

Page New nature-based playgrounds generate sustainable Miami-Dade Parks

Creating park spaces where children can receive a “daily dose” of natural experiences and acquire love and respect for the natural world.

Abstract of the Program: In approximately 200 words or less, summarize the program include the program description, the purpose and outcomes. Abstracts of award winning programs will be published. Please be sure to provide clear and concise information as this section will be used publicly in whatever format it is submitted

Miami-Dade County Parks, Recreation and Open Spaces Department playgrounds are undergoing a massive shift from the traditional pre-fabricated, cookie-cutter look, to incorporating nature-inspired components into the designs. This change in aesthetic complements parks' natural-occurring features while creating a more adventurous and eco-minded public space that enhances the play experience for all. Transitioning to eco-based playground facilities additionally fulfills the needs of providing Miami-Dade County citizens an outlet to engage and learn about their natural world all within an urban dominated setting.

Nature based playgrounds provide a hands-on, interactive outdoor experience for children of all ages and abilities. Nature-oriented spaces are designed for climbing, audial engagement, building, searching, creating, imagining, socializing, and creatively immersing children to explore peripheral trails that connect to diverse natural habitats. These features offer unlimited opportunities for learning and discovery while fostering a life-long love of nature and the environment, through parks.

The new playground development is being implemented in hopes of further encouraging children to seek more outdoor exercise and playtime in Miami-Dade County's beautiful parks, allowing them to disconnect from technology and reconnect to the natural world around them, while letting their imaginations soar.

The Problem or Need for the Program: Discuss the problem or need that prompted the development of the program and the county's legal obligation, if any, to take action. Approximately ¼ pages

Beginning February 2015, Miami-Dade Parks sought to develop a more holistic approach to the process of designing and replacing the aged playground infrastructure found throughout their park system. The life expectancy of a typical playground is often gauged to be between 15 and 20 years, at which point the health, safety and welfare of its users necessitates replacement. This constant cycle of playground change was analyzed and investigated by the department in order to offer a more sustainable solution that is compatible and aligned with the Miami-Dade County Parks and Open Space System Master Plan.

Furthermore, parks, and playgrounds in particular, were understood to be a unique public service for children and their families, providing access to nature in the predominantly urban setting of Miami-Dade County. As brought into the national consciousness through publications such as Richard Louv's "Last Child in the Woods", this current generation of children is widely disconnected from the natural world, their experiences based largely in technology and media. Children are losing the understanding that nature exists in their own backyards and neighborhoods, which further disconnects them from knowledge and appreciation of the natural world.

These factors ultimately led to the implementation of the design philosophy that became the new Miami-Dade Parks Playground Replacement Program.

Description of the Program: Provide a description of the nominated program including its objectives, time frame for development and implementation, clientele, the county's role in implementing the program and the contributions of any other partners where applicable (e.g. states and the federal government, consultants and private partnerships). Approximately 2 ½ pages

Nature based play encourages children to experience the world around them, through a curated natural environment.

The multi-colored traditional playgrounds that were not long ago the norm for children to run and play about, are being incrementally phased-out under the Miami-Dade Parks Playground Replacement Program. Our vision seeks to design and implement playgrounds that include components and elements that blend seamlessly with the South Florida environment, or are made of natural materials in order to reconnect children with the natural world.

Nature based playgrounds help children to foster beneficial aptitudes in the development of their personalities, including social, emotional, and interpersonal skills. Miami-Dade County Parks' natural playscapes engage their participants in cooperation of mutual tasks and enhance cognitive ability to solve problems. This is all in addition to the gross motor skill benefits associated with traditional playgrounds.

The innovative design of nature focused playgrounds enables children to express creativity, cooperate, construct objects, while gaining environmental appreciation and education. The positive impacts are twofold, by both increasing playground users' quality of life and also offering a more sustainable design solution that aligns with the Miami-Dade County Parks and Open Space System Master Plan.

Short-term and long-term benefits include general health improvements and fostering environmental stewards, which will create better citizens of the future. Engaging children with the outdoors through these designed natural spaces will promote healthy habits and create an emotional tie to the earth, fostering involvement and environmental education.

Engaging with the outdoors promotes healthier children by preventing a sedentary lifestyle. Our playgrounds have interventions that require physical movement to experience the space. This has the potential to reduce childhood obesity and other related health issues. Additional health improvements as a result of nature play include stress reduction, decreasing ADHD symptoms, as well as boosting immune systems.

