

**CITY MANAGER  
MEMORANDUM**

**To:** The Honorable Mayor and City Commissioners

**Through:** Joyce A. Shanahan, City Manager

**From:** John E. Noble, P.E., Acting City Engineer

**Date:** July 14, 2011

**Subject:** John Anderson Drive Roadway Improvements

**Introduction:** This item is for the discussion of the John Anderson Drive Roadway improvement project with regards to resident's concerns that were expressed at a public meeting held on April 21, 2011.

**Background:** On June 22, 2010, the City Commission awarded a professional services agreement for the engineering design of the John Anderson Drive Roadway improvements to Gyhabi & Associates for \$699,516.70. On April 21, 2011, Gyhabi & Associates, held a public meeting to update the community on the project. The meeting's purpose was to allow the public to see the 60% design plans and discuss the details of the project.

The design consists of two-way traffic including full road reconstruction with stormwater system improvements. The roadway as currently designed will consist of two 11-foot lanes with high back curbing and a five foot wide concrete sidewalk along the east side of John Anderson Drive. Initially, the City Commission approved the project design with 10-foot lanes in order to reduce tree impacts; however, at the 30% design phase, the consultant was requested to determine if the traffic lanes could be increased to 11-foot without any additional tree impacts, and the Consultant was directed to proceed with 11-foot lanes. The design also included raising the roadway approximately one foot on average to elevate the road base out of the seasonal high water table, enabling the road to drain properly and prevent the road base from becoming saturated and losing its structural strength. Elevating the road will mean some yards will not be able to drain to the roadway and the new stormwater collection system. In these locations, the engineer has designed for installation of yard drains, located outside the roadway to collect water from yards, thereby, preventing yard flooding from occurring. In some locations the yard drains are located outside the City owned right-of-way creating the need for easements from the property owners. Approximately 21 drainage easements will be required.

In order to minimize tree impacts, staff has looked at designing the sidewalk to meander outside the right-of-way where tree impacts can be eliminated. In several locations the sidewalk is located outside of the right-of-way in order to save trees adjacent to the road. Sixteen easements will be needed in these locations to save the trees. Other improvements include replacement of water services to improve water quality and the pressure to houses, and construction of a new 16-inch force main to expand sewer capacity. A total of 124 trees are identified to be removed. Of this total,

49 hardwood and 75 palm trees will be removed under the current design. Of the 49 hardwood, 25 of these are Live Oak trees with 18 (72%) identified as in poor condition in the arborist's report. Staff has applied for a grant from the Volusia County Transportation Planning Organization for the sidewalk funding and is currently fourth on the priority listing for funding. If approved, the City would receive 80% grant funding for the sidewalk which was estimated to cost \$388,000.

Staff also investigated undergrounding of franchise utilities and the interest of the residents in establishing a special assessment district to fund the cost of these improvements. Based on the conversion costs the majority of residents did not wish to fund this option; however, FPL has informed staff that they will be rehabilitating the entire existing overhead service with new wooden poles and wiring along with adding additional power service loops to bring the system up to current standards which will improve reliability during severe weather events. Although not confirmed at this time as FPL has not finalized their design, it is estimated that several additional trees may be removed due to FPL's upgrades.

**Discussion:** Following the April 21<sup>st</sup> meeting it was evident that there were still concerns among the public regarding the project. The following is a summary of the major concerns identified at the public meeting:

- Loss of trees due to roadway alignment and addition of sidewalk;
- Sidewalks are not necessary or desired;
- Sidewalks are needed for children and pedestrian safety;
- This is a "Scenic Roadway" which requires tree planting in advance of improvements;
- Proposed design will require drainage and sidewalk easements;
- Proposed non-mountable curbs are not bicycle friendly;
- Lack of traffic calming measures or decorative elements; and
- Proposed design will encourage speeding.

After hearing the public's concern, the City Commission requested staff to bring the project back for discussion. Staff then asked its consultant to place the project's design on hold and review alternative designs to reduce tree impacts. Present at tonight's meeting is Walter Kloss, Vice President with Gyhabi & Associates. Gyhabi & Associates have prepared the attached PowerPoint summarizing the results of their effort.

