

ORDINANCE 2011-15

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF DORAL, FLORIDA, AMENDING THE GOALS, OBJECTIVES AND POLICIES AND THE DATA, INVENTORY AND ANALYSIS OF THE CITY OF DORAL COMPREHENSIVE PLAN, TO IMPLEMENT THE GREEN ELEMENT; AND AUTHORIZING THE TRANSMITTAL TO THE DEPARTMENT OF COMMUNITY AFFAIRS OF THE PROPOSED AMENDMENT TO THE CITY OF DORAL'S COMPREHENSIVE DEVELOPMENT MASTER PLAN PURSUANT TO THE PROVISIONS OF THE LOCAL GOVERNMENT COMPREHENSIVE PLANNING AND LAND DEVELOPMENT REGULATION ACT; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Ordinance 2009-03 approved the adoption of the Green Master Plan; and

WHEREAS, the Green Master Plan issued recommendations for the preparation of sustainable Comprehensive Plan amendments; and

WHEREAS, the City has prepared Comprehensive Plan Amendments to the Goals, Objectives and Policies and Data, Inventory and Analysis in order to implement the Green Element ; and

WHEREAS, the City Council of the City of Doral finds it to be in the best interests of its citizens to adopt, the amended Goals, Objectives and Policies and the Data, Inventory and Analysis of the City of Doral

Comprehensive Plan and to implement the Green Element, as stated in Exhibit "A," attached hereto and incorporated herein; now, therefore

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DORAL, FLORIDA:

Section 1. The foregoing "WHEREAS" clauses are hereby ratified and confirmed as being true and correct and are hereby made a part of this Resolution upon adoption hereof.

Section 2. The Amendments to the City of Doral's Comprehensive Development Master Plan, as outlined in Exhibit "A," attached hereto and incorporated herein, are hereby adopted.

Section 3. That the City Clerk is hereby authorized to transmit this Ordinance to the Florida Department of Community Affairs.

Section 4. This Ordinance shall not become effective until the State Land Planning Agency issues a Final Order determining the adopted amendment to be in compliance and in accordance with Section 163.3184(9), Florida Statutes, or until the Administration Commission issues a Final Order determining the adopted amendment to be in compliance in accordance with Section 163.3184(10), Florida Statutes.

The foregoing Ordinance was offered by Councilman Cabrera, who moved its adoption. The motion was seconded by Councilwoman Rodriguez and upon being put to a vote, the vote was as follows:

Mayor Juan Carlos Bermudez

yes

| | |
|-----------------------------------|-----|
| Vice Mayor Michael DiPietro | yes |
| Councilmember Pete Cabrera | yes |
| Councilmember Luigi Boria | yes |
| Councilmember Ana Maria Rodriguez | yes |

PASSED AND ADOPTED on first reading this 8th day of June, 2011.

PASSED AND ADOPTED on second reading this 14th day of September, 2011.



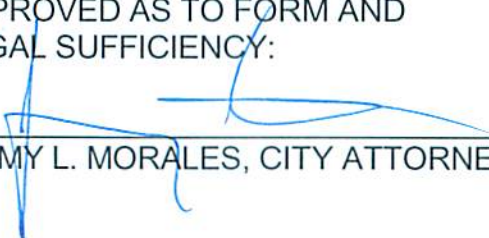
JUAN CARLOS BERMUDEZ, MAYOR

ATTEST:



BARBARA HERRERA, CITY CLERK

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:



JIMMY L. MORALES, CITY ATTORNEY

EXHIBIT “A”

City of Doral Comprehensive Plan

Green Element

(revised 8-16-11)

Introduction

This is the new "Green Element" of the City of Doral's Comprehensive Plan (CP) which is intended to be incorporated as the 1st element in the Plan. The Element is composed of two (2) parts: Goals, Objectives and Policies (GOPs), and Data, Inventory and Analysis (DIA). The GOPs are presented below; the supporting DIA will be provided in the near future. In this Element, the words "green" and "sustainable" are synonymous and when used herein denote "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This definition was developed as part of the Brundtland Commission Report in 1987 and is an accepted industry standard.

The City of Doral has been a leader statewide and nationally for many years beginning in 2003 with City incorporation when the formative city leaders at that time started work on a new Comprehensive Plan that would take the existing urban sprawl type development pattern developed under Miami-Dade County for 50+ years and transform the Doral area into a real city with a downtown focus, mixed use opportunities, business orientation, local transit and traditional neighborhoods. The strong green leadership of Mayor Bermudez and the City Council was evident when the Mayor signed the U.S. Mayor's Climate Protection Agreement in 2005. The City continued its green push in 2008 with the development and approval of its "Green Master Plan" which was awarded the 2009 Excellence in Planning Award by the Florida Chapter of the American Planning Association and the 2009 Outstanding Planning Innovation Award of the Florida Planning and Zoning Association.

While awards are nice, the City is not sitting back but moving forward rapidly to achieve real and meaningful implementation of its Green Master Plan as soon as possible. This Green Element is the first step, and the City's application to the Florida Green Building Coalition (FGBC) to become a Silver Certified Green City is another significant step. Following completion and approval of this Green Element, the on-going project to incorporate sustainable regulations and incentives into the City's Land Development Code (LDC) will be completed.

The placement of this element as the initial element in the City's Comprehensive Plan has real significance. It is intended to send the very real signal that the Green Element is the "glue" that gives sustainable purpose and guidance to the other elements, including land use. It's the green foundation for the remainder of the Plan and Doral's sustainable future. In addition, it meets and exceeds the requirements of State House Bill 697 which requires cities and counties to include consideration of greenhouse gas emissions and energy efficiency in their local comprehensive plans (Section 163.3177, F.S.).

The GOPs herein assume that the City of Doral is responsible for implementation unless otherwise noted. Although limited as much as possible, acronyms are used and a number are defined above; in addition 'LEED' is used later on in this text and stands for "Leadership in Energy and Environmental Design."

I. Green Element Goals, Objectives and Policies

Goal: To conserve our natural resources, minimize greenhouse gas emissions, enhance community health and education, nurture city neighborhoods, and promote carbon-neutral business growth to ensure that a lush green sustainable legacy will be left for future generations of Doral residents.

Objective 1.1 **Sustainable Land Use and Design**

Continuous updating of the Future Land Use Element and Land Development Code to incorporate the latest and most feasible green development techniques, policies, and incentives as the cornerstone for the City's drive toward a sustainable future.

Measure: Completion of at least 1 Comprehensive Plan (CP) amendment and 2 Land Development Code (LDC) revisions annually addressing green objectives, policies and requirements.

Policy 1.1.1: Continue to provide for, and promote, viable mixed use development opportunities in downtown Doral and outlying traditional neighborhood centers on the City's Future Land Use and Zoning Maps.

Policy 1.1.2: Complete the comprehensive revision of the City's LDC to incorporate green polices regulation and standards for all types of development approvals.

Policy 1.1.3: If the data is available, by July 2016, develop a system of "Community Sustainability Indicators" to measure Doral's progress in maximizing energy efficiency, reducing greenhouse gas emissions and increasing resource conservation. Measure the indicators and report the results in the Annual Budget each year starting in 2016.

Policy 1.1.4: Where appropriate, place higher densities in close proximity to transit stops. By January 2015, complete a study with recommended actions of land use and zoning densities near transit access points in Doral measuring them against a minimum transit viability density standard of 7 units per acre.

Policy 1.1.5: Search for evolving opportunities in the Future Land Use Element (FLUE) and LDC for additional cluster residential development and energy-efficient, multi-story homes on smaller lots.

Policy 1.1.6: By January 2014, consider an ordinance to expand options for accessory live/work spaces in appropriate land use categories and zoning districts.

Policy 1.1.7: For mixed use and commercial areas, ensure flexible regulations are in place to increase appropriate sidewalk commerce like street vendors, sidewalk dining and walk-up windows.

Policy 1.1.8: Continue to allow multi-vendor farmer's markets in commercial areas and remove any unnecessary zoning barriers to sale of local farm produce by street vendor's downtown and in selected mixed use locations.

Policy 1.1.9: Ensure that solar facilities, rain collection systems and small wind turbines for homes and other buildings in appropriate locations are permitted and can be sited under City zoning regulations without undue delay. Review side/rear yard setback and height requirements in all zoning districts and determine ways these renewable facilities can be installed with the least impact on neighbors.

Objective 1.2 **Expand Mobility and Connectivity**

Substantial expansion of mobility options conveniently available to Doral residents and visitors, and improved interconnectedness of the local multi-modal transportation systems within the City and with the regional mobility network.