Landscape architects create these spaces to generate a positive micro climate, harvest rainwater, and create sustainable solutions to further educate children about local existing ecosystems.

This is an ongoing program, which is being implemented countywide. Miami-Dade County, through its Parks, Recreation and Open Spaces Department, has carried out this type of design strategy in several playgrounds on a project by project basis. As an implementation strategy, playgrounds that are between fifteen and twenty years old in operation are being replaced with the nature-based playgrounds described in this

document. To date, ten playgrounds have been constructed, eight are permitted to be constructed this year, and twenty five are currently in the design process through the use of Miami-Dade County Parks in-house designers and outside consultants through the Equitable Distribution Program. The goals of this program include replacing around sixty four playgrounds which are fifteen years or older with the nature based play concept.

Existing playgrounds are transformed into an inclusive area of play for children of all abilities. All nature based playgrounds are implemented according to the Americans with Disabilities Act Standards for Accessible Design. The newly transformed playgrounds will revitalize the area with natural elements and play features to harness a hands-on approach to innovative learning about nature through play design. Some aspects of this design strategy include: an educational transect sign which will graphically show an East-West cross section of Miami-Dade County (MDC) and various flora and fauna therein. An interpretive sign with clues to assist children to explore and find critters and plants camouflaging themselves in and around the playground. Sensory play panels for children on the autistic spectrum to encourage focused play through tactical function and educational tools. Plant and animal fossils placed at ground level or slightly elevated in and around the playground to encourage physical movement, problem-solving and critical thinking skills. In areas surrounding the playground a sensory focused butterfly garden will be planted to further assist in stimulating play through exploration of butterflies in and around the playground.

Sustainability is an integral aspect of nature based design. This is accomplished with the reuse of existing elements on the site for other purposes. Examples include: reusing the sand base surface to create mounded play berms and utilizing the wood from Australian Pine removals for playground elements. Australian pines are an existing invasive species that can be used as nature based play elements; integrating nature and the human experience in early users. Australian pine has been reimagined as vertical totems, seating elements, balance logs and more to integrate sustainable solutions into the design.

The Cost of the Program: Describe both the operating and capital costs incurred in developing and implementing the program. List all costs that would be incurred by a county attempting to replicate the program. Approximately $\frac{3}{4}$ to 1 page

The total operating and capital costs associated with the Miami-Dade Parks Playground Replacement Program have been relatively comparative to the previously budgeted playground replacements that did not follow the new guidelines of nature-based play, all things being equal. Certain exemplary projects undertaken in the program, such as Cypress Landing Playground at Zoo Miami, were afforded much larger design and operational budgets commensurate with their high-impact visibility and frequency of use. Total costs are encompassing of several factors including the soft-costs of in-house or consultant personnel design services, permitting process expenditures, competitive bidding and contractor selection services, playground equipment procurement payments, typical construction activity related expenses, and operations and maintenance upkeep.

As of the initiation of the Miami-Dade Parks Playground Replacement Program in 2015, the following total costs have been assessed for the design, permitting, and construction of the ten completed nature-based playgrounds in the Parks' system: \$7,829,324. As aforementioned, certain highly recognizable projects were given budgets to match their caliber of impact, such as Cypress Landing Playground at Zoo Miami, which had total costs come to \$2,681,628.

For the additional 25 playground projects currently active at various stages of the design and review process within the Miami-Dade Parks Playground Replacement Program a total program cost has been allotted for \$11,000,000.

The Results/Success of the Program: Provide a description of the results and the success of the program in meeting its objectives. Include specific examples and outcome measures. Approximately ¾ to 1 page.

In February 2015, the Parks Department opened its first nature-inspired playground at “Tom Sawyer’s Play Island” at Amelia Earhart Park. The 7,500 square foot playground, the largest for the Parks system, replaces its predecessor of the late ‘90s. The island playground, aptly named for the adventure-loving storybook character Tom Sawyer, is accessible via a pedestrian bridge and walk through a cave that chimes, providing scenic opportunities and imaginative play, along the way. The awe-inspiring playground, nestled between an existing landscape of mature oak trees and boulders, features prominent tree house climbers with flexible decks and webbed netting, with posts made to look like tree bark and panels made of recycled wood-grain lumber. A railed deck gives kids the thrill of corkscrewing down to the ground. There’s also a rock climber, with embedded plant and animal fossils; mushroom steppers; leaf balance boards; a log balance beam; acorn seats; a sand play station with sifters; slides; bead and alphabet panels; bongos, and other musical instruments to play.

