STAFF REPORT

DATE: August 27, 2019 updated November 6, 2019

RE: 916 Elizabeth Street (permit application # T2019-0412)

FROM: Karen DeMaria, City of Key West Urban Forestry Manager

An application was received requesting the removal of (1) Tamarind tree. A site inspection was done and documented the following:

Tree Species: Tamarind (Tamarindus indica)


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Diameter: 45″
Location: 50% (trees growing in sidewalk area, root issues with sidewalk, canopy in utility lines, very visible tree)
Species: 50% (not on protected or not protected tree list)

Condition: Additional Information-photos of base of tree

Photo showing old stump area that easily removed during clean up of area.

Photo of the base of the tree, cleaned up, showing decay/hole area.

Photo showing base of tree hole area with a shovel to show size of area.

Photo showing the interior decay. Shovel would tap the wood and it would fall off easily.

Close up photo of hole/decay area, view 1.

Close up photo of hole/decay area, view 2.

UPDATE

Condition: 50% (large old tree, large decay area at base of tree that incorporates a large interior area of the base, canopy in good health condition overall tree health appears to be fair to poor)
Total Average Value = 50%
Value x Diameter = 22.5 replacement caliper inches

Updated arborist report has been submitted (Michael McCoy-New Leaf) as well as information from a professional tree trimmer and former certified arborist (John Cole-Shade Tree Inc).

If tree remains, as per engineering and parking, the sidewalk can be rebuilt to bump out around tree. Two parking spots would be removed.

Additional Information

NEW LEAF ENVIRONMENTAL

October 28, 2019

Ken Reynolds
KHP IV Key West LLC
101 California Street, Ste 980
San Francisco, CA 94111

Via email to: Ken.Reynolds@khpcp.com

RE: Update to Certified Arborist Tree Risk and Viability Assessment, Chelsea House Hotel

New Leaf Environmental, LLC (NLE) is providing this report as an update to our previous tree risk assessment dated August 8, 2019. After preliminary construction site work was conducted which removed the adjacent stump, decay was found under the base of the tree, and NLE was requested to conduct an update to the previous risk assessment.

This assessment was conducted by an International Society of Arboriculture Certified Arborist in general accordance with the ANSI A300 Standards for Tree Risk Assessment and associated Best Management Practices (BMP) companion book, for a Level 3 (Advanced) Assessment. Tools used include digital camera, rubber mallet, metal probe, and soil knife. The time period considered for the evaluation is five years.

Trees Assessed:

- Indian tamarind (*Tamarindus indica*), 45" DBH, 50' height, 45' width

Key Observations:

- The tree is located in line with the sidewalk in front of the western parcel of the Chelsea House Hotel. The tree appears to have been originally planted in a sidewalk cutout but has since grown to overtake (and exceed) the entire width of the sidewalk.
- There is currently no continuation of paving from one side of the tree to the other, and the roots have also dislodged a portion of the roadside curb, and the adjacent segment of sidewalk.
- At an approximate height of seven feet, the main stem splits into two stems. Within the next five feet, the two stems further split into a total of nine stems. All of the stems have a narrow angle of attachment with included bark, and would not be considered as structurally sound.
- Overhead utility lines pass through the middle of the canopy, and branches are in contact with and pressing against the lines.
- The base of the trunk has a cavity approximately three feet in diameter. The cavity is cone shaped, with the top extending upwards up to approximately four feet. The inside edges of the cavity all exhibit significant signs of decay, with 2-3 inches of completely friable/loose wood fragments prior to sound wood. The decay is a white rot, which causes greater structural damage than brown rot. The decay is likely caused by an aggressive fungal pathogen. Based on the fungal conchs on the (formerly) adjacent stump, the fungus is likely to be a variety of *Ganoderma*, which is a very destructive pathogen that is difficult to control.
- The removal of the dead stump from the tree that was abutting the tamarind allowed for viewing beneath the base of the tamarind tree. Owing to the space occupied by the formerly abutting tree, the tamarind tree has no roots (or any wood mass) directly under the tree, and no roots/root

flair on the southwest side. Noting that the roots on the opposite (northeast) side are truncated by the curb (and may be further impacted through curb/sidewalk reconstruction), the tree has a significantly increased risk of failure in either direction.

Risk Analysis and Potential Mitigation:

The risk rating of this tree is *High*, with the most likely cause of failure being the structural breakage at the extreme base of the tree, resulting from wood decay, poor/limited root structure, or a combination of the two. With this type of failure the entire tree would collapse, in likely a northeast or southwest direction, resulting in a severe level of destruction to the hotel building on that side, potentially resulting in loss of life if the room were occupied at the time. Branch failure in the interim is also possible, with potential impacts from branch failure including damage to cars parked in the parking spaces immediately beneath, damage to the adjacent structures, loss of electricity to the surrounding area and potential exposure of the pedestrian pathway beneath to exposed electrical wires.