Measure 1: # of miles of bike paths developed annually.

Measure 2: Increase in route miles and ridership on buses serving the Doral area.

Policy 1.2.1: To the greatest extent possible, implement the road and multi-modal capital projects contained in the CIE 5-Year Schedule of Capital Improvements herein.

Policy 1.2.2: Work with MDTA and MPO to increase transit service. Expand the Doral Trolley Circulator System according to ridership needs, future growth and coordination with the County transit system.

Policy 1.2.3: Work with FDOT and MDC Public Works to prepare a study of the traffic signalization system in Doral including comprehensive signal timing recommendations to optimize traffic flows and reduce congestion and energy usage. Also, work with MDC Public Works on a replacement program for all older incandescent signals and streetlights in Doral with LED or other types of low energy light sources.

Policy 1.2.4: Incorporate criteria into the LDC requiring multi-modal connectivity to the adjacent and areawide mobility system for all new or amended development projects.

Policy 1.2.5: Officially appoint a Bicycle and Pedestrian Coordinator on staff to monitor the implementation of the Bicycle and Pedestrian Master Plan for the City.

Policy 1.2.6: Continue to give high priority in the Capital Improvements Element and annual City Budget to the construction of bicycle paths and supporting facilities recommended in the approved Parks Master Plan.

Policy 1.2.7: By July 2014, review LDC standards to ensure bicycle and pedestrian facilities are fully integrated into each project, and interconnected with adjacent and area bikeways and sidewalks. Require all commercial, industrial and multi-family developments to have adequate and secure bike racks.

Policy 1.2.8: By July 2014, implement the principles of FDOT's "12 Steps Towards Walkable Communities" and "Healthy Street Design" into the City's Land Development Code (LDC), 5-Year Capital Improvement Program and development review criteria.

Policy 1.2.9: Review the City's local road system to identify local half-section and quarter section line road corridors that are currently discontinuous, but could be connected in the future. By 2014, develop a prioritized program to fill in gaps in discontinuous local road corridors.

Objective 1.3 **Smart Buildings and Places**

Significant reduction in energy consumption and greenhouse gas emissions generated by Doral's build environment, coupled with substantial increase in utilization of renewable energy sources.

Measure 1: Number of green certified buildings built and/or renovated in the City.

Measure 2: Number of renewable energy systems installed in buildings.

Measure 3: Number of on-site water conservation systems permitted.

Policy 1.3.1: By January 2013, adopt new Code incentives for new or renovated buildings and/or developments which attain LEED, USGBC or other recognized 'green' certification. Incentives must have a minimum value of \$300/home; \$1,000/commercial or industrial building; and \$2,500/land development project.

Policy 1.3.2: Investigate possible incentives that would encourage all new buildings in the City to obtain a certain percentage of its average daily energy usage from renewable sources.

Policy 1.3.3: Incorporate site design standards into the LDC requiring private development projects to orient and landscape homes and other buildings to minimize direct daily sunlight on walls and windows in the rainy season, and maximize rooftop solar exposure year-round.

Policy 1.3.4: Evaluate potential incentives to assist existing buildings in the City to upgrade high energy usage systems like air-conditioning and water heating to energy efficient units with high Energy Star or other recognized ratings. Also, examine ways to help homeowners and businesses make existing building shells more energy-efficient through better insulation, sealing cracks and replacement of windows.

Policy 1.3.5: Work with FPL to expand the utilization of its Energy Audit Program by Doral businesses and residents.

Objective 1.4 **Enhance Natural Open Space and Landscape**

Continue to expand community parklands and make Doral's landscape cover even greener and shadier while significantly reducing surface "heat islands" in the City.

Measure 1: Annual increase in the amount of open space and park land.

Measure 2: Expansion of landscape shade covering previously exposed paved "heat islands" by 10% per year.

Policy 1.4.1: Preservation and enhancement of the City's tree canopy is paramount. Review the Code by July 2013 and recommend, if necessary, changes to strengthen protections against

illegal and/or premature tree removal. Ensure that retention of existing tree cover and close coordination with the County's DERM is a high priority in development review by the City.

Policy 1.4.2: Evaluate the City's current Landscape Code in comparison to the Florida Friendly (FF) Landscape Irrigation and Design Standards prepared by the Florida Department of Environmental Protection. By January 2014, adopt by ordinance any new or amended provisions necessary to bring the Code into full compliance with FF principles and standards. The revision should also include stronger requirements for shading of paved surfaces such as walkways, sidewalks and parking lots.

Policy 1.4.3: Adopt Florida Friendly Landscape Standards for all City parks and public building sites. Prepare an assessment by January 2015 of landscape improvements needed to ensure the landscapes in all parks and other significant City parcels are Florida Friendly.

Policy 1.4.4: Look for opportunities to preserve and expand open green space in the City. Revisit current standards for open space, parking, and local roadway dimensions with an eye toward reducing impervious area. Incentives for multi-story; cluster housing and structured parking should also be explored. Also, consider reducing parking space requirements for private developments within ½ mile of a transit stop.

Policy 1.4.5: Review, and amend as necessary, the Street Tree Master Plan to focus on effective shading of the sidewalk system in the City.

Policy 1.4.6: By January 2014, amend the City Code to require at least 10% of all required surface parking be pervious and/or heat-reflective using techniques and materials such as open cell pavers, managed turf, porous pavement and other viable options.

Policy 1.4.7: Analyze the paved area coverage in the City and identify the larger "heat islands." Revise the City's Street Tree Master Plan to include large paved parking fields and work with property owners of those facilities to incorporate landscape islands and borders.

Policy 1.4.8: Coordinate with the Florida Department of Environmental Protection (FDEP) and Miami-Dade County Department of Environmental Resources Management to develop a program to remove non-native, invasive plant species from City lands.

Policy 1.4.9: Beginning in July 2014, sponsor an annual "Tree Giveaway" event with the goal to distribute at least 2,000 Florida Friendly native trees per year to local residents along with planting and care suggestions.

Objective 1.5 Conserve and Nurture Healthy Water Resources

Achieve significant annual reductions in the average potable water usage by residents, visitors and businesses, and steady improvement in the water quality of Doral's surface water bodies.

Measure 1: Annual improvement in surface water quality in the city canal system.

Policy 1.5.1: Implement the recommendations of the City's 10-Year Water Supply Facilities Work Plan adopted in 2010 and use its long-range conservation strategies as the basis to reduce water usage citywide by 25% to 150 gallons per capita per day or lower by 2017.

Policy 1.5.2: Ensure that the LDC allows buildings to incorporate and/or retrofit structural rain water harvesting features such as cisterns and rain barrels. Make such features a high priority in

the Green Points System to be developed for future review of land development projects. Permit limited administrative building setback encroachments for such features.

Policy 1.5.3: Review water-saving strategies and standards recommended by the U.S. EPA Water Sense Program, and implement any appropriate revisions to the City's applicable building policies and procedures to meet the Program goals and objectives.

Policy 1.5.4: Require that all automatic landscape irrigation systems in the City be equipped with a fully-operational rain shut-off device. Create an inspection and enforcement program by July 2013 for existing irrigation systems and inspect 25 systems per year.

Policy 1.5.5: Work with the MDC Water and Sewer Department to examine opportunities within Doral to utilize reclaimed water on area golf courses, parks and medians, and if feasible, identify an initial public demonstration project.

Policy 1.5.6: Coordinate with the South Florida Management District (SFWMD) and other agencies responsible for canals within the City to protect and improve surface water quality. The City Engineer will assess water quality in area water bodies by January 2012 and identify any projects or policies to manage and treat urban runoff the City can implement to assist State, regional and local agencies.

Policy 1.5.7: The City currently sweeps over 2500 miles of local roadways every 2 weeks. Maintain this program, and expand as necessary, in order to keep pollutants out of Doral's waterways and produce steady improvement in surface water quality.

Policy 1.5.8: Ensure, by ordinance if necessary, that all new car washes in Doral utilize best management practices as provided in Chapter 62-660-803, Florida Statutes, and recommended by the MDC Department of Environmental Resources Management (DERM).

Objective 1.6 Community Waste Recycling and Reuse

Facilitate the growth of a "waste miser" community culture as point of pride among Doral adults and children alike, marked by aggressive recycling and reuse of discarded equipment, products and other solid waste resources.

Measure: Increase in amount of solid waste recycled by City government by 5% per year.

Policy 1.6.1: Coordinate with the MDC Solid Waste Authority, which assesses the current recycling and reuse rates and practices in the City, and provides cost-feasible recommendations to substantially increase future reuse of waste products by City government and in the wider Doral community.