Miami-Dade Parks’ Zoo Miami opened its own nature-based Cypress Landing Playground, in December 2016. The endeavor coincided with the grand opening of the Zoo’s “Mission Everglades” exhibit. The Zoo’s playground is complete with a giant water-spraying cypress tree that’s climbable. The exhibit also features Lost Man’s River, where guests can experience a slow-moving boat ride, through the heart of the Everglades. Also featured is the American Crocodile Exhibit, where kids can view real crocodiles via a crawl level glass tunnel and rope-bridge; as well as the North American River Otter Exhibit, where they can ride a glass tube slide through swimming otters.

Other newly installed “nature-play” playgrounds in the Miami-Dade Parks system include: Country Lake Park, Greynolds Park (West site), Kings Meadow Park, Norman and Jean Reach Park, Serena Lakes Park, Forest Lakes Park, Debbie Curtin Park, and Biscayne Shores and Gardens Park. Currently in the works are nature-based playgrounds for Kendall Indian Hammocks Park, Concord Park, Camp Matecumbe, and many more.

Park projects like these are a great example of how Miami-Dade Parks is helping to revitalize precious park spaces for the health and well-being of people and the environment.

Worthiness of Award: Give justification for why this program meets the outlined criteria and should be awarded a 2020 Achievement Awards. Approximately ¼ to ½ page

In the initial five years since its inception, the Miami-Dade County Parks Playground Replacement Program has been fortunate to provide increased access to nature-based play experiences to the children and families of Miami-Dade County, a service previously lacking in the highly urbanized South Florida environment. Free play in natural park settings fuels our sense of wonder and child-like curiosity, and brings a bounty of memorable nature encounters, which are priceless.

Evidence continues to demonstrate the multiple psychological and therapeutic effects of exposure to nature on individuals. For children with special needs, nature play and learning spaces may serve a particularly important role because they afford opportunities that other types of play environments may not offer, including novelty and diversity of ground-level play, change, flexibility, openness, and shade. Activities in green settings have also been shown to improve symptoms of Attention Deficit Disorder in children as young as five years old.

The innovative process taken to design the program with regards to the principles of the Miami-Dade County Parks and Open Space System Master Plan has allowed a seamless integration within the framework of the park system as a whole. The emphasis on incorporating elements of sustainability into both the design and implementation of each new nature-based playground has been a critical factor in diluting the conventional playground life-cycle, increasing the longevity for each project to be enjoyed by citizens.

It is with these focuses in mind that the Miami-Dade County Parks Playground Replacement Program was devised, as an innovative tool in the arsenal used by Miami-Dade County in its mission to the people: *“Delivering excellent public services that address our community's needs and enhance our quality of life, now and in the future”*.

Supplemental Materials (Optional): Supplemental materials such as pictures and charts may be uploaded in separate PDF documents once you complete the check-out process. Supplemental materials are not required but are highly encouraged

