



Case # BZA-05-25-00867

Charleston County BZA Meeting of July 7, 2025

Applicant/Property Owner: George Michael Rentz Jr.

Representative: James Schulze of Discovery Development Group

Property Location: 2141 Edisto Avenue – James Island

TMS#: 343-06-00-107

Zoning District: Low Density Residential (R-4) Zoning District

Request:

Variance request for a proposed single-family residence addition to encroach within a restricted area three times the DBH (Critical Root Zone) of a 73.5" DBH Grand Live Oak Tree.

Requirement:

*The Charleston County Zoning and Land Development Regulations Ordinance (ZLDR), Chapter 9 Development Standards, Article 9.2 Tree Protection and Preservation, Sec. 9.2.4.C. Required Tree Protection states, "In no case shall any paving, filling, grading, Building, or construction footing occur or be placed within three times the DBH in inches from the trunk of the Tree, unless otherwise approved by the Board of Zoning Appeals."*



## CHAPTER 9 | DEVELOPMENT STANDARDS

### ARTICLE 9.2 TREE PROTECTION AND PRESERVATION

#### Sec. 9.2.4 Required Tree Protection

##### A. General.

1. All Grand Trees and any other Trees required to remain on a site must be protected during construction and Development of a Parcel. Tree protection must be shown on all Development plans prior to site plan approval. A site inspection of the Tree barricades must be scheduled by the Applicant with the Zoning and Planning Department for approval prior to the issuance of permits or the start of Development activities.
2. Prior to issuance of a Zoning Permit, a pre-construction planning conference is required for on-site Tree preservation with the Zoning and Planning Director or staff representative, the Applicant(s), and any appropriate parties for determining if there is need for additional Tree protection techniques and for designating placement of Tree barricades, construction employee parking, temporary construction office, and dumpsters.

B. Prior to the start of Land Development activities, protective Tree barricades shall be placed around all Required Trees in or near Development areas. The barricades shall be constructed of wood, metal, or plastic fencing or other materials approved by the Zoning and Planning Director, and include a top rail. Tree barricades shall be placed beneath the canopy Drip Line or one foot times the DBH of the Tree as a radius from the trunk, whichever is greater. Other protective devices or construction techniques may be used as approved by the Zoning and Planning Director. Three inches of mulch shall be installed and maintained within all Tree barricade areas. The mulch shall remain in place throughout Development activities. The area within the Tree barricade shall remain free of all Building materials, dirt, fill, and other construction debris, vehicles, and Development activities. All Required Trees are also subject to the requirements of Sec. 9.4.6, *Landscape Materials Standards*, and Article 11.3, *Enforcement Responsibility and Complaints*.

C. In no case shall any paving, filling, grading, Building, or construction footing occur or be placed within three times the DBH in inches from the trunk of the Tree, unless otherwise approved by the Board of Zoning Appeals.