Policy 1.6.2: Increase the number of citywide recycling bins in commercial, public and mixed use areas, incorporate bin and enclosure designs that are aesthetically-pleasing.

Policy 1.6.3: Work with the MDC Solid Waste Authority to assess the effectiveness of curbside recycling in the City, and identify strategies and programs to increase the volume of recyclable waste citywide.

Policy 1.6.4: By January 2014, challenge local business groups to work together to survey local members and develop a coordinated program to significantly increase waste recycling and

reuse in the Doral business community. Possible ideas include: a "Best Business Recycler" of the year award as well as, participation in the City's Annual Eco-Fair.

Policy 1.6.5: Ensure that the latest deconstruction best management practices are employed at all demolition and redevelopment sites in the City, and investigate incentives for the recycling of all construction debris from demolition and building sites.

Objective 1.7 Green Capital Improvements

Development of a 'Green Component' in the City's Annual Budget and Capital Improvements Element which establishes higher priorities for sustainable projects and products.

Measure: Number of capital projects built and installed that reduces greenhouse gas emissions, save energy and conserve water and other resources.

Policy 1.7.1: At the start of the budget preparation process each year, department heads will include, among existing criteria, sustainability factors such as low greenhouse gas emissions, energy savings, conservation of natural resources and long-term cost-effectiveness when considering programs and projects.

Policy 1.7.2: All planned City buildings and facilities will be constructed and/or rebuilt to meet, at a minimum, the LEED Certification Standard or higher.

Policy 1.7.3: Construct the new City Hall Complex in compliance with LEED Silver Certification standards and requirements. Create an informative walking tour within the complex highlighting the various sustainable features built into the design.

Policy 1.7.4: Ensure that the annual Capital Improvements Element Update required by the State contains projects which are consistent with this Element and consideration given to a high level of sustainability in terms of greenhouse gas emissions, energy savings and resource conservation.

Policy 1.7.5: Identify and pursue all feasible federal, State and regional grant funding opportunities for green capital improvements such as the Energy Efficiency and Conservation Block Grant sponsored by the U.S. HUD and DOT.

Objective 1.8 Community Learning and Outreach

Spearhead an aggressive community information program utilizing all forms of media readily-available to make it easy for property owners, residents and businesses to learn about the City's green policies and activities, and sustainable practices that they can implement to help the environment and save real dollars.

Measure: Number of "hits" on the 'Green' and 'Personal Mobility' sections of the City's website.

Policy 1.8.1: Utilize the City's website to inform and advocate for Doral's Green City projects, policies and achievements. By January 2014, create a website area to track Doral's green progress, and provide education and suggestions on best green practices, such as recycling and water conservation. Provide list of green educational videos, and local seminars and speakers on sustainable living. Disseminate this information also at the annual Eco-Fair, and at public parks and governmental offices.

Policy 1.8.2: By July 2013, develop a 'Personal Mobility' section on the City's website with easy-to-use links to Miami-Dade County information on ride-sharing and car pooling opportunities; transit routes, times and connections; and bicycle and pedestrian paths.

Policy 1.8.3: As part of the City's annual Eco-Fair starting in 2013, recognize sustainable residential, commercial and mixed use buildings constructed or renovated in Doral over the past year.

Policy 1.8.4: Pursue low-impact, passive development of the City's 51-acre Environmental Park to demonstrate and inform City adults and school about our natural resources and their vital importance to community sustainability.

Policy 1.8.5: Work with the Miami-Dade County School Board and local charter and private schools to incorporate educational modules into the basic curriculum that address natural, community and personal sustainability principles and practices.

Policy 1.8.6: Provide a wide array community education opportunities for residents and businesses on green building maintenance practices, Florida Friendly landscape programs, energy-saving techniques and resource conservation ideas.

Policy 1.8.7: Give residents and businesses multiple easily-accessible venues to learn about feasible water-conserving techniques and concepts. Encourage them to take advantage of regional and county water conservations programs including Residential Plumbing Fixture Kit, Shower Head Exchange and other similar programs.

Policy 1.8.8: Through the website and other means, regularly inform Doral citizens on what the City is doing to conserve resources, and ways residents and businesses can recycle more and save money. Readily advertise conservation opportunities like free, recycled mulch at the County's Waste-to-Energy Plant Facility on NW 58th Street. Summarize monthly recycling "happenings and ideas" in the City newsletter.

Objective 1.9 Promote Green Business and Job Growth

Help take Doral's role as a regional job center to the next level by working in partnership with our vital business community to accelerate ALL potential job growth opportunities with a special emphasis on green industries.

Measure: Annual job growth increase of at least 5 % per year.

Policy 1.9.1: In coordination with local business groups such as the Chamber of Commerce, work to assess the City's current employment trends and resources, and recommends specific joint projects and programs to keep the Doral business sector competitive and sustainable.

Policy 1.9.2: Every 2 years starting in 2013, the City will examine its planning, zoning and building regulations to clarify any unclear or conflicting regulations, remove unnecessary requirements and expedite development approvals.

Policy 1.9.3: Based on available studies, the City Manager will develop a reliable estimate of employment within Doral by industry beginning in 2014.

Objective 1.10 **Lead by Example**

Continue to provide inspired community leadership not only by educating and suggesting what citizens can do to sustain our future, but by setting the bar high, and showing how an organization can become green and save its clients - residents and businesses – real dollars in each annual budget.

Measure: Reduction in greenhouse gas emissions and increase in energy savings by 5% per year.

Policy 1.10.1: Achieve the Silver Level or higher by January 2012 under the Green City Certification program administered by the Florida Green Building Coalition.

Policy 1.10.2: Designate and fund an on-going staff position entitled "Sustainability Coordinator" to facilitate the implementation of the policies and activities recommended in this Element and with the Green City application filed by Doral with the Florida Green Building Coalition (FGBC).

Policy 1.10.3: Beginning in July 2014, monitor energy use by the City on a bi-annual basis and provide a report to the City Council in July every year. Identify areas of City buildings and operations where long-term energy savings can be achieved and/or resources conserved. Propose energy-saving projects for City buildings, parks and other facilities during the budget process starting in 2015 including conversion of incandescent light fixtures to LED or other energy-saving type.

Policy 1.10.4: Miami-Dade County has adopted a Climate Action Plan. Actively work with the County and area cities on regional sustainable projects and programs.

Policy 1.10.5: By July 2014, develop and implement an Environmentally-preferred Purchasing (EPP) Program based on EPA's 5 guiding EPP principles. Following EPP policy approval and adoption, document the implementation by each applicable department of EPP into their actual purchasing process for credit towards Green City certification.

Policy 1.10.6: Enhance community health by continuing to sponsor and expand the 'Get Fit Doral' Program, which encourages adults and kids to exercise and play on a regular basis, and sponsors activities and programs focused on that goal through the Parks Department.

Policy 1.10.7: By July 2012, the Parks and Recreation Department will develop a 7-year landscaping program to achieve full compliance with, and implementation of, Florida Friendly landscape and irrigation principles in all Doral community parks and other City-owned properties.

Policy 1.10.8: Continue to expand Doral's commitment to "Green Fleet" principles in the operation of its vehicle fleet including use of alternative fuel and hybrid vehicles, and green maintenance practices.

Policy 1.10.9: Assess the feasibility of organizing and operating a carpool and preferred parking program for City employees which would facilitate the development of carpools and offer preferred parking at City Hall and other potential benefits for carpoolers. Preferred parking could also be offered to employees driving hybrids and other very efficient vehicle types to work.

II. GREEN ELEMENT

DATA, INVENTORY AND ANALYSIS

II. Green Element Data, Inventory and Analysis

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Introduction

This component (Part 2) of the Green Element presents the data, inventory and analysis supporting the Element's Goals, Objectives and Policies (GOPs) which is Part 1 of the Element.

Following incorporation in 2003, the City of Doral recognized that community sustainability was paramount to its long-term vitality and growth, and the greatest planning challenge facing the City in preparing for a future with increasingly finite resources. Unplanned population growth, decreasing water supplies, increasing energy costs, loss of open space, and degradation of environmental resources all had the very real potential to greatly diminish the community's future quality-of-life, while increasing the cost of living for City residents and negatively impacting its vital business sector.

Confronted with this challenge, the City of Doral undertook a community-wide "green" initiative to plan for a sustainable future. As a first step, Mayor Carlos Bermudez signed the U.S. Mayor's Climate Protection Agreement in 2005. The Agreement committed Doral to set goals towards reducing greenhouse gas emissions that are linked to climate change by focusing on renewable energy sources, building standards and practices, and transportation options as methods to combat climate change within the community.