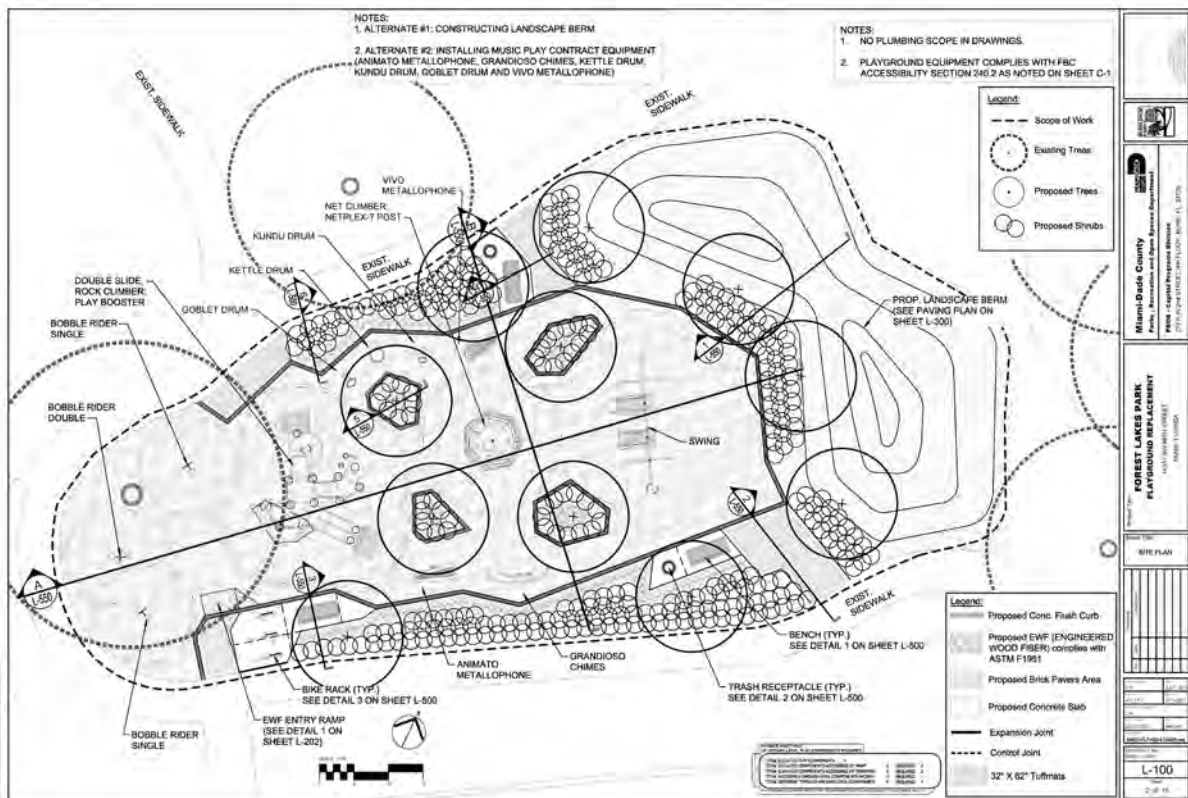
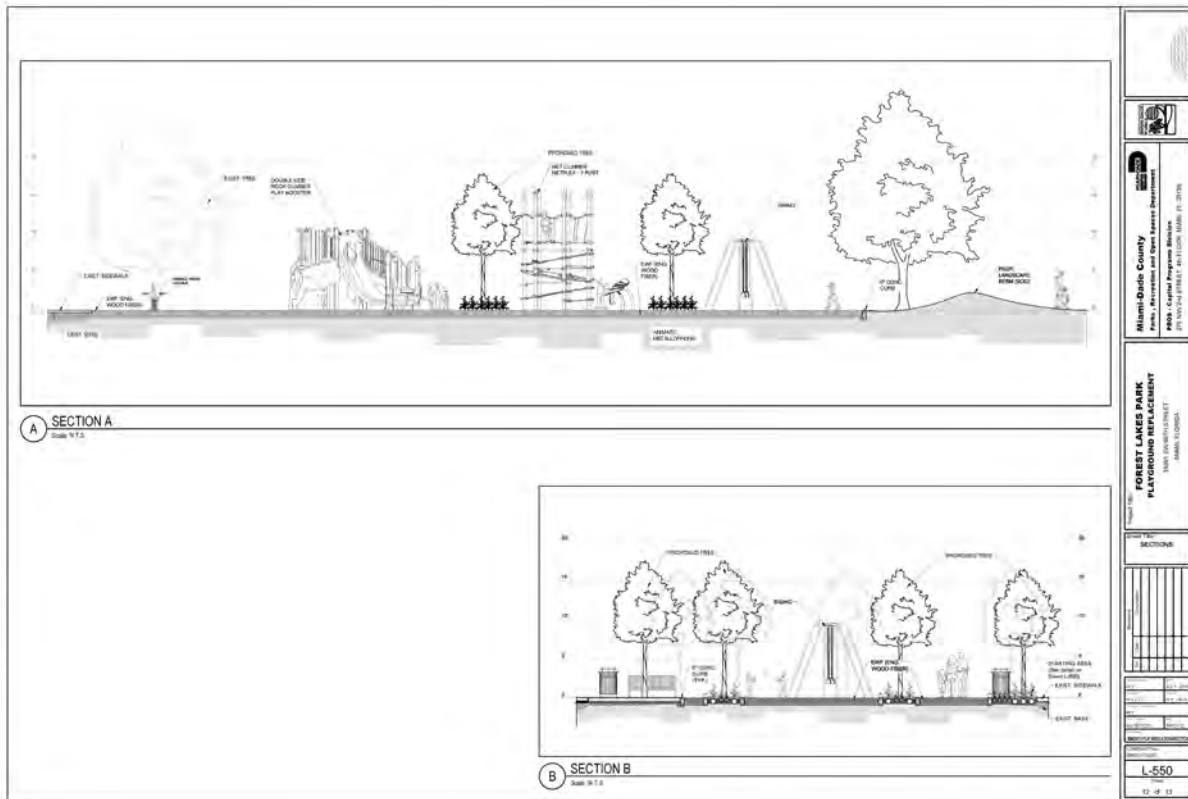
Forest Lakes Park