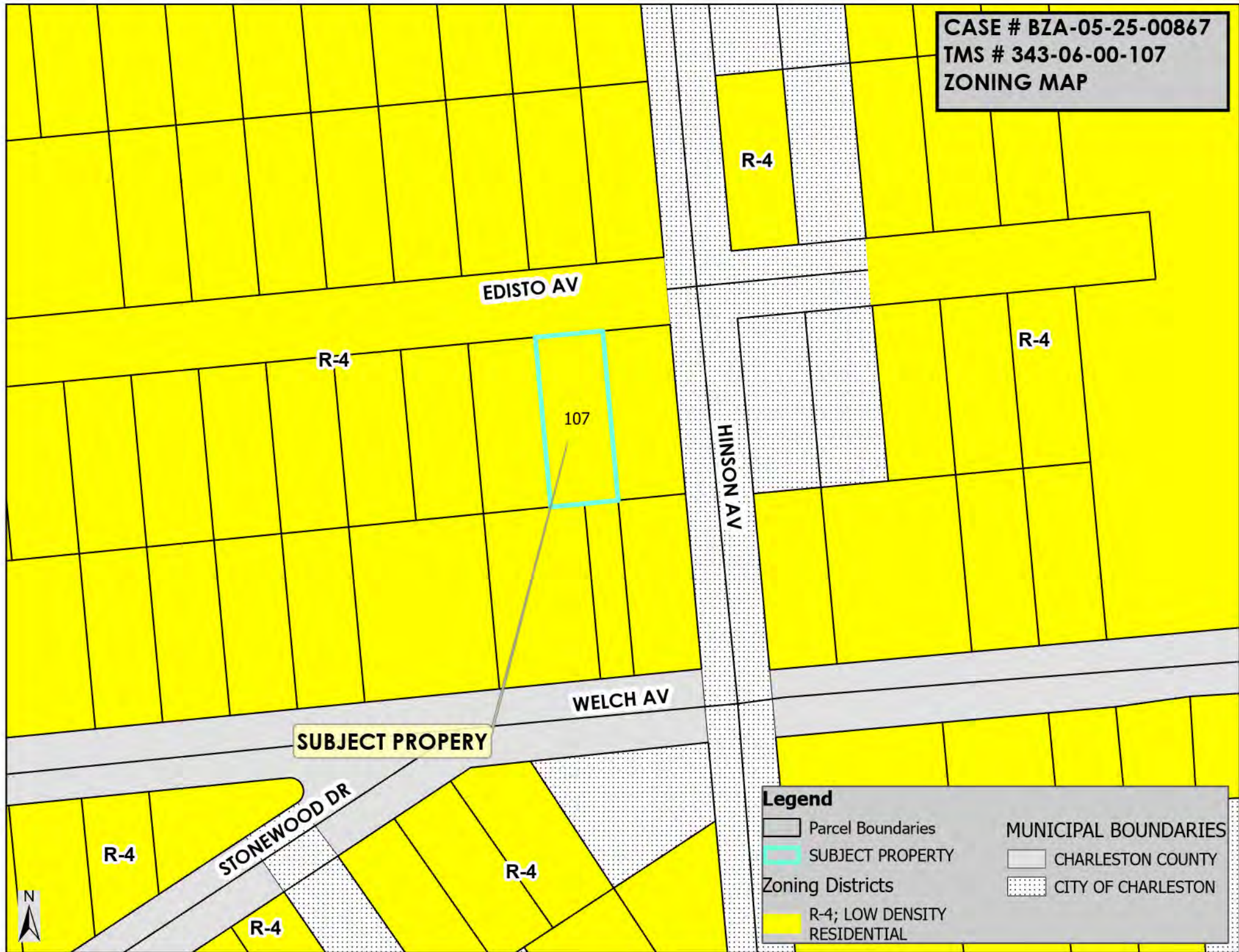
D. Limited Clearing and Grubbing may be authorized by the Zoning and Planning Director prior to the installation of Tree barricades on sites that exhibit unusually heavy undergrowth and where access to the interior of the site and its Protected Trees is impractical. Limited Clearing shall be for the express purpose of accessing the property and Protected Trees to erect the Required Tree barricades and silt fencing. Such limited Clearing shall be done with hand tools, push or walk - behind equipment, or lightweight bush-hog type equipment designed for brush and undergrowth Clearing and which is not capable of removing vegetation greater than three inches in diameter. Under no circumstances may metal-tracked bulldozers, loaders, or similar rider/operator equipment be allowed on site until the Tree barricades are erected and a Zoning Permit is issued.

E. Limited encroachments into the area located within Tree barricades may be allowed by the Zoning and Planning Director provided that encroachments do not constitute more than 25 percent of the protected area beneath a Tree and do not occur in the area located within three times the DBH in inches from the trunk of the Tree unless otherwise approved by the BZA. Any paving, Grading, trenching, or filling of the protected area must be pre-approved by the Zoning and Planning Director or the Board of Zoning Appeals, as required by this Ordinance, and may require specific construction techniques to preserve the health of the Tree. When grading and construction within the protected area of a Tree has been approved, all damaged roots shall be severed clean.