In 2007, the City initiated preparation of a Green Master Plan (GMP) which identified community sustainability options and recommended a comprehensive set of action strategies to greatly reduce the City's carbon footprint, conserve energy and enhance environmental resources. The GMP utilized the ten (10) guiding principles below:

- 1) Reduce vehicle miles of travel
- 2) Strengthen landscape and open space standards
- 3) Create strong energy efficiency standards
- 4) Incentivize alternative urban energy sources
- 5) Interconnect the City's places
- 6) Conserve water
- 7) Reuse and recycle
- 8) Bring back community agriculture
- 9) Strive to be a "carbon-neutral" City government
- 10) Initiate education and outreach

Since GMP adoption, the City has implemented a large number of GMP recommendations in addition to the preparation of this Green Element including:

- * Submitted application to the Florida Green Building Coalition to become certified as a "Green City"
- * Adopted ordinance allowing Farmer's Markets in the City.
- * Prepared a Baseline Greenhouse Gas Emissions Inventory Report (2008)

- * Initiated a myriad of sustainability actions at the department level highlighted later in this DIA.

This Green Element DIA is divided into 10 sections which correspond to the objectives addressed in the GOPs.

I. Land Use and Design

The early development of the Doral area began in the 1950s when it was under the jurisdiction of Miami-Dade County. The construction of the internationally-recognized Doral Golf Resort in (1962) formed the nucleus (and namesake) of what would become the City of Doral in 2003. The geometric expansion of Miami International Airport, plus construction of the Palmetto and Dolphin Expressways, and the Homestead Extension of the Florida Turnpike, over the past 40 years provided the "jet fuel" for the rapid development of the Doral community. Unfortunately, the land use pattern established by the County for this area contained many elements of urban sprawl including large low density residential tracts distant from strip commercial areas and automobile dependence. The extensive and pervasive adverse impacts of this sprawl pattern built over many years of County planning is what faced community leaders upon incorporation. Fortunately, the City responded aggressively to correct this situation with the preparation of its first Comprehensive Plan in 2006 followed by development of its innovative Green Master Plan and now, this Green Element.

Community Energy Conservation Features

As part of the background analysis for this Element, the City prepared an inventory of existing energy conservation features in the community as shown on the Map presented in Figure 1. These features include mixed use areas, multi-modal paths, environmental resources, parks and open space, greenways and mass transit corridors. This Map should be updated regularly as new features are added in the future.

Mixed Use and Cluster Development

The Future Land Use Element (FLUE) established 3 mixed use land use categories: Downtown Mixed Use, Community Mixed Use and Traditional Neighborhood Development. All 3 categories have been utilized since 2005 to create innovative mixed use projects. The FLUE also created special mixed use "opportunity areas" where property owners are encouraged to seek land use amendments to 1 of the 3 mixed use designations. The City plans to continue to provide for, and promote mixed use development opportunities in downtown Doral and outlying traditional neighborhood centers to expand the viability of these communities for improved community health and sustainability. This should include potential accessory live/work spaces in appropriate land use categories to reduce vehicle miles-of-travel and expand affordable housing choices.

Other options for compact, energy-efficient development should also be examined in future Comprehensive Plan updates including additional areas suitable for cluster development and incentives for multi-story homes on smaller lots.

Land Use / Transit Linkage

Transit use is important in reducing road congestion, saving energy and improving air quality. One of the best ways to improve transit ridership is by establishing higher residential densities near transit stops. Studies have shown that densities of 8 units per acre or higher are necessary for viable transit ridership. The current transit system serving Doral is shown on the Transit Accessibility Analysis Map (Figure 2) along with the

proximity of the transit stops in ¼ mile and ½ mile increments. To ensure adequate densities are in place, the City should prepare a study of residential densities near transit accessibility points to identify areas where additional compatible density can be supported.

Green Code

While sustainable goals, objectives and policies in the City's Comprehensive Plan are very important in establishing the framework for green development in Doral, it's equally critical to ensure that these policies are translated into standards and criteria in the Land Development Code (LDC) and are an integral part of the development review process. To accomplish this, the City has recently undertaken an update of the current Code to include sustainable requirements and options. This update will include a "Green Points System" for assessing compliance of future development projects with new Green Code standards.

Sidewalk Commerce

Sidewalk commerce, such as street vendors, farmer's markets, sidewalk dining and walk-up windows can greatly enhance a community's identity as a vibrant and walkable community. Sidewalk commerce encourages walkability by creating visual points of interest along transportation corridors, thereby encouraging pedestrians to explore. Strategies that promote pedestrian movement will lead to healthier and active lifestyles within Doral. Doral should ensure flexible zoning regulations are in place to increase pedestrian-friendly, sidewalk commerce in the public realm, particularly in mixed use and commercial areas of the City.

Renewable Energy Facilities

Traditional zoning regulations can make it difficult to install modern renewable energy facilities like solar panels, rainwater collection systems and small wind turbines due to restrictive building setbacks and/or height limitations. Current City zoning should be reviewed and modified where appropriate to encourage the installation of renewable energy facilities for new development and redevelopment projects with the least impact possible to neighboring properties. When sited and installed properly, these facilities can have minimal impact to adjacent properties, conserve critical natural resources, and allow residents and businesses to save on utility costs.

Local Agriculture

Vegetables consumed in Florida travel over 1500 miles to reach our dinner tables. Florida is a well-known for outstanding and plentiful agricultural production. Local fresh produce is more nutritious and uses much less energy in reaching the point-of-sale. Doral has an excellent opportunity to bring local produce back to the City and in fact has recently seized that opportunity by enacting zoning regulations allowing multi-vendor farmer's markets in commercial areas and removing unnecessary barriers to sale of local produce by street vendors.

Keeping Score

To track progress in achieving sustainability benefits and acknowledge the program's overall success, it is important for the City to develop a set of community sustainability indicators. The indicators will help Doral set parameters for measurement and identify

areas for needed improvement. Indicators for energy efficiency, resource conservation and reduction in greenhouse gas emissions should be established, monitored and reported on an annual basis to determine progress and make mid-course corrections in its aggressive program to maximize city sustainability.



Planning & Zoning
Department

Energy Conservation
Features Map

Legend

- Transit Stop
- Metro Rail Station
- Proposed Off Road Bikeway
- Miami Dade County Bus Route
- MetroRail
- Doral Trolley
- Major Road
- Local and Private Roads
- Urban Central Business District
- Mixed Use Activity Centers
- Private Parks and Open Space
- Greenway
- City Boundary

