RPG Times

Fall 2001

A Publication of the Roots Plus Field-Growers Association of Florida

RPG Times Project Spotlight

University of South Florida Tampa Campus

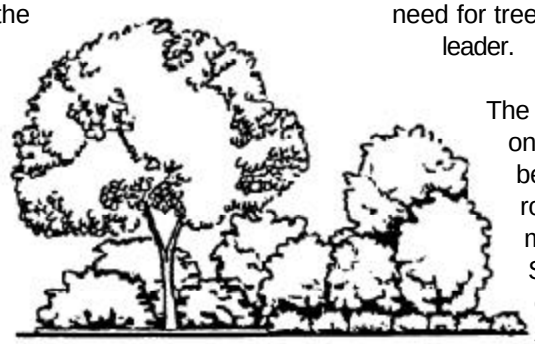
Shirley Hanis, Landscape Architect

In this edition and in future editions of the RPG Times, we'll take a look at one of several projects around Florida where landscape architects and other landscape professionals are using Roots Plus grown trees to improve or restore Florida's landscape for the long term. If there is a site you'd like to see featured in future editions, be sure to let us know.

Building a Canopied Campus

Shirley Hanis, Landscape Architect with the Facilities Planning and Construction Department at the University of South Florida's main campus, is working toward a shadier future for the schools landscape. Shirley has orchestrated the planting of 1,500 shade trees alone on the campus in the last five to six years. Roots Plus Growers supplied 1,055 of those 1,500 trees.

All of these trees have been used to implement the master landscape plan for the main campus. The plan is already transforming the landscape of the bustling Tampa campus. "The master plan includes establishing the major loop road through campus as a tree-lined boulevard," she says. The establishment of a tree-lined road through campus has obvious aesthetic appeal, and Shirley says it will also aid in way-finding on campus - you can easily direct newcomers to the tree-lined road through campus when giving directions.



Finally, the increased shade from the newly planted shade trees will provide some much needed shade to the campus. "Historically, the campus landscape was open land once used as pasture land, and devoid of shade," says Hanis, adding, "Shade is critical."

Sidewalks along this main road are set back 10 feet to allow ample room for live oak plantings, and a pleasant, buffered pathway for pedestrians.

While the live oak planted will someday provide ample shade along the road and sidewalks, Shirley is dedicated to establishing a diversity of species throughout the campus. Pedestrian corridors are also being shaped with native shade trees and native palms.

"We've found that RPG trees have performed very successfully and are of excellent quality for the size trees we use." As a charter member of the Florida Chapter ISA who served as the chapter's first secretary, Shirley was present at some of the first RPG and FC-ISA cosponsored workshops. She notes that as changing industry standards took hold, Roots Plus Growers have kept up with the need for trees produced with a strong dominant leader.

The fruits of the work being done today on the USF Tampa campus may be best enjoyed several years down the road, when lovely, mature specimens grace the entire grounds. But, Shirley says that visitors to the campus today appreciate the significant change just in the last few years. "People who worked or studied here in the years before we began these new planting projects, and return today, comment about the difference." As for those who use the campus today and are witnessing the changes up close, Shirley says, "The plantings are always

Project Spotlight continued page 4

Urban Tree Research

Tree Establishment in the Landscape

Two recent articles published in the Journal of Arboriculture take a look at the landscape performance of trees produced in containers and in field grown conditions. The studies set out to examine the effect of production methods on establishment in an urban landscape setting, and each study also tackles the effects of soil amendments on tree establishment, growth and survival.

English Oaks in Italy

In September of 2000, the Journal presented the preliminary results of a study examining the Effect of Nursery Production Method and Planting Techniques on Tree Establishment in Urban Sites. The study was conducted in a public park in Florence Italy, beginning in March 1998. B&B and Airplant® container grown trees English Oak trees were planted and three types of soil amendments were applied at planting, including high quality compost, leonardite (a humus based commercial application) and Nitrophoska (balanced fertilizer with some microelements.) Trees were watered once a week during the spring and summer 1998.

The researchers collected data on leaf area, shoot length, net photosynthesis, and water use efficiency. While there were no statistical differences among photosynthesis in the treatments, B&B trees used water more efficiently than did the Airplant® trees. Compost addition to the backfill increased the water use efficiency, perhaps by increasing the water holding capacity of the soil. Shoot growth was also statistically greater in B&B trees, and the authors speculate that the reduced growth of Airplant® material may be due to increased drought susceptibility even under weekly irrigation.