F. Prior to issuance of a Zoning Permit for uses other than Single-Family Detached Residential, the following numbers of Trees with a DBH of eight inches or greater shall be preserved and protected pursuant to the requirements of this Ordinance. Preservation and protection of native Trees is to be prioritized. Properties within the Industrial (IN) District may elect to mitigate the removal of these Protected Trees, as described in Sec. 9.2.6.D, with the exception that all Grand trees and any required Buffer tree measuring eight inches (8") or greater shall be preserved. On properties in the IN District that elect to mitigate the removal of these Protected Trees and where the planting of canopy trees is required within Buffers and other landscaping, screening, and buffer areas, canopy trees shall be a minimum of four inch (4") caliper.

1. 20 Trees per acre; or
2. Any number of Trees with a combined DBH of at least 160 inches per acre.

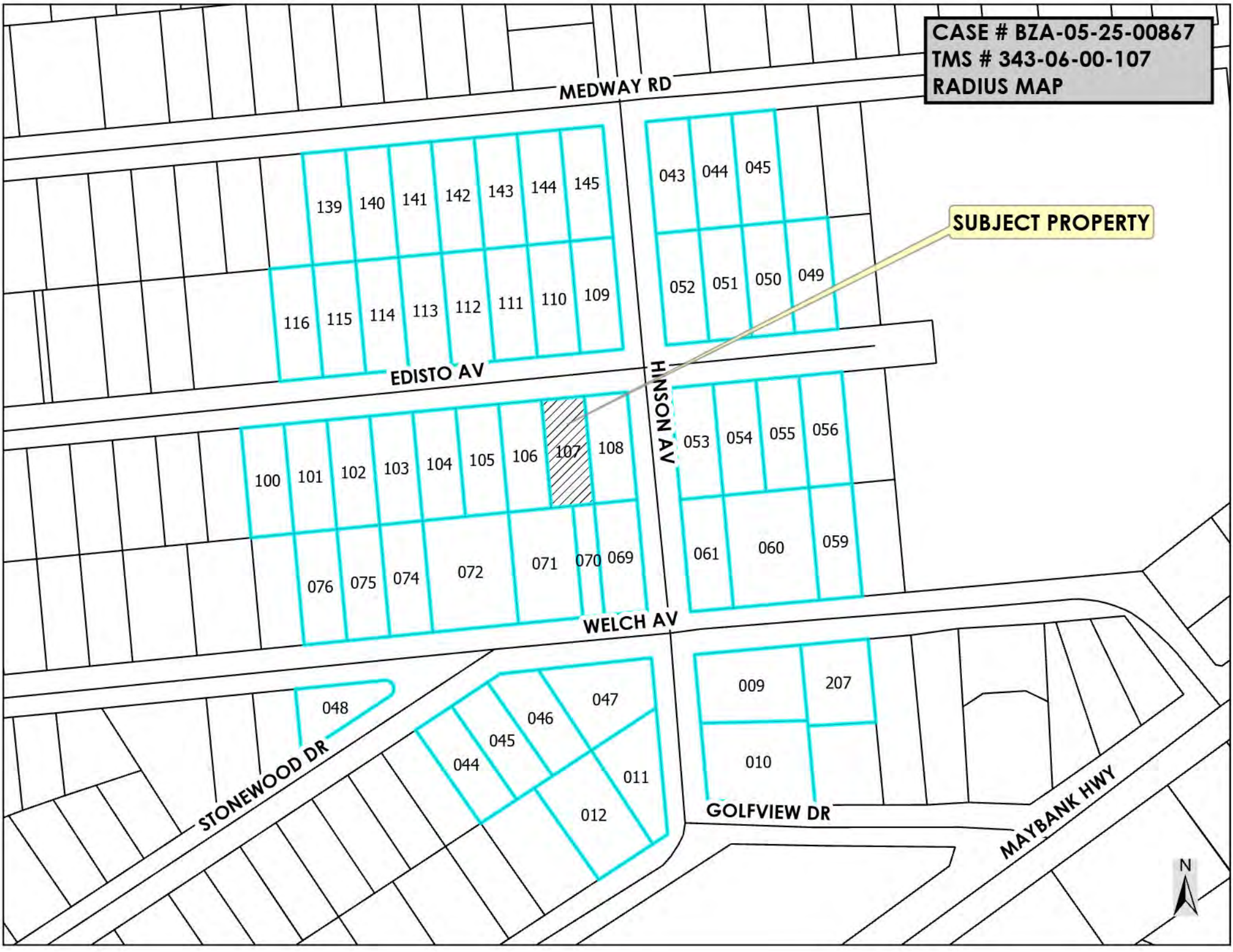
CASE # BZA-05-25-00867  
TMS # 343-06-00-107  
ZONING MAP





