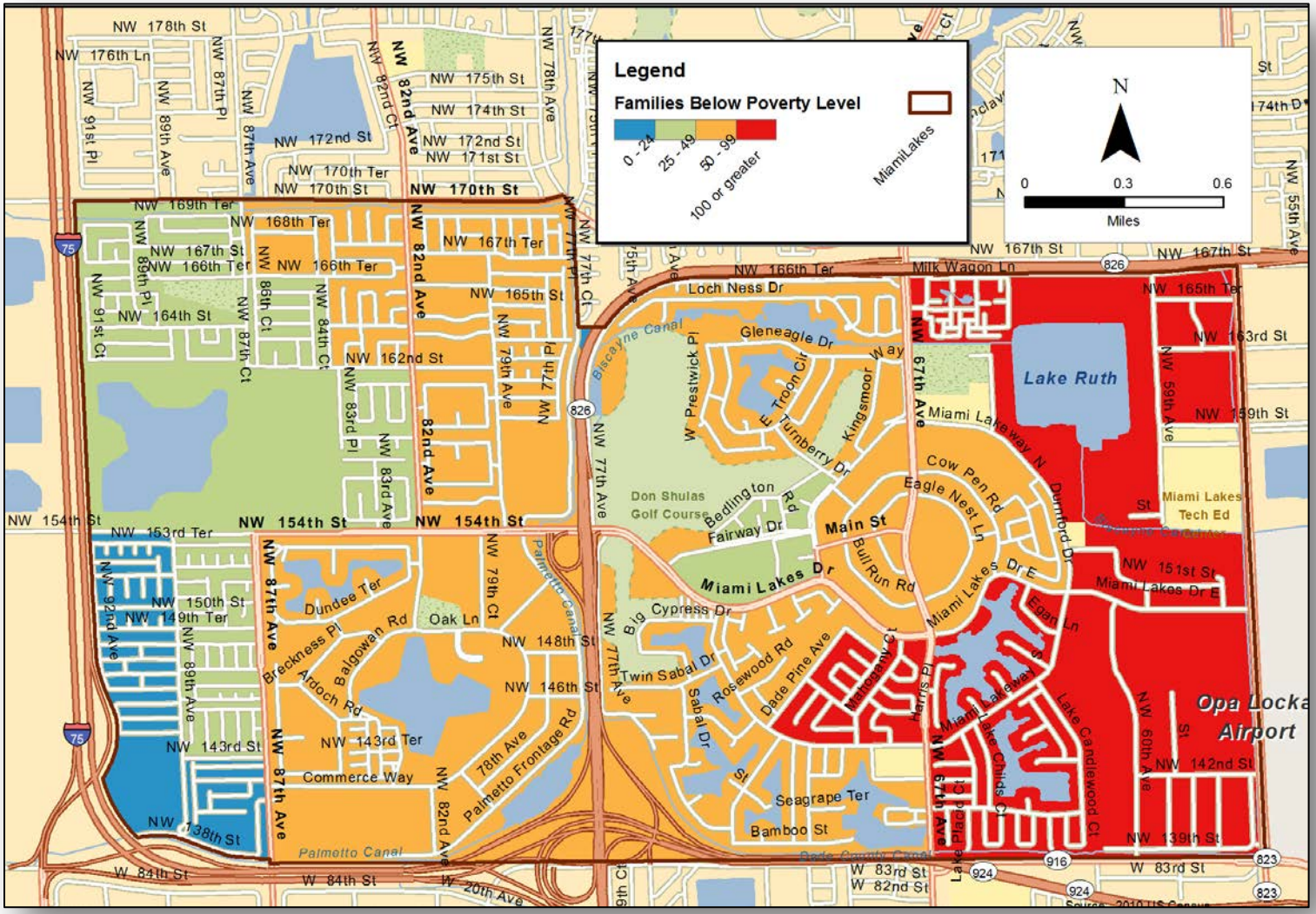
Another factor to consider while evaluating income characteristics is poverty, which is a different index than income. The U.S. Census Bureau bases poverty levels on the number of persons living in the household, and thresholds of income based on the number of persons. Household income data are obtained from the household data set of the U.S. Census. Based on data from the 2011 ACS 5-year estimates, 362 families (5% of the population) had incomes below the poverty level. This is significantly lower than Miami-Dade County which had 82,990 families (15% of the total population) living below the poverty level in 2011. The families below poverty level in Miami Lakes are generally located on the east side of Town to the east of NW 67th Avenue. Figure 2-3 illustrates the families below poverty level by census block within the Town.

TABLE 2-3: INCOME CHARACTERISTICS

Study Area	Median Household Income	Per Capita Income	Families Below Poverty Level
Miami Lakes	$63,794	$29,670	362
Miami-Dade County	$43,957	$23,348	82,990

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

FIGURE 2-3: FAMILIES BELOW POVERTY LEVEL



Housing Characteristics

The Town of Miami Lakes has approximately 10,615 housing units. Approximately 9,837 (92.7%) of the housing units are occupied. A predominant majority of the vacant housing units are related to rental vacancies. Of the occupied housing units, 6,558 (66.7%) are owner-occupied and 3,279 (33.3%) are renter-occupied. A stronger occupancy rate is a positive indicator of a thriving community.

Approximately 66.3% of the housing units in the Town are single-family homes. The median value of housing units within the town is $340,000, which is higher than the median value of housing units in Miami-Dade County ($246,800).

Figures 2-4 and 2-5 illustrate the 2010 housing unit distribution and housing densities by census block within the Town.

FIGURE 2-4: HOUSING UNIT DISTRIBUTION WITHIN TOWN

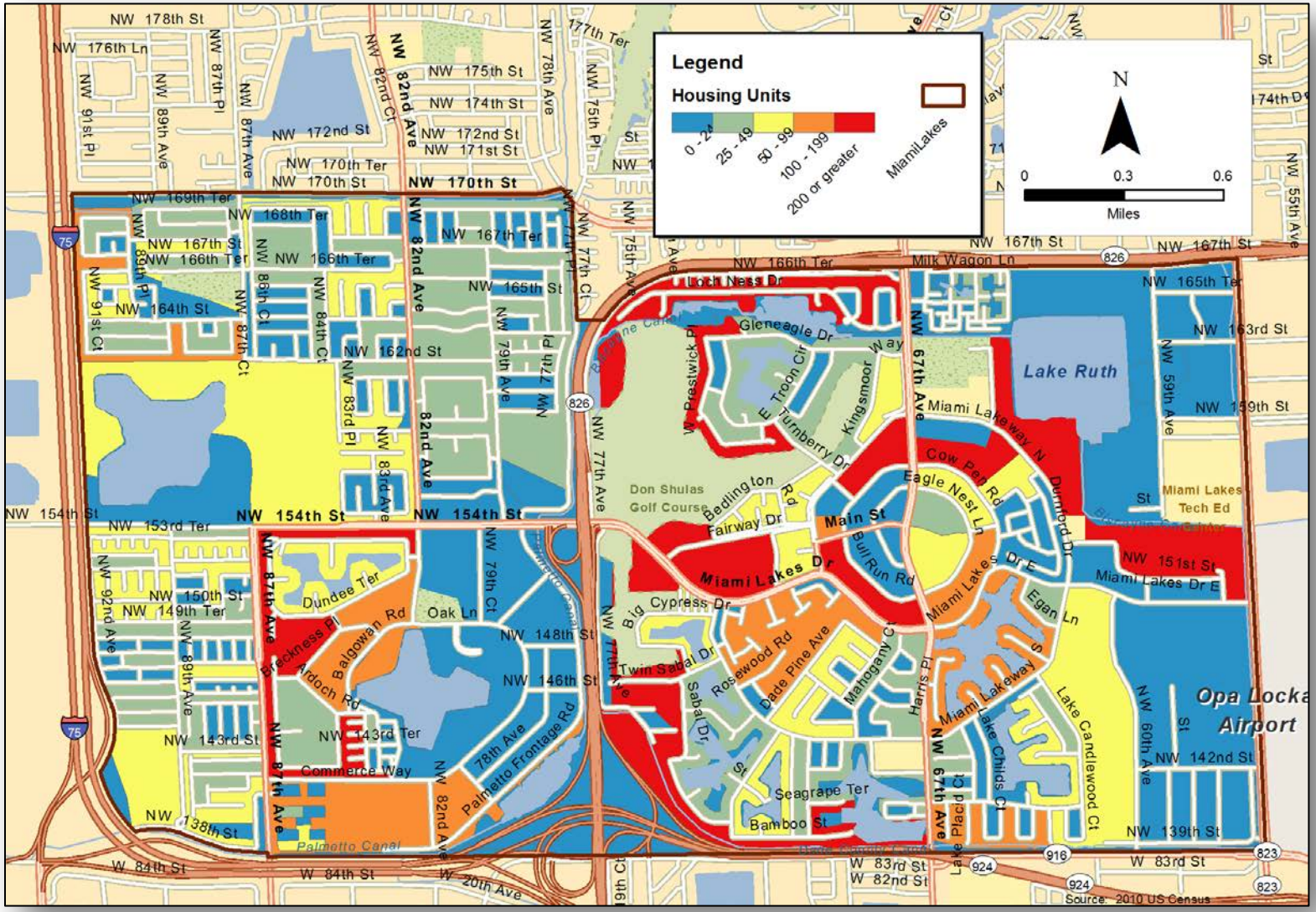
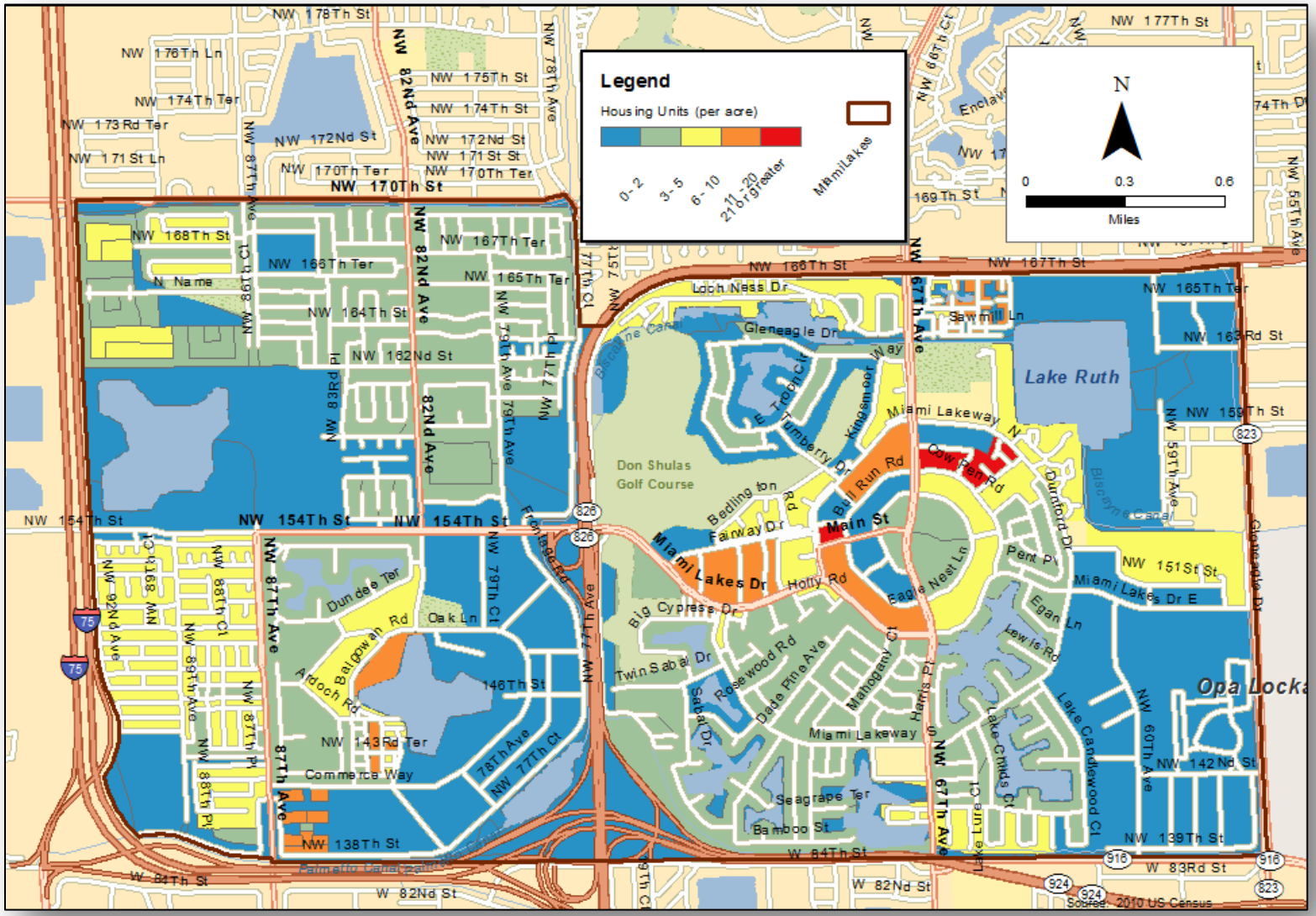


FIGURE 2-5: HOUSING UNIT DENSITY (PER ACRE)



COMMUTING CHARACTERISTICS

Resident Employed Population

Of the 28,702 residents that live in Miami Lakes, 15,077 residents are age 16 years or older and make up the Town's total labor force. That is an increase of approximately 22% from the year 2000 Census, reported as 12,387. Out of the Town's total labor force of 15,077, there are 14,149 residents that are employed with 928 residents classified as unemployed. Table 2-4 summarizes the employment characteristics within the Town.

TABLE 2-4: EMPLOYMENT CHARACTERISTICS

Total Labor Force	Labor Force Percent of Total Population	Total Employed Population	Unemployed Population	Unemployment Rate
15,077	66.2%	14,149	928	4.1%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

Table 2-5 provides a summary of the distribution of workers by occupation. A majority (72%) of the employee population of the Town work in the Management and Sales and Office sectors, which would be generally considered as "white collar jobs".

TABLE 2-5: WORKERS BY OCCUPATION

Occupation	Number	Percent
Management, business, science, and arts	5,914	41.8%
Service occupations	1,563	11.0%
Sales and office occupations	4,286	30.3%
Natural resources, construction, and maintenance	1,201	8.5%
Production, transportation, and material moving	1,185	8.4%
Total	14,149	100.0%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

Resident Employed Population Working within Town

Of the 14,149 residents that are employed, approximately 2,646 residents (18.7%) live and work within the Town and the remaining 11,503 residents (81.3%) travel outside the Town for work, which is a significant majority. Of the 11,503 residents that work outside the Town, 1,955 (17 %) work outside Miami-Dade County. Table 2-6 summarizes the employment location information.

TABLE 2-6: RESIDENTS WORKING WITHIN TOWN OF MIAMI LAKES

Characteristic	Percent	Number
Work within Miami Lakes	18.7%	2,646
Work outside Miami Lakes	81.3%	11,503

Source: Percentages derived from Table S0801 of 2007-2011 American Community Survey 5-Year Estimates

Daytime Population Estimates

An important consideration while determining employment characteristics of the Town and their impact on transportation infrastructure is the daytime population estimates and the Employment-Residence ratio.

Daytime population refers to the estimated number of people who are residing and working in the Town during the "daytime" working hours. The daytime population provides information about daily flows of workers in and out of the Town to gauge the amount of pressure placed on Town's transportation infrastructure. Employment-Residence ratio refers to the ratio of the total number of workers working in the Town to the number of workers living in the Town.

Table 2-7 shows the latest commuter adjusted daytime population estimates reported in the Census Journey to Work data. It should be noted that the numbers in the table are based on the 2006-2010 ACS data, and hence vary slightly from the employment numbers reported in Table 2-4. Based on Table 2-7, Miami Lakes experiences a 15% increase in population, corresponding to an additional 4,205 people coming into Miami Lakes during the daytime work hours.

TABLE 2-7: COMMUTER ADJUSTED DAYTIME POPULATION	
Employment Characteristics	Estimate
Total Resident Population in Miami Lakes	28,082
Total Workers Working in Miami Lakes	18,293
Total Workers Living in Miami Lakes	14,088
Estimated Daytime Population	32,287
Daytime Population Change due to Commuting	4,205
Percent Daytime Population Change due to Commuting	15.0
Workers who Lived and Worked in Miami Lakes	2,423
Percent Workers who Lived and Worked in Miami Lakes	17.2
Employment-Residence Ratio	1.3:1

Source: Latest Commuter Adjusted Daytime Population Estimates Published by the US Census. Based on 2006-2010 American Community Survey 5-Year Estimates

The Town has an Employment-Residence Ratio of 1.3 workers working in the Town for every 1 worker living in the Town (1.3:1). An Employment-Residence ratio greater than 1.0 indicates that there are more jobs than the number of working residents in the Town, meaning that the Town imports its labor.

These numbers indicate that while planning for transportation infrastructure, the additional worker flow into the Town during the daytime hours should be taken into consideration.

Travel Time to Work

Table 2-8 shows the work commute patterns for the Town of Miami Lakes residents compared to Miami-Dade County. The analysis reveals that the Town residents have longer commute times than residents of Miami-Dade County.

TABLE 2-8: TRAVEL TIME TO WORK		
Travel Time	**Miami Lakes**	**Miami-Dade County**
Less than 10 minutes	4.0%	5.7%
10 – 14 minutes	12.8%	9.5%
15 – 19 minutes	11.9%	11.7%
20 – 24 minutes	16.4%	16.3%
25 – 29 minutes	6.2%	6.2%
30 – 34 minutes	21.0%	19.9%
35 – 44 minutes	12.1%	9.2%
45 – 59 minutes	8.7%	11.0%
60 + minutes	7.0%	10.5%
Mean Travel Time	28.4 min	25.7 min

Source: 2007-2011 American Community Survey 5-Year Estimates

Approximately 51% of the Town residents get to work in less than 30 minutes; another 42% get to work in 30 to 60 minutes; and the remaining 7% get to work in more than 60 minutes. A good performance measure for commuting (as outlined in *Commuting in America Part III by Alan E. Pisarski*) is whether 50% of workers get to work in less than 20 minutes. According to this measure, only 28.7 percent of Town residents get to work in less than 20 minutes.

Time Leaving For Work

Table 2-9 shows the time leaving to go to work as indicated by Town residents. Approximately 70% of the commuting residents leave their homes between 6:00 and 9:00 a.m., which is generally considered as the morning peak period. Another 24% of the commuting population is reported to leave for work between 9:00 a.m. and noon.

The two peak travel periods during the morning peak hours are between 7:00 and 7:30 a.m. (21%) and 8:00 and 8:30 a.m. (15.8%). Early and late starts are generally attributed to distant home locations, trip chaining of other activities before work and changing start times in employment (later starting times for service oriented jobs; flexible or variable work schedule such as 4/10 or 9/80 work-hour schedule).

TABLE 2-9: TIME LEAVING TO WORK

Time	Total
12:00 a.m. to 4:59 a.m.	2.8%
5:00 a.m. to 5:29 a.m.	1.2%
5:30 a.m. to 5:59 a.m.	2.0%
6:00 a.m. to 6:29 a.m.	7.7%
6:30 a.m. to 6:59 a.m.	8.3%
7:00 a.m. to 7:29 a.m.	21.0%
7:30 a.m. to 7:59 a.m.	10.5%
8:00 a.m. to 8:29 a.m.	15.8%
8:30 a.m. to 8:59 a.m.	6.7%
9:00 a.m. to 11:59 p.m.	24.0%

Source: 2007-2011 American Community Survey 5-Year Estimates

The Commute Trip Reduction Plan must focus on improving the commuting experience of the 70% of the commuting population traveling between 6:00 and 9:00 a.m.

Mode of Travel to Work

Table 2-10 provides a comparison of the travel modes for commuting by Town residents compared to Miami-Dade County residents. The predominant mode of travel within Miami Lakes is by personal automobile (80.9%) compared to 77.1% for Miami-Dade County. Carpools account for 8.3% of travel by Town residents compared to 9.6% of County residents.

TABLE 2-10: TRAVEL MODE

Mode of Travel	Miami Lakes		Miami-Dade County	
	Number	Percent	Number	Percent
Automobile – Drove Alone	11,030	80.9%	857,994	77.1%
Automobile - Carpooled	1,128	8.3%	107,117	9.6%
Public Transportation	220	1.6%	57,546	5.2%
Walked	114	0.8%	23,705	2.1%
Other	68	0.5%	22,647	2.0%
Worked from Home	1,074	7.9%	43,476	3.9%
Total	13,634	100%	1,112,485	100%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

The Town has a much lower percentage of residents (1.6%) commuting via public transportation compared to Miami-Dade residents (5.2%). 0.8% of Town residents reported walking to work compared to 2.1% of County residents. There was no reported bicycling to work. Approximately 8% of Town residents reported working from home compared to 4% of County residents.

FIGURE 2-6: TRAVEL MODE: AUTOMOBILE, TRUCK AND VAN

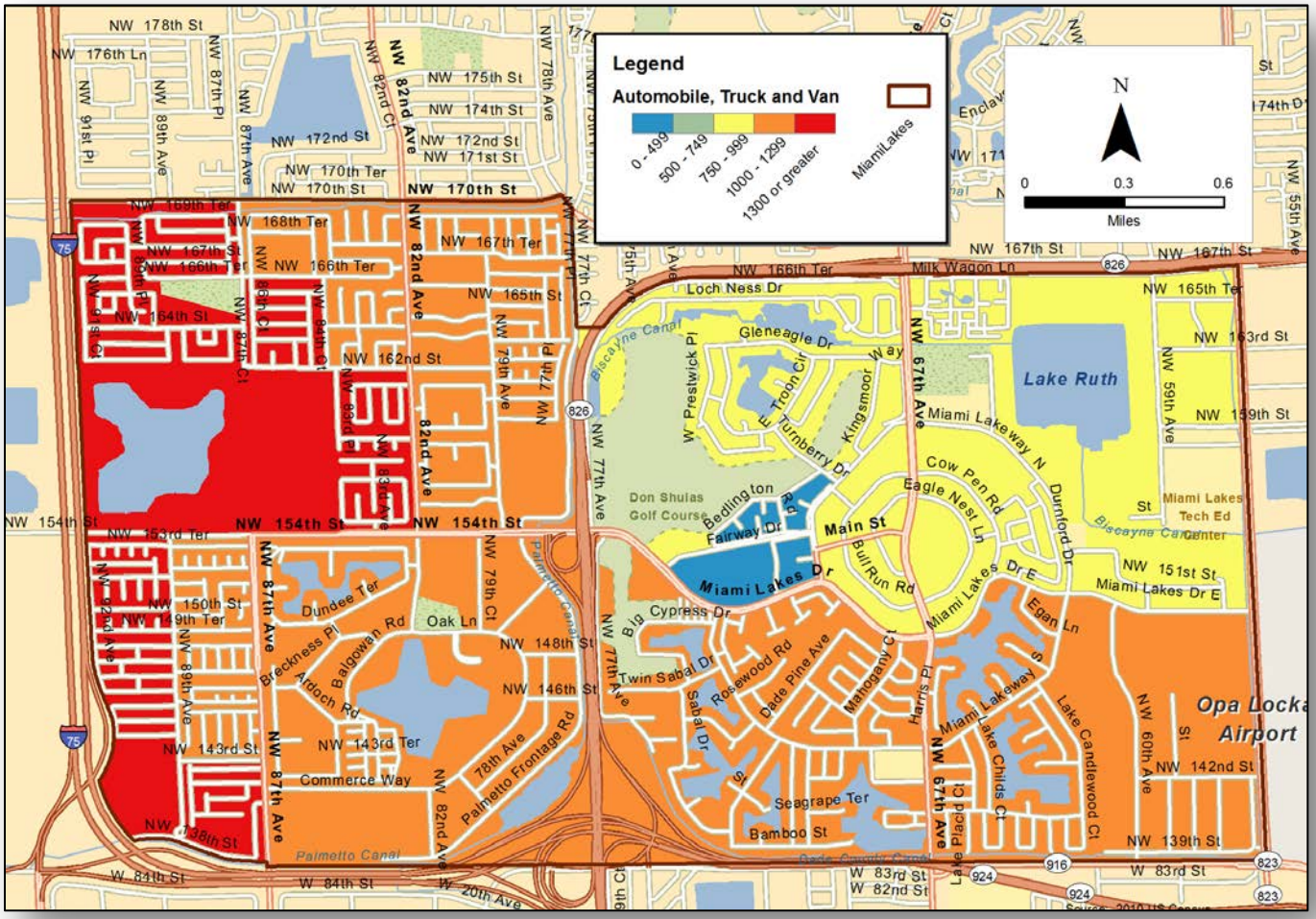


FIGURE 2-7: TRAVEL MODE: PUBLIC TRANSIT

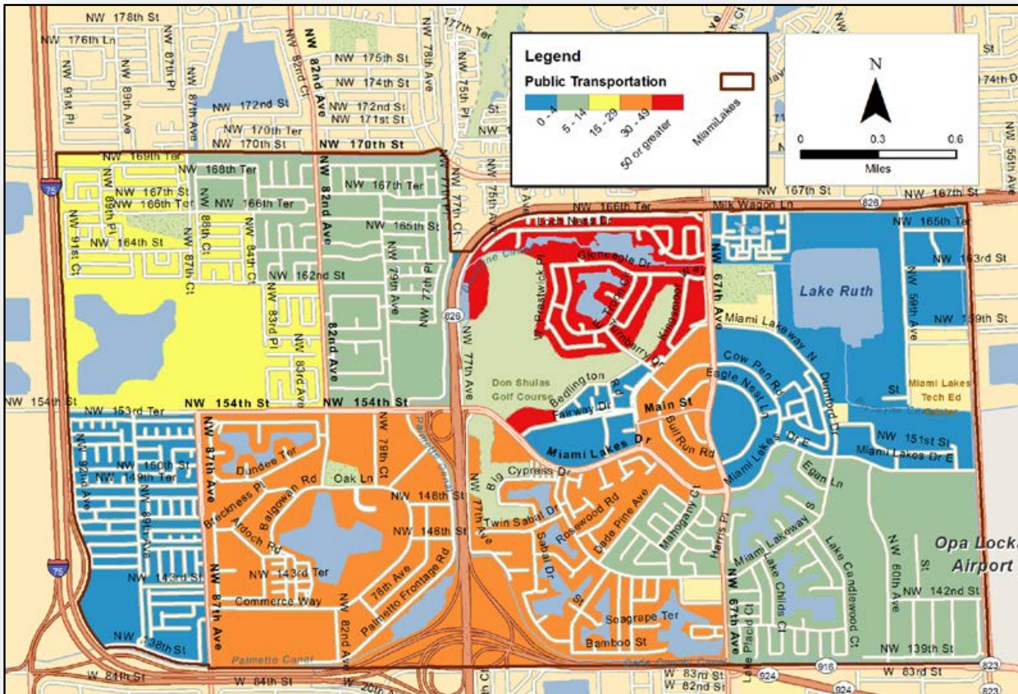
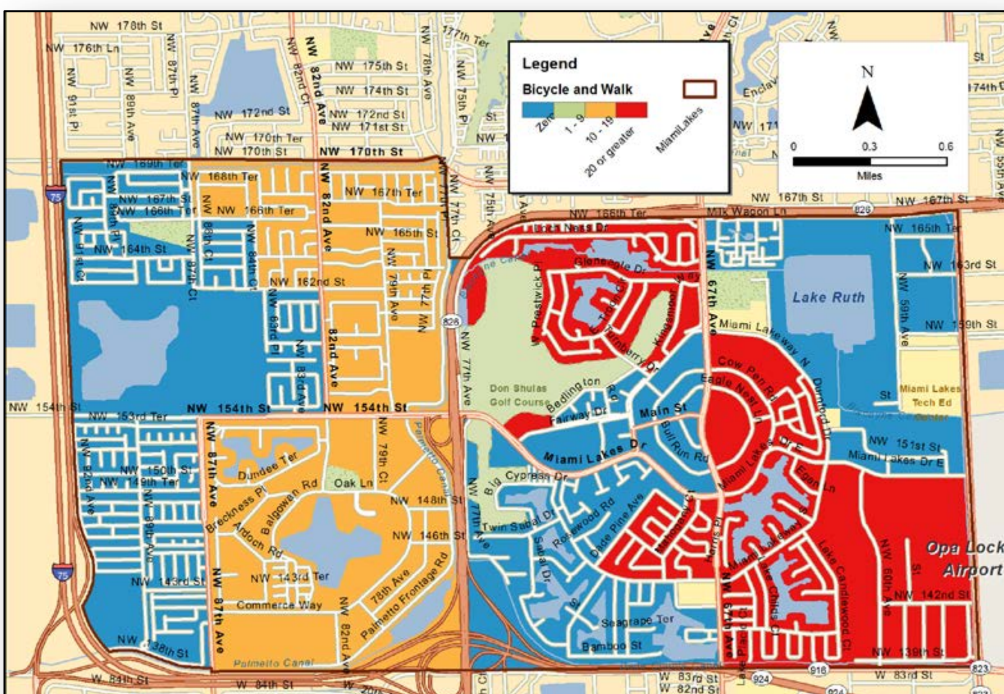


FIGURE 2-8: TRAVEL MODE: BICYCLE AND WALKING



Vehicle Availability

Table 2-11 shows the distribution of vehicle availability among households in Miami Lakes compared to Miami-Dade County. Lack of vehicle availability is a key indicator of the propensity to use transit or carpooling/vanpooling. The Town has much higher vehicular availability compared to Miami-Dade County. Only 2.9% of housing units within the Town have no access to a personal automobile compared to 11.1% in Miami-Dade County. Similarly, 65.5% of housing units within the Town have access to two or more personal automobiles compared to 49.4% in Miami-Dade County.