A little closer to home…

In January of this year the Journal published the results of a study conducted a little closer to home. The study used trees produced in central Florida, and was conducted in Gainesville. It was designed to determine the influence of nursery production method, incorporation of mycorrhizae into backfill, and irrigation management on the survival and growth of live oak. In addition, the study measured the costs of each practice to determine the most practical way to establish trees in the landscape from a financial standpoint.

The Tree Production portion of this research began in 1995 when live oak seedling were planted from 3 gallon containers into 6 different types of nursery production: plastic containers, plastic containers painted with Spinout on the interior, an air root pruning container, a low profile air root pruning container, and into sandy field soil in Gainesville, FL. Half of the field grown trees were root pruned, half were not. The container grown trees were stepped up from #15 to #25 gallon containers in 1996.

In mid-April 1997, 28 trees from each container type, 28 field grown root pruned trees, and 28 field grown trees without root pruning were planted in the same soil as the field grown trees were produced in. Of these 168 trees, half the trees from each production method received MycorTree TreeSaver incorporated in to backfill soil. Container trees were staked for one year after planting.

Nine days after planting, the trees were placed on two different irrigation regimes. Half of the group received irrigation twice weekly (2 gal per caliper inch) through October, and half of the group received irrigation five times at 1 week intervals through May 1997, then no irrigation. Rainfall in summer 1997 was slightly below normal.

So, what results did the mycorrhizae innoculation, production method, and irrigation regimes have upon the survival and growth of these trees? The inoculation of the backfill soil with mycorrhizae had no effect on tree water stress or on tree survival, and did not effect tree growth during the 30 months after transplanting. About two weeks after transplanting, and when all trees had been without water for 7 consecutive days, root pruned field grown trees were significantly less stressed than trees from all container production methods. When water stress was again measured after 7 days without water, both root-pruned and

Tree Establishment continued page 4

It's almost here...
The Great Southern Tree Conference

The First Annual Great Southern Tree Conference (GSTC) will be held November 30-December 1, 2001 in Gainesville, FL. The GSTC is a result of years of planning and cooperation among the Florida Nurserymen and Growers Association, the University of Florida, and the Environmental Horticulture industry. This conference will be unique in that it is the first conference devoted entirely to tree selection, landscape, production, establishment and marketing issues in the Southern United States.

This premier industry event will establish a cutting edge educational conference centered around an outdoor demonstration area developed in conjunction with the conference. The 30-acre demonstration site, supplied by the University of Florida, has projects ongoing that will help the industry implement new technologies into daily practice. Demonstration site projects have been developed specifically for this conference and will provide the vital components of hands-on training, applied field demonstrations, and current project updates. Green industry members will see for themselves the results of various production and landscape practices and techniques, and be able to put them to use in their businesses immediately. Indoor presentations will be combined with outdoor demonstrations for this two-day annual event.

All walks of the industry will benefit from this conference including growers, propagators, landscape architects, landscape contractors, allied suppliers, arborists, urban foresters, researchers, educators, and other tree industry professionals coming together for an annual conference to share experiences and research results in growing, planting, and using quality trees. There are no conferences in the U.S. designed specifically for hands-on training of growers, landscape contractors, arborists, and other green industry members.

Topics for this year's conference include: water in the tree industry, planting specifications, evaluation of crape myrtle cultivars, root manipulation in production, tree handling do's and don'ts, grades and standards, hollies for the south, marketing in the tree industry, evaluating root growth after planting, evaluation of live oak cultivars, pruning and pruning equipment, and much more. Speakers and green industry professionals from around the Southeast will be in attendance.

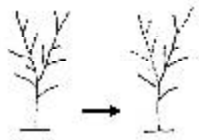
Great Southern Tree Conference partners play an important role in the conference by providing the funding to develop and maintain the demonstration site on a year round basis. The 2001 Specimen Level Partners include: Be-Mac Farms, Bent Oak Farms, Certified Tree Growers Association, Cherry Lake Tree Farm, Florida Chapter ISA, Florikan E.S.A., Harrell's Fertilizer, Inc., Holloway Tree Farm, Marshall Tree Farm, SMR Turf & Trees, Shadowlawn, Skinner's Nurseries, Stewart's Tree Service and Tree Introductions, Inc.