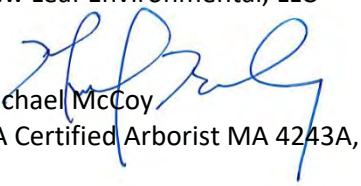
There is no suitable mitigation for the level of decay and structural compromise at the base of the tree. The only effective mitigation measure would be to close this section of road, and to cease use of the hotel buildings on either side, which is not practicable. Removal of weight from the tree to reduce the severity of impact is not possible, as the canopy structure provides no suitable opportunities for canopy reduction, and a significant "heading cut" would likely result in advancing the rate of decay and create a new potential hazard for branch breakage (of fast growing sprouts) high in the canopy.

In addition to these potential losses, it is important to note that the sidewalk is not functional and cannot be re-opened with the tree in place. This of course provides challenges for pedestrian safety and precludes ADA accessibility for the hotel, and would therefore likely require reconstruction of the sidewalk in the area currently used for roadside parking, which would likely result in some additional disturbance to the roots in this area. There are also continual maintenance challenges for the overhead utility lines, which would be anticipated to have repeated outages during windstorms from branch contact with the lines, and the tamarind fruit when fallen provides a potential slip hazard.

Based on this assessment, there is a defined *High* risk associated with this tree, with no suitable mitigation opportunities. The likelihood of catastrophic failure is not imminent, but the likelihood will increase over time, along with an increase in risk in the interim for damage from branch failure. Removal of the tree would result in loss of mature canopy. However, noting the opportunity of new tree planting and incorporating ample growing space and proper species selection to coincide with the refurbishment of the property, removal and replacement would provide the best long-term result for the urban tree canopy, reduce the risk of impacts and damage from this tree, and allow restoration of a safe pedestrian passageway.