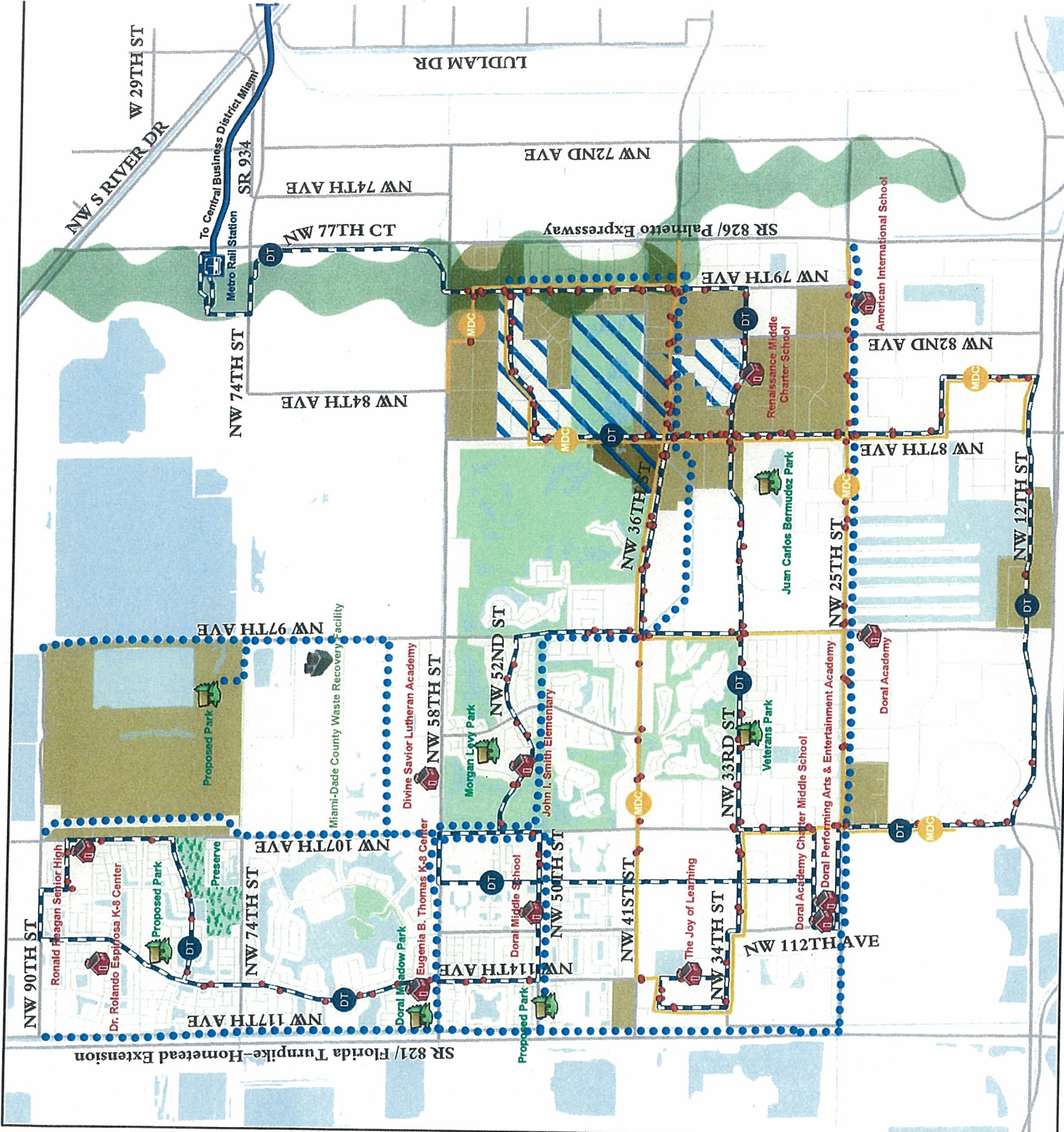
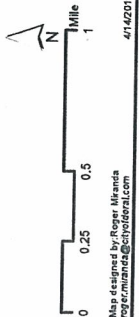


FIGURE 1



II. Mobility and Connectivity

One of the greatest sustainability challenges faced by Doral and all other cities in South Florida today is automobile dependence. Transit ridership accounts for less than 5% of total trips in Miami-Dade County and it's very likely that ridership figures for Doral are similar. Vehicle exhaust from automobiles and truck is the largest contributor of greenhouse gas emissions and the primary culprit air pollution in central west Miami-Dade County.

Transportation Master Plan

In 2010, Doral adopted an update to its Transportation Master Plan (TMP), which identified connectivity and regional traffic as the most severe problem in the City's transportation network. Roadway congestion contributes to increased levels of ozone and other pollutants, including carbon dioxide, carbon monoxide, nitrogen oxides and volatile organic compounds. According to the TMP, roadway facilities in Doral are constrained by regional expressways bordering the City and its close proximity to Miami International Airport.

The usage of mass transit and non-motorized transportation modes should be enhanced. The TMP inventoried all modes of transportation in Doral, and identified capital improvements needed to address current and projected roadway and transit deficiencies through 2030. The 2010 Parks and Recreation System Master Plan also encourages the development and improvement of additional modes of mobility, including multi-modal bicycle and walking paths. Emphasis on capital improvement projects that will enhance mobility, such as walking and bicycling facilities should be prioritized as Doral progresses towards a more sustainable and commuter-friendly city. Regular programming of these types of alternative transportation projects into the 5-Year Schedule of Capital Improvements (SCI) and Annual Budget will help the City make its transportation system more sustainable.

Bicycle and Pedestrian Systems

Transportation strategies that will increase cycling and walking can promote positive "green" behavioral changes in the community and reduce individual contributions to greenhouse gas emissions. According to the GMP, studies suggest that by walking to work twice a week, individuals can prevent up to 1,590 pounds of carbon dioxide emissions per year. Well-designed pedestrian and bicycle networks will improve access, and facilitate active lifestyles for a healthier community and environment. The City should review existing land development standards to ensure that bicycle and pedestrian facilities are fully integrated into each project, and interconnected with adjacent existing and/or future facilities. This can be achieved by implementing FDOT's "12 Steps Towards Walkable Communities" and "Healthy Street Design" into the City's Land Development Code and development review criteria. These contain principles for the design of complete streets to enable the sharing of public-rights-of-way for all modes of mobility, and improved safety. Additionally, associated facilities, such as bike racks and well-shaded transit stops and rest benches, should be incorporated as part of the complete street design to create a sense of comfort and community, and encourage residents to utilize these alternative modes.

Local Street Continuity

While Doral has a good core backbone system of section-line roads, the half-section and quarter-line system is either discontinuous or non-existent in many areas. The City should assess the local roadway system to identify road corridors that are currently discontinuous, but have the potential to be connected in the future. A well-linked street network will increase the ease of mobility by decreasing trip length, traffic congestion and excessive dependence on major arterial roadways for travel. The City has taken aggressive action in this area in recent years by inserting the "missing link" in NW 33rd Street to connect NW 87th and 97th Avenues, providing an important parallel reliever road for Doral Boulevard and NW 25th Street traffic. Also, NW 74th Street has been built from NW 87th Avenue west to a new Florida Turnpike interchange. These represent strategic road improvements that have large positive impacts on traffic flow.

Traffic Control System

The traffic control system in any city is a significant, 24-7 consumer of energy in the community and, when not working properly to maintain efficient traffic flows, can have a very negative impact on air quality. The #1 air quality problem in Miami-Dade County is ozone and the primary source of ozone pollution in the area is vehicle exhaust. Well-synchronized traffic lights in the City will help optimize local traffic flow, reduce congestion and vehicle pollutant emissions. A coordinated system of traffic lights will also improve roadway safety. Most of the traffic control system in Doral is maintained either by the Florida Department of Transportation (FDOT) or Miami-Dade County. Thus, the City should work with FDOT and County Public Works to study the traffic signalization system in Doral, and recommend improvements both to the physical system and its operations. The study should also address the feasibility of a citywide retrofit program to replace older incandescent signal and street lights with LED or other types of low energy light sources.

Public Transit

Public transportation provides many benefits such as reduced road congestion, air pollution and energy consumption. Figure 2 shows the current transit system serving Doral and the close proximity of the City to the County's West Hialeah Metro-Rail Station on NW 74th Street west of the Palmetto Expressway. The Miami-Dade Transit Authority (MTA) operates 4 routes in the City which provide limited coverage leaving many residents and employees without adequate access to the transit system. In response to this problem, Doral launched its Trolley Local Circulator Program in 2008. The Doral Trolley (DT) provides service to areas of Doral not served by County Transit and also connects to the West Hialeah Metro-Rail Station. It has proved to be very successful; carrying about 3,000 passengers a week or 40 passengers per hour. This exceeds the program goal of 30 passengers per hour set by the City when initiating the Trolley. The continued expansion and improvement of the mass transit system in Doral can greatly accelerate the City's drive toward its ultimate sustainability goal. Continuing to build a well-connected, accessible and convenient transit system will require that the City continue to assess ridership and operational needs on an annual basis in close coordination with Miami Dade Transit Authority and the Metropolitan Planning Organization (MPO).

Transit Accessibility

Figure 2 also provides an analysis of transit accessibility for City residents and businesses. Good transit accessibility is typically defined as a ¼ mile walking distance to a transit stop; distances longer than a ¼ mile may discourage pedestrians from utilizing public transit. Figure 2, shows a ¼ mile and ½ mile buffer from each existing bus stop in Doral. The good news is that most of the City's land area is within ¼ mile walk of a bus stop. As suggested above, the City should continue to work closely with County Transit and the MPO to expand transit service including weather-protected bus stops and greater bus frequency per route, especially at peak rush hours.