CASE # BZA-05-25-00867  
TMS # 343-06-00-107  
RADIUS MAP

SUBJECT PROPERTY





EDISTO AV

CASE # BZA-05-25-00867  
TMS # 343-06-00-107  
AERIAL MAP

SUBJECT PROPERTY

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HINSON AV





CASE # BZA-05-25-00867  
TMS # 343-06-00-107  
AERIAL MAP

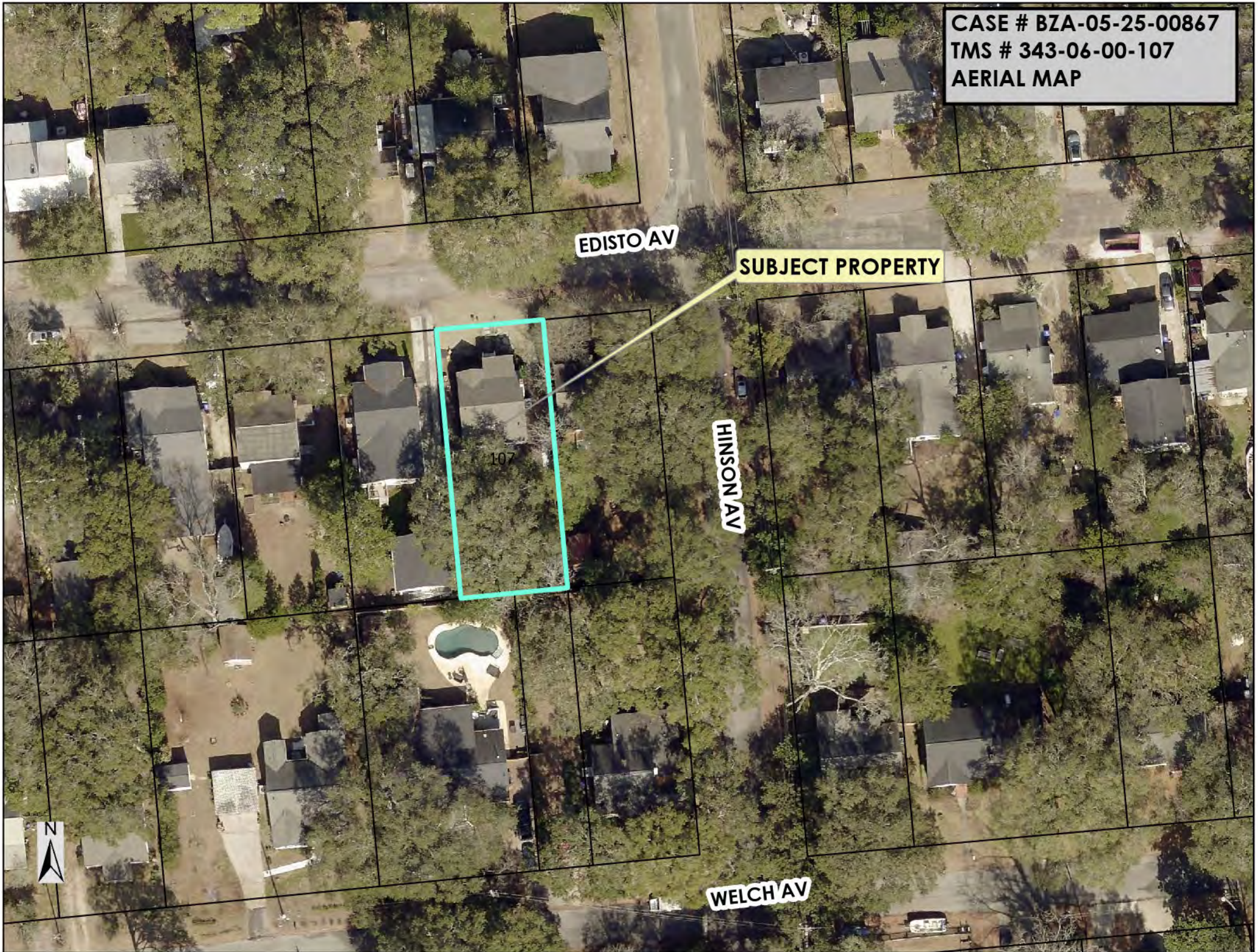
EDISTO AV

SUBJECT PROPERTY

HINSON AV

WELCH AV

107





**Case # BZA-05-25-00867**

**BZA Meeting of July 7, 2025**

**Subject Property: 2141 Edisto Avenue – James Island**

**Proposal: Variance request for a proposed single-family residence addition to encroach within a restricted area three times the DBH (Critical Root Zone) of a 73.5" DBH Grand Live Oak Tree.**





# Encroach 73.5" DBH Live Oak

## Grade B





# Subject Property









Staff Review:

The applicant and property owner, George Michael Rentz Jr., represented by James Schulze of Discovery Development Group, are requesting a variance for a proposed single-family residence to encroach within a restricted area three times the (DBH) Diameter Breast Height (Critical Root Zone) of a 73.5" DBH Grand Live Oak Tree at 2141 Edisto Avenue (TMS # 343-06-00-107) on James Island in Charleston County. The subject property and adjacent properties to the north are located in the Low Density Residential (R-4) Zoning District.

The applicant's letter of intent explains the request, *"I am requesting to build an addition to my existing home. The addition will penetrate the Tree Encroachment Zone for a Grand Tree. We have worked with a 3rd Party Arborist SavATree to develop a Tree Protection Plan, to ensure the survival and thriving of the tree. Both through construction and post-construction. Additionally, our structural engineer has designed the foundation to be minimally invasive (Pin Piers), to again, focus on keeping the tree alive and healthy. Finally, the proposed foundation plan does not take up more than 25% of the surface area of the Tree Encroachment Zone. We are requesting approval to proceed with construction, please."*

Applicable ZLDR requirement:

