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Green Buttonwood at 28 Star Island Dr. Miami Beach, FL.

Date:

February 15, 2021

Prepared for:

BRODSON CONSTRUCTION INC.
120 NE 27th Street. Suite 100
Miami, FL 33137

Prepared by:

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SUMMARY

Brodson Construction hired Bartlett Tree Experts to inspect and evaluate the Green Buttonwood located at 28 Star Island Dr. in Miami Beach, Florida prior to the develop of the lot and the construction of the new house and gardens. This is a mature tree with three large branch failures, the removal of the broken branches due to the size could lead to decay and compromise the structural stability of the tree. The construction and develop of the lot also will have an impact to the tree. Taking extreme precautions and executing a protection plan to try to save the tree will be critical, however time will tell how the tree responds and continue to grow for years to come.

INTRODUCTION

Background

Urban Robot Associates in collaboration with Brodson Construction will build and develop the lot at 28 Star Island Dr. in Miami Beach. Urban Robot will be designing and building the new landscape. At the end of the lot and facing the bay near the seawall there is a mature Green Buttonwood tree *(Conocarpus erectus)*. This mature specimen had sustained branch failures and it's growing in a tree well near the limestone seawall. A section of the tree will have to be pruned to allow the replacement of the seawall and a tree protection plan needs to be implemented in order to try to preserve the tree as the owner has strong desire to keep the tree as part of the new garden.

Assignment

Bartlett Tree Experts' assignment is as follows:

- Visually evaluate the tree from the ground.
- Provide an assessment of the trees condition, develop a tree protection plan and provide recommendations/plans as how to protect the tree before, during and after construction.
- Submit a report.

Limits of Assignment

This report is based on my observations made on February 10, 2021. All of my assessments were performed visually and from the ground. I did not climb the tree or use any aerial lift equipment. No tree risk assessment was performed and this document should not be construed as such.

The conclusions and recommendations are based on the author's experience and education as a qualified professional, and are not intended as a predictor of future conditions. Trees are dynamic

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systems and even healthy, intact trees may fail under given conditions. This work is intended as a tool to assist the tree owner and construction team and designers in making an educated tree management decision rather than to dictate a management action.

Purpose of this Report

This report has been prepared to help Broadson Construction and Urban Robot determine if it's feasible to preserve the Green Buttonwood as a specimen tree at 28 Star Island Dr, take into consideration the current condition of the tree and site development. This is intended also to be used by the client to apply with the City of Miami Beach to obtain other permits for the construction of the new landscape.

OBSERVATIONS

The 28 Star Island Dr. property is located in a private residential neighborhood in Miami Beach. It is a large lot facing the bay. This lot will be developed with a new house and gardens. It's the desire of the property owner to try to preserve the Green Buttonwood growing at the end of the lot near the bay.

The Green Buttonwood is approximately 35 Feet tall, the diameter above the grade and below the first broken limb is 42 inches and the canopy spreads approximately 45 Feet. This is a large mature specimen for this species. The tree is growing in a tree well made of limestone, it has some stairs to the north of the trunk, to the east the seawall is located and to the west the roots of the tree are growing into the surrounding soil. It's likely that the tree's roots are mostly growing in the surrounded soil to the west of the trunk.

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Photo # 1. Green Buttonwood

The tree has a multi-stem trunk with included bark (bark that is trapped between 2 stems creating a weak attachment), one of the stems growing towards the bay failed separating from the main trunk but is still attached to the tree.

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Photo # 2 showing the growing conditions of the tree, limestone retaining wall to form the tree well. Multi-stem trunk with included bark.

Two branches growing also towards the bay have ripped and are still attached to the tree. The higher and smaller branch is 18 inches in diameter near the ripped and the branch just below is 19 inches in diameter near the ripped. The stem that failed is approximately 30 inches in diameter and its closest to the ground. These branches and the large stem are resting on the seawall and growing above the water.