TABLE 2-11: VEHICULAR AVAILABILITY

Area	Number of Vehicles Available per Occupied Housing Unit			
	Zero	One	Two	Three or More
Miami Lakes	2.9%	31.6%	45.3%	20.2%
Miami-Dade County	11.1%	39.5%	35.1%	14.3%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

Based on the census data summarized in this section, the Commute Trip Reduction Plan should realistically focus on reducing the percentage share of the single occupant travel and increasing the percentage shares of carpooling, and transit. The primary modes for consideration in developing TDM strategies include driving alone, carpooling, and public transportation.

COMMUTING CHARACTERISTICS BY MODE

This section evaluates the commuting characteristics of Town residents by these three modes of transportation. Table 2-12 shows the travel time to work broken down by the three modes. For driving alone and carpool, the greatest amount of travel time spent is between 30 and 34 minutes. By comparison, for public transportation, the greatest amount of travel time is at least 60 minutes. More than 40% of transit riders spend more than 60 minutes traveling to work each way. Given the huge disparity in travel times between the automobile and public transportation, vehicle availability plays a significant role in the travel mode of choice by commuters. More than 97% of the Town's residents have access to a personal automobile, thus resulting in very limited use of public transportation.

TABLE 2-12: TRAVEL TIME BY MODE						
Travel Time	Drove Alone		Carpool/ Vanpool		Transit	
	Number	Percent	Number	Percent	Number	Percent
Less than 10 mins	566	3.9%	43	2.6%	0	0.0%
10 to 14 mins	1,843	12.7%	164	9.8%	34	8.4%
15 to 19 mins	1,901	13.1%	239	14.3%	22	5.4%
20 to 24 mins	2,510	17.3%	319	19.1%	61	15.1%
25 to 29 mins	784	5.4%	67	4.0%	0	0.0%
30 to 34 mins	3,163	21.8%	331	19.8%	92	22.7%
35 to 44 mins	1,248	8.6%	169	10.1%	0	0.0%
45 to 59 mins	1,349	9.3%	234	14.0%	32	7.9%
More than 60 mins	1,132	7.8%	107	6.4%	164	40.5%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

Table 2-13 shows the time arriving at work by the three travel modes. For driving alone and carpool, the peak period for arriving at work is between 8:00 and 9:00 a.m. For public transportation, the peak period is between 7:30 and 8:00 a.m.

TABLE 2-13: TIME ARRIVING AT WORK BY MODE						
Time Arriving at Work from Home	Drove Alone		Carpool/ Vanpool		Transit	
	Number	Percent	Number	Percent	Number	Percent
12:00 a.m. to 4:59 a.m.	305	2.1%	94	5.6%	0	0.0%
5:00 a.m. to 5:29 a.m.	116	0.8%	22	1.3%	17	4.2%
5:30 a.m. to 5:59 a.m.	218	1.5%	43	2.6%	0	0.0%
6:00 a.m. to 6:29 a.m.	537	3.7%	45	2.7%	0	0.0%
6:30 a.m. to 6:59 a.m.	972	6.7%	134	8.0%	32	7.9%
7:00 a.m. to 7:29 a.m.	1436	9.9%	152	9.1%	33	8.1%
7:30 a.m. to 7:59 a.m.	1915	13.2%	149	8.9%	83	20.5%
8:00 a.m. to 8:29 a.m.	2278	15.7%	291	17.4%	0	0.0%
8:30 a.m. to 8:59 a.m.	2206	15.2%	235	14.1%	66	16.3%
9:00 a.m. to 11:59 p.m.	4542	31.3%	508	30.4%	174	43.0%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

Table 2-14 shows the breakdown of commuters by occupation for the three travel modes. The occupations where most employees drive alone to work are “management, business, science and arts” followed by “sales and office”. The highest category for carpooling is in the “sales and office” occupations. The highest category for public transportation includes the “natural resources, construction and maintenance” and “production, transportation, and material moving” occupations.

TABLE 2-14: WORKER OCCUPATION BY MODE						
Occupation	**Drove Alone**		**Carpool/ Vanpool**		**Transit**	
	Number	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Management, business, science, arts	5,528	38.1%	401	24.0%	32	7.9%
Service	2,118	14.6%	142	8.5%	85	21.0%
Sales and office	4,484	30.9%	685	41.0%	28	6.9%
Natural resources, construction, maintenance	914	6.3%	150	9.0%	125	30.9%
Production, transportation, material moving	1,466	10.1%	292	17.5%	122	30.1%
Military specific	0	0.0%	0	0.0%	13	3.2%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

With the Town's focus on reducing single occupancy travel, the greatest amount of focus in promoting TDM strategies should be directed to employees and businesses in the "management, business, science and arts" and the "sales and office" occupations.

Table 2-15 shows the breakdown of commuters by industry for the three travel modes. The occupations where most employees drive alone to work belong to the "information, finance, insurance, and real estate" industries. The highest category for carpooling is in the "manufacturing" and "professional, scientific, management and administrative" industries. The highest category for public transportation includes the "construction" and "manufacturing" industries.

TABLE 2-15: WORKER INDUSTRY BY MODE						
Industry	Drove Alone		Carpool/ Vanpool		Transit	
	Number	Percent	Number	Percent	Number	Percent
Agriculture, forestry, fishing & hunting, & mining	0	0.0%	18	1.1%	0	0.0%
Construction	653	4.5%	120	7.2%	125	30.9%
Manufacturing	2336	16.1%	362	21.7%	53	13.1%
Wholesale trade	609	4.2%	70	4.2%	50	12.3%
Retail trade	1538	10.6%	47	2.8%	19	4.7%
Transportation & warehousing, & utilities	392	2.7%	13	0.8%	0	0.0%
Information, finance & insurance, & real estate & rental & leasing	3033	20.9%	314	18.8%	35	8.6%
Professional, scientific, & management, & administrative & waste management services	2118	14.6%	344	20.6%	0	0.0%
Educational services, & health care & social assistance	2336	16.1%	235	14.1%	24	5.9%
Arts, entertainment, & recreation, & accommodation & food services	842	5.8%	95	5.7%	54	13.3%
Other services (except public administration)	392	2.7%	50	3.0%	0	0.0%
Public administration	261	1.8%	0	0.0%	0	0.0%
Armed forces	0	0.0%	0	0.0%	45	11.1%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates

With the Town's focus on reducing single occupancy travel, the greatest amount of focus in promoting TDM strategies should be directed to employees and businesses in the "manufacturing", "information, finance, insurance, and real estate", "professional, scientific, management and administrative" and "educational services, healthcare and social assistance" industries.

SUMMARY OF TOWN'S WORKFORCE CHARACTERISTICS

An analysis of the socioeconomic and commuting characteristics of the residents and employees within the Town reveals the following findings that are relevant to the development and implementation of a Commute Trip Reduction Plan for the Town of Miami Lakes.

- The Town's total population is approximately 28,700.
- The Town's resident workforce is approximately 14,100 people. An additional 4,205 employees travel into the Town during standard daytime hours.
- The additional influx of employees to the Town increases the Town's daytime population to approximately 32,300.
- The mean travel time to work for the Town's workforce is 28.5 minutes.
- 49 percent of the Town's workforce travel more than 30 minutes each way to work.
- 47 percent of the Town's workforce leaves for work between 7:00 and 8:30 a.m.
- More than 80 percent of the Town's workforce travel occurs in single occupant vehicles.
- 97 percent of the Town's workforce has access to a personal automobile.
- For driving alone and carpool, the greatest amount of travel time spent is between 30 and 34 minutes. By comparison, for public transportation, the greatest amount of travel time is at least 60 minutes.
- The highest category of people that carpool to work belong to the Sales and Office occupations.

CHAPTER 3: ANALYSIS OF TOWN TRANSPORTATION SYSTEM

This chapter presents an overview of the existing transportation system within the Town, proposed and planned transportation improvements, and the impact of the Commute Trip Reduction Plan on the transportation system.

AVAILABLE MODES OF TRANSPORTATION WITHIN TOWN

Existing Roadway System

There are four principal arterials, two minor arterials, and five collector roadways within the Town of Miami Lakes. The principal arterials carry longer regional trips and serve major activity centers. These include Interstate 75, SR 826/Palmetto Expressway, SR 924/Gratigny Parkway and SR 823/NW 57th Avenue.

The two minor arterials interconnect and support the principal arterials and include SR 916/NW 138th Street and NW 67th Avenue/Ludlum Road. The five collector roadways include NW 154th Street, NW 87th Avenue, NW 82nd Avenue, Miami Lakeway North, and Miami Lakeway South. In addition to these arterials and collectors, the Town of Miami Lakes has a supporting local street system that provides access to adjacent land uses and serves short local trips.

Based on the Miami Lakes' latest Evaluation and Appraisal and Report, segments of NW 67th Avenue, NW 154th Street and NW 82nd Avenue experience severe traffic congestion during the peak hours. SR 826/Palmetto Expressway, which is the main regional gateway into the Town, also experiences severe traffic congestion during the a.m. and p.m. peak hours. Traffic congestion during peak hours is cited as the single biggest concern of commuters within Miami Lakes.

The Florida Department of Transportation recently implemented the following roadway related improvements on the Town roadways:

- SR 826/Palmetto Expressway from NW 67 Avenue to NW 47 Avenue – This project includes adding an extra lane on westbound SR 826 between the exit ramps on NW 67 Avenue and NW 47 Avenue; adding a second lane at the westbound off-ramps at NW 67 Avenue and NW 57 Avenue; repaving the exit ramps and frontage roads; installing a new electronic message sign board; upgrading drainage system and upgrading lighting and signage. FIN NO: 418423-2-52-01 and 418423-2-56-01. Start Date – September 2011. Completion Date – June 2012.

- NW 87 Avenue/W 28 Avenue on SR 93/I-75 to NW 103 Street along southbound SR 826/Palmetto Expressway – This project includes adding an extra lane on the eastbound I-75 exit ramp and on southbound SR 826 between the exit ramp on I-75 and NW 103 Street. FIN NO: 425478-1-52-01. Start Date – January 2012; Completion Date – March 2013.

Ongoing and Programmed Roadway Projects

Ongoing and programmed roadway projects that will have an impact on traffic within the Town of Miami Lakes are listed below:

- Adding express lanes along SR 826/Palmetto Expressway from West Flagler Street to NW 154 Street. FIN NO: 432687-1-52-01. Anticipated Start Date – January 2014; Anticipated Completion Date – December 2018. Improvements will include one to two tolled express lanes in each direction with moderate widening along SR 826/Palmetto Expressway main line and ramp metering at all entrance ramps along SR 826.
- Adding express lanes along I-75 from SR 826 to NW 170 Street. FIN NO: 432687-1-52-01. Anticipated Start Date – January 2014; Anticipated Completion Date – December 2018. Improvements will include one tolled express lane in each direction along I-75, noise barrier walls, new lighting, and construction of a new flyover connecting SR 826/Palmetto Expressway and I-75. This project and the one above combined is called as the Palmetto Express project and is approximately 13 miles in length. This project will provide continuity to the upcoming I-75 express lanes (75 express) from NW 170th Street in Miami-Dade County to I-595 in Broward County.
- SR 826/836 Interchange Reconstruction – Capacity improvements include the reconstruction and widening along both SR 826 and SR 836, the construction of a four-level interchange as well as the reconstruction/modifications of the Flagler Street/ SR 826 and the Milam Dairy Road/NW 72 Avenue/SR 836 interchanges. FIN NO: 249581-1-52-01. Start Date – November 2009; Anticipated Completion Date – September 2015.
- SR 826/Palmetto Expressway from I-75 to Golden Glades Interchange – The PD&E Study will evaluate traffic capacity, operational and safety improvements, including Active Traffic Management and Intelligent transportation System strategies, lane additions, express toll lanes, major interchange modifications, and bus rapid transit. The study will determine the number and type of travel lanes and interchange improvements required to accommodate anticipated traffic volumes and improve safety conditions throughout the project corridor. FIN NO: 418423-1-22-01; ETDM NO. 11241; Start Date – April 2011; Anticipated Completion Date – April 2015.

Other roadway projects that are programmed in the Miami-Dade County FY 2014 TIP in and around the Town of Miami Lakes that may have an impact on traffic conditions within the Town are listed below in Table 3-1.

TABLE 3-1: PROGRAMMED ROADWAY IMPROVEMENTS			
FM No.	**Description**	**Type of Work**	**LRTP Reference**
2499414	SR 823/NW 57 Avenue from W 65 Street to W 84 Street	Add lanes and reconstruct	p. 4-35, C-34
4217072	SR 93/I-75 ML System from NW 170 Street to S of HEFT Interchange	Add special use lane	p. 4-39, C-40
4290141	SR 823/NW 57 Avenue at NW 138 Street Intersection	Intersection improvement	p. F-9
4291352	SR 826/Palmetto Expy at NW 57 Avenue	Intersection improvement	p. 4-35, C-34
4258572	Safe Routes to School Miami Lakes Elementary School	Pedestrian safety improvement	p. 4-50, 4-51
4307633	SR 93/I-75 From S. of NW 170 Street to Miami-Dade County Line	Preliminary engineering for future capacity	p. F-9

Source: Adopted FY 2014 Transportation Improvement Program

Existing Transit System

Regional transit service within the Town of Miami Lakes is provided by Miami-Dade Transit (MDT) through Metrobus and Metrorail services. The Town of Miami Lakes operates a local transit circulator service and an on-demand paratransit service to supplement and meet the local transit demands of Town residents. The regional transit service provided by MDT and the local transit service provided by the Town are elaborated in the sections below.

There are six Metrobus routes serving the Town – routes 29, 54, 73, 75, 135, and 267 (Ludlam Limited). These routes connect the Town to the regional employment, educational and commercial destinations within Miami-Dade County. The Town residents also have access to the Metrobus park-and-ride lot located at NW 183rd Street/Miami Gardens Drive and NW 73rd Avenue that offers free parking for users.

Table 3-2 shows the route characteristics for the MDT routes that serve the Town Miami Lakes. Peak hour headways for the MDT routes range between 25 and 60 minutes and off-peak hour headways are longer than 45 minutes.

TABLE 3-2: TRANSIT ROUTE INFORMATION				
Routes	Weekday		Weekend	
	Headways	Timings	Headways	Timings
29	45 min	6:00 a.m. – 7.30 p.m	N/A	N/A
54	45 min	5:45 a.m. – 7.20 p.m	N/A	N/A
73	30 min	5:00 a.m. – 10.20 p.m	60 min	6:00 a.m. – 9.30 p.m
75	30 min	5:30 a.m. – 10.00 p.m	45 -60 min	6:20 a.m. – 9.30 p.m
135	60 min	6:00 a.m. – 9.00 p.m	N/A	N/A
267	25 min	3:30 p.m. – 7.15 p.m	N/A	N/A

In addition to Metrobus routes, Town residents have access to Metrorail service operated by MDT. The nearest Metrorail stations to the Town are the Palmetto and Okeechobee station. The Palmetto Metrorail station is located close to the interchange of SR 826 and NW 74th Street. The station is accessed via NW 79th Avenue. The Okeechobee Metrorail station is located close to the interchange of US 27/Okeechobee Road and SR 934/Hialeah Expressway.

Route 267/Ludlam Limited is a recent addition to the Metrobus routes serving the Town and is intended to provide regional connectivity to residents via Metrorail. This route was launched in 2011 and provides frequent weekday rush-hour service on Ludlam Road between Miami Gardens Drive and the Okeechobee Metrorail Station via NW 67th Avenue. This route has a stop at the Metrobus park-and-ride lot located on Miami Gardens Drive at NW 73rd Avenue. The Ludlam Limited route departs every 25 minutes during two and half hours in the morning and three hours in the evening on weekdays.

Table 3-3 summarizes the monthly boarding information for the MDT routes serving the Town based on the latest available count from May 2013. It should be noted that these boardings are for the entire route length and not just the segment running through Miami Lakes. Route 267 which is primarily intended for employees traveling between the Town and the Okeechobee Metrorail Station is heavily underutilized.

TABLE 3-3: TRANSIT ROUTE INFORMATION				
Route	Average Weekdays	Average Saturdays	Average Sundays	Total Monthly Boardings
29	923	-	-	20,303
54	3,995	2,640	1,671	106,808
73	2,792	1,286	706	70,099
75	2,161	853	416	53,024
135	1,870	749	500	46,624
267	136	-	-	2,999

Table 3-4 summarizes the monthly boarding information for the Metrorail stations serving the Town based on the latest available count from May 2013. The boardings at the Okeechobee and Palmetto metrorail stations are significantly lower compared to the boardings at metrorail stations located in the eastern portions of Miami Dade County, illustrating that these stations are underutilized.

TABLE 3-4: TRANSIT ROUTE INFORMATION

Station	Average Weekdays	Average Saturdays	Average Sundays	Total Monthly Boardings
Okeechobee	1,434	510	320	35,264
Palmetto	1,412	390	221	33,835

Table 3-5 summarizes the occupancy at the MDT park-and-ride lots serving the Town's commuters. According to May 2013 ridership statistics, the park-and-ride lot located on Miami Gardens Drive at NW 73rd Avenue was only 21 percent occupied. On average, only 28 out of the 136 parking spaces (21%) were occupied. Parking is provided for free at the park-and-ride lot. Similarly parking partronage summary at the Okeechobee and Palmetto metrorail stations indicate that they were only 25% and 51% occupied respectively.

TABLE 3-5: PARKING PATRONAGE SUMMARY AT TRANSIT LOCATIONS

Locations	Actual Available Spaces	Average Weekday Occupancy	Percent Occupancy
Miami Gardens Dr./ NW 73rd Ave. Park-n-Ride Lot	136	28	21%
Okeechobee Station	1,398	351	25%
Palmetto Station	700	354	51%

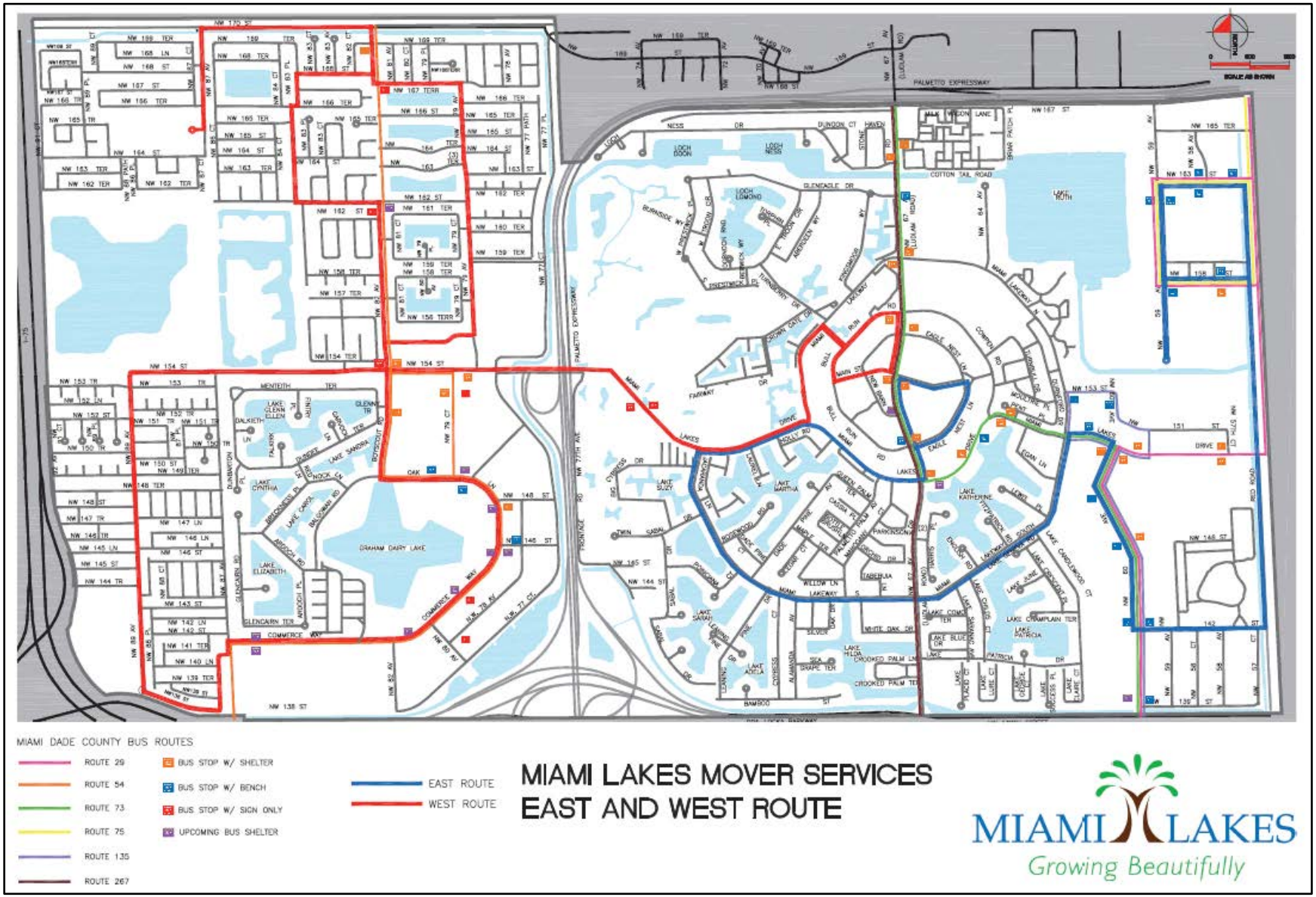
Table 3-6 below shows the ridership information by stop for all stops located within Miami Lakes. Overall, transit ridership is fairly low for bus stops located within the Town compared to stops located in the eastern portions of Miami-Dade County. The stops with the highest ridership within the Town are located along NW 154th Street/Miami Lakes Drive, NW 57th Avenue/Red Road, NW 67th Avenue/Ludlam Road and NW 59th Avenue in the eastern side of the Town, which has the highest concentration of families below poverty level as identified in Chapter 2.

TABLE 3-6: METROBUS RIDERSHIP DAILY TOTALS (JAN-JUNE 2013) AND RANKING FOR MIAMI LAKES BUS STOPS					
Stop No	**Location**	**On**	**Off**	**Total**	**Rank**
490	NW 60 AV MIAMI LAKES DR	92	21	113	1
1194	NW 158 ST NW 57 AV	34	78	111	2
486	NW 60 AV MIAMI LAKES DR	15	92	106	3
9458	NW 158 ST NW 59 AV	54	49	103	4
8371	NW 163 ST NW 57 AV	29	47	76	5
8314	NW 60 AV NW 139 ST	48	4	52	6
8307	NW 60 AV NW 139 ST	8	43	51	7
8321	NW 67 AV WINDMILL GATE RD	11	33	44	8
8322	NW 67 AV LOCH NESS	31	6	37	9
8330	NW 79 CT MIAMI LAKES DR W	19	5	24	10
1081	NW 67 AV EAGLE NEST LN N	7	13	21	11
8325	NW 67 AV MAIN ST	11	7	18	12
8318	NW 67 AV MAIN ST	9	9	18	13
8324	NW 67 AV BULL RUN RD	11	5	16	14
8377	OAK LA NW 79 CT	3	10	14	15
8309	NW 60 AV APPROX # 14401	2	10	12	16
10004	COMMERCE WAY #14261	1	11	12	17
1252	NW 82 AV NW 154 ST	3	8	11	18
10002	COMMERCE WAY NW 85 AV	3	8	11	19
8362	MIAMI LAKES DR E # 15010	2	9	11	20
10003	COMMERCE WAY NW 85 AV	9	2	11	21
8373	OAK LA NW 79 CT	5	5	10	22
8326	NW 67 AV BULL RUN RD	7	2	9	23
8317	NW 67 AV EAGLE NEST LN S	5	4	9	24
8323	NW 67 AV MIAMI LAKEWAY N	4	5	9	25
8363	MIAMI LAKES DR E NW 67 AV	1	7	8	26
8376	COMMERCE WY # 14382	6	2	8	27
8356	MIAMI LAKES DR E NW 67 AV	4	3	8	28
8313	NW 60 AV NW 142 ST	7	1	8	29
8332	NW 82 AV NW 162 ST	7	0	8	30
8308	NW 60 AV NW 142 ST	1	7	7	31
8319	NW 67 AV MIAMI LAKEWAY N	2	5	7	32
8338	NW 82 AV NW 167 TE	0	6	7	33
10006	OAK LN MONTROSE RD	1	6	7	34
10005	COMMERCE WAY NW 146 ST	1	6	7	35
8372	NW 163 ST NW 58 AV	2	4	7	36
8336	NW 82 AV NW 170 ST	0	6	6	37
8311	NW 60 AV # 14740	5	1	6	38
8357	MIAMI LAKES DR E OP # 15000	4	1	6	39
10007	MONTROSE RD # 15151	2	4	6	40
8375	COMMERCE WY NW 146 ST	5	1	5	41

TABLE 3-6: METROBUS RIDERSHIP DAILY TOTALS (JAN-JUNE 2013) AND RANKING FOR MIAMI LAKES BUS STOPS					
8331	NW 82 AV NW 168 ST	5	0	5	42
1124	NW 67 AV NEW BARN RD	3	3	5	43
8374	OAK LA NW 148 ST	4	1	5	44
8339	NW 82 AV NW 162 ST	0	4	5	45
1253	NW 82 AV NW 154 ST	3	1	4	46
8312	NW 60 AV # 14400	4	1	4	47
8305	NW 59 AV NW 163 ST	2	3	4	48
8320	NW 67 AV KINGSMORE WAY	0	4	4	49
8344	NW 138 ST NW 57 AV	0	4	4	50
8378	OAK LA NW 148 ST	1	3	4	51
8361	MIAMI LAKES DR E PENT PL	0	2	2	52
8359	MIAMI LAKES DR E NW 57 CT	1	1	2	53
8358	MIAMI LAKES DR E PENT PL	2	0	2	54
8303	NW 57 AV NW 165 ST	0	1	1	55
8327	NW 67 AV MIAMI LAKEWAY S	0	1	1	56
8316	NW 67 AV MIAMI LAKEWAY S	0	1	1	57
8360	MIAMI LAKES DR E NW 57 CT	1	0	1	58
8346	NW 138 ST OP # 830	0	0	0	59
8345	NW 138 ST NW 58 CT	0	0	0	60
8347	NW 138 ST OP # 940	0	0	0	61

In addition to the regional transit service provided by MDT, the Town operates a local transit circulator service called the “Miami Lakes Mover.” The service is intended to improve mobility within the Town. The Miami Lakes Mover has been operational since July 2012 and operates as a fixed-route circulator providing connections to Metrobus stops and Metrorail, via the Ludlam Limited Route, with a terminal point at Main Street. The service operates two routes – Miami Lakes East and Miami Lakes West. Both routes terminate at the Main Street and 67th Ave stop where passengers can transfer from one bus to the next. Through an Interlocal Agreement, the Miami Lakes Mover utilizes existing Metrobus stops within the Town and travels along multiple Metrobus Routes which improves transit connectivity and lends itself to the efficiency of the larger transit network. The route map for the Miami Lakes Mover is illustrated in Figure 3-1.