Two design alternatives were reviewed and the results indicate that tree impacts are not reduced to any appreciable extent unless the sidewalk is eliminated from the project. However, the majority of trees saved with removal of the sidewalk are palm trees as opposed to hardwood trees. If the sidewalk were to be removed from the project, between 13 and 31 hardwood trees and 34 to 40 palm trees would be saved, depending on whether easements as discussed above under the current design were obtained or not. However, it is staff's intent to provide for the mitigation of trees removed to provide a net positive increase in the total number of trees planted to replace the trees removed by this project. In addition, staff is proposing the following





# City Commission Discussion



## John Anderson Drive Improvements From Granada Boulevard to Northern City Limit



City of Ormond Beach





# Project Need

## *John Anderson Drive Improvements*

### Why was John Anderson Drive Scheduled for Improvements?

- The 1997 Stormwater Master Plan identifies John Anderson Drive for stormwater improvements
- The 1997 Sidewalk Master Plan identifies John Anderson Drive as a priority for pedestrian sidewalks
- In 2000, the City Commission directed staff to upgrade all collector roadways within the City



# Project Need

## *John Anderson Drive Improvements*

### Why is this Project Necessary?

- Does not meet current collector roadway standards;
- The existing stormwater system is inadequate and roadway is prone to flooding in typical storm events;
- The existing high water table causes the pavement to deteriorate;
- Lack of safe pedestrian connection to the side streets; and
- The existing utilities need improvement to improve water quality, pressure and fire protection and provide sufficient sewer capacity.



# Current 60% Design Plans

## Improvements Included

- Curb, gutter and 11' travel lanes
- Elevates the roadway to reduce flooding
- New stormwater system is designed to handle typical storm events
- Improve existing water and sewer utilities to improve quality and capacity
- 5' wide pedestrian sidewalk is proposed along the east side of the roadway
- Installation of irrigation system under driveways for irrigation and street tree planting
- Goal to save healthy hardwood trees as identified in the arborist report

## Proposed Tree Removal as Currently Designed

- 49 Hardwood trees and 75 Palms (124 Total) will be removed if all proposed easements are secured
- 67 Hardwood trees and 81 Palms (148 Total) will be removed without securing proposed easement



# Re-alignment Example

## Saving Healthy Hardwood Trees

Proposed roadway has been shifted west to protect healthy trees over utility pruned trees which offer no canopy over the roadway. See Arborist Report for detailed information.

Trees on the west side are better candidates for removal than those on the east.



Trees on the east side have already developed a canopy over the road-way.





# Project Meeting -(April 21, 2011)

## *Concerns Expressed*

### What concerns did we hear regarding the 60% design plans?

- Loss of trees due to roadway alignment and addition of sidewalk
- Sidewalks are not necessary or desired
- Sidewalks are needed for children and pedestrian safety
- This is a “Scenic Roadway” which requires tree planting in advance of improvements
- Proposed design will require drainage and sidewalk easements
- Proposed non-mountable curbs are not bicycle friendly
- Lack of traffic calming measures or decorative elements
- Proposed design will encourage speeding



# What Can Be Done?

## *Plan to address Resident Concerns*

- **Maintain an Arborist during construction** to Identify/Tag and Document all tree impacts.
- Develop a **Tree Mitigation Plan** to include:
  - Provide a **net positive increase in total number of trees** upon project completion.
  - **Plant new trees** in open areas as early in construction as possible. Enter an agreement with property owners to allow City to replant trees on private property.
  - **Where possible save trees despite possibility of losing them later.**
- **Design road with 10 foot lanes** –*no widening.*
- **Incorporate traffic calming initiatives** such as colored pavement at intersections



## Example of Hardwood Tree Mitigation *Cathedral Oaks*



- Cathedral Oak planted at the City's Boundless Playground at the Ormond Beach Sports Complex. Trees Planted were 6" caliper, 20'-22' Tall, 10'-12' wide. Person in Photo is 5'-10" Tall.



# Design Evaluation

## *Alternative 1 (Current 60% Design Plans)*

### Realigned Roadway with Raised Elevation

#### Pros:

- Reduces roadway flooding such that the drainage system meets City Code
- Prolongs the design life of the road and reduces maintenance costs
- Reduces property flooding

#### Cons:

- Minimally increases tree removal
- Potentially requires additional drainage inlets and drainage easements

#### Tree Removals:

- Without Sidewalk – 77 Trees (36 Hardwoods, 41 Palms)
- With Sidewalk and All Easements – 124 Trees (49 Hardwoods, 75 Palms)
- With Sidewalk and No Easements – 148 Trees (67 Hardwoods, 81 Palms)

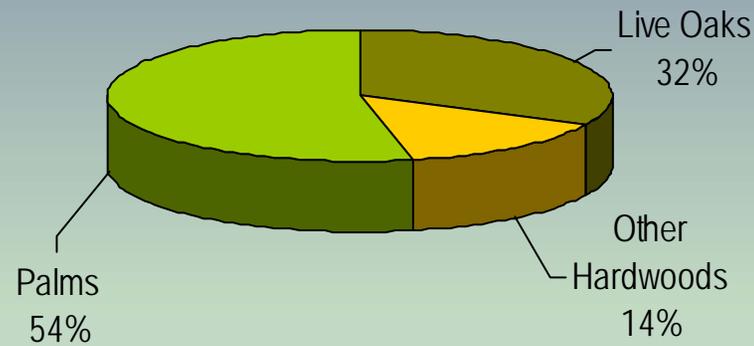
\* Hardwoods are considered all non-palms for the purpose of these analyses