Planning & Zoning Department

Transit Accessibility Analysis

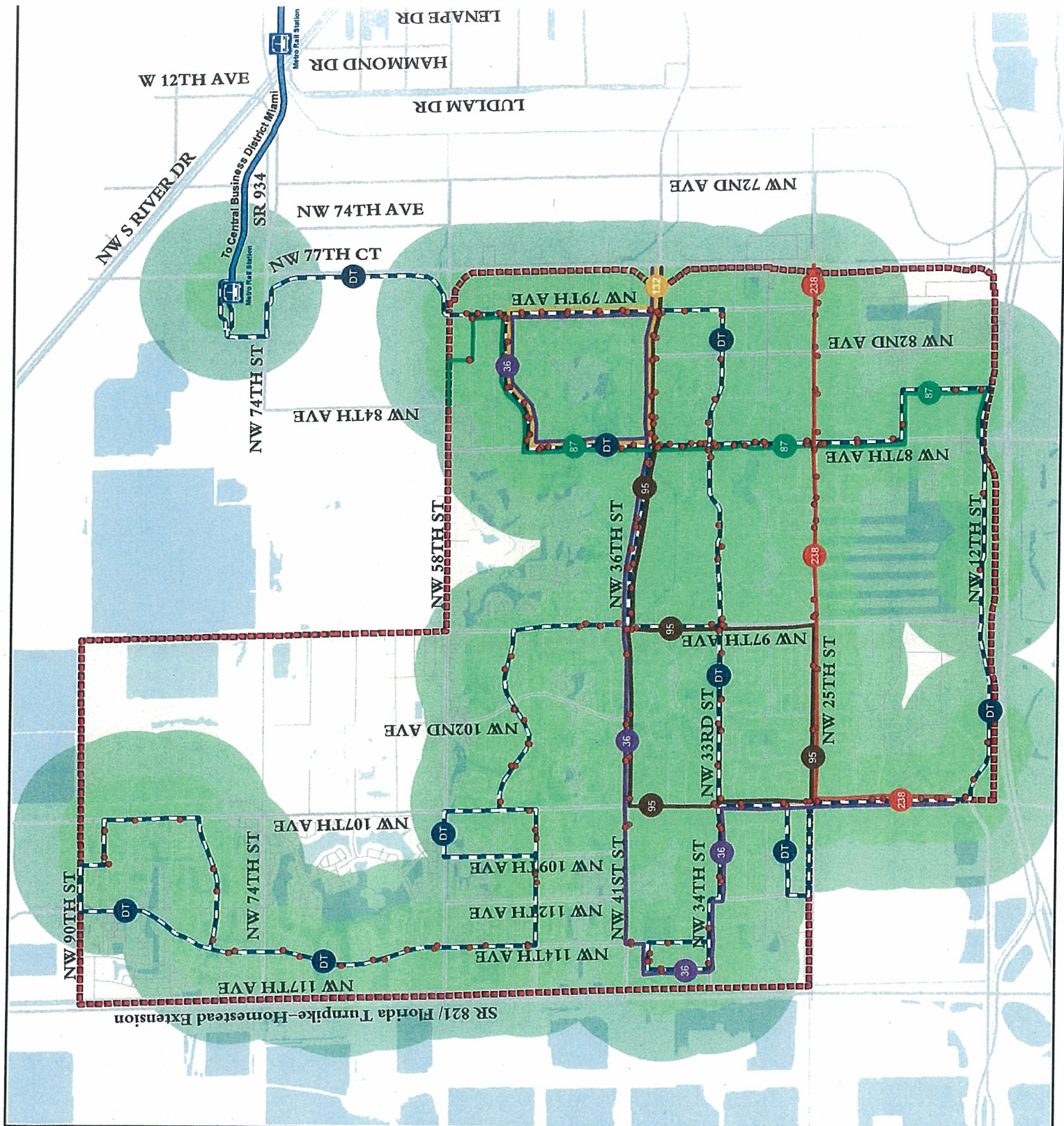
Legend

- Transit Stop
- Miami Dade County Bus Routes
 - 132
 - 238
 - 36
 - 87
 - 95
- Quarter Mile Buffer
 - Acre = 6,054
 - Area (sqmiles) = 9
 - Inside City
 - Acre = 664
 - Area (sqmiles) = 1
 - Outside City
- Half Mile Buffer
 - Acre = 8,323
 - Area (sqmiles) = 13
 - Inside City
 - Acre = 3,070
 - Area (sqmiles) = 5
 - Outside City

- Doral Trolley
- City Boundary
- Major Road
- Local and Private Roads
- Metro Rail

FIGURE 2

Map designed by Roger M. Moore
 roger.m.moore@cityoforal.com
 2/15/2011



III. Smart Buildings and Places

The supply of conventional, non-renewable energy sources such as petroleum, coal and natural gas is declining as population growth and demand continues to rise nationally and around the world. Increased demand over these finite energy sources has amplified the cost of energy use especially over the last decade, and will continue to do so as these resources become less available. Our over-dependence on these non-renewable energy sources is not sustainable. Additionally, the burning of oil and coal to produce energy to power our buildings and cars releases harmful greenhouse gases and other pollutants into the atmosphere contributing to increased respiratory illnesses, reduced crop yields and possible long-term climate change.

Community Renewable Energy

Renewable energy sources must be advanced and become a far greater proportion of our country's "energy diet." These technologies, utilizing solar energy, wind power and natural water movement, are inexhaustible and have far less environmental impact. Many industries are starting to incorporate renewable energy sources into design, construction and day-to-day operations primarily because of the cost-savings and public relations benefits. There are also several disadvantages with the implementation of renewable resources, including high initial costs and relatively low (but growing) energy production efficiency. However, the long-term benefits of facilitating the use of renewable energy sources in the community far outweigh the short-term disadvantages. Renewables must be a significant part of any successful 21st century city.

The City should promote these sustainable forms of energy, and encourage developers, residents and businesses to utilize renewable resources. Developing a "green" incentive program to stimulate green practices in the design and construction of buildings, and daily operations will help make sustainability more attractive to residents, businesses and developers.

Green Buildings

Realistic incentives are always a better approach in convincing people to adopt a new idea. The City should employ this technique to help move the development sector toward renewable energy sources to power their buildings. This could include monetary incentives for private buildings constructed or renovated to achieve any recognized "green building" certification, such as LEED, Green Globes and/or USGBC. It is recommended that at a minimum these incentives be \$300/home, \$1,000/commercial or industrial building, and \$2,500/land development project.

Current barriers to installation of renewable facilities should be identified and provisions made to allow modest renewable facilities in setbacks and on top of buildings. The Building Department should ensure it has adequate technical assistance and staff expertise to review renewable facilities during the building permit and construction inspection process. A more aggressive approach could include a requirement that all new buildings over 50,000 square feet in size obtain a minimum of 25% of their daily

energy need from renewable sources. The City's development sector should be included in community workshops where this potential requirement is considered.

Other methods Doral should consider for reducing energy consumption is requiring private development projects to orient and landscape homes and other buildings to optimize solar heating and natural cooling. Florida's tropical climate makes it one of the sunniest states in the country and efficient cooling is an essential consideration for all building types. By designing to the local climate, landscape and architecture can be utilized to naturally cool structures. Building placement, location of windows and doors should all be considered in environmental design. Site design that takes into consideration the placement of buildings in relationship to the natural environment will conserve more energy than a typical building that does not consider the environmental benefits of placement.

Energy Conservation

The City should continue to prioritize energy conservation and efficiency through partnerships and the development of programs that promote sustainability, efficient energy use and housing affordability. Florida Power and Light (FPL) also offers useful programs for residents and businesses. The City should continue to work with energy providers to educate the community on the benefits of energy conservation, and on the accessibility of programs available to the community, such as FPL's Energy Audit Program.

Lead the Way

Doral can continue to set the example for the community. The City is currently constructing its new governmental complex that will be certified 'LEED Silver' upon completion. The new complex, scheduled for completion in 2012, will showcase energy and water conservation techniques in its design, construction and landscaping. This new complex will also set the bar for the construction of future government buildings in the City.

IV. Natural Open Space and Landscape

Open green space is one of the Doral's most valuable economic and environmental resources. Green space, such as parks, landscaped areas and natural grasslands and forest, uniquely enhances community aesthetics, increases property values, while decreasing energy costs and stormwater runoff. Also, trees and other components of natural landscapes sequester or capture carbon, thereby improving air quality and offsetting greenhouse gas generation in the urban area. Thus, it is crucial to maintain and preserve the City's green space, and expand it as opportunities arise, if Doral is to achieve its sustainability goals.

Street Tree Master Plan

Since incorporation, Doral has taken great strides to come a "greener" City. Such efforts include the adoption and implementation of the Street Tree Master Plan (2007), a tree planting program and plan of action to install thousands of trees along major local street rights-of-way to shade sidewalks, beautify roadways and create a sense of identity and community. In addition, Doral became a certified Tree City U.S.A. in 2008. The City should periodically review, and amend as necessary, the Street Master Plan to focus on the effective shading of sidewalks citywide. Canopy trees along sidewalks provide many benefits, including beautification, cleaner air, and facilitation of walking and/or cycling by providing shade along pedestrian paths and roadways.