FIGURE 3-1: MIAMI LAKES MOVER ROUTE MAP



The Miami Lakes Mover runs Monday through Friday during peak morning (6:00 - 10:00 a.m.) and peak evening (2:15 - 7:00 p.m.) travel periods. The service operates with headways of 35 to 40 minutes. The Miami Lakes Mover also offers a flag-down service and is free to users. The bus is equipped with bicycle racks and ADA-compliant wheelchair ramps. The routes and the schedule for the Miami Lakes Mover may change upon further study of the routes and user input.

In addition, the Town also operates an on-demand paratransit service that offers specialized, door-to-door transport service for the elderly and people with disabilities who are not able to ride fixed-route public transportation. Both the Miami Laker Mover service and the on-demand paratransit service have steadily improved in patronage since inception. Table 3-7 shows the monthly ridership for the Miami Lakes Mover service and the on-demand paratransit service between October 2012 and August 2013.

TABLE 3-7: MIAMI LAKES MOVER 2012-13 MONTHLY RIDERSHIP SUMMARY

Month	East Route	West Route	On Demand Route
October 2012	425	200	577
November 2012	569	227	522
December 2012	569	247	534
January 2013	592	215	665
February 2013	607	289	582
March 2013	636	274	649
April 2013	809	430	856
May 2013	804	520	577
June 2013	395	497	548
July 2013	419	625	562
August 2013	651	720	588

Proposed and Planned Transit Improvements

The following improvements have been funded and planned in MDT's Draft FY 2014 – FY 2022 Transit Development Plan.

1. Bus Shelter Improvements
   Purchase and installation of bus shelters and/or enhancements at 11 bus stops within the Town of Miami Lakes (page 4-13, Draft FY 2014 – FY 2023 Transit Development Plan).

2. Proposed Metrobus Service
   Palmetto Corridor Express Bus Service would provide express commuter transit service between the proposed FDOT park-and-ride lot at I-75 and Miami Gardens Drive

interchange to the Palmetto Metrorail Station via SR 826. Service headways will be 15 minutes during the am/pm peak-hour. Revenue service is anticipated to begin in 2022 using five (5) new commuter coach buses (page 4-13, Draft FY 2014 – FY 2023 Transit Development Plan).

3. Metrorail Station Improvements
   Real-time parking space counters and dynamic message signs at the Okeechobee Metrorail Station Park-and-Ride Facility by December 2014. This will allow commuters using Metrorail to check real-time parking availability along with the estimated time of arrival of the next train approaching the station via the Internet, Smartphones, Personal Digital Assistants, Tablets, and Electronic Signs (page 4-13, Draft FY 2014 – FY 2023 Transit Development Plan).

4. Proposed Park-and-Ride Sites
   There are no proposed park-and-ride locations in Miami Lakes. The nearest planned services are at the following locations (page 4-13, Draft FY 2014 – FY 2023 Transit Development Plan):

   - I-75 Park-and-Ride Lot (FDOT Study) at I-75 and Miami Gardens Drive Interchange
   - Park-and-Ride/Transit Terminal Facility at NW 27th Avenue and NW 215th Street NW 27th Avenue and NW 215th Street
   - Palmetto Intermodal Center at Palmetto Expressway and NW 74th Street

5. Transit Hub Locations and Feeder Routes for Existing Bus Routes
   There are no proposed transit hub locations or feeder routes in Miami Lakes. The nearest planned services are at the Golden Glades Multimodal Terminal and at NW 27th Avenue and NW 215th Street (page 4-13, Draft FY 2014 – FY 2023 Transit Development Plan).

In addition to the MDT improvements, the Town of Miami Lakes has programmed improvements for the Town operated Miami Lakes Mover service. The Town has recently purchased two new larger buses through grant funding opportunities. The buses will be introduced as the Town's newest improvement to its Transportation Services to promote transit ridership. A grand re-launch of Miami Lakes Mover Services is expected to occur over the next few months. In addition, the Miami Lakes Mover route alignments are proposed to be evaluated to reduce headways and to align the Town's transit system with the larger MDT network.

Existing Bicycle Infrastructure

Bicycling is one of the most efficient modes for shorter local trips. The availability of bicycling facilities and end of destination amenities such as bicycle racks and lockers plays an important

role in encouraging bicycling as a travel option. With a good bicycle network in place, a considerable share of shorter vehicular trips can be replaced with bicycle trips, especially to schools and recreational facilities. Bicycling also offers the potential for recreation and improves the health of residents.

There are currently no on-street bicycle facilities within the Town. The Town recently completed a Phase 1 Implementation Plan for the NW 170th Street Greenway, which is multi-use trail for pedestrian and bicycling access. The greenway is located on the south side of the South Florida Water Management District Canal fronting on NW 170th Street from NW 89th Avenue to NW 82nd Avenue. This is currently the only dedicated bicycle facility within the Town. A few off-street pathways exist along the east side of Ludlam Road.

Most neighborhood streets have low traffic volumes that are suitable for bicycling. However, a vast majority of arterials and collectors have high traffic volumes and are not conducive to bicycling due to lack of bicycle provisions.

Proposed Bicycle Facility Improvements

The Town has secured grant funding to develop the next phase of the NW 170th Street Greenway which will consist of improvements from NW 82nd Avenue to NW 77th Court. The Town has also received a grant from Miami-Dade County to prepare a Town-wide Greenways and Trails Master Plan to develop an interconnected bicycle system within the Town that connects to regional bicycle facilities. The Plan will focus on key elements of non-motorized transportation including pedestrian pathways, bicycle trails, shared-use paths, recreational greenways, and connections to mass transit, thereby optimizing walking and bicycling as healthy, clean transportation options in Miami Lakes. The Plan will also identify locations for supporting bicycle infrastructure such as bike racks, lockers, and shelters within the Town.

FDOT has programmed construction of bicycle lanes along NW 154th Street in the vicinity of the Palmetto Expressway interchange, connecting the eastern and western portions of the Town. Additionally, the NW 87th Avenue construction project between NW 154th Street and NW 186th Street will include bicycle lanes and sidewalks.

Existing Pedestrian Infrastructure

The existence of pedestrian facilities and amenities is integral to the success of all other travel modes, since every trip begins and ends with walking. Although the Town of Miami Lakes has good sidewalk coverage, walking accounts for a very small percent of travel in the Town of Miami Lakes. A majority of streets within the residential neighborhoods and commercial portions of downtown have sidewalks on both sides of the street. However, there is a need to improve sidewalk coverage within the business parks and commercial and mixed use areas outside the downtown, such as Miami Lakes Business Park East, Business Park West, Miami Lakes

Technical Education Center, and Miami Dade Medical College. There are also several transit stops and parks within the Town that do not have any sidewalk connectivity or crosswalks. The Town has implemented approximately $560,000 in sidewalk improvements in the last two years, showing a commitment to strengthening the pedestrian infrastructure.

Completing the sidewalk coverage within Town will have a significant impact on pedestrian mobility and transit mobility by incentivizing people to walk or bike to bus stops or train stations to reach their trip destinations. It will also reduce the number of automobile trips necessary to access parks and recreational facilities within the Town by converting them to pedestrian trips.

Proposed Pedestrian Improvements

The Town has recently applied for a Town of Miami Lakes Transportation Alternatives Program (TMLTAP) grant with the Florida Department of Transportation that will include construction, planning and design of on-road and off-road trail facilities, sidewalks, bicycle paths/lanes, crosswalk improvements, safety-related infrastructure, linkages to parks, greenways and transit, and ADA compliant improvements. The project objective is to connect neighborhoods to a Town-wide bicycle and pedestrian network that will link to key destinations, such as Main Street, schools, corporate centers, businesses and parks, as well as the County's greenways and trails network and transit system. The primary focus area for the project is within ¼-mile of transit stops throughout the Town. Improvements would create vital linkages to large employment centers and educational facilities within Town. In addition, the Town-wide Greenways and Trails Master Plan will evaluate pedestrian connections to transit stops within the Town.

The following streets are scheduled for sidewalk improvements under the TMLTAP grant funding:

- NW 163rd St
- NW 165th St
- NW 58th Ave
- NW 59th Ave
- NW 159th St
- NW 60th Ave
- NW 153rd St
- NW 151st St
- NW 64th Ave
- Commerce Way
- NW 77th Ct
- NW 78th Ave
- NW 80th Ave
- NW 146th St
- NW 148th St
- NW 79th Ave

The following projects are programmed for construction of sidewalks – NW 154th Street in the vicinity of the Palmetto Expressway interchange, NW 154th Street from NW 83rd Ave to NW 87th Ave and NW 87th Avenue between NW 154 Street and NW 186 Street.

TRANSIT, BICYCLING, AND WALKING AS VIABLE COMMUTING ALTERNATIVES

According to journey-to-work data collected in the 2010 Census, single occupant automobile trips account for 80.9 percent of all trips to and from work reported by residents in Miami Lakes. Carpools account for 8.3 percent, public transit for 1.6 percent, bicycles for 0.5 percent, and walking for 0.8 percent. The portion of single occupant automobile trips is much higher in the Town of Miami Lakes compared to the rest of Miami-Dade County. This is in part to the socioeconomic and demographic characteristics of the Town residents, such as median household income and automobile ownership. However, there are other components that play a major role in the selection of travel modes by commuters.

Two significant components of the predominantly automobile oriented choice within the Town are the nature of underlying land use and development patterns and the availability and quality of transit, bicycling and pedestrian facilities. The land use and development patterns within the Town vary considerably between the eastern and western portions. The eastern half of the Town has a higher mix of land uses and compact, street-oriented design elements focused around the Town Center. This half of the Town contains many of the building blocks for development of a compact mixed use development pattern such as narrower rights of way, street landscaping, on-street parking in the retail district, and street frontage closer to the street. However, street connectivity largely remains a challenge in the residential areas with cul-de-sacs and gated entrances that limits multiple accesses to retail and recreational facilities.

The western half of the Town is largely low density residential to the north and is separated from the Office, Industrial, and Institutional land uses to the south. The land use and development patterns in the western half of the Town are not conducive to promoting a mix of travel options largely due to the predominantly automobile oriented development pattern that favor parking in the front of buildings, larger setbacks of buildings from the street, etc. Changing the existing single use land use pattern and improving street connectivity will enable shorter trips to be made via walking and bicycling on local roads and remove traffic from regional corridors. Detailed evaluation and recommendations for changing the underlying land use and development pattern is not within the scope of this study.

This study largely focuses on the second component which relates to the availability and quality of transit, bicycling and walking facilities. The availability of facilities is a prerequisite for consideration of these modes as a viable commuting choice. Next, the quality of these facilities should be very high to highlight them as desirable commuting modes. Quality of service includes the time it takes to get to destinations using these modes, connectivity between these modes, and absence of impediments to accessing these modes. As discussed earlier, there are large gaps in the quality and availability of transit, bicycling and pedestrian facilities in the Town.

Improving Transit Mobility

The transit service provided by MDT primarily runs along major routes and is oriented towards serving regional transit trips via connections to the Okeechobee and Palmetto stations and to the Miami Gardens park-and-ride lot. The service is heavily focused on peak hour travel. Off-peak trips and non-work related trips are not well served by the Metrobus service. Even so, the peak hour headways along routes serving the Town are not conducive to attracting commuters to use transit as a viable commuting mode choice, unless the commuters are transit dependent.

The preferred headway for transit is 10 to 15 minutes during the peak hours and 20 to 30 minutes during the off-peak hours. Headways or frequency of service is the primary determinant of the quality of transit from the perspective of the transit rider. The shorter the headways the more convenient it is for the potential transit rider to choose transit over other modes. Based on the census data summarized in Chapter 1, more than 40% of transit riders have a travel time of 60 minutes or more each way to work. It is imperative that the quality of transit service within the Town be improved in order to promote transit as a commuting option to work.

Improvements to the quality of transit service needs to include expanded service coverage, reduced service headways and improved access to transit facilities. The Town has an opportunity to play an integral role in improving transit through provision of sidewalk connections to bus stops, provision of bicycle racks at or near bus stops and improving shelter facilities. The Town can work on close coordination with MDT with regard to identifying and prioritizing bus shelters for improvements either through MDT's shelter improvement program or through requirements from new developments and redevelopments based on the Town's Land Development Regulations.

The Miami Lakes Mover service offers an excellent opportunity for the Town to bridge the gap between local and regional transit circulation for Town residents and employees. By further enhancing its intracity transit network the Town can improve local service coverage, reduce service headways, and increase mobility. Specifically, the route timings for the Miami Lakes Mover can be synchronized with the Ludlam Limited and other MDT route timings, so Town residents can access these stops through Miami Lakes Mover shortly before the arrival of MDT buses. This will greatly improve the quality of service for transit riders within the Town. In addition, improvements to shelter facilities, side walk connections, and existing bicycle infrastructure will lend itself to the enhancement of the larger transit network.

The Miami Lakes Mover service has been operational since July 2012. At the completion of one year of service, it is recommended that the Town conduct on board passenger surveys to receive feedback on the service to assist with the identification of refinements to the route network and timings and additional improvements that could be made to improve user experience. Similarly, continuing to enhance the Town's on-demand paratransit service will offer

residents additional transportation mode choices and greatly improve transit mobility within the Town.

Improving Bicycle Mobility

Bicycling is an underutilized mode of transportation within the Town of Miami Lakes largely due to the lack of bicycling facilities and amenities. Based on the Census Journey-to-Work data, bicycling accounted for only 0.5% of all commuting trips within the Town of Miami Lakes.

Bicycling can play in important role in improving mobility within the Town by converting shorter automobile trips into bicycling trips and by converting longer automobile trips into a combination of bicycling and transit trip. Creating a broader network of on- and off-road bicycle facilities will have a significant impact on bicycle mobility and encourage a shift from automobile trips to bicycle trips for short to moderate trips lengths. Providing bicycle facilities along major arterials with transit service, such as NW 67th Avenue, will allow bicyclists to take advantage of MDT's Bike & Ride program. Similarly, requiring commercial and business establishments to provide ancillary bicycle facilities such as bicycle racks/lockers and shower facilities will encourage the use of bicycling for commuting, shopping and recreational trips. It is recommended that the Town's Land Development Regulations be revised to require new developments and redevelopments to provide for bicycle friendly amenities.

The Town can also play a significant role in improving mobility through the provision of bicycling facilities such as on-road and off-road bicycle facilities and bicycle parking facilities such as bicycle racks/lockers at strategic locations throughout the Town. The Town has taken steps towards improving bicycle mobility through the proposed Greenways and Trails Plan and the 170th Street Greenway Project and will continue to strengthen bicycle infrastructure through the Town of Miami Lakes Transportation Alternatives Program (TMLTAP) grant project.

As the Town continues to build bicycle facilities and greenways, it is recommended that potential opportunities for connecting those facilities to recreational and major retail destinations are explored. One short term opportunity is to connect the NW 170th Street Greenway project to Royal Oaks Park that will provide bicycle access to one of the major recreational destination within the Town. Other similar opportunities should be explored during the development of future facilities and the Greenways and Trails Plan.

Improving Pedestrian Mobility

The most important aspect of pedestrian mobility is to provide connections to other modes of transportation and strengthening linkages around trip origins and trip destinations. A trip solely undertaken by walking usually occurs for a very short distance between an origin and a destination that is within a 5-15 minute walking distance. Most often walking occurs as smaller portion of a longer trip through connections to public transit. Hence, a key aspect to increase the

share of walking as a viable travel option is to improve connections to bus stops as well as provide sidewalk coverage in and around major destinations. These destinations should include schools, parks and recreational facilities, employment centers, commercial centers and ancillary retail establishments.

The Town has taken steps towards improving pedestrian mobility through the investments made at improving sidewalk coverage in recent years and will continue to strengthen pedestrian infrastructure through the Town of Miami Lakes Transportation Alternatives Program (TMLTAP) grant project. In addition, it is recommended that the Town's Land Development Regulations be strengthened to require pedestrian amenities and connectivity to adjacent developments from all new developments and redevelopments.

CHAPTER 4: EMPLOYEE COMMUTE PATTERNSURVEY

ANALYSIS OF TOWN BUSINESSES

The Town staff compiled a database of businesses located within the Town using the information contained in the Business Tax Receipts. The database consists of basic information on Town businesses such as the business name, address, type of business, number of employees and the e-mail address of the contact person. The Town staff also created a database of businesses within the Town grouped by the number of employees – under 10, 10-49 and more than 50. It should be noted that the total number of employees as listed in Table 4-1 varies significantly from the number of employees obtained from the Census data as identified in the previous section. The intended use of this table is only to gain an understanding of the distribution of the number of employees by business size.

TABLE 4-1: SIZE OF BUSINESSES WITHIN TOWN

Business Size (# of Employees)	Firms		Employees[1]	
	Number	Percent	Number	Percent
Under 10	771	82%	2,211	20%
Between 10-49	121	13%	2,519	23%
Over 50	48	5%	6,214	57%
Total	940	100%	10,944	100%

1. Total number of employees in the business size category
2. Source – Town of Miami Lakes Business Tax Receipt information

Small businesses (less than 10 employees) constitute more than 80% of the number of firms within the Town; however, they only employ 20% of the workforce. In contrast, large businesses (more than 50 employees) are only 5% of the firms but employ close to 60% of the total employee workforce. This indicates that focusing the Town's TDM strategies on the major employers would yield the maximum return on investment in reducing the Town's goal of reducing and managing peak hour traffic congestion.

EMPLOYEE COMMUTE PATTERN SURVEY

In addition to researching the census data for commuting trends, a survey of employees working within the Town was undertaken to collect information on the commuting patterns of employees within the Town. The information obtained from the survey was used to supplement the census information and obtain a more detailed understanding on commuting patterns and preferences, evaluate accessibility of available travel options and gauge interest in alternative travel modes.

A 20-question web-based survey was designed to obtain detailed information on employee travel patterns, travel mode preferences and to receive input from employees on the Town's

transportation infrastructure. The survey questions were designed to be short and easy to understand. A sample survey instrument is attached in Appendix A. The survey questions covered the following areas:

- trip origin detailed to street address or nearest major intersection;
- trip destination detailed to street address or nearest major intersection;
- trip purpose;
- trip length;
- mode of travel;
- time of travel;
- vehicle occupancy;
- usage and attitude towards public transit;
- nature of work schedule;
- attitudes towards other travel modes; and
- transportation services and amenities.

The web-based survey was administered through e-mail to the businesses located within the Town. The contact information for businesses identified in the Town's Business Tax Receipt database was used to send survey information to employees. The web survey was hosted on the popular survey website www.surveymokey.com. In addition to sending the survey information through e-mail to local businesses, the information was also disseminated through the Town website, the Town's Chamber of Commerce, and a Mayor's press release statement.
In order to encourage survey response, the Town hosted a random prize drawing for survey participants. The survey prizes included five gift cards each worth $200 and 50 gift cards each worth $25. The Town staff and the consultant team made telephone calls to the major employers within the Town to encourage additional responses. The web survey was held open for approximately 6 weeks with two intermittent reminders.

A total of 119 surveys were filled out. Out of the 119 submitted surveys, 85 were complete and were used to summarize the survey responses. The response rate for each question is shown in Table 4-2.

TABLE 4-2: RESPONSE RATE BY QUESTION						
Question	**Responses**	**Response Rate**		**Question**	**Responses**	**Response Rate**
1	78	92%		16a	76	89%
2	82	96%		16b	73	86%
3	83	98%		16c	72	85%
4	83	98%		16d	75	88%
5a	82	96%		16e	77	91%
5b	82	96%		16f	71	84%
6	84	99%		16g	73	86%
7	83	98%		17	81	95%
8	84	99%		18	72	85%
9	81	95%		19a	76	89%
10	83	98%		19b	74	87%
11-12	85	100%		19c	64	75%
13	84	99%		19d	66	78%
14	84	99%		19e	75	88%
15	40*	47%*		19f	73	86%

* Possible low response rate because “none” wasn’t listed as one of the possible answers.

SURVEY ANALYSIS

The analysis of the survey is divided into four sections: Commuting Characteristics, Usage of Public Transportation, Employment Flexibility and Attitudes towards Alternate Travel Modes. Each section illustrates the results in a graphical format along with a description of the results.

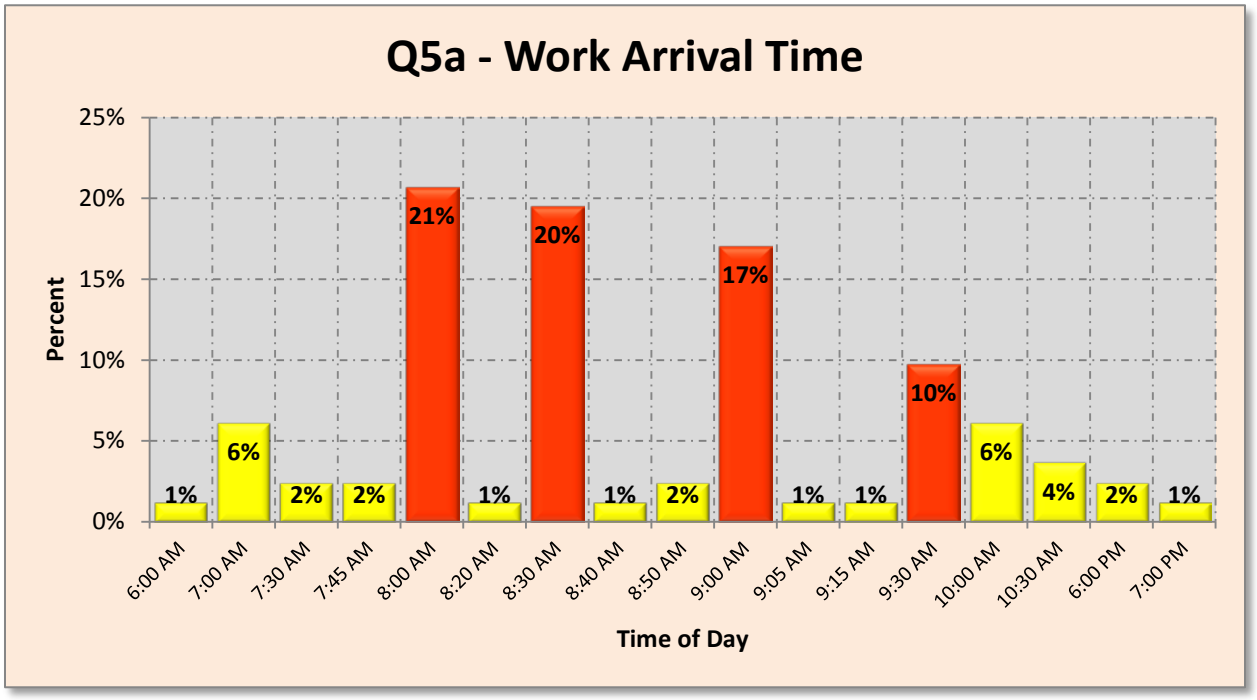
Commuting Characteristics

The Commuting Characteristics section contains specific attributes of the employees’ individual work trip characteristics. The questions relate to work trip origins, distance to work, travel time to work and mode of travel. Question 2 asked participants to identify their trip origins. Approximately 62% of the respondents indicated that their trip began within the Town of Miami Lakes and the remaining 38% of respondents started their trip from outside the Town limits. Of the 38% of respondents that start their trips outside the Town limits, approximately 18% begin their trips outside Miami-Dade County.