FOREST LAKES PARK: PLAYGROUND
April 2018

ILLUSTRATIVE CONCEPT PLAN





Amelia Earhart Park "Tom Sawyer's Play Island"



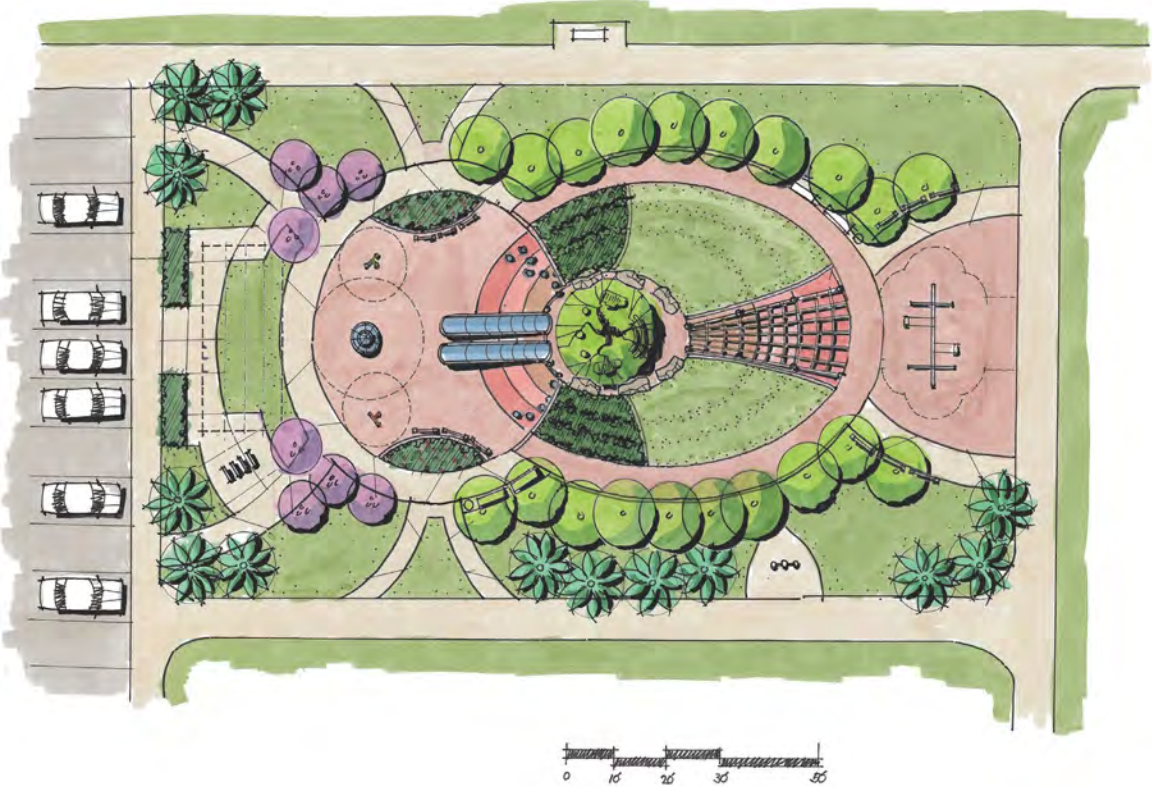


Biscayne Shores and Gardens Park





Debbie Curtin Park





Serena Lakes Park

MIAMI-DADE COUNTY
SERENA LAKES PARK -PLAYGROUND

APRIL 2017



CONCEPT PLAN