The Charleston County Zoning and Land Development Regulations Ordinance (ZLDR), Chapter 9 Development Standards, Article 9.2 Tree Protection and Preservation, Sec. 9.2.4.C. Required Tree Protection states, *"In no case shall any paving, filling, grading, Building, or construction footing occur or be placed within three times the DBH in inches from the trunk of the Tree, unless otherwise approved by the Board of Zoning Appeals."*

Applicable ZLDR Chapter 12 Definitions, Article 12.1 Terms and Uses Defined:

Arborist, Certified A Person certified by the International Society of Arboriculture.

Diameter Breast Height (DBH) The total diameter, in inches, of a Tree trunk or trunks measured at a point four and one-half feet above existing Grade (at the base of the Tree). In measuring DBH, the circumference of the Tree shall be measured with a standard diameter tape, and the circumference shall be divided by 3.14.

Grand Tree Any Tree with a diameter breast height of 24 inches or greater, with the exception of Pine Tree and Sweet Gum Tree (*Liquidambar styraciflua*) species.

Staff conducted a site visit of the subject property on June 16, 2025. Please review the attachments for further details regarding this request.



Planning Director Review and Report regarding Approval Criteria of §3.10.6:

§3.10.6(1): *There are extraordinary and exceptional conditions pertaining to the particular piece of property;*

Response: There may be extraordinary and exceptional conditions pertaining to 0.15-acre property. **The applicant's letter of intent states, "Yes. This is my home where I live and plan to raise my family. I'm planning to get married and have children and raise them in this home. I love my Neighborhood and being part of Charleston County. My business is located in Charleston County as well. I would like to add additional square footage to adequately provide for my small family. I also love the Tree in my backyard and consider it a vital part of my living experience. I have already hired a 3rd party arborist to ensure the safety and livelihood of the tree. The grand tree is right in the middle of my back yard, which as pertaining to the code, limits me to zero opportunity to expand the size of my home, even though my yard is huge."** Therefore, the request may meet this criterion.