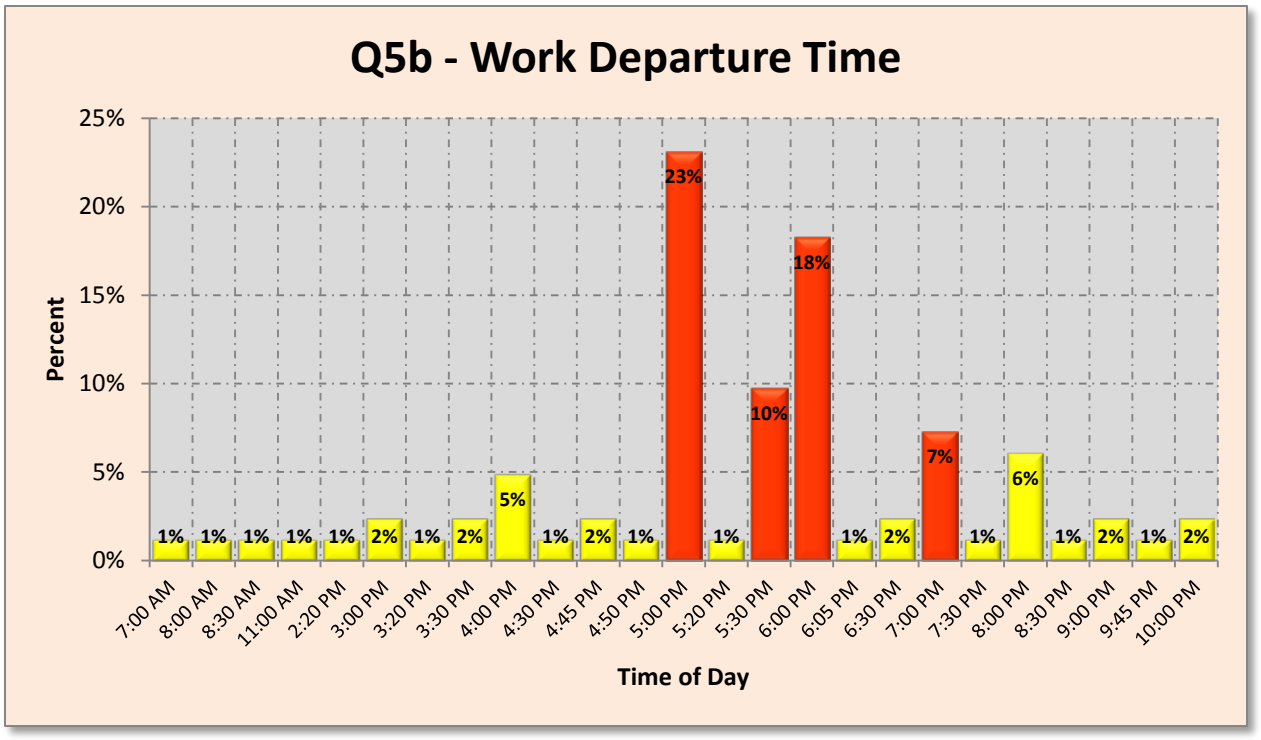
TABLE 4-3: TRIP ORIGIN SUMMARY		
Origin	**Number**	**Percent**
Trips that begin in Miami Lakes	51	62%
Trips that begin outside Miami Lakes	31	38%
Total	**82**	**100%**

Time of Arrival at and Departure from Work

Question 5 asked respondents to identify the time of arrival and departure to and from work. The peak periods of arrival at work were identified as 8:00 to 8:30 a.m. and 9:00 to 9:30 a.m, totaling 42% and 29% of the respondents respectively. Factoring in for the travel time, this information correlates with the time leaving home for work reported by the U.S. Census estimates of 7:00 – 8:30 a.m. Extrapolating the representative sample to the universe of employees, almost 75% the Town's employee population use the Town roadways during the morning peak period of 8:00 to 9:30 a.m.



Approximately 64% of the respondents indicated the time of departure from work between 4:00 – 6:30 p.m. Considering this representative sample, a majority of the Town's employee population is using the Town's roadways during the evening peak hour.

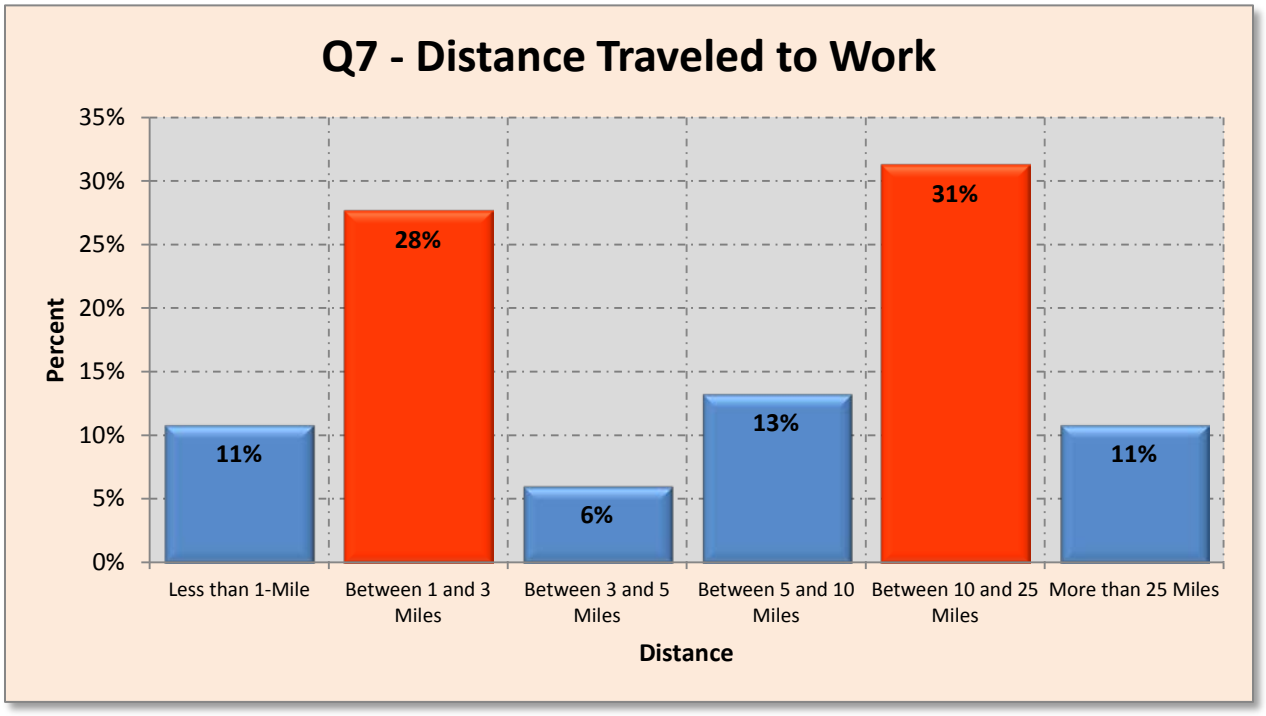


Question 6 asked the respondents to identify their standard workweek. Approximately 75% of the respondents work a standard workweek of Monday through Friday, 11% work six days a week, 5% work seven days a week and 3% work four day workweeks. The remaining 6% work staggered days each week as summarized in Table 4-4.

TABLE 4-4: SUMMARY OF WORK WEEK SCHEDULE

Day	Number	Percent
4-day Workweek - Monday thru Thursday	2	3%
5-day Workweek - Monday thru Friday	63	75%
6-day Workweek - Monday thru Saturday	9	11%
7-day Workweek - Monday thru Sunday	4	5%
Other Combinations	6	6%
Total	**84**	**100%**

Question 7 asked the respondents to identify the distance from their residence to their workplace. 45% of the respondents travel less than 5 miles to work. Another 31% travel between 10 and 25 miles. Another 11% of the respondents travel more than 25 miles to their work location in Miami Lakes.



Question 8 asked respondents the time it takes for them to get to work each way. 38% of the respondents travel to work in less than 15 minutes and another 32% travel to work in 30 minutes. 26% of the respondents travel between 30 and 60 minutes to work. The survey results are shown in the chart below.

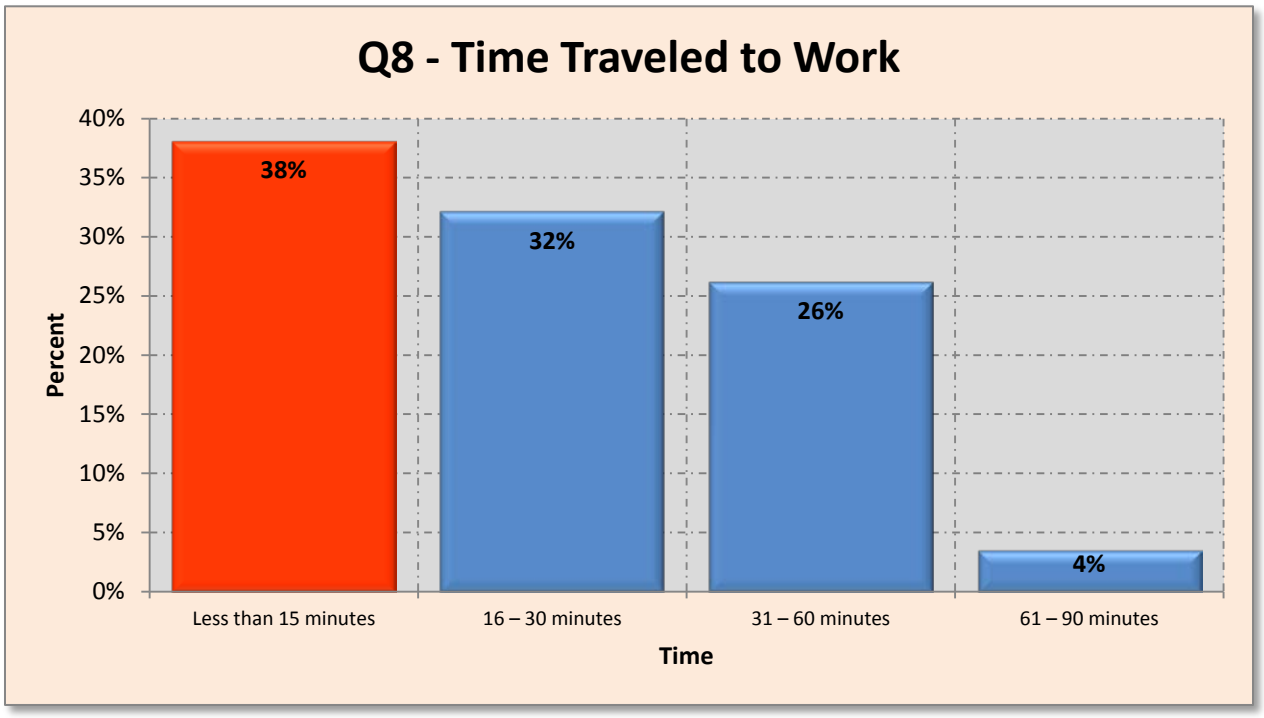
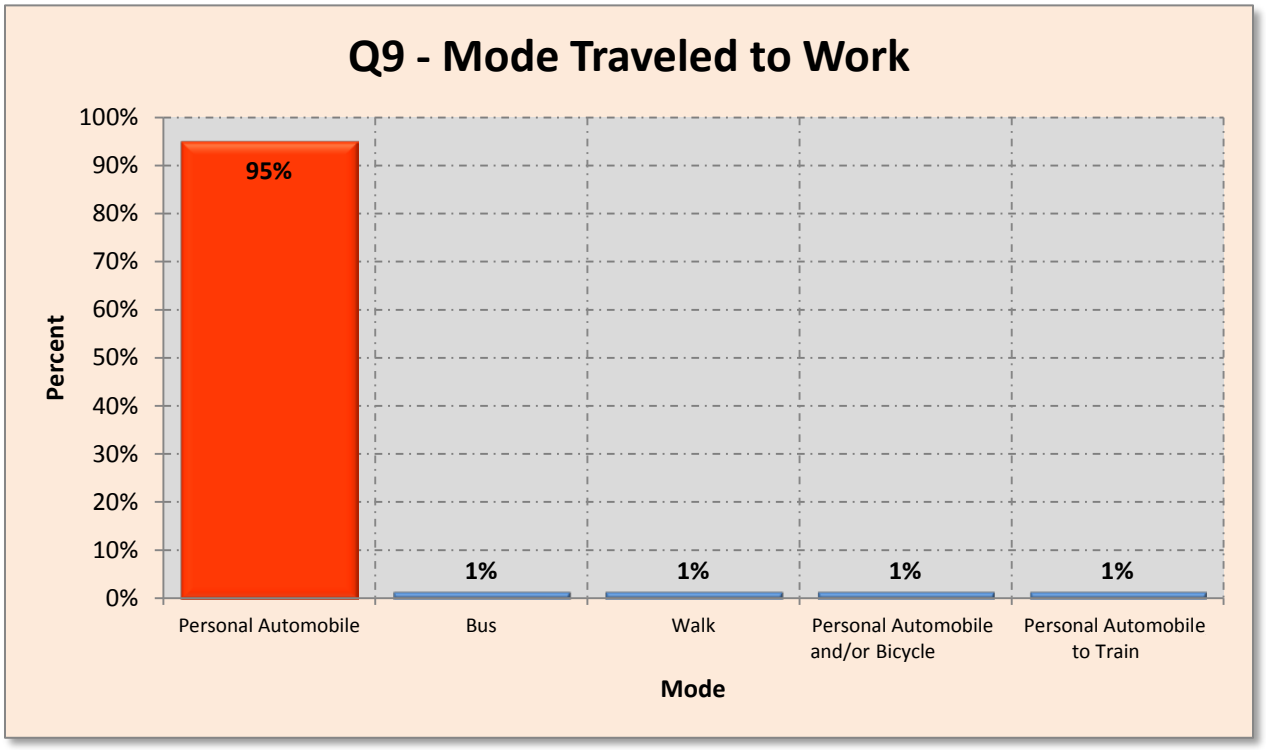


Table 4-5 shows the travel time to work as reported in the employee surveys. 70% of the respondents indicated their travel time as less than 30 minutes and another 30% travel more than 30 minutes each way to get to work. The travel times identified in the employee surveys are generally shorter than the times indicated in the Census Data since a majority of the survey respondents live and work in the Town.

TABLE 4-5: TRAVEL TIME TO WORK

Time	Employee Survey	
	Number	Percent
Less than 15 minutes	32	38%
16 – 30 minutes	27	32%
31 – 60 minutes	22	26%
61 – 90 minutes	3	4%
Total	84	100%

Question 9 asked respondents to identify the travel modes they use to travel to work. 77 out of the 81 respondents (95%) travel to work in a personal automobile. The survey group had higher personal automobile usage compared to the overall Town usage as reported in the Census data.



The main reasons cited for choosing their current travel mode to work were “most convenient”, “fastest” and “only choice available”.

TABLE 4-6: REASONS FOR CHOOSING TRAVEL MODE

Reason	Number	Percent
Most Convenient	61 of 85	72%
Least Expensive	2 of 85	2%
Fastest	32 of 85	38%
Most Comfortable	17 of 85	20%
Only Choice Available	19 of 85	22%
Environmentally Friendly	1 of 85	1%
Less Stressful	9 of 85	11%
Reliable	15 of 85	18%
Other	4 of 85	5%
Multiple Responses	50 of 85	59%

Usage of Public Transportation

This section explores the extent of public transportation usage by employees and their attitudes towards public transportation. 84 out of the 85 (99%) survey participants have never used public transportation to work. The main reasons cited for not using public transportation included "not convenient", "not interested" and "not available". Some of the other responses volunteered by survey respondents included work related constraints such as having an employer provided vehicle or work timings rendering transit use impractical, longer commute times via transit, unreliability of the transit system, and lack of information on transit service. Table 4-7 below summarizes all the responses.

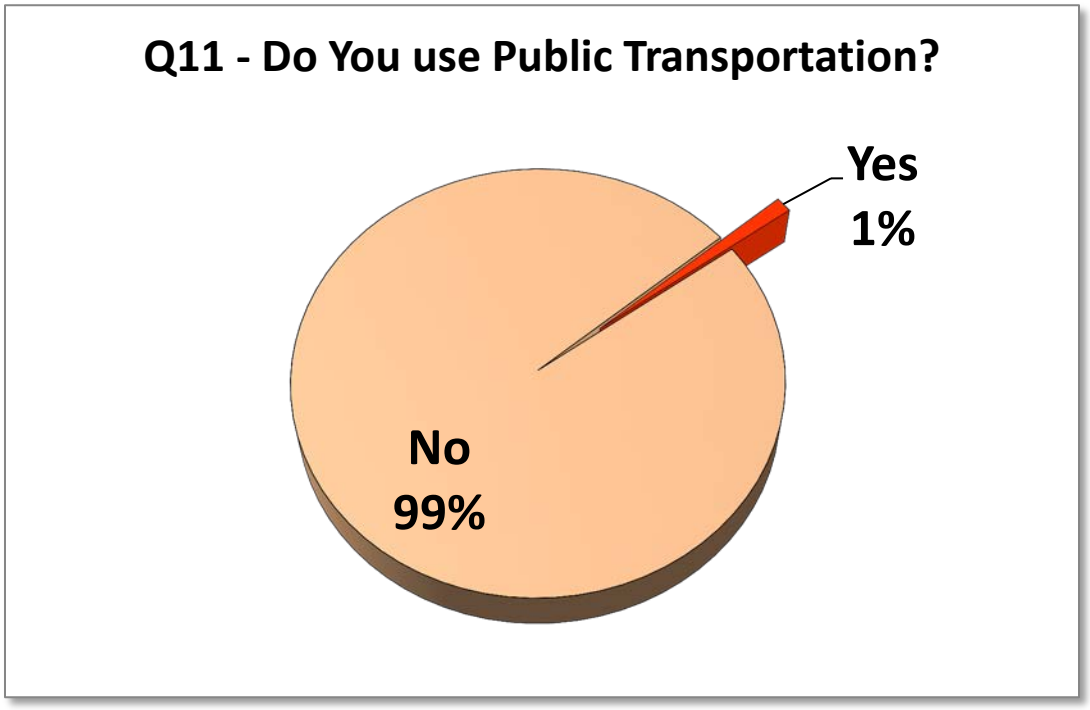


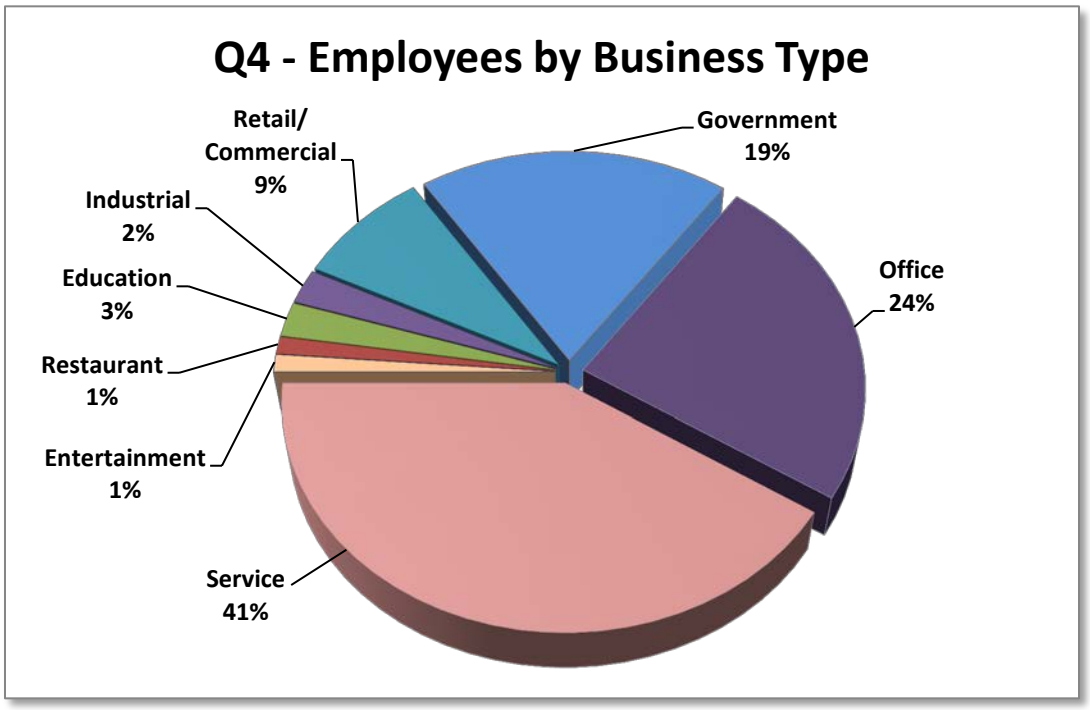
TABLE 4-7: REASONS FOR NOT USING PUBLIC TRANSIT

Reason	Number	Percent
Not Available	21 of 85	25%
Nearest Stop is too Far	14 of 85	16%
No Sidewalks or Bicycle Lanes to Transit Stop	3 of 85	4%
Not Interested	24 of 85	28%
Not Convenient	40 of 85	47%
Other (please specify)	17 of 85	20%

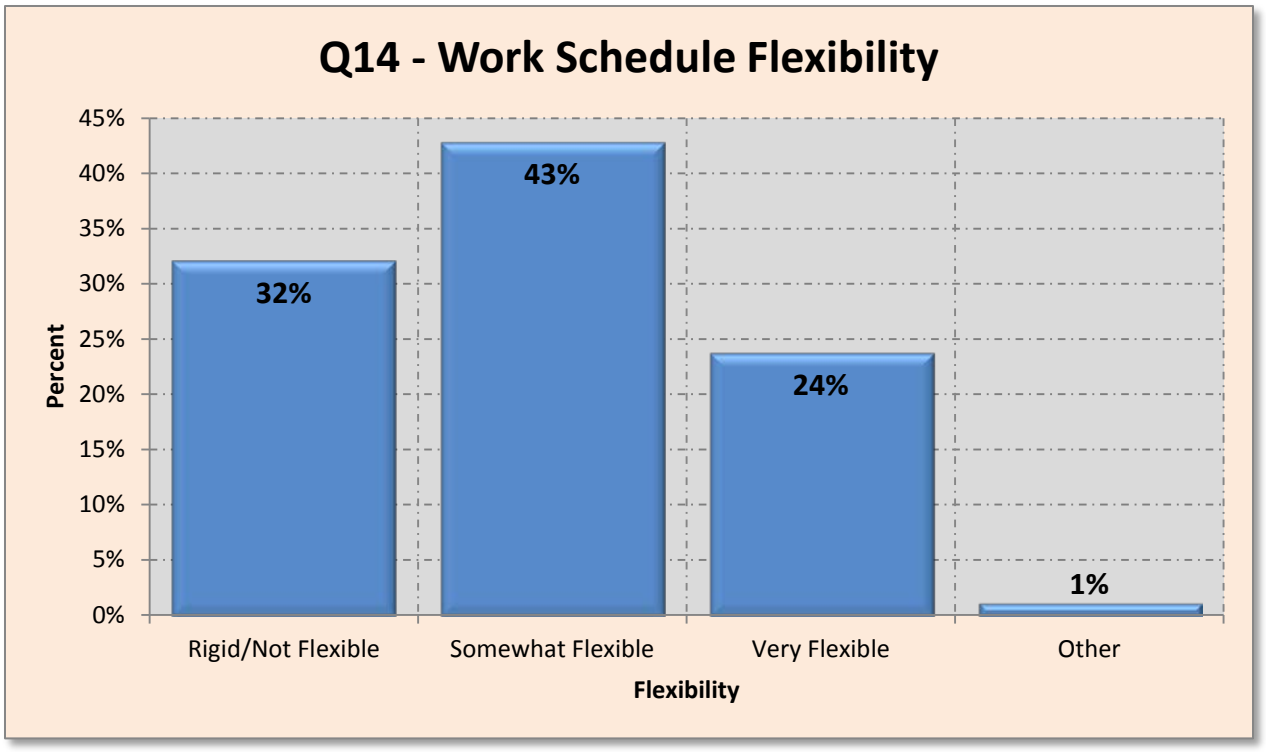
Employment Information

This section presents the findings related to nature of business, employment flexibility, and availability of employer provided amenities that facilitate usage of alternative travel modes.

The survey respondents were asked to identify the nature of business of their employer. A majority of the survey respondents worked in the service, office and government sectors.



24% of the survey respondents identified their work schedule as “very flexible” and another 43% identified their work schedule as “somewhat flexible”. The Town’s TDM plan should focus on efforts on modifying the travel behavior of the 67% of the population with somewhat and very flexible schedules.



Question 15 asked the participants to identify whether their employer offered any of the amenities/options related to encouraging travel by alternate modes of transportation. Table 4-8 provides a summary of the survey responses. 14% of the respondents indicated that they have the option of working from home (telecommuting). The other amenities/options listed below were available to 5% or less of the respondents.