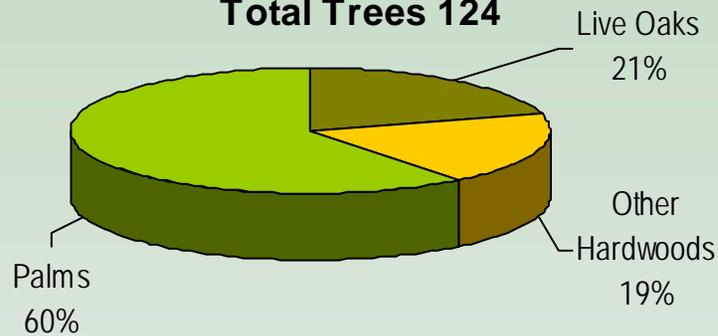
# Alternative 1

## *Tree Removal by Type*

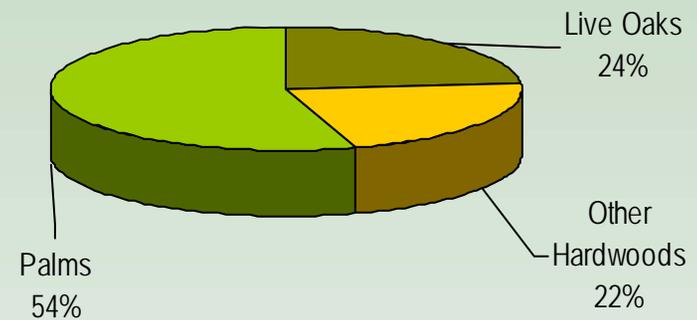
**Without Sidewalks - Total Trees 77**



**With Sidewalks and ALL Easements - Total Trees 124**



**With Sidewalks and NO Easements - Total Trees 148**





# Design Evaluation

## *Alternative 2*

### Realigned Roadway at “Existing” Elevation

#### Pros:

- Less impacts to adjacent properties
- Potentially fewer drainage inlets and need for drainage easements
- Reduces property flooding

#### Cons:

- Drainage system will not meet City Code
- Decreases the design life of the roadway and increases maintenance costs

#### Tree Removals:

- Without Sidewalk – 71 Trees (34 Hardwoods, 37 Palms)
- With Sidewalk and All Easements – 121 Trees (51 Hardwoods, 70 Palms)
- With Sidewalk and No Easements – 146 Trees (71 Hardwoods, 75 Palms)

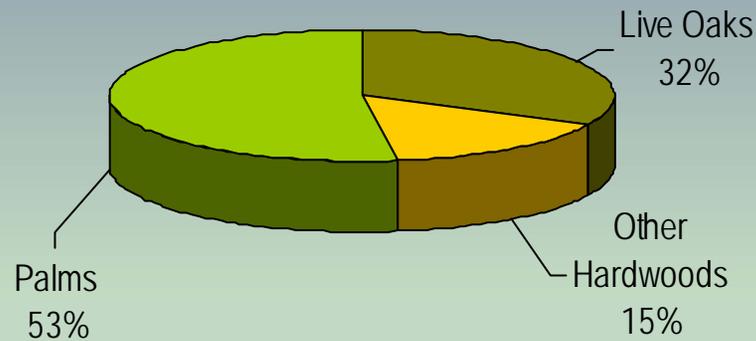
\* Hardwoods are considered all non-palm trees for the purpose of these analyses