GSTC registration brochures were mailed in mid-September. If you have any questions or need a registration brochure, please contact the FNGA office at 407-295-7994.

Next time you're online, visit www.rootsplusgrowers.org

Roots Plus Growers has recently joined the World Wide Web! We're online at rootsplusgrowers.org. While we look forward to adding lots of educational information to the new site in the coming months, the first visitors to the site can read about the origin of the Roots Plus Growers Association, its mission, and find contact information and a locator map for our members. Soon, you'll be able to download the popular tree grading cue card and the new tree planting cue card, peruse the RPG Times archives, and visit links to our members and to other online resources for growers and landscape architects.

We hope you'll check it out, and we welcome your comments!



RPG Field Day to be held Spring 2002

In the last few years, RPG has cosponsored a field day for growers and landscape professionals in the late fall. Perhaps you've attended one of these workshops, hosted most recently at Stewart's Trees Service in Brooksville and at Marshall Tree Farm as well.

This year, in part to avoid conflicting with the Great Southern Tree Conference (of which several of our members are sponsors) we will instead schedule the field day for April 4, 2002, a Marshall Tree Farm in Morriston. A spring date could allow us to examine some aspects of production not usually focused on in late fall. As always, you can look forward to an informative day of practical, applied learning focused on the production and maintenance of quality trees.

Project spotlight continued from page1

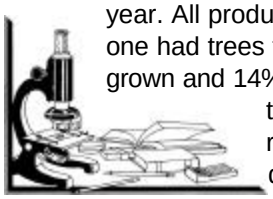
very positively received."

You don't have to read the research about the cooling effects of trees in cities, or the research about how green spaces and canopied roads can slow traffic and improve the way people feel about their surroundings to appreciate the difference trees make in the urban landscape. Roots Plus Growers know it is just one part of why producing quality trees for the landscape is so rewarding. It is gratifying to know that Roots Plus grown trees can be part of an even bigger and better final product: a healthy, beautiful landscape to be enjoyed for many years to come.

Tree establishment continued from page 2

non-root-pruned field grown trees were less stressed than all container grown trees.

There were no differences in survival among the trees that received regular irrigation throughout the summer of 1997 – all trees survived. Of the trees irrigated for only six weeks after transplanting, 35 of 84 trees died in the first year. All production method treatments except one had trees that died – 55% of the container grown and 14% of the non-root-pruned field trees died. No trees from the root-pruned field grown group died.



RPG Notes for Growth

by Jack Seibenthaler

What is the future of RPG dependent upon? Why is growth so important? Where is the growth support coming from? How is this growth to be determined? Who are our allies?

A lot of questions to which we will have to answer!

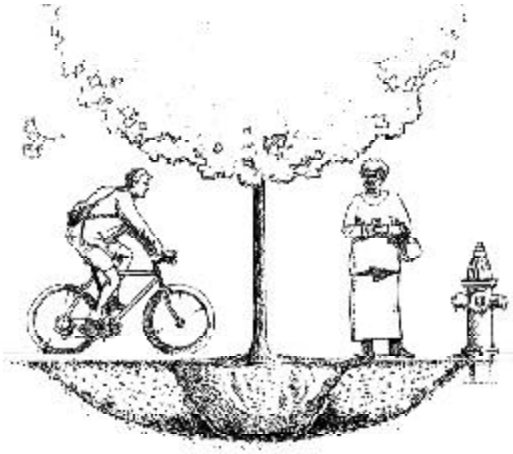
RPG was started several years ago by a very small group of forward-looking growers who had a dream. To produce a superior line of tree products which would provide recognizable advantages to their end users: Landscape Architects who wanted better results for their designed projects, Landscape contractors who desired higher recognition for their work product, Project Developers who were looking for more success in their overall development success.

The future of RPG lies in several directions. The continued growth of membership to include not only growers, but, in many areas of parallel interest, such as designers, installers, allied product suppliers and owners this growth is so important, as it is in all applied organizations, because it is through continual growth that progress is possible. A stagnant organization soon becomes a dying organization.

There are immediate ways in which we can all contribute to this important need for growth. Talk to fellow growers, landscape architects, and suppliers about our experiences with the dynamics of RPG. It isn't hard to bring up the subject at the right time with our business friends. Better than talking about the weather or financial news sometimes!