TABLE 4-8: EMPLOYER INCENTIVES CURRENTLY OFFERED

Amenity/Option	Number		Percent
Work from Home Option	12	of 85	14%
Car or Vanpooling	4	of 85	5%
Preferential Parking for Carpool/Vanpool	2	of 85	2%
Subsidized Bus/Train Passes	1	of 85	1%
Compressed Work Week	2	of 85	2%
Bicycle Parking Racks/Lockers	4	of 85	5%
Shower Facilities	2	of 85	2%
Other*	1	of 85	21%

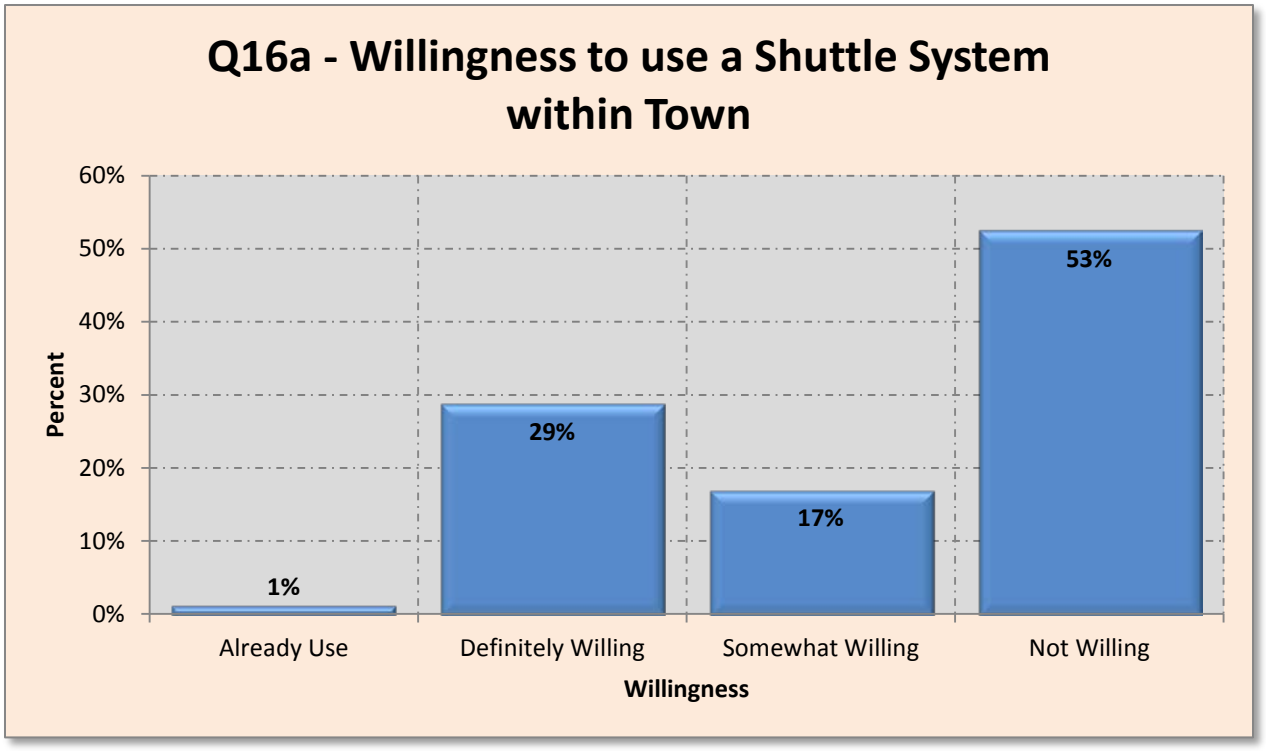
* - 4-day work week available during summer

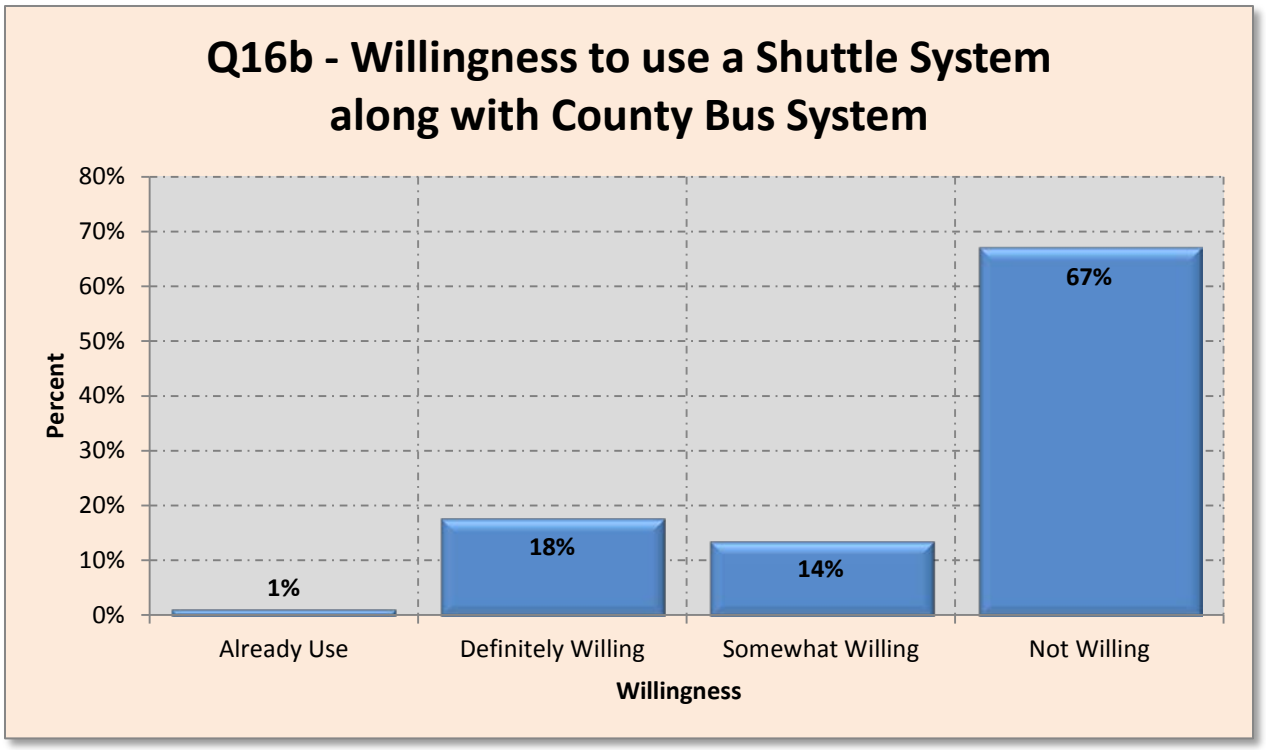
Attitudes towards Alternate Travel Modes

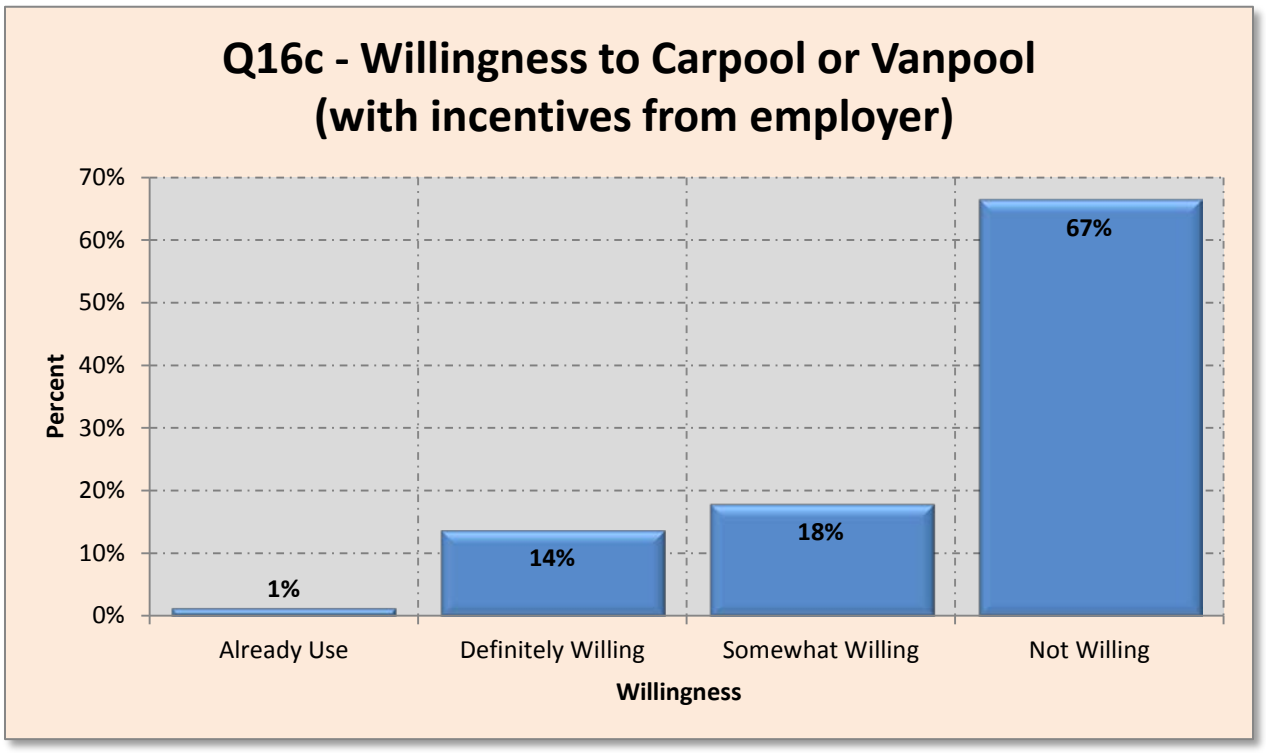
The section presents the findings from a series of questions regarding employee willingness to use other travel modes and work arrangements different from their current usage. The choices provided included the following:

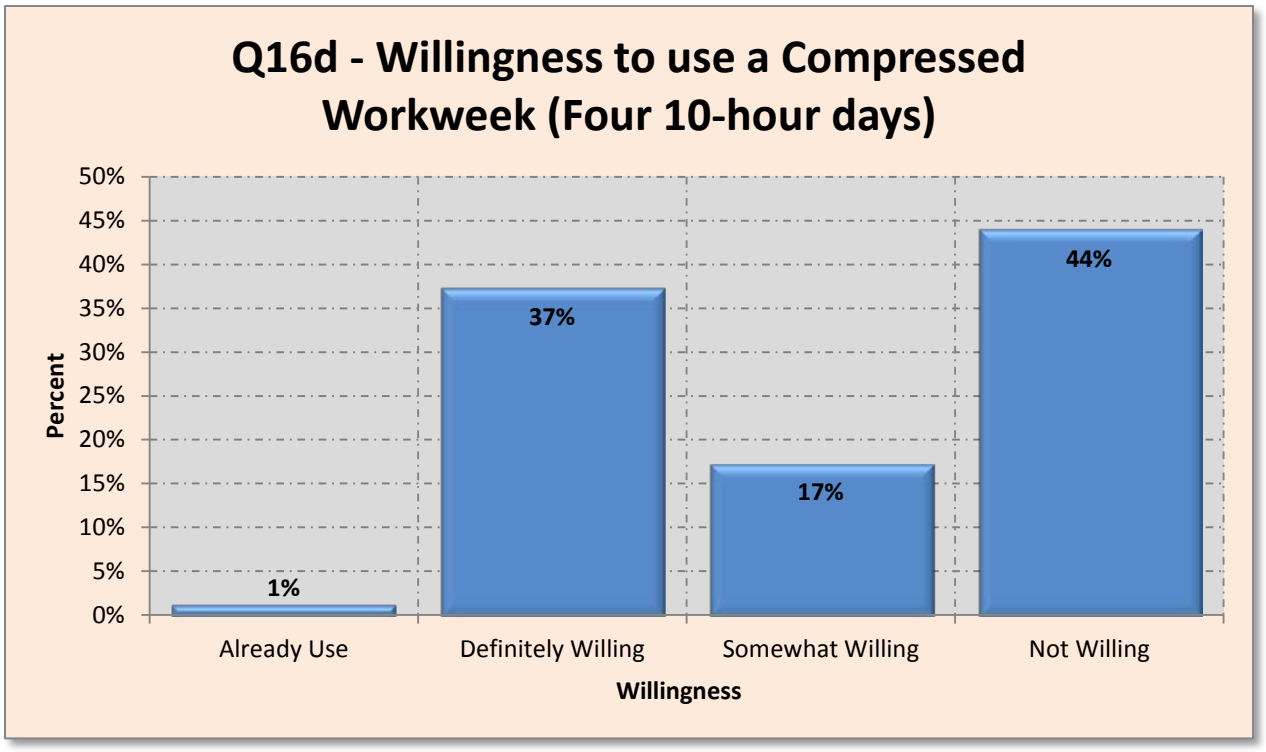
- Shuttle system within Town
- Shuttle system along with County Bus system
- Carpooling or Vanpooling (with incentives from employer)
- Compressed Workweek (Four 10-hour days)
- Work from Home
- Subsidized bus/train passes
- Bike to work, if bicycle parking and shower facilities were available

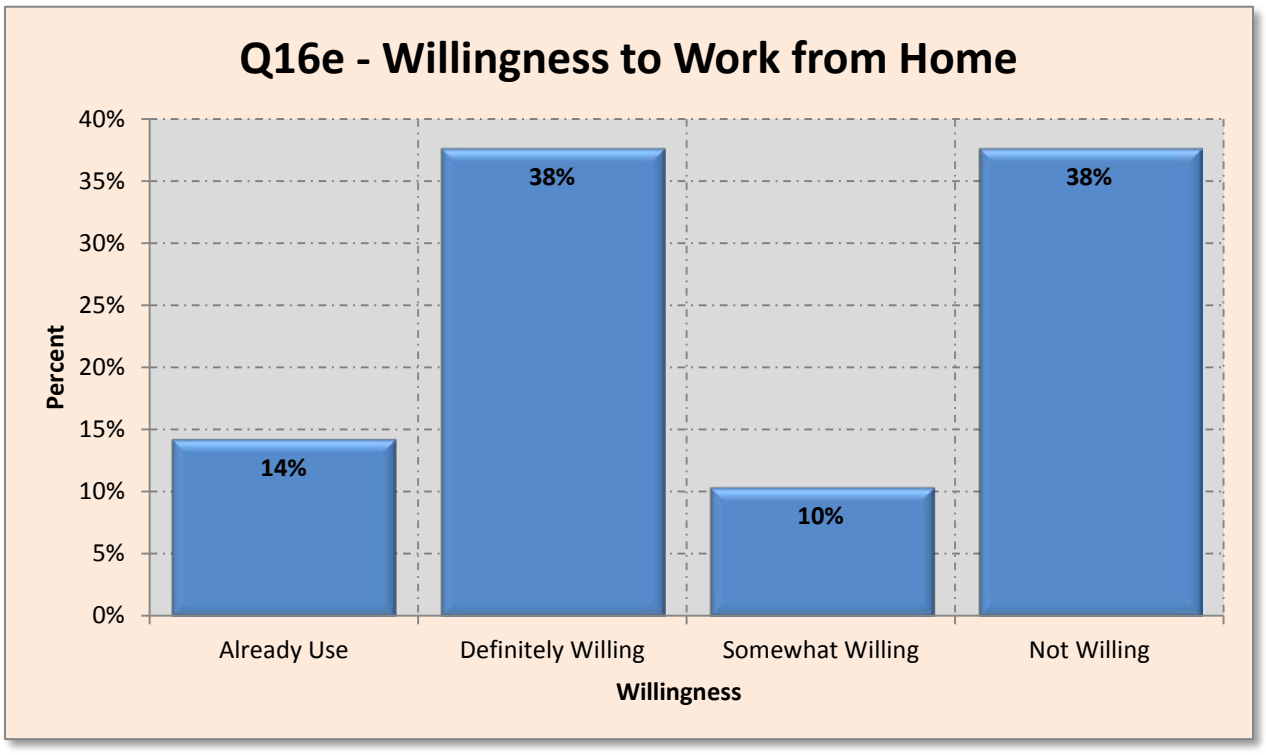
The options that received the highest interest included the Town shuttle system (47% willingness), compressed work week (55% willingness), and telecommuting (62% willingness). Based on this information, the Town's Commute Trip Reduction Program should target the 47% of employees that are willing to use the shuttle system for commuting to work. Similarly, the Town will partner with employers to promote employer based TDM strategies such as compressed work week and telecommuting.

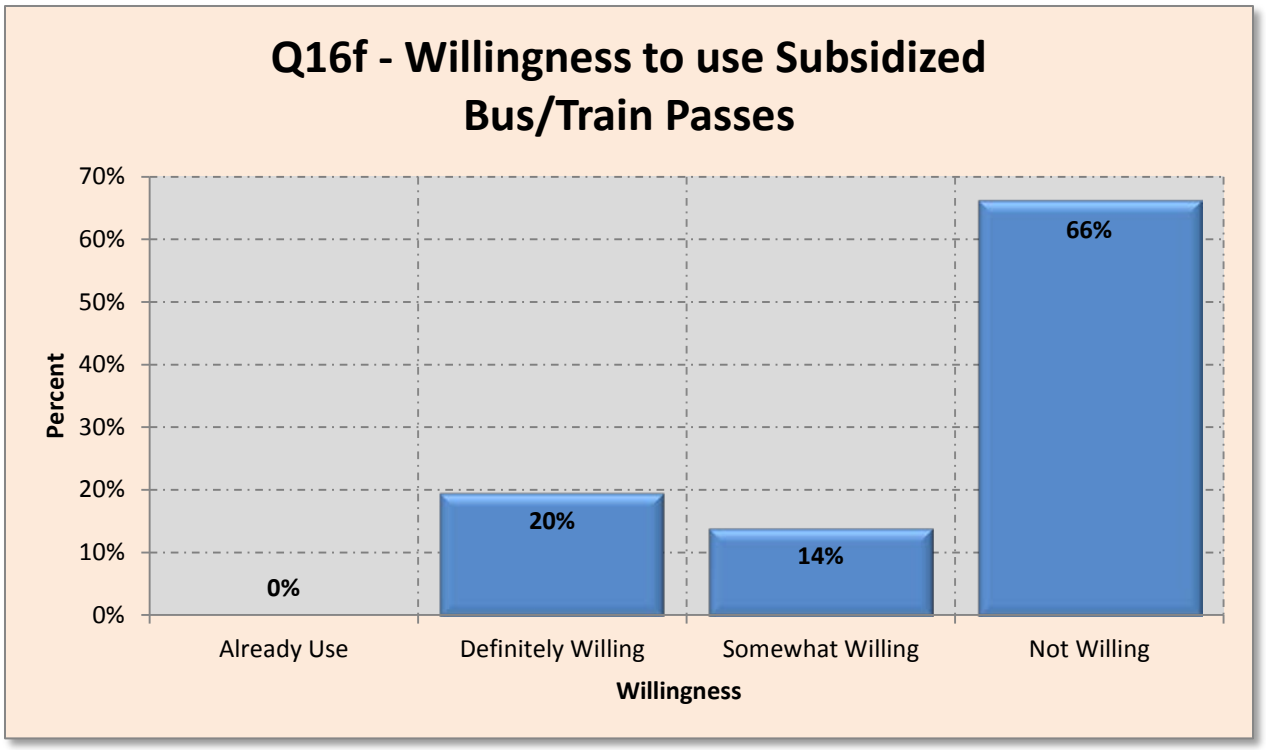


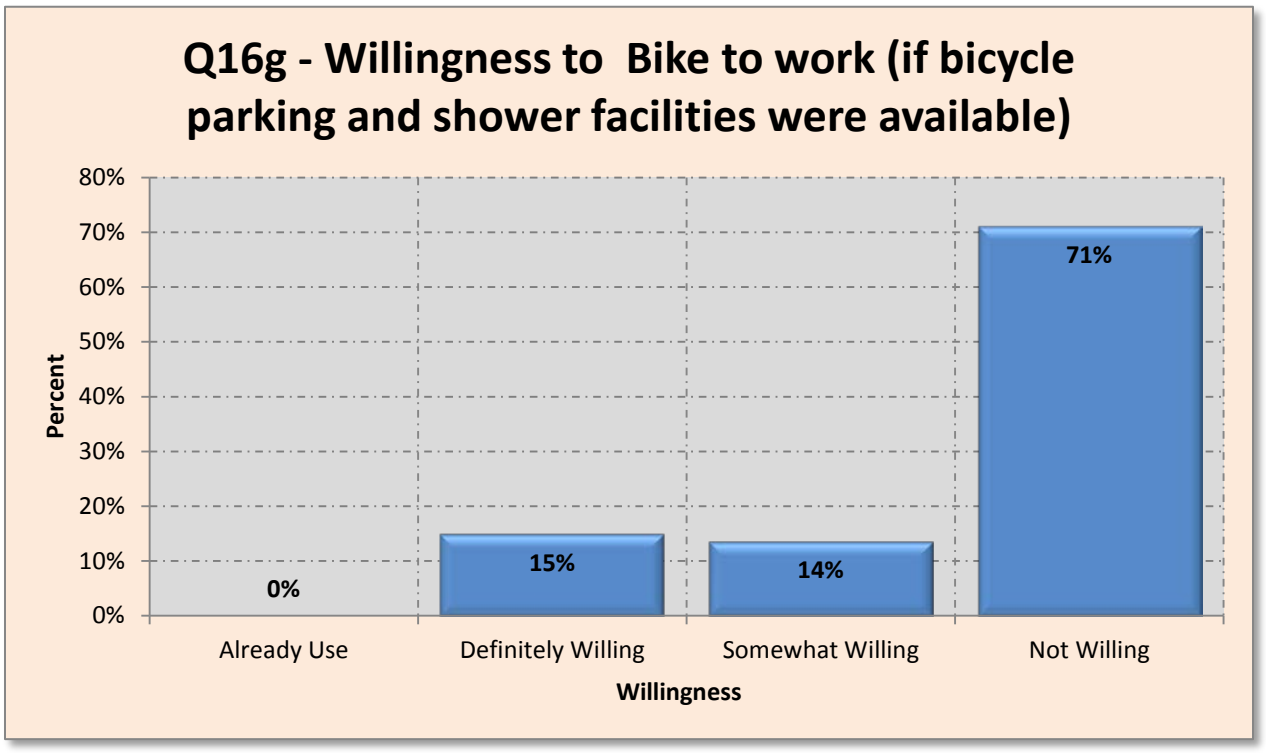

Q16b - Willingness to use a Shuttle System along with County Bus System
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent
1%
18%
14%
67%
Already Use
Definitely Willing
Somewhat Willing
Not Willing
Willingness


Q16c - Willingness to Carpool or Vanpool (with incentives from employer)
70%
60%
50%
40%
30%
20%
10%
0%
Percent
1%
14%
18%
67%
Already Use
Definitely Willing
Somewhat Willing
Not Willing
Willingness


Q16d - Willingness to use a Compressed Workweek (Four 10-hour days)
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Percent
1%
37%
17%
44%
Already Use
Definitely Willing
Somewhat Willing
Not Willing
Willingness

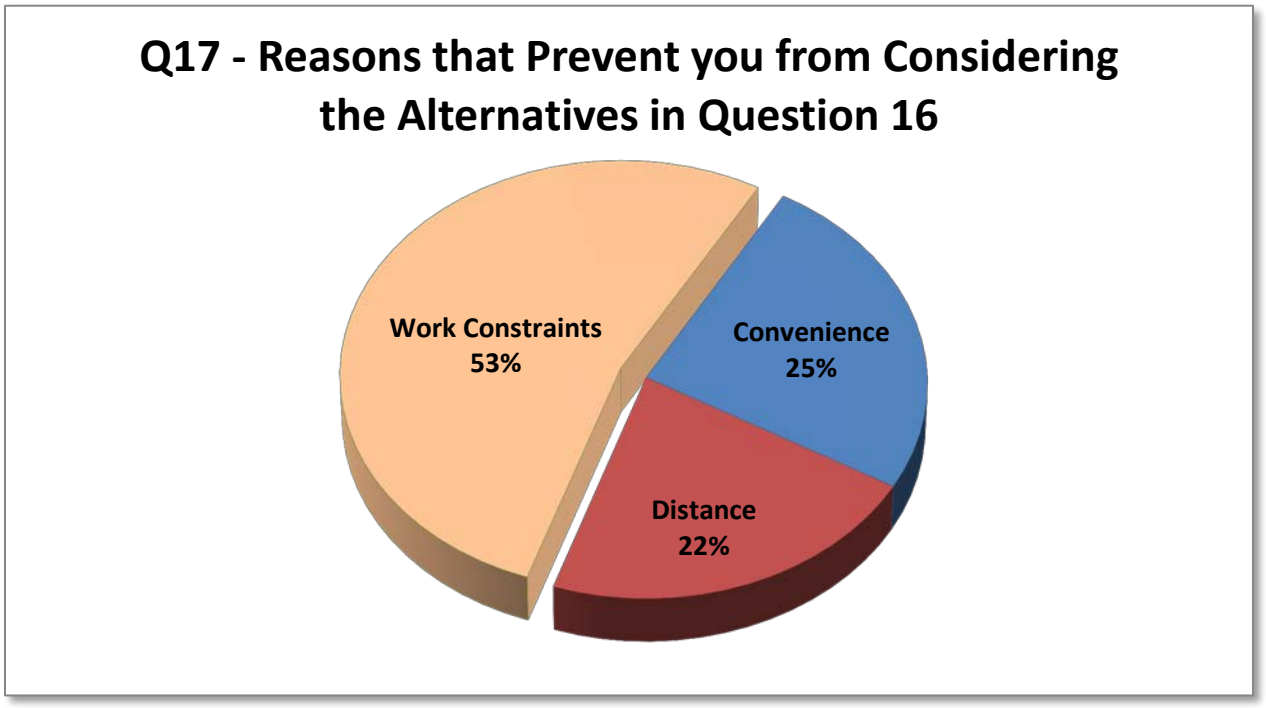

Q16e - Willingness to Work from Home
40%
35%
30%
25%
20%
15%
10%
5%
0%
Percent
14%
38%
10%
38%
Already Use
Definitely Willing
Somewhat Willing
Not Willing
Willingness


Q16f - Willingness to use Subsidized Bus/Train Passes
70%
60%
50%
40%
30%
20%
10%
0%
Percent
0%
20%
14%
66%
Already Use
Definitely Willing
Somewhat Willing
Not Willing
Willingness


Q16g - Willingness to Bike to work (if bicycle parking and shower facilities were available)
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent
0%
15%
14%
71%
Already Use
Definitely Willing
Somewhat Willing
Not Willing
Willingness

The options that received less interest included using the MDT transit system (33% willingness), receiving subsidized transit passes (34% willingness), carpooling/vanpooling (33% willingness), and bicycling (29% willingness). However, these options could still serve as effective strategies for reducing single occupancy travel. For example, improving timed transfers between the Town's shuttle system and the MDT system combined with subsidized transit passes will encourage commuters to use transit for longer regional trips.

The reasons provided for unwillingness to try these options included work constraints such as working late nights and carrying office related materials, convenience of owning a car with regard to trip chaining and emergencies and the perceived increase in travel time with public transportation and carpooling.



Perceptions of the Town's Transportation System

When asked to rate how well the Town's transportation system meets their travel needs, almost 38% of respondents indicated that it does not adequately meet their needs. Another 40% indicated that it meets their needs somewhat well. Only 22% responded that it meets their needs very well.

The respondents were asked to rate the various aspects of the transportation system. The results are summarized below. The highest rated characteristic was the presence of sidewalks in the Town. The lowest rated characteristics were traffic congestion and intersection congestion. The ratings are summarized in Table 4-9.

TABLE 4-9: EMPLOYEE RATING OF THE TOWN'S TRANSPORTATION SYSTEM														
Characteristics	Excellent		Good		Average		Below Average		Poor		Failing		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Traffic Congestion	3	4%	13	17%	29	38%	8	11%	15	20%	8	11%	76	100%
Intersection Congestion	3	4%	8	11%	23	31%	14	19%	16	22%	10	14%	74	100%
Bus Route Coverage	9	14%	14	22%	23	36%	6	9%	6	9%	6	9%	64	100%
Bus Stop Location	9	14%	19	29%	20	30%	7	11%	6	9%	5	8%	66	100%
Sidewalk Presence	25	33%	30	40%	8	11%	5	7%	4	5%	3	4%	75	100%
Bicycle Lane Availability	4	5%	12	16%	21	29%	12	16%	11	15%	13	18%	73	100%

Additional comments provided by the survey respondents are summarized below:

- Heavy traffic congestion at the SR 826 on and off ramps during peak hours and NW 154th Street between 87th Avenue and SR 826.
- Lack of bicycle facilities in the Town and the need to build bicycle lanes.
- Provide residents with maps of the MDT and trolley routes and bus stops. Make Town and County website more user-friendly.
- Allow right turns only at the intersection of Eagle Nest Lane and 67th Ave.
- Need to synchronize traffic lights and reevaluate signal timings along major transportation corridors, especially Ludlam Road/NW 67th Avenue and Miami Lakes Drive.
- Significance of the town trolley to serve Town employees.

Survey Segmentation Analysis

As indicated in Table 4-3, approximately 62% of the survey respondents live and work within the Town (resident employees). The survey results from this segment of the respondents were further analyzed to determine if additional insights on travel patterns of Town residents can be identified. A summary of their responses are provided below.

- Almost 71% the Town's resident employees use the Town roadways during the morning peak period of 8:00 to 9:30 a.m. compared to 75% for the overall survey response.
- Approximately 57% the Town's resident employees use the Town roadways during the evening peak period of 4:00 to 6:30 a.m. compared to 64% for the overall survey response.

- 90% of the Town's resident employees work a standard work week of Monday through Friday compared to the 75% for the overall survey response.
- 92% of resident employees drive a personal automobile to work compared to 95% for the overall survey response.
- 71% of resident employees identified convenience as the reason for driving a single occupancy vehicle to work.
- None of the resident employees use public transportation to work.
- 31% of resident employees indicated that they are not interested in using transit to work and another 39% indicated that it is not convenient.
- 68% described their work schedule as somewhat or very flexible.
- Approximately 50% of the resident employees indicated willingness to try the Town's shuttle system and 37% indicated a willingness to try the MDT system
- 56% expressed willingness to work from home and another 50% were interested in a compressed work schedule.
- 58% of the Town's resident employees believe that the Town's transportation infrastructure meets their travel needs somewhat or very well.

Generally, the survey responses of the Town's resident employees are very similar to the overall survey responses.

