

SP5810000 TREE AND PALM RELOCATION  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

Shea Hansen

Work Phone: 9547030396

E-Mail: shansen@monarchladesign.com

Comments: (Industry 6-4-21)

Section 581-5, there is new language instructing the contractor to install tree protection around relocated material. Suggest considering that some material gets relocated outside of project limits to different locations along state right of ways and therefore tree protection may not be required on all relocated material.

Response: Per the FDM, 229.3, *“for construction projects, trees or palms must be relocated to a site that is within the project limits. Relocation on-site may decrease transport costs, increase the survival rate after relocating, and serve to minimize the loss of vegetation in the local environment. In some cases, there is not sufficient space onsite to accommodate a receiving site for the relocated plants.*

*Relocation of trees or palms to a location off-site may be justified in rare conditions. Offsite relocations are more complicated as the materials will be leaving the project site. Maintenance-let or push-button projects may have more flexibility to relocate trees and palms off-site. In all maintenance-let projects, final locations must be within the District in which the contract is let.”*

The construction specification is limited to relocation within the project. Your concern may be addressed with expanded/modified language in the maintenance specification or the contract documents.

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Robert Coteleur

Work Phone: 561-747-6336

E-Mail: rcoteleur@coteleur-hearing.com

Please Contact

Comments: (Industry 6-9-2021)

581-3.1 Add requirement for Contractor to review the site conditions and trees to be relocated with the professional of record prior to starting work to ensure none of the existing conditions have substantially changed.

Response: This is addressed in 4-3.7 of the specifications (Division 1 language applicable to all sections, to address differing site conditions).

Add item number 581-3.1.4, “Condition” of existing trees to be relocated.

Response: This is addressed in “document the existing condition” of 581-3.1.

581-3.2 Add, “.... unless otherwise specified in the Contract Documents”, to the last sentence of this paragraph. This is because for some projects the RLA might find it important to place certain requirements in the plans instead of allowing the Contractor to determine them. We did this on project where some large Oak trees were specified to be relocated so we wanted to ensure they were properly root pruned instead of allowing the Contractor to decide this, and we provided a detail in the plans on how it should be done.

Response: The “unless otherwise specified” is understood throughout the specification book, as

addressed in 5-2 (Division 1 language).

581-3.2.5 Add, “Pre and post relocation” to the beginning of this item.

Response: This is outside of the scope of proposed changes; it may be addressed with 581-3.2 (1.), or proposed with future changes.

581-3.2 (items #1 through #8) Add item for ‘Proposed Transporting and Trunk Protection Measures’. (For example, Royal Palms always need to have their trunks protected before placing them on a tree bar). Add item for ‘Post Installation Maintenance Plan’.

Response: This is outside of the scope of proposed changes; it may be addressed with 581-3.2 (1.), or proposed with future changes.

581-5 and 581-6 Disagree with the statement that ‘New nursery stock or other material may not be substituted for a dying or dead relocated tree or palm’. The intent of this was to prevent contractors from not even trying to relocate trees as called for in the plans; but if they do an inadequate job of relocating trees and they die, then it would be good incentive to require them to replace them. The Department can even allow a smaller replacement tree than the one that died but they should at least get something. I suggest adding the following language to the end of this sentence, “... except to replace relocated trees that died”. (Much more discussion needed on this topic).

Response: This is outside of the scope of proposed changes (reordering existing text); it may be addressed with future changes, following discussion with District Landscape Architects.

581-5 The following sentence should not be revised as suggested; Install relocated trees and palms in their final location within 24 hours of removal performing initial root pruning. Trees should not be dug at all within at least 8 weeks of the initial root pruning.

Response: This is outside of the scope of proposed changes (reordering existing text); it may be addressed with future changes, following discussion with District Landscape Architects.

Relocation may also be considered through a Maintenance Contract.

581-5 At the end of the sentence regarding installing tree protection barrier, add the following, “... as shown or called for in the plans”. Tree protection barrier is not always required, especially on projects or in areas without construction impacts. Other times they are not only required but the designer might also want to place them around existing trees to remain, so they should be shown on the plans.

Response: Tree protection barrier will only be installed when/where shown, due to the payment being limited to the locations included in the contract documents/summary table.

581-6 Suggest adding requirements for quarterly inspections (at least) with the RLA during the establishment period. We are having difficulties getting contractors to maintain relocated trees during this period.

Response: This is outside of the scope of proposed changes (reordering existing text); it may be addressed with future changes, following discussion with District Landscape Architects. Note that the Engineer may coordinate with the RLA/DLA at any time throughout the contract; this only becomes a specification requirement if the contractor is required to take action beyond maintaining the plant.

