

SOUTHPORT FORESTRY COMMITTEE



Franklin Park Tree Assessment

August 2023



**North Carolina Department of Agriculture
and Consumer Services**
N.C. Forest Service



Steven W. Troxler
Commissioner

Scott Bisette
Assistant Commissioner

July 27, 2023

Urban Forestry Service Request
Brunswick County: Town of Southport

North Carolina Forest Service
1616 Mail Service Center
Raleigh, NC 27699

Scott Len, Southport Forestry Committee
318 Willis Drive
Southport, NC 28461

Dear Mr. Len,

I enjoyed meeting with you during my visit to the Town of Southport. The purpose of my visit was to examine the mature live oak trees in Franklin Park and provide the town with an overview of the trees' health and tree care advice to maintain the live oaks for the future.

Overview:

The area that comprises Franklin Park was originally designated as the town commons during the 1700's, when Southport was founded. Later, the commons was made into a park in the 1800's. During the early 20th century, WPA & CCC workers made improvements to the park, but little proactive management has been done to the park or its trees since then. The majority of tree work has been "reactive" pruning, following storms and hurricanes that frequently hit the area.

The trees found within Franklin Park are primarily mature live oaks (150+/- years old) with some scattered laurel oaks, eastern red cedars, dogwoods, and crepe myrtles. The live oak trees have all been tagged with numbered tags to make future inventory and care easier for the town.

Overall, I found most of the trees to be in fair to good health. Many of the live oaks have some suspended dead wood in their canopies. This isn't unusual for trees their age that are exposed to occasional severe storms. I also noted that a number of the trees have large wounds with exposed patches of wood on their trunks. Few of the trees had exposed surface roots, and most of the trees had healthy canopies with no signs of insect damage or tree disease.

Recommendations:

Suspended Dead Wood

One of the issues I saw that affects nearly every live oak in Franklin Park is suspended dead wood in the tree's canopy. Suspended dead wood occurs when a tree branch dies back, or is damaged, and a portion of the dead branch remains attached to the tree. Suspended dead wood is often a natural part of a tree's self-pruning and isn't always an indicator of poor health. When

trees in parks and public areas have suspended dead wood in their canopies, it can create a falling hazard. These dead branches have a much higher risk of falling from the tree and can potentially cause harm to any people or property located beneath the trees. I recommend the town have qualified tree care professionals prune away the suspended dead wood in the live oak trees. Not only does this greatly reduce the risk the trees pose to public spaces, but a clean, flat pruning cut has a much better chance of compartmentalizing and healing, which reduces the likelihood that the tree will experience decay.

Trunk Injuries with Exposed Wood

Another issue I saw affecting several trees within the park were large injuries to the trunk where the tree's bark was missing, and the sapwood was exposed. In all cases, these injuries appeared to be quite old. I noted scar tissue on the borders of every injury, which indicates the tree has been healing for several years. The biggest issue with this type of injury is that the exposed wood is open to the elements, as well as wood boring insects and decay producing fungi.

Live oak wood is particularly resistant to decay. In most of the trees I examined with this type of injury, the wood appeared to be solid with very little decay. Many of these trees may be completely structurally sound, provided that there's no significant decay hidden within the tree's trunks. I recommend managing the live oaks with exposed wood trunk injuries on a case-by-case basis. Each tree should be examined by a qualified private arborist with a resistograph or ultrasound device that can measure wood density and detect hidden decay. Trees that lack enough sound holding wood to provide structural stability should be removed to reduce the falling risk posed to the public. Trees with sufficient solid wood can remain in the park but should periodically be re-examined. Trees with visible soft rot, or with fungal bodies growing from their trunks may have an elevated risk and should be examined promptly.

Exposed Roots and Soil Compaction

As we discussed during our meeting, the sandy soil found in Franklin Park is resistant to soil compaction. I observed very little soil compaction in the park, even in the more highly trafficked areas. Several of the trees had exposed surface roots, but I saw minimal lawnmower and foot-traffic damage to the roots.

I recommend taking some steps to lessen the impact on the tree's root systems. In the most highly trafficked areas in the park, I recommend spreading mulch to cushion impacts to the soil. This will also protect the exposed sand from erosion which might expose tree roots. As the mulch decays, the organic matter released into the soil contributes nutrients for the trees.

For the trees with exposed surface roots, I recommend covering the roots with a layer of mulch as well. This will protect the tree's roots from foot traffic and minimize the need for frequent mowing close to the trees.