Park Lands

The City adopted a Parks and Recreation System Master Plan last year which inventoried the City's existing parks and recreation space, and proposed an action plan to achieve adopted level of service standards for parks over the next 20 years. Projects in the Parks and Recreation System Master Plan include the development of new park space and multi-use paths and trails enhanced with shade trees and other landscaping. Doral has demonstrated a major commitment to its parks system, and will continue to make parks and recreation a high priority. This can be achieved by continuing to schedule on a priority basis the projects in the Parks and Recreation Master Plan into the 5-Year Schedule of Capital Improvements in this Comprehensive Plan and the Annual Budget process on an ongoing basis.

Florida-Friendly Landscaping Standards

Sustainable landscaping standards are critical in the maintenance of existing and new landscaped areas. The application of environmentally-friendly landscape techniques, such as xeriscaping and hydrozones will improve the quality of green space while preserving the natural environment. Current land development regulations in Doral encourage many of these resource conservation techniques in landscape design. However, the City can take sustainable landscapes one crucial step further by implementing Florida-Friendly (FF) Landscape Irrigation and Design Principles into the design and maintenance of landscapes throughout the city. FF principles and standards include the use of native, drought-tolerant plant species; mulching and application of yard waste to retain soil moisture; guidelines for fertilizer and pesticide use; and efficient watering techniques. FF principles will conserve natural resources more effectively than current landscaping standards, while improving the quality of

landscapes in Doral. The City should adopt the standards and principles of FF into the landscape code to strengthen existing standards and protect natural resources for a more sustainable environment.

Heat Islands

Large paved and treeless parking fields, known as "heat islands," are a significant climate warming problem in many urban areas and Doral has its share of these temperature enhancers. They produce excessive surface heat and thermal, raising the background temperature of the local micro-climate. This heat island effect can be reduced by increasing the number of trees for shade and the amount of pervious surface area in the community. Land development regulations that limit or reduce the amount of impervious surface area through low impact design will lessen the impact of heat islands, reduce urban runoff, and foster green space development in an environmentally sustainable manner. Alternatives to impervious surface requirements, such as the use of open cell pavers, managed turf and porous pavement, should be investigated. Additionally, the City should continue to look for opportunities to preserve and expand open green space such as increasing pervious area standards, reducing parking requirements, cluster development and local roadway design. One option would be to require at least 35% of all surface parking to utilize a pervious material.

Community Involvement

Residents and businesses can be important partners in increasing the City's green landscape cover. The City should continue to educate the community on the benefits of sustainable landscaping. This is a recurring theme at the City's annual Eco-Fair. Programs, such as a tree giveaway program, could be useful and it's recommended that the City establish a goal to distribute at least 10,000 FF trees to residents annually.

V. Water Resources

Water is our most vital resource. Conservation of this limited resource is of particular importance in South Florida as the population continues to grow and natural drinking water becomes scarce as a result of overuse and prolonged periods of drought. Doral receives its potable water service from Miami-Dade Water and Sewer Department (WASD). The source for potable water in Miami-Dade County is the Biscayne Aquifer. According to the GMP, Florida receives 52 inches of water per year, which is barely enough to replenish the Aquifer to meet the growing water demands of the region. Much of this water is used to water lawns and other landscapes, and carried into local waterways.

Water Consumption

Doral's per capita water consumption rate is currently 195 gallons per capita per day, which is one of the highest consumption rates in the County among retail customers of WASD. Additionally, Doral has 113 acres of park lands and many more acres of private golf courses. The City plans to significantly increase the amount of park space to 222 acres by 2015 to meet level of service standard for parks and recreation. While the parks and golf courses are some of the City's most valued economic resources and public amenities, they are also major consumers of water. The City can have a large water conservation impact if water-saving features are implemented at these facilities.

Water Conservation

Doral should continue to seek new opportunities in water conservation and surface water quality improvements. The City should continue to coordinate and brainstorm with the SFWMD, Miami-Dade WASD, and all applicable agencies in the transparent development and implementation of new and innovative ways to strengthen, conserve and protect potable water in the City. This will ensure that adequate water supply will continue to be provided for the current and future residents of Doral. Water conservation must be viewed and promoted as a community-wide effort to engage residents and expedite target reduction rates in the City's potable water use.

Water Supply Plan

Doral's 10-Year Water Supply Facilities Work Plan (adopted in 2009) provides a long-range program to meet the current and future potable water needs of the community. The Plan, required pursuant to Chapter 163, Florida Statutes, requires the City to coordinate effectively with Miami-Dade WASD for water supply, identify methods of water conservation and make capital improvements to meet the projected potable water needs. The Water Supply Plan contains additional recommended long-range conservation strategies that the City should implement to reduce its per capita consumption rate. The continued update and implementation of the water supply plan will ensure adequate water will be available for the future residents, businesses and visitors.

Best Management Practices

Adopting citywide water conservation best management practices (BMP), such as requiring all irrigation systems be equipped with a fully-operational moisture sensor/rain

shut-off device and the installation of high efficiency plumbing fixtures should be considered and implemented. Over the last 5 years, the County and State established minimum standards in water conservation for landscaping, residential and commercial plumbing fixtures, and car washes. These regulations should be adopted by the City. Additionally, an enforcement program should be established to monitor that these water conservation strategies are properly being implemented.

Street Sweeping

Regular street sweeping is important to protecting and improving the water quality of the City's surface water lakes and canals. It helps prevent significant amounts of polluting chemicals and sediments from being discharged into receiving waters. Currently Doral operates an aggressive street sweeping program; sweeping all public roads in the City every two weeks which totals 2,520 miles of roadway per year. It is important that Doral continues to maintain, and expand if necessary, its street sweeping program in order to protect and improve the quality of its surface waters.

Rainwater Harvesting

A cost-effective and increasingly popular method of water conservation is rainwater harvesting. This technique involves the accumulation and storage of rainwater for future use on-site, using cisterns and rain barrels. This is a very affordable water conservation feature. Residents and businesses should be encouraged to harvest rainwater to reduce potable water use and save on monthly water fees. Adjusting current land development regulations to allow rain harvesting facilities in building setback areas for instance, will encourage residents and businesses to implement water conservation techniques.

Reclaimed Water

Reclaimed water is a form of wastewater that has been treated to remove solids and certain impurities. This form of water is suitable for landscape irrigation and to recharge the groundwater aquifer. Reclaimed water is currently used in many parts of Miami-Dade County to irrigate golf courses and road medians. Doral can greatly benefit from the use of reclaimed water and reduce potable water demand by allowing reclaimed water to be used on the City's parks, golf courses and landscaped areas. The City should work with Miami-Dade WASD and the South Florida Water Management District (SFWMD) to investigate feasible opportunities within the City to utilize reclaimed water.

VI. Waste Recycling and Reuse

Waste recycling and reuse helps to preserve natural resources, lessen energy use and reduce pollution associated with the manufacture of products from raw materials. It also reduces the amount of solid waste deposited in landfills. It is interesting to note that one of the world's largest waste-to-energy plants is located adjacent to Doral's northeast boundary. It is the Miami-Dade County Resource Recovery Facility operated by Montenay Power Corporation. It converts garbage and trash into electricity the energy of which can supply the average power needs of 40,000 households per year. Having such a neighbor serves as a close example to City residents and businesses of what serious recycling can do.

According to the GMP, the County-wide recycling rate is approximately 20%, which is below the 30% minimum required by the State. This low recycling rate has impacted Miami-Dade County's landfill capacity, challenging the ability of the County to meet the solid waste demand of the municipalities it serves, including Doral beyond 2016. Waste reduction will be essential to maintaining sufficient landfill capacity to meet future needs.

City Recycling Program

Doral's current level of service (LOS) standard for solid waste is 9.4 pounds per capita per day, however figures on the actual solid waste generation rate of City residents and businesses are not available. In recent years, the City has instituted an aggressive recycling program in commercial and mixed use areas, and at municipal facilities including parks. They deploy 50 recycling bins at approximately 25 locations around the City. Two (2) concrete bins are placed at each location, one for mixed garbage and the other for paper only. The bins are emptied weekly.

Curbside Recycling

Currently, residential curbside recycling in Doral is provided once a week by the Miami-Dade Department of Solid Waste Management (DSWM) which accepts various types of recyclable material including: newspaper, corrugated cardboard, aluminum, ferrous metals, glass containers, aseptic packages, plastic, household batteries and telephone books. The City can increase waste reduction by expanding the recycling program to target commercial operations and other effective methods for recycling waste. A long-term Waste Recycling Master Plan should be developed to guide and effectively implement an enhanced solid waste reduction program for residential, commercial and industrial generators, as well as, the City government itself. Current recycling and reuse practices and rates should also be assessed and cost-effective solutions developed and implemented.