581-8 Overall this basis of payment section is weak, and we are finding there it does not require enough incentive for the Contractor to ensure the work is completed adequately. Also, the deduction formula is overly complicated and should be simplified. Trees can be “successfully relocated” but not properly root pruned or watered, and they still die. Payment should be based on the contract price for each tree instead of 90% of the trees. The RLA should have the ability to require replacement trees if the relocated tree die (for projects that warrant it). If the formula is to remain then at least the percentages should be closer to 50/50 than the current 85/15. We have several large tree relocation projects, and this specification is just not strong enough to get them to perform this work adequately. We have more ideas on this topic and would welcome the opportunity to discuss them further.

**Response:** This is outside of the scope of proposed changes; it may be addressed with future changes, following discussion with District Landscape Architects.

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Melissa Hollis  
Work Phone: 850-414-4182  
E-Mail: melissa.hollis@dot.state.fl.us

Comments: (Industry 6-10-21)

Email comment from Darryl Richard, D1 Landscape Architect: Let's match the latest language that Paul Hiers had recommended. Per 6/7/2021 DLA meeting. Change reference to "Meet the requirements of 987-2.4"

**Response:** Agree; change made.

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Ananth Prasad  
Florida Transportation Builders' Association, Inc.  
w (850) 942-1405  
www.FTBA.com

Comments: (Industry 6-11-21)

The soil specifications may be project specific shown on plan notes but would be overridden by these Special Provisions.

**Response:** Agree; per 987-2.4, “Where shown in the Plans or when approved by the Engineer, existing soil may be amended with...”

**No change needed in Section 581 or 987;** the designer will note when soil may be amended to meet spec requirements.

Is the intent to utilize the numbers provided by the Designer in the plans? You don't want the Contractor adding random handwritten numbers on their one set of plans so it should be clear the Contractor is to utilize the numbers provided in the plans.

**Response:** Agree; added clarification to 581-3.1 (1) “as shown in the Contract Documents”.

This is unclear do you want individual photos of each palm or pictures of the material to be relocated that is questionable?

**Response:** No change needed: all, not just those that are questionable.

581-3.1 “Document the existing condition of all trees and palms scheduled to be relocated.”

Clean up this sentence better use of commas and "or FNGLA Certified Contractor.

Response: Agree; paragraph reworded.

Add Proposed fungicide, if applicable as a bullet number

Response: Agree; text added.

Spec 987 referenced above.

Response: No change made; Section 987 was addressed above.

What happens if the contract documents don't address "other material"? Shouldn't the disturbed area be either sodded, mulched, or seeded/mulched? If this is on a sloped area filling the hole with soil does not address potential erosion prevention measures, such as placement of sod. Suggest adding language similar to that in 581-6.2, last sentence "Regrade and sod or mulch the site to match the adjacent condition and grade.

Response: This is outside of the scope of proposed changes; it may be addressed with future changes, following discussion with District Landscape Architects.

Unless new material is being planted in the hole where the relocated material is being removed, the hole should be backfilled with existing soil to help with stabilization.

Response: This is outside of the scope of proposed changes; it may be addressed with future changes, following discussion with District Landscape Architects.

"or as approved in the Contractor's Relocation plan".

Response: Agree; text added

This needs some rethinking. There are many situations where it makes more sense to remove and replace instead of relocate. This should almost be addressed on a case by case basis. Many things can happen between when the DOR decides to utilize relocation instead of demo. Perhaps a section in the contractor's relocation plan for making an argument why relocation is not in the best interest of The Department. That plan would need to be approved by The Department prior to execution.

Response: No change. From Production Support, "The decision whether to relocate or remove a tree is already a case by case basis. When the decision to relocate is made, it becomes incumbent upon the contractor to protect that tree from damage."

or as shown in the plans or approved by the Engineer.

Response: No change; this is understood for most activities, and does not need to be repeated throughout.

Trees and palms need to be planted at the proper depth ( they could have been planted to high or low before relocation).

Response: This is outside of the scope of proposed changes; it may be addressed with future changes, following discussion with District Landscape Architects.

Most relocated material is planted away from any construction activities and tree protection barriers are not needed. Suggest "Provide tree protection barriers if relocated material could be impacted by construction activities".

Response: No change needed. This will be addressed with the Standard Plans and the Contract Documents (summary table/pay item).

There are certain situations where slopes would be better stabilized by flush cutting palm or tree and leaving root ball in place.

Response: This is outside of the scope of proposed changes; it may be addressed with future changes, following discussion with District Landscape Architects.