Future Landscaping

You mentioned that the town is considering landscaping projects within the park in the future. This can enhance the diversity and beauty of the park, and when done properly, can also help to protect the mature live oaks that are the focal point of Franklin Park. When planting new trees and shrubs, I recommend taking steps to avoid damaging the roots of the established trees. Avoid

cutting tree roots when possible and try to locate planting areas in the openings between the oak tree's canopies. Shrubs and small trees can be used to focus foot traffic in particular areas, creating natural barriers that encourage the public to stick to preferred trails.

In the future I recommend periodic inspection of the park's numbered trees. Health information and maintenance needs should be updated, and work scheduled as needed. I recommend working with qualified tree care professionals for future pruning needs.

The NCFS U&CF branch is happy to assist Southport with an inventory of the park's trees. I'll be working with our staff to put together a group of certified arborists who can visit and inventory the trees and take note of their health and overall condition. I will keep you up to date on the progress of this project, and let you know when we schedule workdays in Southport.

Please feel free to reach out to me if you have any questions or comments. We're happy to assist you with your urban forestry needs.

Thank you,

F. Justin Bennett
NCFS Urban Forestry Specialist
ISA #SO-6632A



GYM

REC

GALLERY

FIRE DEPT

WVC

FRANKLIN SQUARE PARK
SOUTHPORT, NC

Google E

ZONE 1

ZONE 3

ZONE 2

PUMP

STAGE

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LO Live Oak LL Laurel Oak RC Red Cedar
M Magnolia D Dogwood

Southport Forestry Committee
Franklin Park Tree Survey

Tree #	ZONE	SPECIES	DBH	NOTES	CANOPY	LIMBS	TRUNK	AGGR.
Example	1	Live Oak	35.5	Dead Limbs, Bark compromised	5	4	4	4.33
1	1	LO	32	unbalanced, void @ root collar, edge of sidewalk	2	2	3	2.33
2	1	LO	42.9	Dieback in Canopy, limb damage	3	3	4	3.33
3	1	LO	38.7	Identified for possible removal - minimal canopy, most dead, SP	1	1	2	1.33
4	1	LO	38.8	dead limbs over Howe, unbalanced, SP	3	3	4	3.33
5	1	LO	46.5	old damage to major limbs, unbalanced	2	2	4	2.67
6	1	LO	32.5	some major limb damage, SP	4	3	4	3.67
7	1	LO	34	old limb wounds, sparse canopy, poor balance	2	3	4	3
8	1	LO	54.1	large limb on church side, bark missing/poor shape. Poor balance, old prune wounds	4	2	3	3
9	1	LO	30.1	wounds in trunk, old prunes/old wounds on limbs	3	2	3	2.67
10	1	LO	30.3	unbalanced, large injury to trunk, SP	3	2	3	2.67
11	1	LO	35.7	possible candidate for removal in future - Monitor. Bark missing, poor shape. Two leaders, hvy bark loss, severe unbalance	1	2	1	1.33
12	1	LO	40.1	limb damage/pruning, woodpecker tracks, Nash edge	4	3	4	3.67
13	1	LO	11.7	many dead small branches, young tree	3	4	4	3.67
14	1	LO	44	old prune wounds, large trunk scar	4	3	2	3
15	1	LO	28.5	on main thoroughfare, surface roots - mulch around base	3	3	2	2.67
16	1	LO	46.1	overall good - lightening scar? Old prune wounds	4	3	4	3.67
17	1	LO	34.5	lightening scar? Exposed heartwood/little decay - monitor	3	2	2	2.33
18	1	LO	28	conjoined//overall good shape	4	3	3	3.33
19	1	LO	31.5	conjoined//overall good shape, old prune void	4	3	2	3
20	1	LO	33.9	bark peel/recovered. Surface roots, SP, old limb scars	3	3	4	3.33
21	2	LO	24.1	some bark slough, scars	3	3	4	3.33
22	2	LO	33.7	knot - woodpecker or squirrel widening, limb loss	4	3	4	3.67
23	2	LO	31	old prune wounds, small void	4	3	4	3.67
24	2	LO	35.3	radial crack - Bartlett to ultrasound, old prune wounds, some dieback	4	3	3*	3.33
25	2	LO	24.9	SP, old limb wounds, few voids	3	2	4	3
26	2	LO	24.1	new trunk wound, limb loss, void	4	3	4	3.67