§3.10.6(2): *These conditions do not generally apply to other properties in the vicinity;*

Response: These conditions do not generally apply to other properties in the vicinity. **The applicant's letter of intent states, "They are unique to my property, but not only me. I live in Riverland Terrace, where there are many live oak grand trees. There are certainly a few residents that have a grand tree in their backyards, but not everyone. My neighbor across the street has a grand tree in his back yard and was able to build an addition similar to mine, where his dwelling also penetrated the tree encroachment zone."** Therefore, the request may meet this criterion.

§3.10.6(3): *Because of these conditions, the application of this Ordinance to the particular piece of property would effectively prohibit or unreasonably restrict the utilization of the property;*

Response: The application of this Ordinance, Chapter 9 Development Standards, Article 9.2 Tree Protection and Preservation, Sec. 9.2.4.C. Required Tree Protection to 2141 Edisto Avenue may unreasonably restrict the utilization of the property to build an addition to the existing 3-bedroom single-family residence that was constructed in 1944 per Charleston County records. **The applicant's letter of intent states, "Yes. My backyard is very big, relative to the size of my home. There is plenty of room to increase the size of my house. There is also a grand tree, which limits the space to which I can build an addition to virtually zero square footage. Obviously, I understand the rule regarding protecting the Tree, but there are also building methods available, of which we are following to ensure we don't harm the tree, and**



**can keep it alive, healthy, and vibrant, post construction.”** Therefore, the request may meet this criterion.

§3.10.6(4): *The authorization of a variance will not be of substantial detriment to adjacent property or to the public good, and the character of the zoning district will not be harmed by the granting of the variance;*

Response: The authorization of this variance may not be of substantial detriment to the adjacent properties and the public good, and the character of the Low Density Residential (R-4) Zoning District may not be harmed. **The applicant's** letter of intent states, “No, it will not. The tree primarily only exists in my backyard. This will not disturb any neighbors. Further, I have written approval from my neighbors stating that they know my plans and like me as a neighbor. They are in favor of this addition. If anything, it will increase the beauty and value of the neighborhood that all residents will benefit from.” Therefore, the request may meet this criterion.

§3.10.6(5): *The Board of Zoning Appeals shall not grant a variance the effect of which would be to allow the establishment of a use not otherwise permitted in a zoning district, to extend physically a nonconforming use of land, or to change the zoning district boundaries shown on the official zoning map. The fact that property may be utilized more profitably, should a variance be granted, may not be considered grounds for a variance;*

Response: The variance does not allow a use that is not permitted in this zoning district, nor does it extend physically a nonconforming use of land or change the zoning district boundaries. Therefore, the request meets this criterion.

§3.10.6(6): *The need for the variance is not the result of the applicant's own actions;*

Response: The need for the variance may be the **result of the applicant's own actions**. However, the **applicant's letter of intent** contends, “Partially. I plan to build an addition to my home. I respect the ordinance regarding grand trees, and proactively taken steps to inform all necessary parties - builder, architect, engineer, 3rd party arborist, and the county - to make sure everything was in compliance, and I could do this safely and cost effectively.” Therefore, the request may meet this criterion.

§3.10.6(7): *Granting of the variance does not substantially conflict with the Comprehensive Plan or the purposes of the Ordinance;*

Response: Granting of the variance may not substantially conflict with the *Comprehensive Plan* or the purposes of the *Ordinance* if the Board finds that the strict application of the provisions of the Ordinance results in an unnecessary hardship and if the board approves this request with the conditions recommended by Staff below. In addition, the applicant states,



*"No, it does not. The exception I am applying for is in compliance with necessary building standards to protect the grand tree." Therefore, the request may meet this criterion.*

**Board of Zoning Appeals' Action:**

According to Article 3.10 Zoning Variances, Section §3.10.6 Approval Criteria of the *Charleston County Zoning and Land Development Regulations Ordinance (ZLDR)*, (adopted July 18, 2006), The Board of Zoning Appeals has the authority to hear and decide appeals for a Zoning Variance when strict application of the provisions of this Ordinance would result in unnecessary hardship (§3.10.6A). A Zoning Variance may be granted in an individual case of unnecessary hardship if the Board of Zoning Appeals makes and explains in writing their findings (§3.10.6B Approval Criteria).

