1) Trace-Some Faily Oak
3 Tree - Island that (New File Survey)



KENNETH A. KNOX Consulting Arborist

June 19, 1984

Mr. Joe Sistare Site Construction Manager ALCOA South Carolina P. O. Box 819 Beaufort, SC 29901-0819

Dear Joe:

As a result of my recent inspection, I offer the following observations, comments, and recommendations concerning certain trees and treed areas:

A. Previously-treated trees

1. Sams oak - looks as good as can be expected; leaf development and twig growth have progressed at a very good rate since injection and fertilization, and the removal of poison ivy vines. Large water oak/right front of #11 green has been badly damaged by construction activities and probably won't survive too many more years. In the meantime, it partially blocks from view the more important cemetery oak and is thus a nuisance tree. Also, several large oaks and a Southern magnolia on South side of cemetery are too tall and too dense for Sams oak to properly develop.

Recommendations:

- a) Remove large water oak at right front of green.
- b) Trim oaks and magnolia at South side of cemetery to thin out crowns so as to allow more light to filter through to Sams oak (note: this latter trimming should be in accordance with Class A, NAA, Specifications and should be accomplished only by qualified dendricians under the direction of a consulting arborist).
- B. Boulevard trees there has been considerable additional disturbance of root zones of these trees since my last visit; numerous trees are now dead and many others show indications they will die soon (Hypoxylon cankers, borers, etc. have already become established). Examples of injury and results of

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same include:

- 1. Oak in center of boulevard opposite construction headquarters sign when other trees were felled, a large limb was broken from tree that is to remain; this type of injury is serious, in that root and trunk damage can result from the force of impact, plus large stubs such as this ultimately decay and reduce tree vigor and stability.
- 2. Oaks on either side of 54" storm drain line at Lagoon Four basal injury, with subsequent invasion by <u>Hypoxylon</u>; this tree, plus live oak nearby, will die.

Recommendations:

- a) Remove all dead and dying trees now, before final grading and paving are completed.
- b) Exercise care in working around important trees so as to reduce additional losses.
- C. Pecan Grove this is a beautiful area, with the trees still in fairly good health (men and equipment have't gotten to them yet!). There is a "pocket" of unthrifty trees here, however, and a more intensive investigation is needed to ascertain the causes so that their vigor can be quickly restored (and thus avoid mortality) and so the other trees can be properly protected and/or treated.

Recommendations:

- a) Collect soil samples from eight areas within the grove and submit to lab for analyses. Treat areas with lime, fertilizer and other elements as indicated by lab report. Repeat at two-year intervals (test soil in summer; treat trees in autumn).
- b) Retain wild vegetation at the base of each tree for protection and to retain wild character (some thinning or trimming of this vegetation may be in order in certain instances, but such treatment should be minimal).
- c) Remove Virginia Creeper vines from one tree (where such growth has become so extensive as to be harmful to tree), and reduce moss growth on several others.
- d) Design parking so as to minimize root damage. (Do not grade or pave).
- e) Inject all with Stemix nutrients prior to June 30.
- f) Retain all existing ground cover (wild strawberries, etc.).

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- g) Add one to two inches (1-2") of decomposed organic matter to soil surface to reduce soil temperature and conserve moisture (perhaps a layer of well-rotted sawdust, topped with decomposed hardwood chips, would be best).
- D. Live Oaks, etc. along shore at proposed Marina area these are extremely valuable trees (not only for their shade and beauty, but for the protection they provide the pecan trees).

Recommendations:

a) Retain all trees to extent possible. Do not remove or trim except under direction by consulting arborist. Do not "open up" or "trim up" too much. Do not build marina or other structures, etc. too close to trees. (I believe it would be extremely beneficial for me to be involved in the planning of the marina, parking facilities, walkways, utility installations, etc.).

E. Golf Course Trees

1. #16 West

a) Large (approx. 45" Dbh) live oak along South edge of fairway near tee shot landing area - this tree has extensive fill over its root system, but this condition is probably not so serious as the apparent root destruction that has already been caused by the installation of a water line and a catch basin within the root zone. At any rate, this is a very important and valuable tree that has been put under a great deal of stress by harmful construction design and activities and it is now very weak. In addition, extensive trunk injury has been done by clearing and/or grading equipment. (This is another prime example of why it is important to include the advice of a qualified arborist during the planning and construction stages).

Recommendations:

- i) Grade off excess fill down to near original grade (perhaps 12" on woods side; 18" on fairway side); use small equipment and avoid further root and trunk injury.
- ii) Do not seed to grass on South side of trunk (towards woods), allow leaves, pine needles, etc. to accumulate and control future weed growth with occasional use of Round-Up ($2\frac{1}{2}$ ounces per gallon of water).
- iii) Trace and treat scars on trunk and major roots (before June 30).

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- iv) Fertilize and vertical mulch in Fall.
- v) Inject with Stemix nutrients before June 30 to aid in callus formation and improved vigor.
- b) Loblolly pine (approx. 24" Dbh) along North edge of fairway a valuable tree that has been extremely stressed; a prime candidate for pine beetle attack. Needs injections, fertilization, and spraying.
- c) One individual loblolly and group of three loblollies along South edge of fairway near green same as above.
- d) Sugarberry at green this is a key tree with <u>lots</u> of <u>character</u> due to unusual branching; multiple trunks, etc. However, it has been badly damaged at base (<u>why???</u>). Again, this is carelessness and reflects a lack of sensitivity to trees' needs and physiology. Damage is deplorable; how can such a tree be replaced? Why was protection not provided for this tree?

Recommendations:

Trace and treat scars, trim, inject, spray, fertilize and vertical mulch.