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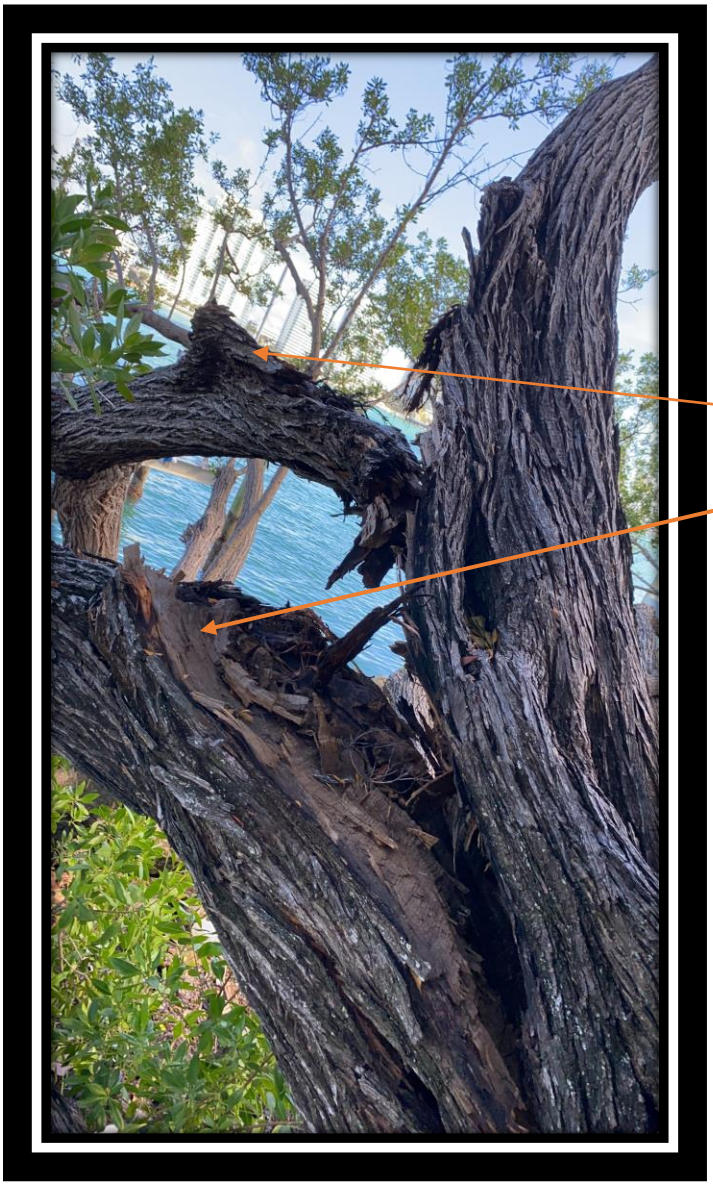

Ripped branches still attached growing towards the water.

Photo # 3

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Branches that failed are resting on the seawall

Photo # 4

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BARTLETT TREE EXPERTS
SCIENTIFIC TREE CARE SINCE 1907

Branches extend over the water.

Photo # 5

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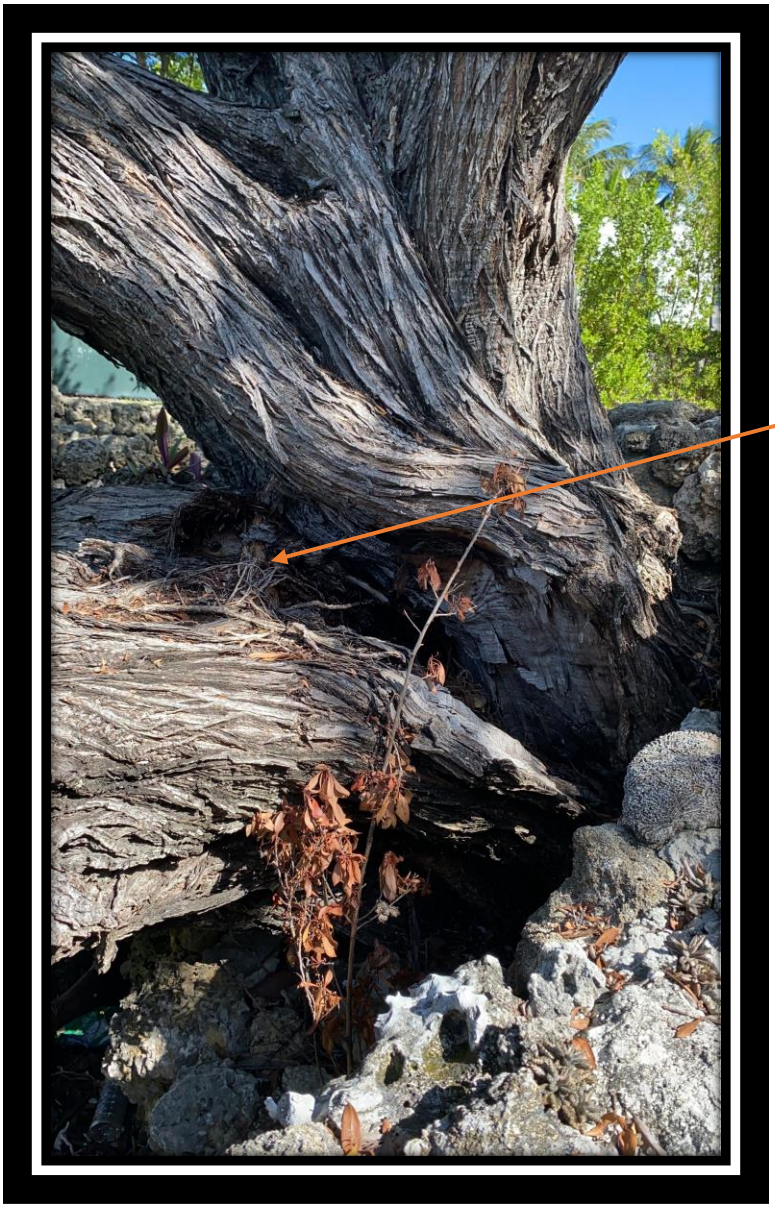