CHAPTER 5: IMPLICATIONS FOR THE COMMUTE TRIP REDUCTION PLAN

This section consolidates the findings from the census data and the employee survey results regarding employee commute patterns and preference to determine their implications for the Commute Trip Reduction Plan. The findings are summarized into the following categories:

1. Demographics: population, job type, vehicle availability, income
2. Travel patterns: from where, to where, how, and why employees travel
3. Motivations: why employees use their current travel mode
4. Work Schedule: flexibility in employee schedule, current employer incentives
5. Perceptions and attitudes: employees' feelings about commute alternatives
6. Interest: employees' interest in various alternatives and incentives

DEMOGRAPHICS

- In addition to the Town's resident population, an influx of 4,205 employees within the Town increases the Town's daytime population by 15%. This influx of workers driving into the Town puts an additional strain on the Town's already over utilized roadway infrastructure.
- The median household income of Town residents is substantially higher than the remainder of Miami-Dade County. A majority of the residents work in white collar jobs. This combined with the fact that more than 97% of residents have access to a personal automobile, makes driving alone as the most convenient choice for them.

TRAVEL PATTERNS

- More than 80% of the Town's population in the labor force travel outside the Town for work, 16% of which travel outside of Miami-Dade County.
- A significant (50 – 75% of Town's employees) amount of commuting occurs during the morning peak hours of 7:00 to 9:30 a.m. and the evening peak hours of 4:00 to 6:30 p.m.
- 80-95% of Town's employees drive alone to work, less than 8% carpool to work, and less than 2% commute via public transportation and another 1-8% work from home.
- More than half of the Town's employees who drive alone drive more than 5 miles to work or more than 30 minutes to work each way.
- More than 40% of transit riders spend at least 60 minutes to work each way.
- The occupations where most employees drive alone to work belong to the management, business, science, and sales and office.
- The highest use of ridesharing (carpool/vanpool) occurs in the sales and office occupations.
- The highest use of public transportation occurs in the construction, maintenance, production, transportation, and material moving occupations.

MOTIVATIONS

- The main reasons cited by employees for driving alone is that it is most convenient, fastest, reliable and sometimes the only choice available.
- The reasons cited for not using public transportation included the lack of availability of transit near home/work, nearest transit stop/station being too far, transit not being convenient and lack of interest in using transit.

WORK SCHEDULE

- An overwhelming majority (90%) of employees in the Town work a standard work week of Monday through Friday, thus contributing to everyone being on the roadways at similar times during the weekdays.
- 60-70% of the Town's employees have work schedules that are either very flexible or somewhat flexible. The TDM strategies related to workplace and schedule flexibility will be most effective in the 67% of the aforementioned employee groups with some flexibility in schedules.
- More than 10% of employees have a "work from home" option provided by their employers. Very few (less than 5%) work in businesses that promote carpooling/vanpooling, allow a compressed work week, and provide for bicycle parking and shower facilities. The objective of the TDM plan should be to increase the share of businesses that promote these alternative work options and amenities.

PERCEPTIONS AND ATTITUDE

- 95-99% of Town's employees have never used public transportation to work. The main reasons cited for not using public transportation is that it is not convenient, not available where they live or work and that they are not interested.

INTEREST

- The alternative options that received the highest interest included the Town shuttle system (47% willingness), compressed work week (55% willingness), and telecommuting (62% willingness).
- The options that received less interest included using the MDT transit system (33% willingness), receiving subsidized transit passes (34% willingness), carpooling/vanpooling (33% willingness), and bicycling (29% willingness).

IMPLICATIONS FOR THE COMMUTE TRIP REDUCTION PROGRAM

Based on the information obtained from the census data and the employee surveys, the predominant mode of transportation as well as the preferred mode of transportation to work is through an automobile. The other transportation modes such as transit, bicycling and walking do not appeal to the commuters due to longer commute times associated with transit and the lack of a comprehensive network of pedestrian and bicycle infrastructure. However, peak hour traffic congestion is a real issue and comes at a significant cost both to the individual commuters and to the Town and regional governing bodies.

In order to address traffic congestion, the Town will adopt a comprehensive approach that focuses on the following elements:

- Shift single occupancy vehicle (SOV) trips to non-SOV trips;
- Shift peak hour commuting trips to non-peak hour commuting trips; and
- Shift vehicular trips to non-vehicular trips.

Given the low transit ridership, longer commute times using transit, and the lack of willingness in using transit, the TDM Plan's immediate focus should be on the first two elements – promote shifts from SOV to non-SOV travel and from peak to non-peak commuting trips. The third element, shift from vehicular to non-vehicular trips, will occur over time as the Town continues to build on the transit, bicycle and pedestrian infrastructure.

A significant majority of the employees have flexible work schedules and some employers allow working from home. The objective of the Commute Trip Reduction Program should be to increase the share of businesses that promote these alternative work options and amenities as a means of reducing peak hour commuting trips. This will involve working with major employers to implement employer programs such as a compressed work week, flexible start and end timings, telecommuting, and commuter tax incentives. The strategies should also focus on educating the employers and employees on the various commuting options and financial incentives available through the South Florida Commuter Services, which will be discussed in detail in the next chapter.

Based on the employee survey results discussed in Chapter 4, approximately 62 percent of the survey respondents live and work within the Town and approximately 95% of them drive to work. The plan should focus on strategies to encourage employees that live and work within the Town to use a combination of the Town shuttle system, bicycling and walking to commute to work rather than drive. Also 47% of the survey respondents indicated a willingness to use the Town's shuttle system compared to only 33% who were willing to use the MDT bus system. The Town's shuttle routes should be evaluated to ensure that the residential neighborhoods within the Town are connected to the major employer centers in order to encourage residents to use the shuttle system to get to work.

The commute trip reduction strategies should be focused on employers and businesses in the management, business, science, and sales and office sectors, where there is currently the highest use of ridesharing and work schedule flexibility.

CHAPTER 6: TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Transportation Demand Management (TDM) is a general term for strategies aimed at improving the efficiency of the transportation system by encouraging a shift from single-occupant vehicle (SOV) trips to non-SOV modes, shifting automobile trips to non-automobile trips and from peak period trips to non-peak period trips. The primary purpose of TDM is to reduce automobile trips by increasing travel options, by providing incentives and information to encourage and help individuals modify their travel behavior, or by reducing the physical need to travel through transportation-efficient land uses. A comprehensive set of TDM strategies can have a significant impact on travel behavior, system efficiency, and SOV rates. TDM programs are most efficient when implemented by public agencies, employers, or via public-private partnerships.

Some of the benefits of TDM strategies include congestion mitigation, energy and fuel conservation, savings in parking and road costs, and improvement in safety and overall mobility. The basic premise of TDM is that roadway congestion in urban areas can be reduced by changing the travel habits of commuters and by increasing public awareness of travel choices. If a significant number of commuters can vary when and how they travel to work or school, the peak-hour traffic volumes can be significantly reduced and the traffic can be spread more evenly throughout the day.

There are generally two types of TDM programs:

1. Employer-based TDM Programs; and
2. Area-wide TDM Programs.

Employer-based TDM programs consist of strategies that are implemented, enforced and monitored by individual employers at their place of business. These programs are often the most effective in reducing commute based trips. Employer based TDM strategies are chosen to meet a relatively narrow set of worksite characteristics, operational characteristics, and commuters' demographic and travel characteristics. The information regarding these strategies are disseminated to target precisely the employees most likely to use the alternatives, and offered in a personalized manner that eases commuters' transition to an unfamiliar travel mode. Further, employers can establish a "corporate culture" that affirms an employee's decision to use a commuting alternative.

Area-wide programs are generally implemented by a local or regional governing body and are less likely to result in large reductions in commute trips because they must accommodate greater diversity in the factors that influence a commuter's choice of travel mode. For example, availability of travel options such as public transit, the distance commuters travel to work, the flexibility they have in when they travel, and worksite characteristics and conditions all influence commuters' travel mode choices. Further, research has shown that commuters are more responsive to TDM strategies when they are presented at the worksite, even if sponsored by a

regional group. Thus, the success of an area-wide program depends heavily on the extent to which individual employers support the program. Since generally, not all employers will fully participate, administrators of the area-wide program cannot expect to reach the trip reduction percentage of an employer acting alone at a worksite.

Both employer-based and area-wide programs are currently being successfully utilized in urban areas across the country. In most cases, these programs are implemented in tandem to achieve the optimum results desired by the implementing agency.

TDM Implementation in South Florida

Many communities in South Florida have implemented TDM programs with varying levels of success as a strategy to reduce single occupancy vehicles and reduce peak hour traffic congestion. Municipalities such as West Palm Beach and Boca Raton have partnered with the South Florida Commuter Services to implement Transportation Management Initiatives. Many cities also allow for parking reductions or variances from requirements if the developers can adequately demonstrate reduction in motor vehicle demand and hence parking demand. Developments that are adequately served by transit, bicycle and pedestrian facilities and supported by TDM programs can create a significant reduction in parking demand. Parking reductions for the implementation of TDM strategies can vary from 5 to 40 percent depending on the number of strategies utilized. For example, the City of Boca Raton allows for up to a 5 percent parking reduction for developments that provide on-site showers, bike racks, transit stop, financial contribution for a local transit circulator, and TDM information kiosks. These requirements can act as incentives for employers looking to reduce costs of their footprint.

PRELIMINARY STRATEGIES

A literature review was performed to gain a better understanding of the TDM programs and strategies that have been successfully and commonly implemented in other jurisdictions around the country. A list of 25 most commonly used TDM strategies was identified for consideration within the Town of Miami Lakes.

The more common TDM strategies that are in use are listed below.

1. **Carpooling** – Carpooling refers to the shared use of a car by commuters sharing similar origins and destinations.
2. **Vanpooling** – Vanpooling is a form of ridesharing of 5 – 15 people that use vans supplied by employers or commuter assistance agencies to commute to work on a regular basis.
3. **Emergency Ride Home (ERH)** – ERH is generally a part of commute trip reduction programs that offers free or subsidized rides to commuters during emergency or unexpected situations.

4. **Telecommuting** – This is a program in which employees work one or more days from home or at a satellite work center closer to their homes.
5. **Compressed/Flexible Work Week** – Under compressed work week, employees work a full 40-hour work week in fewer than the typical 5 days or an 80-hour time period in fewer than the typical 10 days. Flexible work schedule allows employees to shift their work start and end times to less congested times of the day.
6. **Commuter Tax Incentives** – This strategy allows employers to give their workers up to $240 each month for transit or vanpool commuting costs as a tax-free benefit. It also allows employers to give employees the option to use payroll deductions to avoid paying taxes on up to $240 a month in commuting costs.
7. **Bicycle Master Planning** – This strategy relates to creation of a plan to guide implementation of bicycle-related facilities and amenities to enhance mobility options and the safety of bicyclists within the Town.
8. **Pedestrian Master Planning** – This strategy relates to creation of a plan to guide implementation of pedestrian-related projects and facilities to enhance mobility options and the safety of pedestrians within the Town.
9. **Fixed Route Transit Service Enhancement** – This strategy relates to implementation of improvements to enhance the quality of fixed route transit service through service coverage, service headways and passenger amenities at bus stops including signage, shelter, landscaping, bus route information, and maintenance of facilities.
10. **Public Outreach** – This strategy refers to the use of existing local government communications opportunities including web site, newsletters, utility bills and signs to communicate TDM related information to the public.
11. **Employer Outreach** – This strategy refers to conducting outreach and educational activities to raise awareness amongst employers regarding the various commuting options and benefits available to them and their employees, since many of the TDM strategies are most effective when implemented by the employers.
12. **TDM Marketing/Promotion/Events/Advertising** – This strategy refers to employing methods to create public awareness including, but not limited to, marketing, advertising, public relations, brochures, web outreach, direct mail inserts, blast emails, events, media buy, and database marketing.
13. **Public-Private and Intergovernmental Partnerships** – This strategy refers to developing partnerships with public and private agencies that share similar values in promoting TDM programs to improve efficiency and cost-effectiveness.
14. **Employer Transportation Coordinator (ETC) Program** – This strategy involves recruiting, training, rewarding, and retaining people in the workplace and community who champion the TDM program and serve as a liaison between the employer and the commuter agency.
15. **Parking Management** – Parking Management refers to specific strategies that encourage efficient use of existing parking facilities, improve the quality of service provided to parking facility users, and improve overall parking facility design. This

strategy includes limiting parking provisions, charging a fee for parking, managing supply and demand, and channeling parking revenues towards economic development.

16. **Transit Oriented Development Support in CP/LDC** – This strategy refers to incorporation of Transit oriented development (TOD) principles within the comprehensive plan and the Land Development Code to promote land development that is supportive of transit service. TOD means directing development and redevelopment in and around transit nodes so as to maximize the utilization of the transit system and presenting transit as an effective means of transportation.
17. **Transportation Management Association or Initiative (TMA/TMI)** – Transportation Management Associations (TMAs) or Transportation Management Initiatives (TMI) are non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center or industrial park. They are generally public-private partnerships, consisting primarily of area businesses with local government support. TMAs and TMIs are formalized partnerships, usually between FDOT, a local government, and the business community, to champion TDM within a specific area. They often operate trolley or shuttle systems, promote TDM awareness, or conduct outreach. The TMA/TMI fills the same role locally, and in depth, that regional Commuter Assistance Programs provide on a larger scale.
18. **Specialized TDM Activities** – This strategy refers to identifying and planning specific and concentrated TDM efforts, that are localized and focused, but usually of limited time and scope. Examples include shuttles or ridesharing to special events, TDM geared towards school children called “school pools”, or TDM measures instituted as mitigation during major road or bridge construction projects.
19. **Commute Trip Reduction Ordinance** – This strategy refers to ordinances usually enacted by larger congested municipalities to regulate large trip generators, including major local employment centers. The employers are usually regulated because they have control over the commuting habits of employees and can offer them incentives, pay for transit passes, subsidize vanpools, reward ridesharing, etc.
20. **Congestion Pricing** – This strategy refers to variable road tolls intended to reduce peak hour traffic volumes to optimal levels. Tolls can vary based on a fixed schedule or can be dynamic, where rates change depending on the level of congestion that exists at a particular time. It is usually implemented on existing roadways as a demand management strategy to avoid the need to add capacity.
21. **High Occupancy Vehicle (HOV) Lanes/Priority** – High Occupancy Vehicle (HOV) Lanes/Priority refers to strategies that give priority to High Occupant Vehicles, including transit vehicles, vanpools and carpools. HOV Priority is a major component of many regional TDM programs. Two, three or four occupants (indicated as 2+, 3+ or 4+) is usually considered an HOV as opposed to Single Occupant Vehicles (SOVs).
22. **High Occupancy Toll (HOT)/Managed Lanes** – High Occupancy Toll (HOT)/Managed Lanes is a road pricing scheme that gives motorists in single-occupant vehicles access to High Occupancy Vehicle (HOV) lanes. Sometimes, entire roads are designated for the use of HOVs. Tolls are collected either by manned toll booths, automatic number plate

recognition, or electronic toll collection systems. Typically, these tolls increase as traffic density and congestion within the tolled lanes increases. The goal of this pricing scheme is to minimize traffic congestion within the lanes.

23. **Shuttle Services** – Shuttle services include a variety of transportation services that use small buses or vans to provide public mobility. These include circulating shuttles to transport people to major destinations, demand response paratransit vehicles and special mobility services for the elderly and people with disabilities, privately operated jitney services, mobility to work programs to low income areas, and tourist transportation management. Shuttle Services may be provided during periods of unusually high traffic demand, during special events and as an overflow parking solution.
24. **Bike Sharing** – Bike sharing provides convenient rental bicycles intended for short urban trips. A typical bike sharing system consists of a fleet of bicycles, a network of automated stations where bikes are stored, and bike redistribution and maintenance programs. Bikes may be rented at one station and returned to another. Stations with automated self-serve docking systems are located at major destinations and transportation centers. Use is free or inexpensive for short periods, allowing urban residents and visitors to bicycle without needing to purchase, store and maintain a bike.
25. **Park-and-Ride Facilities** – Park-and-Ride consists of automobile and bicycle parking facilities at transit stations, bus stops and highway on-ramps, to facilitate transit and rideshare use.

Table 6-1 lists the preliminary TDM strategies evaluated for applicability within the Town's Commute Trip Reduction Program. The table also identifies whether the strategy falls under an employer-based program or area-wide program, the entity better suited to implement the strategy and whether the strategy is a standalone or dependent strategy.

A standalone strategy is one that can be implemented on its own as a TDM measure and a dependent strategy is one that is dependent on whether or not other complementary strategies are implemented and the timing of implementation of those strategies. For example, carpooling, telecommuting, and congestion pricing are standalone strategies because they can be implemented on their own. However, an Emergency Ride Home program is dependent on the implementation of strategies such as carpooling and vanpooling, thus making them a dependent strategy. Other examples of dependent strategies include employer and public outreach.

TABLE 6-1: LIST OF PRELIMINARY TDM STRATEGIES				
	TDM Strategy	**Type of Program**	**Implementing Entity**	**Stand-alone or Dependent Strategy**
1	Carpooling	Employer Based	Regional Agency	Standalone
2	Vanpooling	Employer-Based	Regional Agency	Standalone
3	Emergency Ride Home	Employer-Based	Regional Agency	Dependent
4	Telecommuting	Employer-Based	Employer	Standalone
5	Flexible/Compressed Work Week	Employer-Based	Employer	
6	Commuter Tax Incentives	Employer-Based	Employer or Regional Agency	Standalone
7	Bicycle Master Planning	Area-wide	Municipality	Standalone
8	Pedestrian Master Planning	Area-wide	Municipality	Standalone
9	Fixed Route Transit Service Enhancement	Area-wide	Regional Transit Provider	Standalone
10	Public Outreach	Area-wide	Municipality	Dependent
11	Employer Outreach	Area-wide	Municipality	Dependent
12	TDM Marketing and Promotion	Area-wide	Municipality or Regional Agency	Dependent
13	Public-Private and Intergovernmental Partnerships	Area-wide	Regional Agency	Standalone
14	Employer Transportation Coordinator (ETC)	Employer-Based	Employer	Dependent
15	Parking Management	Area-wide	Municipality	Standalone
16	Transit Oriented Development Support in CP/LDC	Area-wide	Municipality	Standalone
17	Transportation Management Association or Initiative (TMA/TMI)	Area-wide	Regional Agency	Standalone
18	Specialized TDM Activities	Area-wide	Municipality	Standalone
19	Commute Trip Reduction Ordinance	Area-wide	Municipality	Standalone
20	Congestion Pricing	Area-wide	Regional Agency	Standalone
21	High Occupancy Vehicle Lanes/Priority	Area-wide	Regional Agency	Dependent
22	High Occupancy Toll/ Managed Lanes	Area-wide	Regional Agency	Dependent
23	Shuttle Services	Area-wide	Municipality	Standalone
24	Bike Sharing	Area-wide	Municipality or Regional Agency	Dependent
25	Park-and-Ride	Area-wide	Municipality or Regional Agency	Dependent

SCREENING PROCESS

Many of these preliminary strategies have the potential for implementation within the Town of Miami Lakes either in the immediate term or the long term. However, some strategies while still useful for reducing peak hour traffic congestion, may not be directly implemented by the Town or may not be applicable at this time. In order to identify strategies that will return the maximum return on investment and will have the biggest possible impact on reducing peak hour traffic congestion, a screening process was implemented. Two criteria were identified for the screening process – strategies that may be more effective for implementation in a larger area or by a regional agency and strategies that do not directly promote the Town's Commute Trip Reduction goals or are not applicable due to the current development pattern. The strategies that satisfied the following criteria were identified and removed.

Criterion 1: Strategies that are more effective for implementation by regional transportation agency and in a larger geographic area

This criterion is intended to identify strategies that may be more effective when implemented in a larger metropolitan area by a regional transportation agency rather than individual municipalities. The strategies require greater economies of scale to be effective. The strategies that meet criterion 1 are listed below:

> Strategy 9. Fixed Route Transit Service Enhancement – The Town's role in enhancing MDT's transit service is severely limited since MDT is operated and maintained by a different governmental entity. It is most efficient for the Town to use its resources in enhancing the Town's trolley service in order to improve service coverage, headways and transfers to the MDT system rather than focus on the MDT fixed route transit. The Town will continue to coordinate with MDT as needed to identify opportunities for improvements to Town routes. The Town will also partner with employers to encourage employees to use transit through subsidized bus passes, employee tax benefits, and pretax transit passes as a recruitment and retention benefit.
>
> Strategy 13. Public-Private and Intergovernmental Partnerships – This strategy is much more effective when implemented by regional agencies such as the FDOT or the Miami-Dade MPO that can bring together and manage multiple funding partners on projects of regional significance. Since the FDOT (SFCS) already provides a majority of the commuter assistance programs in partnership with regional agencies such as the Miami-Dade MPO, MDT, and Tri-Rail, this strategy is not applicable to the Town at this time. The Town will focus on partnering with the SFCS and local employers to provide support for implementation of commuter assistance programs.
>
> Strategy 17. Transportation Management Association or Initiative (TMA/TMI) – A TMA or a TMI is typically implemented by larger metropolitan areas with a fairly large

employment pool. This strategy is more effective when implemented on a regional basis due to the economies of scale with regard to cost and the management and administration structure. Cities around the US that have successfully implemented TMAs include Los Angeles, Atlanta and Boston. Since the FDOT (SFCS) already provides a majority of the commuter assistance programs that would normally be provided by TMAs, this strategy is not applicable to the Town.

Strategy 20. Congestion Pricing – Congestion pricing is a very effective strategy and has been successfully implemented in many large cities throughout the world including New York, London, and Singapore. Although an effective strategy, the Town's size and jurisdiction is too small for implementation of this strategy.

Strategy 21. High Occupancy Vehicle Lanes/Priority – HOV priority is one of the most effective TDM strategies that has been successfully implemented in many large metropolitan areas of the US. It is one of the biggest incentives that attracts commuters to adopt ridesharing such as carpooling or vanpooling as their primary choice of commute. Since HOV lanes are already being implemented along SR 826/Palmetto Expressway, I-75, and other major regional facilities in Miami-Dade and Broward Counties by the FDOT, it is not recommended for inclusion within the Town's Commute Trip Reduction Plan. However, the Town should play a supporting role in the implementation of this strategy by the FDOT and raise awareness among the business community about the positive impacts of ridesharing.

Strategy 22. High Occupancy Toll Lanes/Managed Lanes – HOT lanes or managed lanes are a relatively new strategy that has gained popularity all over the US. It is also a very effective strategy in reducing peak hour traffic congestion. It is one of the biggest incentives that attracts commuters to adopt ridesharing such as carpooling or vanpooling as their primary choice of commute. Since HOT lanes are already being implemented along SR 826/Palmetto Expressway, I-75, and other major regional facilities in Miami-Dade and Broward Counties by the FDOT, it is not recommended for inclusion within the Town's Commute Trip Reduction Plan. However, the Town should play a supporting role in the implementation of this strategy by the FDOT and raise awareness among the business community about the positive impacts of ridesharing.

Strategy 25. Park-and-Ride – Due to the relatively small percentage of transit use by employees and residents within the Town, this strategy is not appropriate for implementation at this time. However, since this is an effective strategy that supports the Town's goals of increasing ridesharing and transit use, Town staff should continue coordination with Miami-Dade Transit to identify new park-and-ride locations within or closer to the Town as the other TDM strategies are implemented.

Criterion 2: Strategies that do not directly promote the Town's goals or are not applicable due to the current development pattern

These strategies are effective in reducing peak hour congestion and improving multimodal mobility within the Town. However, they are not appropriate at this time for the following reasons.

Strategy 14. Specialized TDM Activities – The implementation for this strategy should be determined on a case by case basis for special events and special circumstances. This strategy is not a very effective strategy for the Town at this time due to the initial stage of the TDM implementation plan. Once the TDM plan is well established, this strategy can be implemented on an incremental basis as needs are identified.

Strategy 15. Parking Management – There is not an abundant supply of public parking within the Town that warrants a comprehensive parking management strategy. The current development pattern and community expectations will make it difficult to propose parking management strategies such as limiting parking provisions and charging a fee for parking. These considerations should be evaluated as a part of future transportation planning and development/redevelopment on a case by case basis

Strategy 16. Transit Oriented Development (TOD) Support in CP/LDC – The nature of transit service currently available within the Town and the development patterns do not fully support implementation of Transit Oriented Developments. The comprehensive plan and the land development regulations will continue to be strengthened to require transit supportive elements to be incorporated into new development and redevelopment projects. The requirements will be implemented in conjunction with improvements to transit facilities and amenities within the Town. However, a true transit oriented development framework is not applicable at this time.

Strategy 24: Bike Sharing – The current bicycle usage within the Town and the lack of bicycle facilities cannot support a bike sharing program at this time. This strategy will be revisited after the adoption and implementation of major recommendations of the Town's Greenways and Trails Master Plan.

Criterion 3: Strategies that are already being implemented at this time

These strategies are effective TDM strategies that are already being implemented at this time and will continue to be evaluated for improvements.

Strategy 23. Shuttle Services –The Town recently launched a transit circulator program to provide service to major destinations within the Town and along the Ludlam Road corridor connecting to the Okeechobee metrorail station. The program needs to be implemented for a specific period of time (at least one year) before it can be evaluated

and potential changes based on commuter needs can be identified. The Town will continue to enhance the circulator program as more patronage and funding is available.

The results of the screening analysis are presented in Table 6-2.

TABLE 6-2: SCREENING RESULTS OF PRELIMINARY TDM STRATEGIES

	TDM Strategy	Criterion 1	Criterion 2	Criterion 3	Selected for Implementation
1	Carpooling				Yes
2	Vanpooling				Yes
3	Emergency Ride Home				Yes
4	Telecommuting				Yes
5	Flexible/Compressed Work Week				Yes
6	Commuter Tax Incentives				Yes
7	Bicycle Master Planning				Yes
8	Pedestrian Master Planning				Yes
9	Fixed Route Transit Service Enhancement	X			Yes
10	Public Outreach				Yes
11	Employer Outreach				Yes
12	TDM Marketing and Promotion				Yes
13	Public-Private & Intergovernmental Partnerships	X			No
14	Employer Transportation Coordinator				Yes
15	Parking Management		X		No
16	TOD Development Support in CP/LDC		X		No
17	Transportation Management Association	X			No
18	Specialized TDM Activities		X		Yes
19	Commute Trip Reduction Ordinance				Yes
20	Congestion Pricing	X			No
21	High-Occupancy Vehicle Priority	X			No
22	High Occupancy Toll/Managed Lanes	X			No
23	Shuttle Services			X	No
24	Bike Sharing		X		No
25	Park-and-Ride	X			No

The next section presents a more detailed evaluation of the strategies. Each strategy is presented as a template beginning with a brief description of the strategy and analysis of various evaluation factors for implementation. The respective strategies are presented with the following information:

- General Description – brief description of the strategy and its application;
- Existing Conditions – identification of whether or not the strategy is currently applied within the Town;
- Potential for Application – brief evaluation of the strategy to promote goals of the Town;
- Implementation Steps – description of how the strategy will be implemented; and
- Monitoring Measures – criteria for measuring success of strategy when implemented.

The strategies selected for implementation by the Town are renumbered and listed in Table 6-3.

TABLE 6-3: SELECTED TDM STRATEGIES

1	Carpooling
2	Vanpooling
3	Emergency Ride Home
4	Telecommuting
5	Flexible/Compressed Work Week
6	Commuter Tax Incentives
7	Bicycle Master Planning
8	Pedestrian Master Planning
9	Public Outreach
10	Employer Outreach
11	TDM Marketing and Promotion
12	Employer Transportation Coordinator
13	Commute Trip Reduction Ordinance

TDM STRATEGY 1: CARPOOLING

General Description

Carpooling refers to the shared use of a car, especially for commuting to work and is the most common and cost effective form of ridesharing. Generally, a formal carpooling service is provided by a transit agency, a regional transportation organization, or a rideshare agency through an interactive database that facilitates the development of a ridesharing network.