2. #17 West

a) Large live oak behind green is an incredibly beautiful and valuable tree (lots of character is added by virtue of the tree being at a higher elevation than the fairway, so that as a golfer approaches the green, he will be looking up through the crown of the tree. Such a tree again cannot be replaced. Why has it not received some care? (Foliage is already becoming chlorotic).

Recommendations:

- i) Collect soil samples and fertilize and vertical mulch in Fall.
- ii) Inject with Stemix nutrients before June 30.

3. #18 West

a) Large live oaks, etc. create a park-like atmosphere on and around the tee. This is a beautiful area that needs to be treated with care.

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Recommendations:

i) Ladies tee appears to be ok as is.

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- ii) White tee needs minor trimming to live oak at left front edge of tee; trim lowest limb back approximately ½ way to trunk (to other large lateral).
- iii) Blue tee move tee markers back and to right so as to avoid trimming large oak at edge of marsh. (Do not touch this tree; it is beautiful as it is and any trimming will be extremely detrimental).
- iv) Large double-trunk ash has already lost one stem (this is a good example of why proper cabling is so important); remainder is decayed and dangerous (leans towards white tee). Remove promptly (but carefully, so as to avoid damage to other trees).
- b) Large live oak/left rear of green is crowded by three lesser valuable water oaks to North and West; remove water oaks so as to provide adequate growing spacing for live oak.

4. #10 West

Trees dying along East side of fairway are probably doing so as result of combination of heat and smoke injury, excessive root damage (all ground vegetation has been removed), exposure to sun and wind, etc. Again, this appears to be careless and unnecessary construction practices which will continue to cause a lot of grief in the future. Trim and remove as needed.

5. #15 East

Pines and oaks at back of tee have been badly skinned up and have excessive topsoil filled around them. Trace and treat scars; remove excess fill; inject with Stemix; fertilize and vertical mulch.

6. #11 East

- a) Loblolly at left edge of fairway approximately 75 yds. short of green very weak and needs help; fertilize, inject and spray.
- b) Live oak at green basal injury, etc.; treat as above.
- c) Water oak (approx. 14" Dbh) at right rear of green (with white ribbon attached) lightning strike or wind shake has caused extensive crack in trunk that is decaying; leans towards cart path; is dangerous now and can only get worse. Remove immediately.

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d) Water oak (approx. 22" Dbh) behind green - decayed at approximately 10' and 15' above ground (at site of old limb stubs); trunk bends at this point and leans towards #12 tee; cable back to two other water oaks and flush off old stubs.

7. #18 East

- a) Large willow oak along right side of fairway near tee shot landing area key tree, but very weak. Fertilize, spray, inject with Stemix.
- b) Large dogwood nearby too much fill; grade down to near original grade.
- c) Hickories along side of fairway at edge of marsh one has been hit by lightning and all are very weak (ground has been scraped and surface roots damaged; why wasn't soil scraped with small tractor and spring raked instead of heavy bulldozer with unyielding blade?) Trim to remove deadwood; fertilize and inject with Stemix (these trees are important for protecting and stabilizing slope).
- d) Live oak at green trunk has been badly damaged. Trace and treat scars, trim, fertilize and inject.
- F. Clubhouse time did not allow an adequate examination and analysis of trees in this area. Large laurel oak in front is extensively decayed and perhaps is too unstable to be allowed to remain; on the other hand, it is a potentially valuable tree that perhaps can be treated and supported and stabilized. Further analysis is necessary (again, I feel that this should have been done prior to construction).

Summary

I am very concerned over the concept of tree appreciation and care as I view it. There seems to be concern for trees to the extent that existing trees are used in golf course design, to beautify the boulevard, to landscape the clubhouse, etc. Surveyors are being paid to locate, measure, identify, and plot certain trees; architects include them in their designs; workmen are instructed to exercise care in working around the trees, etc. However, there does not appear to have been enough appreciation to budget sufficient money to analyze the tree situations and to set up proper guidelines and controls. Many of the trees that are supposedly being "saved" will either die or need a great deal of work (and money) to prolong their existence. In addition, their stability (due to root damage, decay, etc.) and thus safety to future residents, visitors, and employees will be in question.

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I am greatly concerned over all the abuse and neglect that has already taken place, and of the divergent attitudes towards the trees. The trees make the island what it is. Why then should their care be given a secondary role?

Prevention is always the best cure, and steps must be taken to prevent future damage as much as possible. It is still not too late! I suggest you set up at least a one-day seminar whereby all contractors could be assembled together and receive proper instruction and appreciation of trees. I would propose to show them slides of abused trees along with subsequent decay, decline, breakage, property damage, mortality, etc., and explain to them exactly what happens when bark is skinned off or roots damaged, etc. Get them all involved, from the dozer operators to the truck drivers and ditch diggers, from the surveyor to the architects, etc., and give them some real concern for the future beauty of the island.

I am further concerned over what each homeowner may do to their building lot. You may already have your do's and don'ts and covenants, etc., but what I believe you really need is a quality brochure that explains what happens to trees when a wooded lot is overly-thinned and the remaining trees are suddenly exposed to drying winds and sun; what happens when existing shrubs, young trees, and other ground vegetation and organic matter are scraped away by a bulldozer; what happens when roots are destroyed in the course of digging for drive-ways, foundations, sewer lines, water lines, electric and telephone lines, underground lighting and sprinklers, etc., etc.

Such a brochure could be a real sales tool to show people how much concern there is for retaining the peacefulness, the beauty, the cooling effect, etc. of the trees.

This project needs more input from a tree specialist such as myself. I can help you, in many ways. In the long run, such help will result in dollars saved.

Sincerely,

Kenneth A. Knox, ASCA Consulting Arborist

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Enclosure

cc: Bill Cochrane John Cardamore Phil LeRoy