So let's all participate in what will mean more to the growing of better quality trees the RPG way. Let's talk about, plan about, use the RPG products consistently for a bright future in trees!

Tree Essentials: Planting trees the right way



Essential to the success of any landscape project is that the trees added to the site thrive and flourish in their new permanent location. If you start with quality trees, but plant them incorrectly, your investment is in danger. There are several important steps involved in planting a tree properly, including choosing the best quality tree, careful transport and care at the job site, and attention to detail during planting. Some planting sites may require special attention to ensure tree health in the long term.

A Good Start

Starting with quality grade trees as specified in the Florida Grades and Standards for Nursery Stock is critical - be sure the time and money you and your clients are investing in the project are not wasted by installing poor quality plant material. Even a properly planted tree that lacks an adequate root system, or that has poor structure won't thrive the way quality grade plants do.

Handle with Care

Trees need some protection during transport to the planting site, and on the site before they are planted. To keep trees in good condition prior to planting, be sure that trees are protected in an enclosed truck or with a tarp during shipping. When trees arrive and are unloaded, lift the tree by the root ball, and never by the trunk. Only lift trees using the container handles or root ball straps. Finally, if trees are held at the job site prior to planting, it is important that the are stored upright in a shady spot, and they must be irrigated twice daily with 5 gallons per caliper inch until they can be planted.

Planting Depth

According to Principles and Practice of Planting Trees and Shrubs, by Gary Watson and E.B. Himelick, planting too deeply is the most common mistake during planting, and it is nearly impossible to correct when discovered several months or years later.

Trees planted too deep have their roots buried under too much soil and often under too much mulch, too. Roots exist in the top few inches of soil where they are able to obtain adequate water and oxygen from the environment. When purchasing and then planting trees, look for the top most root in the root ball. This root should be at or slightly above the finished grade in the landscape.

Before you prepare the planting hole, take into account the width and depth of the tree's root ball (measure depth from the bottom of the root ball to the topmost root in the ball). Then, prepare a hole that is twice as wide as the root ball, and about two inches less than the depth of the root ball. Remove any plastic wrap or synthetic material from the root ball and center it in the hole. It should sit slightly higher than the finished grade.

When the tree is straight in the hole, begin filling in with field soil. Water in the backfill as you fill the planting hole, and work the soil to ensure that no air pockets remain. At the edge of the root ball, make a soil berm 2-3" high to form a shallow water holding area. Then, water in with 5 gallons of water per caliper inch.

Before mulching, take a moment to be certain that any string or wire has been removed from the trunk. Mulch should be applied in a three-inch layer to an area 8 feet in diameter for 4" caliper trees. For larger material, apply mulch at 2 feet diameter per caliper inch. Don't pile mulch around the trunk.