Existing Conditions

FDOT currently funds the South Florida Commuter Services (SFCS) that offers regional commuter assistance programs to commuters looking for alternatives to driving alone. SFCS hosts a Call Center (1-800-234-RIDE or www.1800234ride.com) to answer commuter questions and provide rideshare information. The Call Center also gives transit route information and automatically transfers calls to mass transit systems in Miami-Dade and Broward County. SFCS maintains a computerized database of carpool participants. Commuters interested in carpooling can sign up to receive a list of possible carpool partners based on the participant's location.

SFCS is currently offering an incentive program to reward and motivate commuters whose commute to work involves travel along SR 826 or SR 836 for using alternative modes of transportation. This program is being offered to mitigate the traffic impacts caused by reconstruction of the SR 826/SR 836 interchange. The monthly financial incentives range between $25 to $75 visa cards for carpoolers participating in the program. This incentive may be of interest to residents and employees in Miami Lakes.

Potential for Application

Carpooling will be a highly effective strategy for Miami Lakes due to the low upfront costs and the number of large employers. The infrastructure required for implementing this strategy is already available through SFCS. Per the employee surveys, a small percentage (<5%) of the employers in Town encourage carpooling and offer preferential parking for carpoolers. The Town can build upon this first step and encourage carpooling through employer outreach.

Implementation Steps

The Town can partner immediately with SFCS to raise awareness about ridesharing amongst its employees and residents. SFCS has expressed a desire to establish a partnership with the Town and has agreed to conduct employer outreach under its current outreach program. After the initial partnership discussion between the Town and SFCS, a formal interlocal agreement should be established that defines the roles and responsibilities of each of the parties.

Monitoring Measures

1. Number of employers promoting carpooling; 2. Number of additional carpooling participants; 3. Carpooler surveys to learn miles/trips saved, emissions prevented.

TDM STRATEGY 2: VANPOOLING

General Description

Vanpooling is a form of ridesharing where participants use vans supplied by employers or commuter assistance agencies to commute to work on a regular basis. A vanpool usually consists of 5 to 15 people, where one person volunteers to be the main driver/coordinator. Some vanpools are self-supporting by members, while many are subsidized by employers or commuter assistance agencies. Vanpooling is particularly suitable for longer commutes of 10 miles or more because the longer the commute, the greater the savings versus driving alone. Similarly, the higher the number of riders per van, the lower the costs per person.

Existing Conditions

SFCS provides commuter assistance for vanpooling through financial incentives, partner matching and enrollment in the emergency ride home program. Miami-Dade Metropolitan Planning Organization offers a $400 subsidy per vanpool and participants are eligible to receive Commuter Tax Benefits of up to $240 per month. The main driver is also allowed to use the van for personal travel during the nights and weekends. Vanpools can use the High Occupancy Vehicle Lanes and the I-95 Express Lanes greatly reducing commute time during peak hours.

South Florida Vanpool (1-800-826-RIDE or www.southfloridavanpool.com) operates and administers a turn-key vanpool program through partnership with SFCS. The service matches interested participants with other commuters that share nearby origins and destinations. These groups are assigned a van and share commuting expenses. Currently, there are 221 active vanpools in South Florida. A typical vanpooler saves approximately $100 per month compared to driving alone. Vanpooling helps employers by reducing the number of parking spaces required on site thus making the facility more accessible for customers. It also allows employers to expand their labor recruiting market into outlying areas and attract workers. Employers can contribute up to $105 per month tax-free to help cover employees' vanpool expenses.

Potential for Application

Vanpooling is a highly effective strategy for the Town to reduce peak hour traffic congestion. The infrastructure required for implementing this strategy is already available through SFCS.

Implementation Steps

The Town can partner immediately with SFCS to raise awareness about ridesharing as a commuting option. SFCS has expressed a desire to establish a partnership with the Town and has agreed to conduct employer outreach activities under its current outreach program. SFCS will administer the vanpool program and the Town can identify outreach and event opportunities.

Monitoring Measures

1. Number of employers promoting vanpooling; 2. Number of additional vanpooling participants; 3. Vanpooler surveys to learn miles/trips saved, emissions prevented.

TDM STRATEGY 3: EMERGENCY RIDE HOME

General Description

Emergency Ride Home (ERH) programs are generally a part of commute trip reduction programs provided by regional/local agencies, commuter assistance programs, or by employers participating in such programs. ERH programs provide free or subsidized rides for commuters during emergency or unexpected situations. Examples of qualifying emergencies include a vanpooler that must return home for a family emergency or a carpooler that must stay at work later than expected. ERH programs may use taxis, rental cars or company vehicles. ERH programs are a common component of rideshare programs.

Existing Conditions

The SFCS offers an ERH program for registered commuters in Miami-Dade County. Participants are provided with free taxi service in the event of an unexpected emergency 24 hours a day, seven days a week. The program is available to commuters who carpool, vanpool, ride transit, bicycle, or walk to work at least three days a week. Eligible "emergency" situations include: illness of the commuter or a member of his/her immediate family; unscheduled overtime or extended work hours; or a carpool/vanpool driver's inability to make the scheduled trip home due to an unexpected work schedule or illness. Each registered ERH program participant is allowed up to six free emergency rides per year. A qualified voucher is given to the taxi company to utilize the service. Vouchers are available upon commuter registration through the ERH online voucher system or paper vouchers.

Potential for Application

The ERH program is an excellent strategy to complement ridesharing strategies by eliminating the fear of addressing an emergency situation. Since the program is already administered by SFCS, there is tremendous potential for increasing awareness among commuters about the program. This program can be applied in combination with TDM strategies 1 and 2.

Implementation Steps

The Town can partner immediately with SFCS to raise awareness about ridesharing as a commuting option and the complementary ERH program. SFCS has expressed a desire to establish a partnership with the Town and has agreed to conduct employer outreach activities under its current outreach program.

Monitoring Measures

1. Surveys to evaluate commuter experience with ERH programs.

TDM STRATEGY 4: TELECOMMUTING

General Description

Telecommuting or telework is an effective TDM strategy for reducing trips and is commonly included in commute trip reduction programs. Telework is a general term for the use of telecommunications (telephone, fax, e-mail, video connections) to substitute for physical travel. Telecommuting allows employees to work from home or another location (such as a satellite office) to reduce commute times. Telecommuting is often performed on a part-time basis, with employees working from home one or two days a week. It can also be used on a temporary basis, for example, while an employee is working on a particular project or when ill.

Existing Conditions

According to the Census Journey-to-Work data, approximately 8% of Town residents telecommute or work from home. According to the employee surveys, almost 15% of employers in Miami Lakes allow telecommuting as an option or incentive to their employees. Additionally, home-based businesses can be determined through Business Tax Receipts and may provide additional information on telecommuting use in the Town.

Potential for Application

The promotion of telecommuting as a TDM strategy to reduce peak hour vehicle trips could be very effective in Miami Lakes in combination with other employer based TDM strategies. There is an increased interest in this strategy due to the increasing fuel prices and longer commute times. The implementation and success of this strategy will be largely dependent upon the willingness of employers to employ telecommuting and the nature of business. Employers have to typically work with managers, employees and labor organizations to develop suitable telecommuting policies and practices. Informal Telecommuting is common at many businesses, so an official policy may simply formalize and support existing practices. The success of this strategy will be higher in customer support and information management related tasks like research, accounting, software development, and design.

Implementation Steps

Telecommuting is usually implemented by individual employers and can be promoted as part of the Town's Commute Trip Reduction program. The Town can partner with the National Telework Coalition to identify opportunities to establish a telecommuting program. The Town can also partner with the Chamber of Commerce to coordinate with the business community to identify opportunities and constraints in establishing telecommuting as a viable TDM strategy. As the Town works with SFCS to raise awareness of TDM opportunities, telecommuting could be promoted as a valuable TDM tool.

Monitoring Measures

1. Number of employers/employees allowing telecommuting; 2. Surveys of participants/employers to determine miles/trips saved.

TDM STRATEGY 5: COMPRESSED/FLEXIBLE WORK WEEK

General Description

A compressed work week is a work schedule arrangement, in which employees work a full 40-hour work week in fewer than the typical five days. Reducing the typical five day week to four days, 10 hours each, reduces commuting trips by 20 percent and is often described as an effective and desirable employee recruitment and retention tool. Other compressed work week strategies involve working nine days, instead of 10, during a pay period, which benefits in a 10 percent trip reduction. Flexible work schedules allow employees to shift their work start and end time (and thus travel times) to less congested times of the day.

Existing Conditions

According to the employee surveys, less than 5% of employers in Miami Lakes offer compressed or flexible work week options to their employees. The employer outreach efforts currently undertaken by the SFCS do not include providing information on the benefits of flexible/compressed work weeks.

Potential for Application

Similar to telecommuting (TDM Strategy 4), the promotion of a compressed/flexible work week as a strategy to reduce peak hour vehicle trips could be somewhat effective in Miami Lakes. The Town's role will include promoting this strategy to employers and businesses as a viable alternative to existing schedules as well as offer this to Town employees. The Town can also promote the strategy through public awareness and education campaigns while educating employers on the other TDM strategies. The implementation and success of this strategy will be largely dependent upon the employers' willingness to participate.

Implementation Steps

The Town can partner with the SFCS and the Chamber of Commerce to coordinate with the major employers to identify opportunities and constraints in establishing a flexible/compressed work schedule as a viable TDM strategy and also educate them on the benefits of implementing the strategy. As the Town implements its partnership with the SFCS to raise awareness of carpooling, vanpooling, and other TDM opportunities, a flexible/compressed workweek should also be promoted as a valuable TDM tool. The Town should also initiate discussions with the Town Council and staff members to evaluate the feasibility of offering flexible/compressed work schedules to Town employees.

Monitoring Measures

1. Number of employers/employees participating in the program; 2. Surveys of participants/employers to determine miles/trips saved.

TDM STRATEGY 6: COMMUTER TAX INCENTIVES

General Description

Commuter Tax Incentives are a powerful strategy to encourage vanpooling and transit while reducing trips on congested roadways. Federal law allows workers to receive up to $240 a month in employer-paid tax-free transit costs or take up to $240 a month in tax-sheltered payroll deductions for transit costs. This law allows employers to give their workers up to $240 each month for transit or ridesharing commuting costs as a tax-free benefit. Employers can allow their employees to purchase transit commuter benefits – in effect, pay for their own transit and vanpool commuting costs – with pre-tax dollars. The first $240 per month of commuting costs paid by the employee will be exempt from federal income and payroll taxes.

Existing Conditions

The South Florida Regional Transportation Authority (Tri Rail) operates an Employer Discount Program (EDP) that offers a 25 percent discount on monthly and 12-trip tickets as a public transit benefit program for employees of participating companies. Currently, more than 2,600 employers participate in the program in South Florida. Within the Town, 13 major employers participate in the program including the Town of Miami Lakes. EDP members are permitted to purchase one monthly or multiple 12-trip tickets per month and get free parking at all Tri-rail stations. More information on this program is available at the SFRTA website (http://www.tri-rail.com/discount_programs/overview.asp).

Potential for Application

This is an effective strategy for the Town of Miami Lakes. Most of the infrastructure required for implementing this strategy is already available through SFCS and Tri-Rail. SFRTA is available to set up individual presentations for companies that are interested in participating in the program. Enrollment in the EDP is free for employers with very minimal administrative paper work. Any employer with more than one employee and a registered business address is eligible to participate in the program. Given that there are many large employers within the Town, this could be an effective strategy to encourage people that are using ridesharing and transit for their commutes to work.

Implementation Steps

The Town can partner immediately with SFCS to raise awareness about commuter tax benefits while conducting outreach events on ridesharing. SFCS has expressed a desire to establish a partnership with the Town and has agreed to conduct employer outreach under its program.

Monitoring Measures

1. Number of employers offering commuter tax incentives; 2. Number of employees receiving benefits.

TDM STRATEGY 7: BICYLE MASTER PLANNING

General Description

This strategy relates to creation of a plan to guide implementation of bicycle-related facilities and amenities to enhance mobility options and the safety of bicyclists within the Town. The integration and promotion of bicycle and pedestrian modes into the overall transportation infrastructure can have a significant impact on reducing automobile travel. Bicycle facilities and amenities coupled with good land use strategies provide the opportunity to conduct shorter trips through bicycling and longer trips through automobile and transit modes. A bicycle master plan can provide the guidance for enhancing the bicycling network in the Town. It provides a detail of the existing conditions, opportunities for future routes, lanes, and trails, and prioritizes project implementation. It can also be used as an opportunity to provide the community with information regarding bicycling in the Town.

Existing Conditions

The Town's Comprehensive Plan contains a number of policies within the Transportation Element designed to encourage bicycling and lays the foundation for the implementation of bicycling infrastructure. The Miami-Dade MPO's Bicycle and Greenways Plan contains a program of interrelated improvements to enhance bicycling throughout the County. The Town is currently in the process of developing a Greenways and Trails Master Plan to develop an interconnected bicycle system within the Town that connects to regional bicycle facilities. The Plan will contain recommendations for bicycle trails, shared-use paths, recreational greenways, and connections to mass transit. The Plan will also identify locations for supporting bicycle infrastructure such as bike racks, lockers, and shelters within the Town.

Potential for Application

This is a highly effective strategy for the Town of Miami Lakes. The adoption of a Bicycle Master Plan outlining the Town's vision for bicycling facilities and initiatives would highlight and reinforce the Town's goal of creating a multimodal transportation system. In addition to developing the master plan, this strategy should also consist of monitoring measures to ensure that the master plan is being implemented in a manner that was intended.

Implementation Steps

The Town should closely coordinate with the Miami-Dade MPO and adjacent municipalities through the development of the Bicycle Master Plan in order to maintain connectivity to regional facilities. This strategy should be expanded to include implementation of master plan recommendations. The Town should look for grant opportunities for implementation of the recommended improvements from the plan. Once the facilities are in place, the Town can focus its efforts on implementing more advanced strategies like bike sharing.

Monitoring Measures

1. Adoption of masterplan within intended timeframe; 2. Implementation of facilities and amenities outlined in the plan; 3. Improvement in bicycling activity throughout the Town.

TDM STRATEGY 8: PEDESTRIAN MASTER PLANNING

General Description

This strategy relates to the creation of a plan to guide implementation of pedestrian-related facilities and amenities to enhance mobility options and the safety of pedestrians within the Town. The integration and promotion of bicycle and pedestrian modes into the overall transportation infrastructure can have a significant impact on reducing automobile travel. Good sidewalk coverage with connectivity to transit stops and building frontages coupled with good land use strategies improves mobility for pedestrian and transit modes. A pedestrian master plan can provide the guidance for enhancing the pedestrian network in the Town. It provides a detail of the existing conditions, opportunities for future sidewalk connections and trails, and prioritizes project implementation. It can also be used as an opportunity to provide the community with information regarding walking in the Town.

Existing Conditions

The Town's Comprehensive Plan contains a number of policies within the Transportation Element designed to improve the pedestrian infrastructure within the Town. The Town does not currently have a Pedestrian Master Plan. As mentioned earlier, the Town is currently in the process of developing a Greenways and Trails Master Plan that will consist of recommendations for pedestrian pathways, shared-use paths, recreational greenways, and pedestrian connections to mass transit. The Town has also applied for a Town of Miami Lakes Transportation Alternatives Program (TMLTAP) grant that will include construction, planning and design of trail facilities, sidewalks, crosswalk improvements, linkages to parks, greenways and transit, and ADA compliant improvements.

Potential for Application

This is a highly effective strategy for the Town of Miami Lakes. The adoption of the Greenways and Trails Master Plan combined with the implementation of the TMLTAP grant related improvements would highlight and reinforce the Town's commitment to walking and community health. In addition to developing the master plan, this strategy should also consist of monitoring measures to ensure that the master plan is being implemented in a manner that was intended.

Implementation Steps

The Town should closely coordinate with the Miami-Dade MPO and adjacent municipalities through the development of the Greenways and Trails Master Plan in order to maintain connectivity to regional facilities. Since this strategy is already underway, the scope of the strategy should be expanded to include implementation of master plan recommendations. The Town should continue to enhance the pedestrian amenities and facilities within the Town.

Monitoring Measures

1. Adoption of master plan within intended timeframe; 2. Percentage of sidewalk coverage within the Town; 3. Evaluation of pedestrian safety related incidents annually within the Town

TDM STRATEGY 9: PUBLIC OUTREACH

General Description

The strategy refers to the use of existing Town communications opportunities including cable television, Town web site, newsletters, utility bills and signs to communicate TDM related information to the public. This will utilize the Town's resources to effectively communicate with the public without spending significant financial resources to buy outside media or advertising time. The intent of this strategy is to utilize the existing public communication network already utilized by the Town to disseminate information.

Existing Conditions

The Town currently disseminates information to employers and residents through the Town web site, newsletters, mayor announcements, electronic messages, social media, utility bill inserts, etc. This strategy will utilize existing lines of communication to raise awareness and send marketing messages about alternatives to driving alone and benefits of using those alternatives.

Potential for Application

Public outreach for TDM strategies is critical to the success of the Town's Commute Trip Reduction Program. This strategy is dependent on and complementary to the implementation of other TDM strategies. The SFCS has expressed great perceived value in using the Town's existing communications systems to carry messages regarding TDM strategies. After establishing an inter-local partnership with the SFCS, the Town can use its communications systems to raise awareness of these TDM tools that will benefit both employers and residents.

Implementation Steps

The Town should develop a TDM marketing plan in partnership with the SFCS, which outlines the Town's long-term TDM program and the phased implementation strategies within the program. Once the strategies for advertisement are identified, the communications necessary to promote the strategies can be orchestrated. The marketing plan will outline the internal procedure for incorporating TDM messages into the Town website, TV/internet advertising, social media, newsletter, and utility inserts. The Town can use the marketing materials already prepared by the SFCS as a base for crafting tailored messages for Town residents and employees. This strategy represents the most cost effective way to launch public involvement, public relations, and marketing messages regarding the Town's TDM program.

Monitoring Measures

1. Number of marketing messages sent via Town communication systems; 2. Estimates of number of recipients; 3. Number of employers, employees and residents who ask for more information.

TDM STRATEGY 10: EMPLOYER OUTREACH

General Description

Employers have major influence over the commuting habits of their employees. Most Commuter Assistance Programs conduct outreach to educate employers of the value of programs such as ridesharing, transit, alternative work schedules and commuter tax incentives. Employers have a vested interest in having employees arrive at work rested, on time, and productive. Employers who offer employee benefits such as the ability to buy vanpool or transit passes using pre-tax dollars have a competitive edge in recruiting and retaining a workforce. Most employers provide free parking to employees even though those spaces actually cost the employer. Some employers offer their employees TDM incentives such as paying for employee's transit or vanpool passes because the practice frees up parking spaces for customers. This strategy is designed to give employers the tools they need to effectively promote commuting to their employees. Employers are most impacted by commuting practices and can be active partners and promoters of the Town's TDM program.

Existing Conditions

The extent of employer outreach is limited to SFCS' outreach efforts to the business community, which are limited in resources. SFCS has a dedicated person on staff that conducts employer outreach activities for all of Miami-Dade County.

Potential for Application

Conducting meaningful and effective employer outreach is extremely critical to the success of Commute Trip Reduction Program. SFCS' current outreach efforts will be immensely bolstered through a partnership with the Town. Employers will be more receptive to the outreach knowing that the Town is fully committed and supportive of commuter programs administered by the SFCS. The Town can also partner with the Chamber of Commerce to communicate TDM messages to employers. Employers are generally very receptive to learn of free programs they can offer to employees and are receptive to placing TDM messages on their intranets and/or forwarding TDM informational emails to their employees.

Implementation Steps

The Town can partner with the SFCS and the Chamber of Commerce to raise awareness amongst employers of the benefits of TDM as a recruitment and retention tool. The strategy involves maximizing existing resources and partners to conduct outreach, rather than hiring additional staff. The Town can take advantage of SFCS' existing TDM outreach program by helping to identify major employers within the Town. The Town can explore programs whereby communication regarding Business Tax Receipts includes an invitation to practice TDM solutions.

Monitoring Measures

1. Number of employers reached through the Town's Employer Outreach program; 2. Number of employers offering TDM programs as part of the Town's TDM Program.

TDM STRATEGY 11: TDM MARKETING, PROMOTION, AND PARTNERSHIPS

General Description

This strategy includes implementing methods to create public awareness of TDM strategies through marketing, advertising, public relations, brochures, web, outreach, direct mail inserts, blast emails, events, media buy, and database marketing. Each of these individual tactics, whether creating brochures for employers or crafting video messages for broadcast on television, are most cost-effectively developed within the context of an overall marketing plan. The strategy behind the marketing plan will be to maximize measurable TDM results and responses at the lowest possible costs.

Existing Conditions

SFCS already maintains a website (http://www.1800234ride.com/) and has produced marketing brochures that describe the various alternative commuter programs currently offered by them. The Florida TDM Clearinghouse, funded by the Florida Department of Transportation and operated by Center for Urban Transportation Research (CUTR), also offers samples of creative materials used to promote TDM tools in other cities.

Potential for Application

This strategy is extremely critical to the success of the Commute Trip Reduction Program. The Town can tailor SFCS' existing advertising and marketing materials with Town specific information with limited resources and time commitment.

Implementation Steps

The Town can partner with the SFCS to obtain the marketing, advertising, and campaign materials they already have and tailor it to Town's unique needs and vision. The development of an overall strategic marketing plan will be an important first step in preparing marketing collateral and marketing tactics. The strategic plan will identify the process, tactics, and partners that will be used in disseminating information regarding the TDM strategies. Some of the tactics that may be incorporated into the Town's marketing plan include creating a TDM webpage on the Town website; informational emails, brochures, posters, and survey forms; signs, banners, exhibiting backdrop for outreach events; bill inserts, direct mail, newsletters, and flyers; news releases, and rideshare matching events; employer handouts, flyers for distributions to local community groups and organizations; promotions and incentives, including free bus passes and vanpool rides; and outreach, special events, speaking engagements and presentations.

Monitoring Measures

1. Number of TDM marketing tactics implemented; 2. Request for information resulting from implementation of these tactics.

TDM STRATEGY 12: EMPLOYER TRANSPORTATION COORDINATOR

General Description

An employer transportation coordinator (ETC) is someone on an employer's staff that is responsible for managing and promoting TDM initiatives within an organization. The ETC also serves as a liaison between the employer and the commuter agency. This strategy is particularly applicable for large employers or employment centers. The ETC can be formalized by an employer designating a staff person as the company's ETC or a volunteer within the company that is passionate about TDM activities. The ETC is often a staff member of the Human Resource Department as commuter incentives can be associated with benefits. This person is charged with distributing rideshare and commuter benefit information along with transit schedules to new and existing employees. The ETC is typically provided with training and promotional materials during appointment of the task.

Existing Conditions

SFCS maintains standard training materials for ETCs. There are no known ETCs currently in existence within the Town of Miami Lakes.

Potential for Application

ETC can serve as an effective strategy for the Town given the high number of large employers. The Town can partner with SFCS to obtain the information brochures and standards training materials for ETCs. ETCs can be required as a mandatory element of meeting the Town's TDM requirements upon adoption of a TDM ordinance. In the meanwhile, an ETC can be promoted as a voluntary option in the initial stages of implementation of the Town's TDM Plan.

Implementation Steps

The implementation of this strategy will involve partnering with SFCS as the local clearinghouse of TDM information and services. An ETC can be designated for the Town of Miami Lakes staff to promote TDM strategies amongst Town staff. The Town can partner with the Chamber of Commerce to create awareness in the business community regarding ETC training. When the Town adopts a TDM ordinance, ETC can be included as a mandatory requirement for major employers.

Monitoring Measures

1. Number of ETC's designated and trained.

TDM STRATEGY 13: COMMUTE TRIP REDUCTION ORDINANCE

General Description

Traditional trip reduction ordinances are usually enacted by larger congested municipalities to regulate large trip generators, including major local employment centers. The employers are usually regulated because they have control over the commuting habits of employees and can offer them incentives, pay for transit passes, subsidize vanpools, reward ridesharing, etc. Some cities have created TDM policies, some of which are enforceable, and others that are designed to articulate community goals and aspirations regarding TDM. The ordinance is generally geared toward new businesses, but may be retroactive to existing businesses. It is intended to require TDM actions as prescribed by the local government. The City of Boca Raton implements a very progressive Commute Trip Reduction Ordinance that requires TDM participation by both new and existing developments.

Existing Conditions

Currently there are no TDM related requirements for developments within the Town Comprehensive Plan or the Land Development Code.

Potential for Application

A Commute Trip Reduction Ordinance is an effective strategy for the Town given the large number of major employers. The adoption of the ordinance will show the Town's commitment to implementing a multimodal transportation system and to address peak hour traffic congestion. The adoption of a Commute Trip Reduction Ordinance would serve better as a medium term strategy rather than an immediate implementation strategy. The Town should initially implement voluntary participation in the TDM program and make targeted outreach to the top 25 major employers. The lessons learned from the initial implementation can be used to develop a TDM ordinance more appropriate to the needs of the community.

Implementation Steps

The Town should create and adopt a Commute Trip Reduction Ordinance based on strategies identified for implementation within the Town and related requirements associated with each of the strategies. The Commute Trip Reduction Ordinance should apply to major employers with 50 or more employees. However, voluntary participation should be encouraged for medium and small employers. In addition to adopting the ordinance, the Town's comprehensive plan and land development regulations should be amended to include support for the Town's TDM program. Some sample requirements for the proposed TDM ordinance are included as part of the TDM Implementation Plan in Chapter 7.

Monitoring Measures

1. Adoption of CTR Ordinance within the intended timeframe; 2. Number of employers adhering to requirements of the CTR Ordinance; 3. Incorporation of TDM supportive goals, objectives and policies within the comprehensive plan.

The final list of selected strategies can be grouped based on the following comprehensive approach objectives identified earlier in this report to address traffic congestion:

- **Shift single occupancy vehicle (SOV) trips to non-SOV trips –** This objective will be furthered by ridesharing strategies that are aimed at reducing the number of single occupancy vehicles and increasing higher occupancy trips. These strategies include carpooling, vanpooling and the emergency ride home programs, and are categorized as ***Strategy Group 1***.

- **Shift peak hour commuting trips to non-peak hour commuting trips –** This objective will be furthered by workplace flexibility strategies that are aimed at reducing the number of peak hour trips by shifting more commute travel to non-peak hour trips or by removing trips off the roadways. These strategies include telecommuting, flexible/compressed work week and commuter tax incentives, and are categorized as ***Strategy Group 2***.

- **Shift vehicular trips to non-vehicular trips –** This objective will be furthered by multimodal strategies aimed at reducing the number of automobile trips by increasing the share of transit, bicycle, and walking trips. These strategies include bicycle master planning and pedestrian master planning, and are categorized as ***Strategy Group 3***.