LO Live Oak LL Laurel Oak RC Red Cedar
M Magnolia D Dogwood

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27	2	LO	26.5	Interior decay on 1 limb, roots. Check lean following storms, conk	4	3	3	3.33
28	2	LO	28.8	some bark loss, limb loss/prunes	4	3	4	3.67
29	2	LO	39.4	old limb wounds/loss. Small bark void, SP	4	3	4	3.67
30	2	LO	47.5	"Y" some cracked bark, old limb loss	4	3	4	3.67
31	2	LO	47.6	Deadwood, exposed heartwood, bark slough	3	2	2	2.33
32	2	LO	55.8	"Y", SP, dead wood, limb/bark wounds	3	3	4	3.33
33	3	LO	21.4	good shape - young, some small dead branches	4	4	5	4.33
34	3	LO	37	Old trunk wound. Bark change - "Smooth patch disease?"	4	3	3	3.33
35	3	LO	61.5	Crack - Bartlett assess depth. Bark slough, old limb wounds/breakage	3	3	2	2.67
36	3	LO	40.8	old limb prunes	4	3	4	3.67
37	3	LO	33.1	old trunk wound, old limb prunes	4	3	3	3.33
38	3	LO	26.6	Surface roots - mulch around (Grnds Crew to remove limb over lot) Old wound in main leader, dead small in canopy	4	4	4	4
39	3	LO	40.3	old limb wounds/prunes. Bark loss on limbs	3	2	4	3
40	3	LO	29.3	poor balance, sparse canopy, 1 leader broken	2	2	4	2.67
41	3	LO	27	old prunes/breakage of limbs, sparse canopy	3	2	4	3
42	3	LO	42.3	exposed roots, old prunes, sparse canopy/suckers	2	3	4	3
43*	3	LO	36.8	void in base, solid heartwood - monitor	3	2	2	2.33
44*	3	LO	33.3	old limb wounds, SP	2	2	3	2.33
45*	3	LO	44.8	old limb wounds, bark slough, wound trunk base	2	2	2	2
46*	3	LO	33.7	huge catface - solid heartwood. Unbalanced, boring in trunk	2	2	2	2
47	2	Cherry		3 main leaders				
48	Nash	LO	27.3	SP, trunk wounds, broken limbs	2	2	2	2
49	Nash	LO	33.5	in tub - small root zone	2	2	3	2.33
50	3	LO	53.3	large scar - bark gone - solid heartwood. Bark slough, large wound trunk base	3	2	2	2.33
51	2	Pecan	24.1		4	4	4	4
52	2	LO	7.8	some prune wounds	5	5	5	5
53	2	LO	7.2	some prune wounds, exposed roots	5	5	4	4.67
54	1	Laurel	30	2 main leaders, wood pecker tracks, old prune wounds	5	4	3	4
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LO Live Oak **LL** Laurel Oak **RC** Red Cedar
M Magnolia **D** Dogwood

Southport Forestry Committee
Franklin Park Tree Survey

56				NOTES: Compaction generally not an issue - very few roots above surface. Ground easily penetrated.				
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52	2	LO	7.8	some prune wounds	5	5	5	5
47	2	Cherry		3 main leaders				
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Forestry committee member(s) present:

Tree species observed:

Address/location of inspected tree:

Date:

Criteria	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Score
Tree Canopy	Tree canopy cover is near 100%. Leaves appear full and are not dropping prematurely from the tree. Canopy is evenly covered with leaves.	Tree canopy cover is at least 90%. Leaves appear full and normal. Some leaves are missing from a few branches, but overall, tree canopy appears healthy at time of observation.	Tree canopy is 80-89%. Some leaves appear stunted and/or absent from several limbs. Some leaves appear to be dropping prematurely.	Tree canopy is 70-79% covered in leaves. Distribution of leaves is spotty and more than several limbs appear to be missing and/or dropping leaves prematurely.	Less than 69% of the tree canopy is covered in leaves. Leaves appear stunted and/or significant leaf drop may be occurring prematurely.	
Limbs	Tree limbs and crown are balanced with no dead/dying/diseased branches. Attachment points to the main trunk are strong. Minimal to no evidence of nesting cavities or insect damage. Tree has been pruned properly and is in excellent condition.	Tree limbs and crown are mostly balanced. There are no more than 1-2 branches that appear to be dead/dying/diseased. Some evidence of nesting cavities or insect damage. Tree has been pruned properly.	Tree limbs and crown are adequately balanced. Tree has 3-4 branches that appear to be dead/dying/diseased. Nesting cavities and/or insect damage is moderate. Tree has not been pruned properly—dead snags are evident.	Tree limbs and crown are poorly balanced. Tree branches are mostly dead/dying/diseased. Nesting cavities and/or insect damage is becoming severe. Tree has not been pruned properly—dead snags are evident.	Tree limbs and crown are poorly balanced. Tree branches are mostly dead/dying/diseased. Nesting cavities/insect damage is severe. Tree is improperly pruned and dead snags pose a threat to public safety.	
Trunk	Trunk is in excellent condition with no evidence of dead or missing bark. Bark coloration is normal for the tree species. No apparent interior decay is visible.	Trunk has some evidence of damage but is less than 5% of the trunk. Bark coloration appears normal for the tree species. No apparent interior decay is visible.	Trunk is 10-15% damaged. Some evidence of bark cracking around the trunk. Bark appears discolored in places.	Trunk is 16-25% damaged. Moderate evidence of cracking bark. Discoloration of trunk is evident; conks or other decomposing fungi are present around the trunk.	Trunk is >25% damaged. Strong evidence of cracking or peeling bark. Discoloration is present throughout most of the trunk. Conks are present in most places around the trunk. Structural integrity of the trunk poses a safety hazard for the general public.	