Deconstruction

Other innovative methods of waste reduction, such as "deconstruction" should also be considered. Demolition of structures often creates a large amount of debris which is eventually hauled to the landfill. This construction debris can be recycled and reused in new development and/or redevelopment. The method of demolition debris recycling requires that the building to be disassembled piece-by-piece so that much can be

recycled and many materials salvaged from the site for later reuse. The City should consider modifying current demolition requirements to ensure that a significant portion (at least 40%) of demolition projects are recycled and reused. The benefits of this type of recycling will create less dependence for raw material extraction, less energy consumption in the processing of raw materials, and reduce the amount of solid waste taken to landfills.

Community Participation

Community involvement is imperative to serious and long-lasting recycling. It can be source of city pride. Community education and programs should be established to inform and involve residents and businesses in Doral's goal to reduce waste and make recycling "second nature" to Doral citizens. Establishing participatory and awards programs, and providing technical assistance in best practices in home and business waste reduction, will help educate and encourage residents to recycle and reuse. Additionally, the City's annual Eco-Fair is a great opportunity to provide education to the community on waste reduction, and the City has stressed this important community goal at each Fair event. This helps promote sustainability in a very real way and encourages the community to participate in community-wide waste reduction.

VII. Green Capital Improvements

Sustainable Capital Decisions

The 5-Year Schedule of Capital Improvements (SCI) in this Comprehensive Plan and the Annual Budget process conducted by the City Manager are the 2 principal methods by which the City can make sure real sustainability is infused into its capital improvement decisions. All capital projects proposed in either SCI updates or for the Annual Budget should be evaluated and prioritized based on positive green factors such as low greenhouse gas emissions, energy savings, resource conservation and long-term cost-effectiveness. This will help the City government operate more effectively, efficiently and at lower cost. The sustainability factors will assist each department to plan and prioritize projects based on necessity and sustainability, with the potential for lasting socially and economically.

Green City Facilities

Sustainability efforts should begin with internal City operations in order to set an example of sustainability for the community. In 2010, the City began construction on the new City Hall Complex that will be certified LEED Silver. This building will be the first green certified city-owned building in Doral, and it will represent the present and future vision of sustainability in the City. This "green" building standard should be extended to apply to all future planned City buildings. Adopting LEED Silver as the minimum standard for all future city buildings will strengthen the City's commitment and leadership towards becoming a sustainable city. Furthermore, a program should be developed to provide informative walking tours to educate the community on the various sustainability features built into the design and construction of the new complex.

Grant Funding

As the "green" movement progresses at a national and state level, funding streams will increasingly become more available for Doral's green initiatives. Cities with significant environmental achievement are more competitive when pursuing grant opportunities. Additionally, projects with a "green" component are more eligible for previously untapped funding sources. There are a number of grant opportunities for green upgrades at the federal and state level, and these should be identified and pursued in order to supplement City dollars in sustainable capital projects.

VIII. Learning and Outreach

Education and public outreach enables the community to learn, interact and better understand its environment, and how we impact it every day. The City has informed and engaged the community on environmental issues and the importance of sustainability through its website, quarterly newsletter and brochures, and annual Eco-Fair.

Eco-Fair

The Eco-Fair, which began in 2008, has been a successful tool in developing environmental awareness in Doral. The Fair, held every April to celebrate the month of Earth Day, offers education on the importance of the ecosystem, and environmentally-friendly, cost-saving strategies to reduce energy and natural resource consumption. The Fair also showcases "green" products and services to residents. A "Green Awards Program" could be incorporated into the event highlighting the most sustainable buildings constructed in Doral.

Website

The City maintains a very interesting and professional website informing citizens about itself, and community programs and achievements. It can be an invaluable tool in informing citizens and businesses on sustainable topics and issues. A "green" area should be established on the website to describe the City's green initiatives and provide information on sustainable practices and principles. The City should also continue to develop and establish "green" programs that will encourage the community to participate. This can include a Personal Mobility website section with relevant bicycling, transit and ride-sharing information.

Environmental Education Park

Doral owns a 51 acre environmental area at NW 107th Avenue and NW 74th Avenue. The City is planning to develop of this future passive park into an environmental education venue for school children and adults alike.

Newsletters and Brochures

The City already provides brochures on a myriad of public topics at many municipal facilities. This program should be expanded to include a wide array of education materials on green building and property practices, FF landscaping, energy-saving techniques and, resource conservation ideas.

IX. Business and Employment

A sustainable city must include an active and healthy business and employment environment. Located within 1 mile from Miami International Airport (MIA), and adjacent to local jurisdictions, such as the City of Miami, Town of Medley and Sweetwater, Doral is a regional employment center for a diverse range of businesses and financial institutions. In 2008, Fortune Small Business and CNN Money ranked Doral as number 51 on a list of 100 cities with the best mix of business advantage and lifestyle appeal, continuing to attract young families as well as retirees.

Business Action Plan

Attracting new business to Doral is a key priority for the City. Coordination and the sharing of information with potential business ventures, business owners and groups is crucial to ensuring that Doral's economy continues to thrive. Employment trends and resources must continue to be monitored and evaluated so that the business and employment sectors in the City remain competitive. A business strategic action plan should be developed to identify key recommendations, and specific joint projects and programs. Support for "green" industries and green retrofits in business operations and capital should also be encouraged by the City. Green industries focus on eliminating or reducing the dependence on oil, greenhouse gas emissions and toxins in the environment. The market is growing for green products and services, which has the potential to greatly expand business ventures and employment opportunities in the area. Strategic tools, such as financial incentives, should be explored to promote and encourage "green" industries and retrofits.

Efficient Regulations

Ensuring the timely construction of new commercial establishments and maintaining existing ones are also important elements to sustaining a healthy economy. Unnecessary zoning and permitting regulations that delay the construction of new establishments and/or business operations in a timely manner may inhibit businesses from investing in the City and should be eliminated from the City Code. The City should review current zoning, development regulations and permitting processes to determine if there are any redundancies in the Code that would affect the timely establishment of new commercial/business ventures.

Jobs

The job base in Doral is very large with over 100,000 people working in the City daily. A healthy employment sector is a key component of sustainable communities, including Doral. It is important that the City monitor job trends in the west Miami-Dade area annually and support community job growth to the maximum extent possible.

X. Lead by Example

Determined leadership with a long-term vision is the single most important factor in the successful implementation of a comprehensive sustainability program citywide. The City of Doral is a major employer, landowner, service provider, and consumer of goods and services. It recognizes that sustainability is critical to maintaining the City as a healthy, active and vibrant community for residents, businesses and visitors alike. The City has provided inspired leadership in laying out a green community agenda, informing its citizens and setting the "green bar" high for itself. This Green Element and its effective implementation will solidify the City's role as one of the most sustainable communities in the nation.

In 2008, the City undertook a study of greenhouse gas emissions resulting from its internal operations. Figure 3 summarizes the study results, and shows that City Hall and the Police Fleet generate 82% of the total greenhouse emissions of City government. These 2 facilities should be a focal point for sustainability improvements and in fact the City is doing just that. The new City Hall Complex will be LEED Silver-certified; greatly reducing emissions. In addition, the Police Fleet has already converted over 60% of its vehicles to alternative fuels and hybrids, plus the department uses bicycles extensively in neighborhood and commercial area patrols.

Green City Certification

In 2010, Doral took the first steps to becoming recognized as a Green Local Government by the Florida Green Building Coalition (FGBC). The City plans to achieve FGBC Silver certification status by early 2012. This FGBC designation distinguishes cities and counties for outstanding governmental and community sustainability, and environmental stewardship. The certification will also help the City take leadership in developing community awareness and support towards its sustainability goals and initiatives.

Implementation

To effectively implement the goal, objectives and policies in this Element, a Sustainability Coordinator position should be created within City government to oversee the program. Several key programs should receive priority for implementation including:

- * Monitor City energy use, report annually and implement recommended energy-saving recommended improvements at City facilities.
- * Develop an Environmentally-preferred Purchasing Program based on EPA's 5 guiding EPP principles.
- * Continue and expanded if needed the innovative "Get Fit Doral" Program.
- * Develop 7-year plan to install Florida Friendly landscaping at all City parks and other facilities.

- * Expand Doral's Green Fleet Program including additional hybrid and flex fuel vehicles, and green vehicular maintenance practices.
- * Develop incentives for employees to carpool to work and utilized energy efficient vehicles.

FIGURE 3
TOTAL CO₂ Equivalent Emissions (metric tons, %)