The TDM strategies that can be supportive of the strategies identified in the first three strategy groups and can contribute to the achievement of all three objectives include:

- Support strategies that support strategy groups 1, 2, and 3. These strategies include public outreach, employer outreach, TDM marketing, promotion and partnerships, and the Employer Transportation Coordinator Program, which are categorized as ***Strategy Group 4***.

- Policy planning strategies that achieve transportation efficient land uses and multimodal conscious site planning. This category includes the commute trip reduction ordinance strategy, categorized as ***Strategy Group 5***.

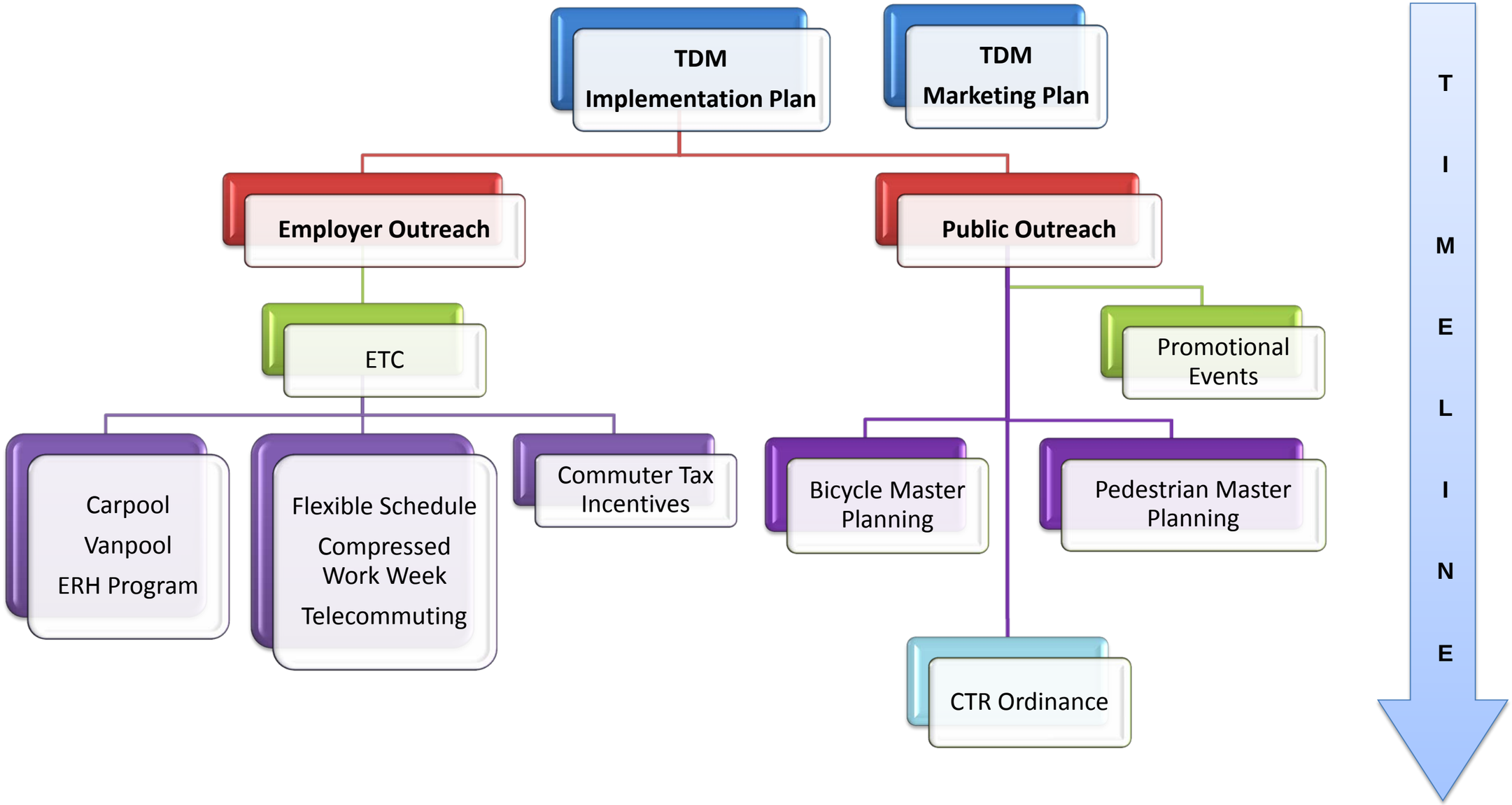
Strategy Groups 1 and 2 generally will not require intensive physical improvements and can be implemented in a shorter timeframe. The tools and the infrastructure to support strategies outlined in these groups already exist and the implementation of these strategies require policy level changes by employers and individual employees. Strategy Group 3 will require moderate to intensive physical improvements and the planning and implementation will occur in a medium to long-term timeframe. Strategy 4 will require some planning by Town staff and relatively moderate financial investment depending on the strategies. Strategy Group 5 will serve as the policy guidance throughout the life of the Commute Trip Reduction program, and can be adopted by the Town over a medium timeframe, and implemented over a long-term timeframe.

The final recommended strategies along with the type of strategy, lead agency for implementation and the implementation time frame are listed in Table 6-4 and illustrated in Chart 6-1.

TABLE 6-4: RECOMMENDED TDM STRATEGIES FOR IMPLEMENTATION

	Selected TDM Strategies	Strategy Group	Type of Strategy	Lead Agency	Implementation Time Frame
1	Carpooling	SG 1	Employer-based	Town/SFCS	Short
2	Vanpooling	SG 1	Employer-based	Town/SFCS	Short
3	Emergency Ride Home	SG 1	Employer-based	SFCS	Short
4	Telecommuting	SG 2	Employer-based	Employer	Medium
5	Flexible/Compressed Work Week	SG 2	Employer-based	Employer	Medium
6	Commuter Tax Incentives	SG 2	Employer-based	SFCS/ Employer	Medium
7	Bicycle Master Planning	SG 3	Area-wide	Town	Medium
8	Pedestrian Master Planning	SG 3	Area-wide	Town	Medium
9	Public Outreach	SG 4	Area-wide	Town	Short- Medium
10	Employer Outreach	SG 4	Area-wide	Town/SFCS	Short- Medium
11	TDM Marketing and Promotion	SG 4	Area-wide	Town/SFCS	Short- Medium
12	Employer Transportation Coordinator	SG 4	Employer	Town/ Employer	Short- Medium
13	Commute Trip Reduction Ordinance	SG 5	Area-wide	Town	Medium/Long

CHART 6-1: FINAL LIST OF RECOMMENDED TDM STRATEGIES



Even though the recommended TDM strategies are listed separately and categorized into the various strategy groups, these strategies are rather interconnected. The success of certain strategies is dependent on upon the implementation and success of other strategies as explained earlier. It is also important to note that these 13 TDM strategies can contain other sub-strategies or require additional policy analysis and decision making that will trigger implementation of complementary strategies. For example, Chart 6-2 illustrates the various components that might be part of implementing some of the recommended employer based strategies. There are three components to consider while implementing employer based strategies – strategies for implementation, review internal policy decisions with regard to strategies, and outreach for selected strategies.

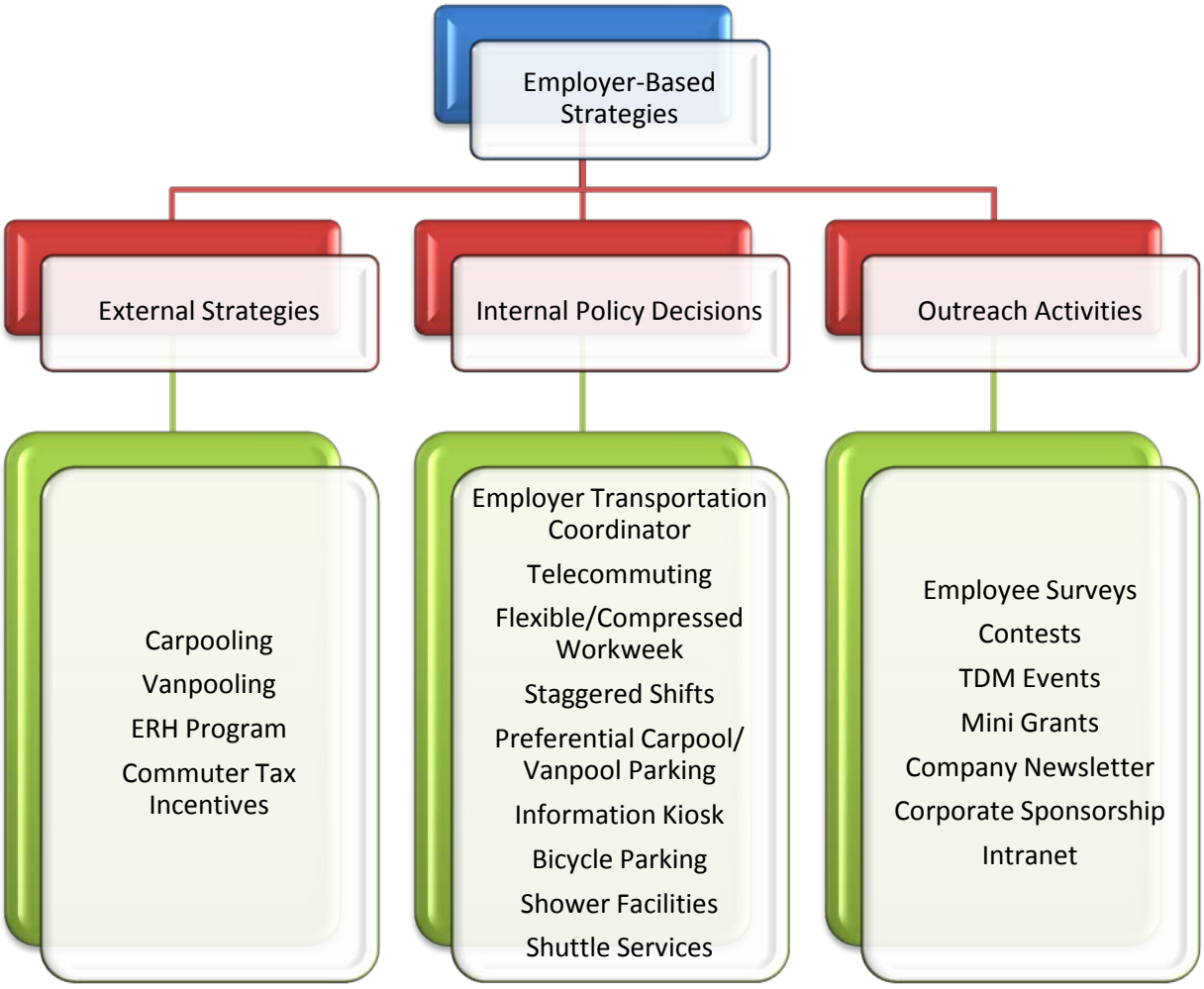
First, the employer must decide which strategies they would like to implement, which in this case includes carpooling, vanpooling, ERH program and commuter tax incentives that are available through an external agency such as the South Florida Commuter services.

Second, the employer will need to make some policy decisions through internal discussions on strategies such as designation of an ETC, whether or not telecommuting and flexible/compressed work week fits in with the nature of their business. The employer may also need to make policy decisions on sub-strategies that are not specifically listed in the final recommended list but may be required by the Town as part of a Commute Trip Reduction Ordinance, such as preferential parking for carpooling, provision of bicycle parking and shower facilities, etc.,

Third, the employer will need to evaluate the type of employee outreach activities required to implement the TDM strategies that are chosen. These outreach activities could include the events scheduled and promoted by the Town or additional activities identified and implemented by the employer.

The final list of selected strategies will serve as a guide to the Town in the selection and implementation of the Town's Commute Trip Reduction program. Additional strategies and sub-strategies can be built into the structure of the Commute Trip Reduction program as appropriate.

CHART 6-2: IMPLEMENTATION COMPONENTS OF EMPLOYER-BASED STRATEGIES



CHAPTER 7: COMMUTE TRIP REDUCTION/TDM IMPLEMENTATION PLAN

This chapter outlines a recommended implementation plan for the Town of Miami Lakes' Commute Trip Reduction Program. The plan provides a general timeline for each of the activities focusing on those strategies that have the potential to be immediately successful. The success of these immediate actions is intended to provide the program momentum that will support additional Town initiatives and funding to expand the TDM strategies.

The implementation plan is only a recommended path to implementation. It is understood that the implementation will be a function of staff time and Town resources. The implementation plan is based upon the TDM strategies that were described in detail in Chapter 6 and determined to be most applicable to the Town of Miami Lakes. The implementation plan consists of tasks that can be achieved within the identified time frames. The strategies identified in the implementation plan can be broadly categorized as either employer responsibility or Town responsibility; however, the Town is still assumed to be the lead agency in the implementation of the plan.

YEAR 1 (Immediate)

1. Assign a Commute Trip Reduction Coordinator
   Assign a Town of Miami Lakes staff person to initiate the Commute Trip Reduction Implementation Plan through coordination with South Florida Commuter Services (SFCS). This person will take the lead in developing the relationship with SFCS and creating the marketing and promotional materials that are specifically tailored to the Town businesses and residents.

2. South Florida Commuter Services Coordination
   Schedule a meeting with SFCS Commuter Assistance Program Coordinator (Gretchen Abi Daher) and Project Director (Jim Udvardy) to identify partnership mechanisms to implement the Commute Trip Reduction Program Strategy Groups 1, 2, and 4.
   a. Discuss the parameters of the Town's partnership with SFCS to promote the already available commuter assistance programs and the steps to formalize the relationship.
   b. Determine available materials that the Town can immediately distribute and/or post on its web site:
      i. Link to the South Florida Commuter Services web site (www.1800234ride.com);
      ii. Carpool, Vanpool and Emergency Ride Home information;
      iii. Commuter tax benefit information;
      iv. Transit Information; and

v. Special financial incentives available through the SR 826/SR 836 Interchange Project.

c. Discuss additional materials that the Town and SFCS could collaborate on to increase exposure and share costs:
   i. Brochures at Town buildings;
   ii. Town mailings;
   iii. Community and business outreach events; and
   iv. Social Media (Facebook, Twitter).

d. Request SFCS to establish benchmark data for the Town of Miami Lakes employment participation and history regarding the commuter assistance programs, along with the following performance measures:
   i. Number of employers that are current partners;
   ii. Number of commuters requesting assistance;
   iii. Number of commuters registered to switch modes;
   iv. Number of vanpools in service; and
   v. Major accomplishments.

3. Formalize Partnership between the Town and SFCS
   Sign a formal interlocal agreement with SFCS to establish partnerships parameters, commitment, responsibilities, and goals.
   a. Request South Florida Commuter Services to add the Town to the list of partners and participating agencies on the SFCS website.

4. Create a Commute Trip Reduction Web Page
   Develop a Commute Trip Reduction web page on the Town's website along with a link to the SFCS commuter assistance web page. At a minimum, outline the goals of the Town's Commuter Trip Reduction program and the benefits to employers, employees, and residents.

YEARS 1 – 3 (Short Term)

1. Develop a Commute Trip Reduction Marketing Plan
   a. Develop marketing materials for Miami Lakes Commute Trip Reduction Plan and commuter assistance programs offered through SFCS. The marketing materials can include:
      i. Brochures;
      ii. Display ads;
      iii. Kiosk setup;
      iv. Mail inserts; and
      v. Materials for posting on the website – PowerPoint presentations, Videos.
   b. Develop Commute Trip Reduction Branding Icon
      Develop a "brand" or icon for the Town of Miami Lakes' Commute Trip Reduction initiative. This can be done as a community contest and potentially involve local

schools or businesses. The “brand” should then be used for all marketing materials and the web page.

c. Commute Trip Reduction Initiative Promotions
   Prepare press releases and journal articles to highlight the partnership between the Town and the FDOT (SFCS) to promote a commuter assistance program.

2. Develop a Commute Trip Reduction Outreach Program
   Develop an outreach program to disseminate information regarding TDM strategies and the commuter services programs available through SFCS. The outreach program should utilize marketing materials that were developed under the Marketing Plan. The outreach program should identify community events, community meetings, and chamber events to present the Town’s Commute Trip Reduction initiative. The outreach should establish an annual calendar of events where the Town can host TDM related activities and a schedule for presentations.

3. “Lead by Example” – Town of Miami Lakes
   The Town should serve as the role model for employers by implementing the Commute Trip Reduction strategies that are required of major employers. This will indicate the Town’s commitment to improving mobility within the Town and demonstrate the benefits of the program to the community. The strategies that the Town could immediately implement include:
   a. Providing information to Town employees on the commuter assistance programs and financial incentives available through SFCS, especially the additional incentives available for the SR 836/SR 826 interchange project.
   b. Assigning preferential parking spaces at Town buildings for carpool and vanpool vehicles. This could also include a percentage of hybrid or electric vehicles to focus on energy conservation.
   c. Designating bicycle parking facilties, such as bike racks or lockers.
   d. Providing TDM information kiosks at Town buildings – Town hall, library, etc.
   e. Distributing monthly/yearly TDM prizes for employees that walk/bike, carpool, vanpool, or take transit to work.
   f. Promoting TDM activities by hosting “Bike to Work Day” or other commuter celebrations that promote the utilization of the TDM program. These activities could be promoted as recurring annual events where the Town can monitor progress towards achieving goals and to encourage participation.

4. Identify Target Commute Trip Reduction (CTR) Sites
   Develop a list of the top 25 major employers within the Town in the order of employee size and label them as Phase 1 CTR sites. The selection of this list should specifically focus on the businesses related to management, business, sales and office sectors.
   a. Initiate contact with these employers and communicate the Town’s intent.

b. Set up one-on-one meetings with these employers and partner with SFCS to attend these meetings.
c. Use the marketing and informational materials regarding the Town's Commute Trip Reduction plan to raise awareness about TDM programs and the benefits to the employers.
d. Establish trip reduction goals for each CTR site in coordination with the employers.
e. Assist employers with implementation of available commuter assistance programs through financial incentives such as mini-grants.

5. Evaluate CTR Sites for Implementation of multimodal strategies (Strategy Group 3)
   For the CTR sites chosen in the previous step, prepare a multimodal evaluation plan to maximize success rates.
   a. Prepare a due diligence review of the Phase 1 CTR sites
      i. evaluate sidewalk connectivity around CTR sites;
      ii. evaluate bicycle access to CTR sites;
      iii. evaluate quality of transit stops, including transit rider amenities near CTR sites;
      iv. evaluate transit route connections around the CTR sites; and
      v. review parking conditions within and around the CTR sites.
   b. Develop a multimodal improvement plan to strengthen pedestrian, bicycle and transit infrastructure in and around the CTR sites.

6. Develop a program of TDM incentives for employers.
   a. Develop a mini-grant program that provides $1,000-$2,000 in financial assistance to employers for designation of ETC related activities.
   b. Develop an Employer Recognition Program that recognizes employers that have implemented TDM programs through posting on the Town website, highlighting in community newsletters or mayor's announcements.

7. Evaluate Applicability for Specialized TDM Activities
   Once the Commute Trip Reduction program implementation begins and the outreach program is established, the Town should continue to promote TDM related activities and events each year. These include proclamations, hosting events, and participation at local events.
   a. Identify a list of annually recurring events that would provide a platform for highlighting and raising awareness of the Town's Commute Trip Reduction program.
   b. Distribute surveys to residents and local businesses at these events to gauge the effectiveness of the marketing and outreach programs.

c. Promote local and regional transit service through a demonstration event where residents and employees can ride the Miami Lakes Mover to the transfer stop along the Ludlam Limited route to the Okeechobee Metrorail station.

YEARS 3 – 5 (Medium Term)

1. Adopt a Commute Trip Reduction Ordinance

   Adopt a Commute Trip Reduction ordinance that requires new developments and redevelopments to develop a Commute Trip Reduction plan to mitigate their impacts on the transportation system. The voluntary TDM activities undertaken in years 1 through 3 will provide an assessment of the extent to which employers are receptive about TDM strategies. The lessons learned from those activities could be incorporated in refining the ordinance requirements. The Commute Trip Reduction ordinance requirements will be mandatory for all major employers with more than 50 employees and voluntary, but highly recommended, for all other employers. At a minimum, the ordinance should address the following employer related requirements:

   a. Designation of Employer Transportation Coordinator.
   b. Distribution of TDM related information and opportunities to employees
      i. Information kiosk with information on commuter assistance programs available through SFCS and transit service maps and schedules; and
      ii. Dissemination of TDM information and Town's promotional activities to employees through e-mail, employer intranet, newsletter, or similar medium.
   c. Implementation of site specific strategies
      i. Preferential parking for carpool, vanpool and energy efficient vehicles;
      ii. Provision of bicycle parking facilities, lockers, and shower facilities;
      iii. Provision of employer commuter tax incentives of $240 per month per employer as provided by Federal law;
      iv. Provision of parking incentives for employees that don't use employer provided parking;
      v. Establishment of flexible or compressed work schedules or staggered work shift;
      vi. Establishment of option of working from home on a part time basis, depending on the nature of the business;
      vii. Implementation of other meaningful employer initiated measures to reduce single occupancy vehicles or reduce peak hour travel;
      viii. Provision of shuttle services from employer site to other public transit facilities or contribution to the Town's transit circulator; and
      ix. Construction of new stops or upgrades to existing transit stops, if site has frontage along transit routes, or contribution towards other transit related improvements.
   d. Annual report of Commute Trip Reduction activities undertaken and progress towards Commute Trip Reduction goals. This should include information on

which strategies are currently implemented within the organization and how they achieve program goals.

2. Update Comprehensive Plan and Land Development Regulations
   The adoption of the Commute Trip Reduction ordinance should be accompanied by revisions to the Town's Comprehensive Plan and Land Development Regulations.
   a. Revisions to the Comprehensive Plan should include objectives and policies that outline the framework of the Commute Trip Reduction ordinance and communicate the Town's commitment to promoting mobility for all modes.
   b. Revisions to the Land Development Regulations should be based upon the requirements contained in the Town's Commute Trip Reduction Ordinance, which, at a minimum, should include the following:
      i. Bicycle parking requirements;
      ii. Specifications for bicycle parking and ancillary facilities;
      iii. Site design requirements to accommodate vanpool and transit vehicles;
      iv. Design specifications for transit accommodations within a site;
      v. Design specifications for transit stops associated with a site;
      vi. Proposed changes to automobile parking requirements, including shared parking and on-street parking provisions;
      vii. Reduction requirements associated with shared or joint use of parking facilities;
      viii. Alternatives to Town's Transportation Concurrency Management System that addresses multimodal infrastructure; and
      ix. Signage specifications for parking spaces designated for preferential parking for ridesharing participants or energy efficient vehicles.

3. Review Status of Bicycle and Pedestrian Improvements
   Conduct a review of bicycle and pedestrian improvements implemented since the adoption of the Town's Greenways and Trails Master Plan. Evaluate the impact of those improvements on providing mobility and reducing the share of automobile trips.

YEARS 5 – 10 (Long Term)

1. Evaluation of Fixed Route Transit Service and Town's Transit Circulator Service
   a. Developing a Transit Master Plan will help identify the quality of transit route connections, transit stops and associated transit facilities within the Town. The plan can also establish minimum standards for transit shelters and pedestrian and ADA accessibility around transit shelters that can be required for future development/redevelopment projects as a way of meeting the TDM requirements. The master plan should also identify a program of prioritized transit improvements that is coordinated with MDT so future funding can be directed towards those projects. The Commute Trip Reduction ordinance will require development/redevelopment projects along a transit route to provide

improvements to transit facilities or contribute funding towards other transit-related improvements.

b. Review the Town's transit circulator service routes and ridership information to evaluate the effectiveness of service and customer feedback on service. Implement necessary improvements based on the assessment. Updates to transit circulator service should take connections to priority CTR sites into consideration.

2. Review and Update Town's Commute Trip Reduction Plan
   The Town's Commute Trip Reduction Plan should be periodically evaluated to determine applicability of existing strategies and introduction of new or modified TDM strategies. The update should be developed in coordination with SFCS and the major employers participating in the Commute Trip Reduction program so realistic feedback can be incorporated into the revised plan. The review should include quantitative comparisons of mobility components from the baseline year to the update year and identify areas for improvement.

MONITORING PLAN

The success of the Town's Commute Trip Reduction Plan will largely be determined by the lessons learned from the Monitoring Plan. Monitoring and assessment is an important component of any initiative aimed at changing the current status quo situation to a new enhanced vision. The intent of the Monitoring Plan to quantify the progress made towards achieving the Town's Commute Trip Reduction goals and evaluated the pros and cons of the implemented strategies. A Monitoring Plan should be developed on an annual basis.

The Town shall maintain a database of Commute Trip Reduction program participants and make up-to-date additions and revisions regarding employer participation information. The Town shall prepare an annual report of progress made towards achieving the Town's Commute Trip Reduction goals. The annual review will be performed in coordination with SFCS. The baseline measures identified during the initial establishment of partnership with SFCS will be used to assess annual progress made towards achieving Commute Trip Reduction goals.

At a minimum, the following performance measures will be quantified and evaluated. Some of the data regarding the performance measures will be collected by the Town while the others can be obtained from SFCS. The evaluation of these performance measures will help identify changes that need to be made to the Commute Trip Reduction program to increase program participation rates and achieving mobility goals outlined in the Commute Trip Reduction program.

Town Data:

1. Number of employers participating in the Commute Trip Reduction program
2. Number of specialized TDM events organized
3. Amount of financial assistance provided to employers
4. Number of bicycle related improvements implemented
5. Number of pedestrian related improvements implemented
6. Number of transit related improvements implemented

SFCS Data:

1. Number of partner employers registered with SFCS
2. Number of commuters requesting assistance
3. Number of commuters switching modes
4. Number of vans in service
5. Number of vehicle trips eliminated
6. Number of vehicle miles of travel (VMT) eliminated
7. Parking spots saved/parking needs reduced
8. Commuter costs saved
9. Major accomplishments

CONCLUSION

The Town of Miami Lakes is undertaking an important effort at improving mobility for all modes of transportation and reducing peak hour traffic congestion by adopting this Commute Trip Reduction Plan. This plan is a part of an overall program of interrelated improvements aimed at reducing single occupancy vehicle travel and improving the bicycle, pedestrian and transit infrastructure within the Town. This ambitious program of interrelated improvements, of which the Commute Trip Reduction program is a part, will require comprehensive and coordinated effort by dedicated Town personnel focused on multimodal transportation and sustainability. Since incorporation, the Town has demonstrated its commitment to improving the quality of life of residents and making the Town an exceptional place to live, work and play. The Town's commitment towards implementing this program will be no different from its past achievements.

The Commute Trip Reduction Plan recommends an approach that involves maximizing existing resources with relatively minimal financial investment. This "easy first step" involves partnering with FDOT/SFCS to raise awareness and promote the already funded commuter assistance programs. The plan recommends using the State's existing system to the fullest extent to achieve initial success and gather impetus for the remainder of the program. After the initial implementation success, the Town can garner additional support to implement the more intensive strategies through a combination of Town resources, employer contributions and grant opportunities. It will require continued and consistent coordination of all planning efforts currently undertaken by the Town to achieve the vision of multimodal mobility within Miami Lakes.

APPENDIX A

EMPLOYEE COMMUTE PATTERN SURVEY