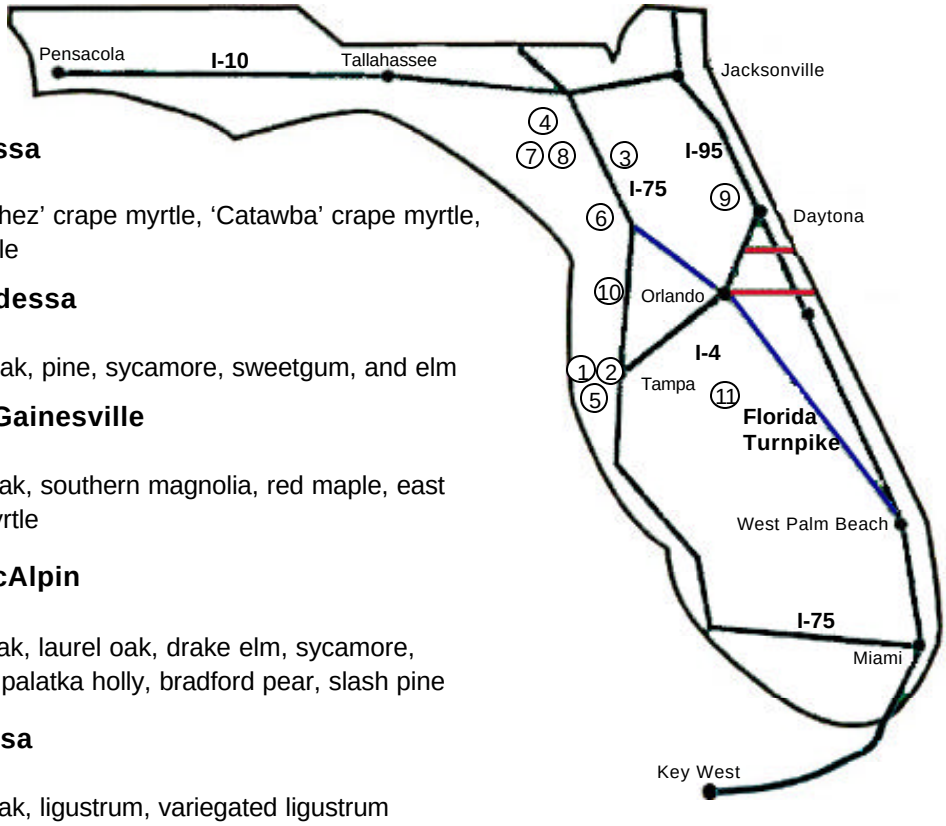
Irrigate for Establishment

The chart below lists two irrigation schedules - a schedule to ensure vigorous growth, and a schedule that will ensure survival. Trees on the lower volume schedule may establish slowly be more subject to transplant shock. Of course, the larger the tree, the greater it's irrigation needs.

Size of Nursery Stock	Irrigation Schedule for Vigor	Irrigation Schedule for survival
< 2 inch caliper	Daily for 2 weeks; every other day for two months; weekly until established	Twice weekly for 2-3 months
2-4 inch caliper	Daily for i month; every other day for 3 months; weekly until established	Twice weekly for 3-4 months
> 4 inch caliper	Daily for six weeks: every other day for 5 months; weekly until established	Twice weekly for 4-5 months

Roots Plus Growers Association Members

locator map and available species



1 Arborgate Farms, Odessa
813-920-8325
RPG Trees available: 'Natchez' crape myrtle, 'Catawba' crape myrtle, and 'Muskogee' crape myrtle

2 Be-Mac Tree Farms, Odessa
813-920-2247
RPG Trees available: live oak, pine, sycamore, sweetgum, and elm

3 Champion Tree Farm, Gainesville
352-375-6001
RPG Trees available: live oak, southern magnolia, red maple, east palatka holly, and crape myrtle

4 Fort Drum Growers, McAlpin
386-776-2727
RPG Trees available: live oak, laurel oak, drake elm, sycamore, sweetgum, river birch, east palatka holly, bradford pear, slash pine

5 Keystone Farms, Odessa
813-920-0894
RPG Trees available: live oak, ligustrum, variegated ligustrum

6 Marshall Tree Farm, Morriston
800-786-1422
RPG Trees available: live oak, 'Highrise' live oak, southern magnolia cultivars, crape myrtle, slash pine, bald cypress, holly cultivars, winged elm, 'Allee' lacebark elm, sweetgum, sycamore

7 Nature Coast Tree Corp, Bell
386-935-9349
RPG Trees available: live oak, ligustrum, holly

8 Southern Pride Tree Farm, Bell
386-935-3636
RPG Trees available: live oak, ligustrum, holly

9 Skinner Nurseries, Bunnell
800-741-2020
RPG Trees available: live oak, ligustrum, holly, crape myrtle

10 Stewart's Tree Service, Brooksville
352-796-3426
RPG Trees available: live oak, southern magnolia cultivars, holly cultivars, red cedar, laurel oak

11 Tiger Lake Nursery
863-692-1009
sorry, sold out of RPG Trees

Associate Members

Arbor Greene Land Development

Braun Horticulture

Caretree Systems

Graco Fertilizer Company

Wendell Hollenbeck

Rainbow Landscaping

Schickedanz Brothers, West

Jack Siebenthaler

Seaworld

Sunrise Landscape

The Willows Nursery

Treemart

RPG TIMESline

RPG Tree Field Day

Mark your calendar for April 4, 2002 at Marshall Tree Farm

November 30-December 1, 2001
The Great Southern Tree Conference, University of Florida, Gainesville.
contact the FNGA at 1-800-375-3642

January 17-19, 2002
Tropical Plant Industry Exhibition
Fort Lauderdale, FL
contact the FNGA at 1-800-375-3642