In granting a variance, the Board of Zoning Appeals may attach to it such conditions regarding the location, character, or other features of the proposed building or structure as the Board may consider advisable to protect established property values in the surrounding area or to promote the public health, safety, or general welfare (§3.10.6C).

The Board of Zoning Appeals may approve, approve with conditions or deny Case # BZA-05-25-00867 [Variance request for a proposed single-family residence to encroach within a restricted area three times the DBH (Critical Root Zone) of a 73.5" DBH Grand Live Oak Tree at 2141 Edisto Avenue (TMS # 343-06-00-107) on James Island in Charleston County] based on the BZA's "Findings of Fact", unless additional information is deemed necessary to make an informed decision. In the event the Board decides to approve the application, the Board should consider the following conditions recommended by Staff:

1. The applicant shall retain a Certified Arborist to monitor and treat all Grand Trees **within 40' of disturbance through the duration of construction. The applicant shall** provide a copy of the Tree Preservation Plan to Zoning Staff for review and approval prior to Zoning Permit approval for construction.
2. If the 73.5" DBH Live Oak Tree dies within up to three (3) years from the date the structure is permitted, the applicant shall mitigate the DBH of the tree by either (a) submitting a mitigation plan for review and approval indicating the installation of canopy trees no smaller than two and one-half (2.5) inches in caliper equaling inch per inch replacement, (b) by depositing funds into the Charleston County Tree Fund as described in Sec. 9.2.6 of the *Charleston County Zoning and Land Development Regulations*, or (c) a combination of both (a) and (b). The allotted mitigation shall be in place prior to its removal.



# ZONING VARIANCE APPLICATION

## Charleston County Board of Zoning Appeals (BZA)

<b>Property Information</b>			
Subject Property Address: 2141 Edisto Avenue, Charleston, SC 29412			
Tax Map Number(s): 343-06-00-107			
Current Use of Property: Single family residential dwelling			
Proposed Use of Property: Single family residential dwelling			
<b>Zoning Variance Description:</b> Grand Tree Enroachment Zone to be penetrated less than 25% of total surface area.			
<b>Applicant Information</b> (Required) George Michael Rentz Jr.			
Applicant Name (please print): George Michael Rentz Jr.			
Name of Company (if applicable):			
Mailing Address: 2141 Edisto Avenue, Charleston, SC 29412			
City: Charleston	State: SC	Zip Code: 29412	
Email Address: Michael@gnosiscompanies.com		Phone #: 803-479-4760	
Applicant Signature: <i>Michael Rentz</i>		Date: 05-16-2025	
<b>Representative Information</b> (Complete only if applicable. Attorney, Builder, Engineer, Surveyor etc.)			
Print Representative Name and Name of Company: James Schulze (Builder) - Discovery Development Group			
Mailing Address: 816 Toler Drive			
City: Mount Pleasant	State: South Carolina	Zip Code: 29464	
Email Address: James@discoverydevgru.com		Phone #: 619-623-0625	
<b>Designation of Agent</b> (Complete only if the Applicant listed above is not the Property Owner.)			
I hereby appoint the person named as Applicant and/or Representative as my (our) agent to represent me (us) in this application.			
Property Owner(s) Name(s) (please print):			
Name of Company (if applicable, LLC etc.):			
Property Owner(s) Mailing Address:			
City:	State:	Zip Code:	Phone #:
Property Owner(s) Email Address:			
Property Owner(s) Signature:			Date:
FOR OFFICE USE ONLY:			
Zoning District: <i>R-4</i>	Flood Zone: <i>X(513K)</i>	Date Filed: <i>5/30/25</i>	Fee Paid: <i>\$250</i>
Application #: <i>BZA-05-25-00867</i>	TMS #: <i>343-06-00-107</i>	Staff Initials: <i>jw</i>	