Large stem failed and it's detached from the main trunk

Photo # 6

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The Green Buttonwood has other weak attachments with included bark that will required additional attention to reduce the risk of failure.

DISCUSSION

Green Buttonwood are trees with twisted liked wood and prone to breakage due to the weak attachments especially during extreme weather conditions.

This is a large specimen with large structural defects what could compromise the structural stability of the tree leading to large areas of decay where the failures occurred. Providing the proper care and maintenance of the tree will be critical.

Attempting to save this tree involves multiple considerations:

- Preserve the majority of the roots growing into the surrounding soil by avoiding changes in grade. Limit raising the grade with additional soil to prevent the roots may suffocate and/or receive enough water and moisture.
- Use mechanical support to help stabilize branches and the tree.
- Prune the tree to accommodate the new construction accordingly to industry standards.
- Provide adequate care before, during and after construction.

CONCLUSION

It's important that the owner, as well as the builders, designers and developers understand the limitation and defects that trying to save the tree presents. Proper arboriculture techniques and practices have limitations. As such, the owner must recognize that its response to the recommended treatments may be unpredictable.

RECOMMENDATIONS/PLAN

The following are the recommendations and preservation plan recommended in an effort to attempt to save the tree:

-Create a tree protection zone by installing a chain link fence 6 Ft tall that extends to the dripline of the tree (the most outer parts of the branches).

-Take a soil sample and develop a long term soil care program to provide the tree with the adequate nutrients to reduce the stress due to construction.

- Supply with irrigation to keep the soil moist and don't allow large variations in soil moisture and conditions.

- Prune to remove approximately 30% the canopy by removing the branches above the water to allow the construction of a new seawall. Pruning should be performed under the supervision of a Board Certified Master Arborist and the work should be performed by a Certified Arborist.

- Cut back the branches that are ripped, making a heading cut to leave a 3-5 Ft stub and try to reattach to the main parental branch using bracing bolts and cables if necessary. This will reduce the exposed surface area that possibly could decay. Work should be performed under the supervision of Board Certified Master Arborist and the work should be performed by a Certified Arborist.

- Prune the tree as practical to reduce weight and install support cables that will reduce the risk of future failure. On-going pruning will be required. Work should be performed under the supervision of Board Certified Master Arborist and the work should be performed by a Certified Arborist.

-Monitor the tree on a monthly basis for insect and disease.

- Evaluate the tree after a few months to see if the installation of props may be required to help stabilize the tree.

APPENDIX A: ASSUMPTIONS AND LIMITING CONDITIONS

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or to attend meetings, hearings, conferences, mediations, arbitrations, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant and the consultant's fee is not contingent upon the reporting of a specified appraised value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference.
Inclusion of said information with any drawings or other documents does not constitute a representation of Juan C. Carrasco as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only the examined items and their condition at the time of inspection: and b) the inspection is limited to visual examination of accessible items without

dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

APPENDIX B: CERTIFICATE OF PERFORMANCE

I, Juan C. Carrasco, certify that:

- I have personally inspected the tree(s) and/or property referred to in this report, and that I have stated my findings accurately. The extent of the evaluation or appraisal is stated in the attached report and the Terms of Assignment.
- I have no current or prospective interest in the vegetation or property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I further certify that I am an International Society of Arboriculture Board Certified Master Arborist, and have been involved in the practice of arboriculture and the study of trees for over twenty-five years.

Signed:  Dated: February 15, 2021

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