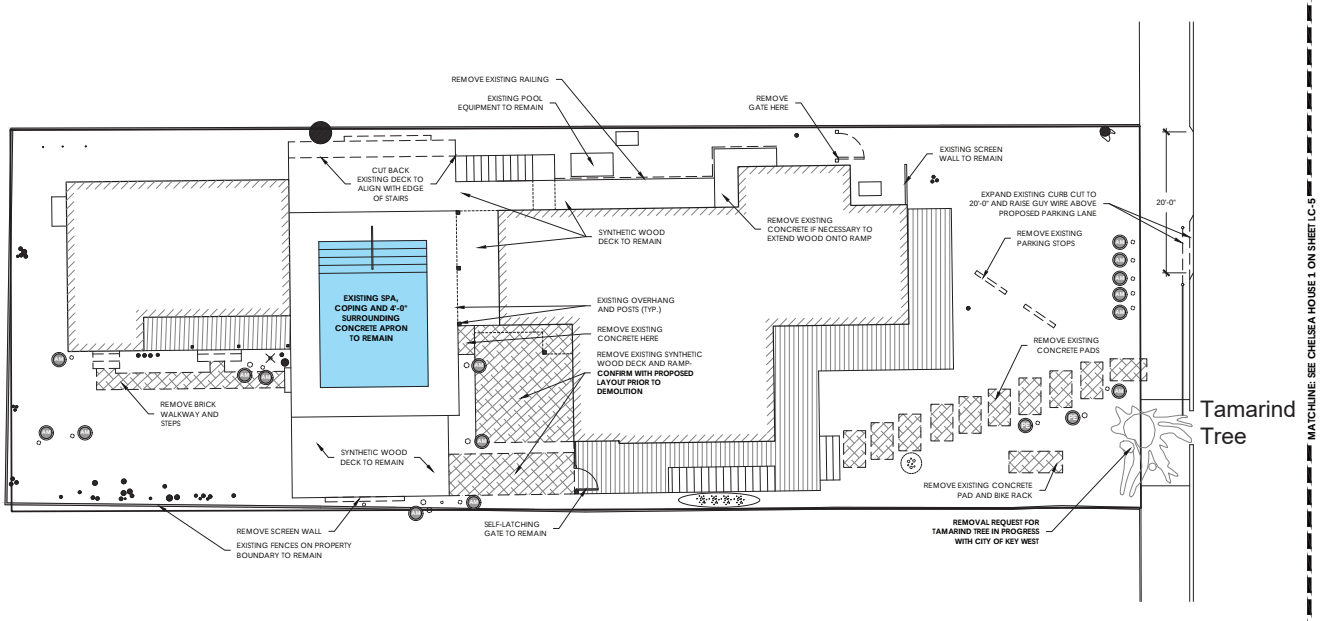
Sincerely,

New Leaf Environmental, LLC



Michael McCoy
ISA Certified Arborist MA 4243A, TRAQ Qualified

Attachment: location map, photo log

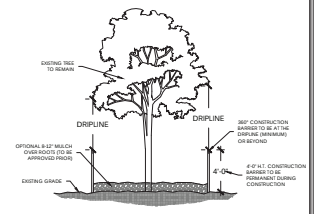


NOTE: LANDSCAPE ARCHITECT TO REVIEW AND APPROVE ALL ENGINEERING DETAILS PRIOR TO IMPLEMENTATION. WORK PERFORMED WITHOUT LANDSCAPE ARCHITECTS APPROVAL WILL BE REDONE AT CONTRACTORS EXPENSE. **NO EXCEPTIONS**.

NOTE: GENERAL CONTRACTOR TO COORDINATE ALL TREE REMOVALS & RELOCATIONS WITH QUALIFIED LANDSCAPE CONTRACTOR OR ARBORIST AS WELL AS COORDINATION WITH CITY AND TREE COMMISSION OFFICIALS. **NO EXCEPTIONS**.

NOTE: CONTRACTOR TO CONFIRM ALL JURISDICTIONAL APPROVALS ARE IN PLACE BEFORE PROCEEDING WITH ANY SITE WORK. **NO EXCEPTIONS**.

NOTE: COMPARE & CONFIRM ALL DEMOLITION WITH PROPOSED LAYOUT PLANS - NO EXCEPTIONS.



TREE PROTECTION DIAGRAM

TREE DISPOSITION PLAN

ID	Botanical Name	Common Name	Size	Disposition
TREE & PALM REMOVALS				
1	*Adonidia merrillii*	Christmas Palm	>8' CT.	**REMOVE**
TREE & PALM ON-SITE RELOCATIONS			**Qty.**	
AM	*Adonidia merrillii*	Christmas Palm	14	**RELOCATE**
PE	*Ptychosperma elegans*	Alexander Palm	2	**RELOCATE**

DEMOLITION LEGEND

- EXISTING HARDSCAPE TO BE REMOVED
- EXISTING FENCE/WALL TO BE REMOVED
- EXISTING TREE/PALM TO BE REMOVED
- EXISTING UNREGULATED TREE/PALM TO BE REMOVED
- EXISTING TREE/PALM TO REMAIN
- EXISTING TREE/PALM TO BE RELOCATED

KEY WEST, FLORIDA
KHP CAPITAL PARTNERS HOTEL

NORTH

CHELSEA 2 SITE DEMOLITION & TREE DISPOSITION PLAN

0' 4' 8' 16' 24'
SCALE: ⅛" = 1' - 0"

DATE: July 1, 2019
DRAWN BY: LMK

SHEET LC-6

CRAIG REYNOLDS landscape architecture
craigreynolds.net 305.292.7243
517 Duval Street, Suite 204 Key West, Florida 33040

Photo 1. Overall view of tree from south

Photo 2. View of tree from north. Sidewalk is missing, adjacent pavers and curb broken.

Photo 3. View of base of tree from the south.

Photo 4. View of canopy and utility lines

Photos 5 & 6. View of cavity on southwest side of tree. Soil knife inserted into white rot to a depth of approximately three inches on both sides.

Photos 7 & 8. View of stump removed from southwest side of tree. White rot visible on right side of stump, fungal conchs visible on main root (larger view on inset).

Photo 9. View within center cavity of tree, no roots or woody mass beneath the tree (root flair curving out is visible).

Karen DeMaria

From: Karen DeMaria
Sent: Thursday, October 31, 2019 2:23 PM
To: Karen DeMaria
Subject: FW: Indian Tamarind Tree. Chelsea house Elizabeth St.

From: John Cole <shadetreeservices@yahoo.com>
Sent: Thursday, October 31, 2019 2:11 PM
To: Karen DeMaria <kdemaria@cityofkeywest-fl.gov>
Subject: Indian Tamarind Tree. Chelsea house Elizabeth St.

Karen, I was brought in by JDS Construction to examine the Indian Tamirind Tree.
After extensive examination of the cavity on the western base of the tree. I have found that there is a cavity opening with advanced decay throughout the heartwood approximately 52” from the soil level extending upwards. I noted extensive decay and fungi development in the remaining support roots.
With the amount of rot and decay it is at high risk of structural failure supporting this large canopy. (Please see attached photos)

It’s my professional opinion and with over 30 years in the field of arborculture that our options for public safety and to prevent property damage are limited to complete Tree removal and replacement.

Respectively

John Cole
Sent from Yahoo Mail for iPhone