January 25-26th, 2002
Gulf States Horticultural Expo
Mobile, AL
contact the Gulf States Horticulutral Association at 334-821-5148

February 15-16, 2002
Northeast Florida Trade Show
Jacksonville, FL
contact the NE Chapter FNGA at 904-292-1117

February 22-23th
Tampa Spring Expo
Tampa, FL
contact the Tampa Wholesale Growers Association at 813-655-1914

RPG Information

If you would like more information about the Roots Plus Field-Growers Association of Florida please complete the following and return it to:

Roots Plus Growers
17350 SE 65th Street
Morriston, FL 32668

☐ Please add me to your mailing list

Please send me information on the following:

☐ Tree Transplanting Research ☐ Tree Transplanting Tips

☐ RPG Membership ☐ Other_____

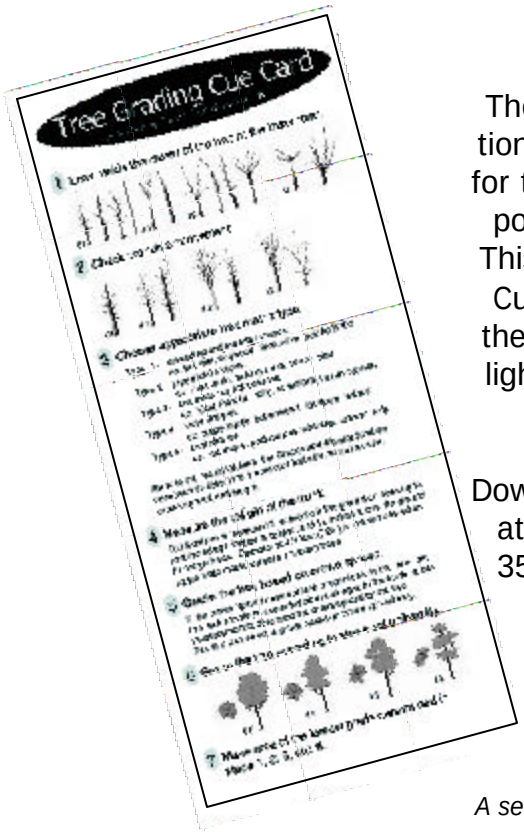
Name _____

Firm _____

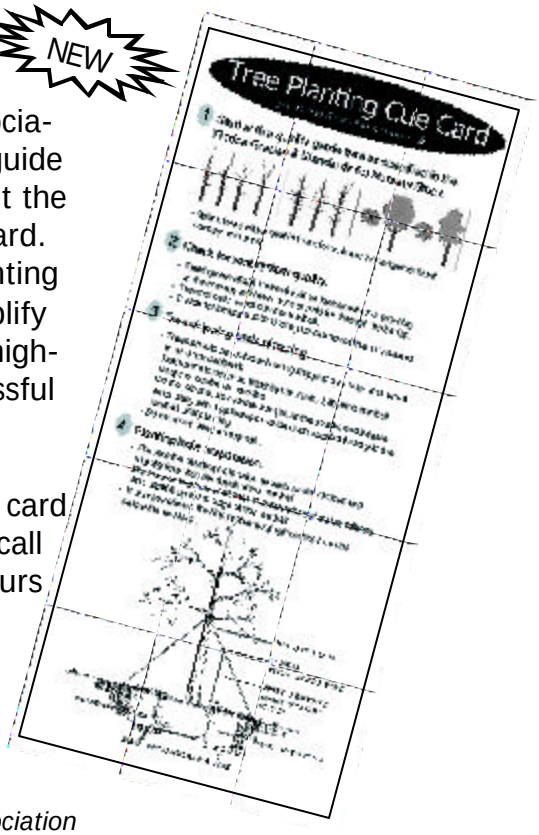
Address _____

City / State / Zip _____

Phone _____ Fax _____



NEW



The Roots Plus Growers Association has developed a pocket guide for tree planting to supplement the popular Tree Grading Cue Card. This 3x7" laminated Tree Planting Cue Card is intended to simplify the tree planting process by highlighting eight steps for successful transplanting.

Download a copy of each cue card at rootsplusgrowers.org, or call 352-528-3880 to request yours today!

A service of Roots Plus Growers Association

17350 SE 65th Street
Morriston, FL 32668