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Please see attached for the multiple comments/responses from FTBA 6-11-21. NOTE: Only the portions of the proposed revision with comments are included. They appear in the order asked/commented on.

**TREE AND PALM RELOCATION – CONSTRUCTION.**  
**(REV 5-11-21) (FA 1-18-19) (7-21)**

The following new Section is added after Section 571.

**SECTION 581**  
**TREE AND PALM RELOCATION**

**581-1 Description.**

Remove, relocate, and maintain trees and palms in accordance with the Contract Documents.

**581-2 Materials.**

**581-2.1 Water:** Meet the requirements of Section 983.

**581-2.2 Fertilizer:** Provide fertilizer as shown in the Plans.

**581-2.3 Mulching:** The use of cypress mulch is prohibited.

**581-2.4 Landscape Soil:** Meet<sup>[A1]</sup><sub>[A2]</sub> the requirements of Section 987.

**581-3 Reporting.**

**581-3.1 Tree and Palm Condition Report:** Submit a Tree and Palm Condition Report at the preconstruction meeting. Document the existing condition of all trees and palms scheduled to be relocated. Include at a minimum:

1. Tree and Palm numbers<sup>[A3]</sup><sub>[A4]</sub>, as shown in the Contract Documents.
2. Description of any damage, disease, scars or infestation
3. Photographs<sup>[A5]</sup><sub>[A6]</sub> of trees and palms

**581-3.2 Relocation Work Plan:** Provide a Relocation Work Plan in accordance with the Florida Nursery Growers and Landscape Association (FNGLA); it must be prepared by an International Society of Arboriculture (ISA) Certified Arborist, or a Florida Licensed Landscape Architect. Submit the Relocation Work Plan for approval at least one week prior to performing initial root pruning or initiating tree relocation operations. Include at a minimum:

1. A schedule for all relocation activities, including activities that occur prior to, and post relocation

2. Proposed equipment
3. Palm frond removal, bundling, splinting
4. Root pruning procedures
5. Watering procedures
6. Anti-desiccation measures
7. Proposed fertilizer
8. Sample tree identification tag
- 9.<sup>[A7]</sup><sub>[A8]</sub> Proposed fungicide, if applicable

**581-4 Worksite Landscape Supervisor.**

Provide a Worksite Landscape Supervisor to directly oversee all tree and palm relocation work. The Worksite Landscape Supervisor must be an ISA Certified Arborist, or a State of Florida Registered Landscape Architect, or a Certified Landscape Technician or Certified Landscape Contractor in accordance with FNGLA. Provide verification at the preconstruction meeting.

### **581-5 Relocation Requirements.**

Attach plant identification tags as applicable in a manner that does not impact the health of the tree or palm. Do not use paint. Match the plant numbers indicated on the Plans.

Protect trees and palms from damage.

Perform lifting using a tree spade or using nylon-metallic slings wrapped around the trunk.

At the removal location, fill the hole with landscape soil<sup>[A9][A10]</sup>, unless other material<sup>[A11][A12]</sup> is shown in the Contract Documents or approved<sup>[A13][A14]</sup> by the Engineer.

Install relocated trees and palms in their final location within 24 hours of performing initial root pruning<sup>[A15][A16]</sup>, unless otherwise approved in the Relocation Work Plan.

New nursery stock or other material may not be substituted for a relocated tree or palm. Demonstrate<sup>[A17][A18]</sup> that planting holes are free draining prior to planting. Notify the Engineer of drainage or percolation problems before plant installation.

Plant trees and palms to the same depth at which they were removed.

Brace relocated trees and palms in accordance Standard Plans Index 580-001<sup>[A19][A20]</sup>.

Maintain<sup>[A21][A22]</sup> trees and palms in an upright position at all times.

Install tree protection barrier around relocated trees and palms in accordance with Standard Plans Index 110-100<sup>[A23][A24]</sup>.

Remove leaf ties within 14 days of installation.

### **581-6 Post Installation Period Requirements.**

The post installation period is a period of one year from the date of final installation, or until the date of the Engineer's final acceptance of the project, whichever comes first. During the post installation period:

1. Maintain trees and palms to a condition equivalent to the health characteristics in the Tree and Palm Condition Report.

2. Remove<sup>[A25][A26]</sup> dying or dead palms, including the root ball. Cut dying or dead trees flush with the ground surface and remove. Regrade and sod or mulch the site to match the adjacent condition and grade.

3. New nursery stock or other material may not be substituted for a dying or dead relocated tree or palm.

4. Remove bracing at the conclusion of the post installation period unless otherwise directed by the Engineer. Do not allow bracing or straps to damage or become embedded.