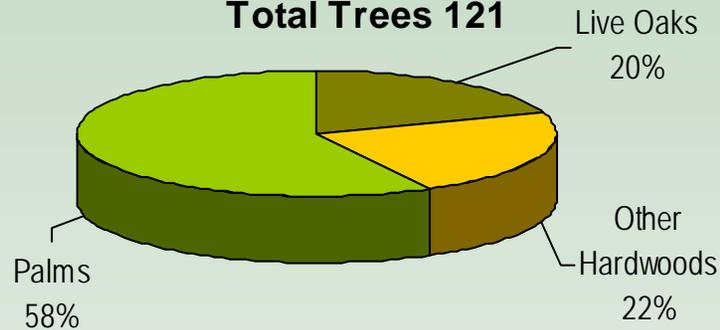
# Alternative 2

## Tree Removal by Type

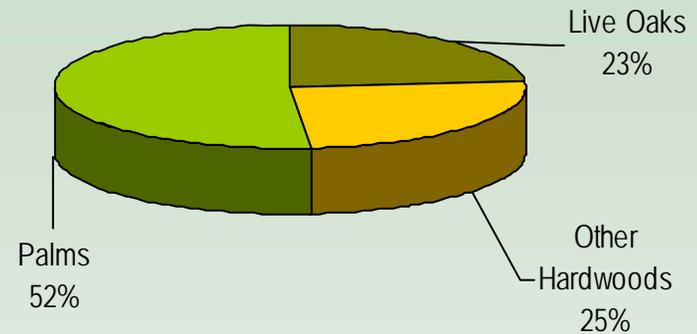
**Without Sidewalks - Total Trees 71**



**With Sidewalks and ALL Easements - Total Trees 121**



**With Sidewalks and NO Easements - Total Trees 146**





# Design Evaluation

## *Alternative 3*

### Existing Alignment at “Existing” Elevation

#### Pros:

- Less impact to adjacent properties
- Reduces property flooding

#### Cons:

- Existing roadway alignment does not meet current design standards
- Does not minimize the removal of hardwood trees
- Drainage system will not meet City Code
- Decreases the design life of the roadway and increases maintenance costs

#### Tree Removals:

- Without Sidewalk – 65 Trees (36 Hardwoods, 29 Palms)
- With Sidewalk and All Easements – 115 Trees (53 Hardwoods, 62 Palms)
- With Sidewalk and No Easements – 140 Trees (73 Hardwoods, 67 Palms)

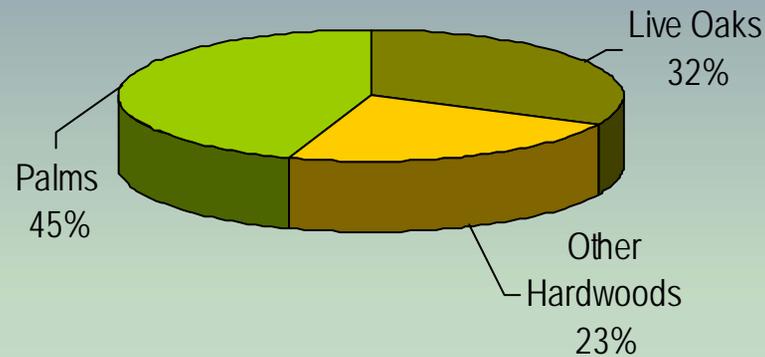
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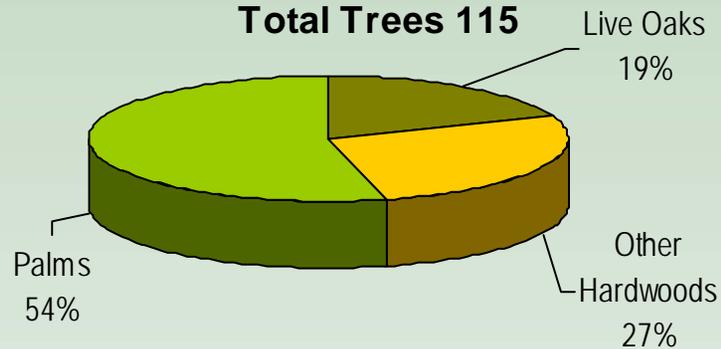
# Alternative 3

## Tree Removal by Type

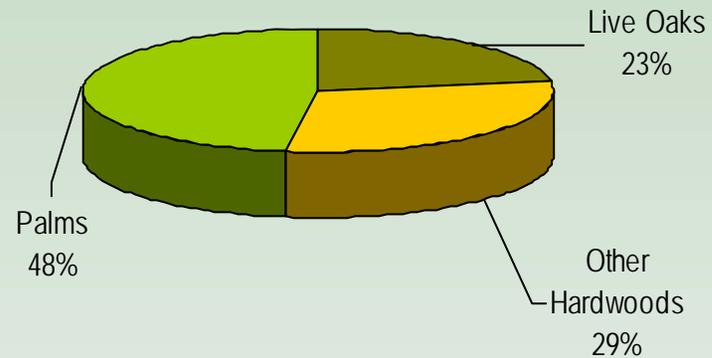
**Without Sidewalks - Total Trees 65**



**With Sidewalks and ALL Easements - Total Trees 115**



**With Sidewalks and NO Easements - Total Trees 140**





# Tree Impact Comparison

## Roadway Improvements without Sidewalk:

Alternative	Hardwoods	Palms	Total
1	36	41	77
2	34	37	71
3	36	29	65

## Roadway Improvements with Sidewalk and All Easements Granted:

Alternative	Hardwoods	Palms	Total
1	49	75	124
2	51	70	121
3	53	62	115

## Roadway Improvements with Sidewalk and No Easements Granted:

Alternative	Hardwoods	Palms	Total
1	67	81	148
2	71	75	146
3	73	67	140

**\* Tree removals due to FPL utility upgrades are not included**