Post Assessment Comments

Overall score:

Tree ranking and continued monitoring criteria

For trees that with an overall score of **5 or 4**: Regular follow up assessment in 5 years is recommended. No recommendations for corrective pruning at this time.

For trees with an overall score of **3**: Follow up monitoring should occur within 2-3 years. Some recommendations for corrective pruning may need to be made at time of observation.

For trees with an overall score of **2**: Follow up monitoring should occur in 6-12 months. Recommendations about corrective pruning need to be made at this time.

For trees with an overall score of **1**: This is a priority species and recommendations should be made about removal as it poses a potential threat to public safety or structural integrity of surrounding buildings.

Southport Forestry Committee
Franklin Square Park Assessment
August 2023



Typical issues found



Tree 3: Poor form, minimal canopy



Tree 8: Broken limb, old prunes. Heartwood exposed



Tree 9: Very old prune, reaction wood



Tree 10: old damage scar, reaction wood at base of trunk. Exposed heartwood.



Tree 10: Embedded object, insulator (prevalent in many of the trees)



Tree 11: Exposed heartwood on trunk



Tree 11: Old prune of main leader, old trunk wound, exposed heartwood



Tree 14: Old limb loss, exposed heartwood on trunk



Tree 17: old lightning scar? Apparent lean



Tree 21: embedded wire/insulator. Bark loss.



Tree 22: old woodpecker trails



Tree 26: bark scrape at base of trunk. ONLY new wound found on any tree in Park.



Tree 29: old limb/bark loss.



Tree 30: Old limb loss



Tree 31: old damage to base of trunk. Exposed heartwood.



Tree 34: "Smooth Patch" (loss of outer bark, not harmful to tree)



Tree 37: very old limb loss



Tree 38: Exposed roots



Tree 50: old scar at trunk base, likely car damage (tree adjacent to E. Nash). Minor indication of rot



“The Four Sisters” (Tree’s 43-46). Sparse canopy, wounds on trunks, limb loss in canopy

SUMMARY

Please find attached my final report on the status of the trees in Franklin Park. The NCFS report reflects a more general overview of the park and the trees within; I have since done a tree-by-tree assessment using established assessment criteria. In addition, the report contains a photo gallery of **typical** issues found on the trees in park; not every tree has every issue but these are the most common/prevalent.

A couple of takeaways from the NCFS visit and my survey:

- The number one enemy or cause of the issues in the park is **AGE** - these are old trees that have been beat up over the years and the issues are common amongst ALL the live oaks around town and not unique to Franklin Square
- I found only one incidence of new/recent damage (other than the cuts made this week to remove deadwood). Tree 26 has a recent bark scrape; all the other wounds, scars, prunes, and limb loss are **very** old based on the amount of reaction wood adjacent to the wounds.
- There are a number of trees with exposed heartwood and bark loss from old wounds. Surprisingly there is little apparent incidence of rot, at least as indicated by the tree's exterior. The Bartlett assessment might provide more insight as to what's happening inside.
- Several trees have exposed roots - this can be easily mitigated during any future project through the use of mulch or other permeable media.

I look forward to any additional information the Bartlett Tree assessment can add to our data set. As I told the "Friends of Franklin" - with regard to the trees "Restore" is not an appropriate or viable plan - these trees are old and there is nothing that can be done to restore them to youthful vigor. "Renovation" of the park is probably a better term - there are things that can be done to the park by the provision of understory plantings, shrubs, walkways, etc. that will minimize the likelihood of future effects on the trees, but they are what they are. The 'damage' I found is almost without exception extremely old and not a result of any recent use or activity of the park.