## **Description of Request**

*Please describe your proposal in detail. You may attach a separate sheet if necessary. Additionally, you may provide any supporting materials that are applicable to your request (photographs, letter of support, etc.)*

I am requesting to build an addition to my existing home. The addition will penetrate the Tree Encroachment Zone for a Grand Tree. We have worked with a 3rd Party Arborist - SavAtTree - to develop a Tree Protection Plan, to ensure the survival and thriving of the tree. Both through construction and post-construction. Additionally, our structural engineer has designed the foundation to be minimally invasive (Pin Piers), to again, focus on keeping the tree alive and healthy. Finally, the proposed foundation plan does not take up more than 25% of the surface area of the Tree Encroachment Zone. We are requesting approval to proceed with construction, please.

## **Applicant's response to Article 3.10 Zoning Variances, §3.10.6 Approval Criteria**

**Zoning Variances may be approved only if the Board of Zoning Appeals finds that the proposed use meets all 7 of the approval criteria. In evaluating your request, the members of the board will review the answers below as a part of the case record. You may attach a separate sheet if necessary.**

1. Are there extraordinary and exceptional conditions pertaining to the subject property? Explain:

Yes. This is my home where I live and plan to raise my family. I'm planning to get married and have children and raise them in this home. I love my Neighborhood and being part of Charleston County. My business is located in Charleston County as well. I would like to add additional square footage to adequately provide for my small family. I also love the Tree in my backyard and consider it a vital part of my living experience. I have already hired a 3rd party arborist to ensure the safety and livelihood of the tree. The grand tree is right in the middle of my back yard, which as pertaining to the code, limits me to zero opportunity to expand the size of my home, even though my yard is huge.

2. Do these conditions generally apply to other property in the vicinity or are they unique to the subject property? Explain:

They are unique to my property, but not only me. I live in Riverland Terrace, where there are many live oak grand trees. There are certainly a few residents that have a grand tree in their backyards, but not everyone. My neighbor across the street has a grand tree in his back yard, and was able to build an addition similar to mine, where his dwelling also penetrated the tree encroachment zone.

3. Because of these extraordinary and exceptional conditions, would the application of this Ordinance to the subject property effectively prohibit or unreasonably restrict the utilization of the property? Explain:

Yes. My backyard is very big, relative to the size of my home. There is plenty of room to increase the size of my house. There is also a grand tree, which limits the space to which I can build an addition to virtually zero square footage. Obviously, I understand the rule regarding protecting the Tree, but there are also building methods available, of which we are following, to ensure we don't harm the tree, and can keep it alive, healthy, and vibrant, post construction.



4. Will the authorization of a variance be a substantial detriment to adjacent property or to the public good? Will the character of the zoning district be harmed if this variance is granted? Explain:

No, it will not. The tree primarily only exists in my backyard. This will not disturb any neighbors. Further, I have written approval from my neighbors stating that they know my plans and like me as a neighbor. They are in favor of this addition. If anything, it will increase the beauty and value of the neighborhood that all residents will benefit from.

5. The BZA shall not grant a variance the effect of which would be to allow the establishment of a use not otherwise permitted in a zoning district, to extend physically a Nonconforming Use of land, or to change the zoning district boundaries shown on the Official Zoning Map. The fact that property may be utilized more profitably if a Zoning Variance is granted shall not be considered grounds for granting a Zoning Variance. Does the variance request meet this criterion?

Yes, it does.

6. Is the need for the variance the result of your own actions? Explain:

Partially. I plan to build an addition to my home. I respect the ordinance regarding grand trees, and proactively taken steps to inform all necessary parties - builder, architect, engineer, 3rd party arborist, and the county - to make sure everything was in compliance and I could do this safely and cost effectively.

7. Does the variance substantially conflict with the Charleston County Comprehensive Plan or the purposes of the Ordinance? Explain

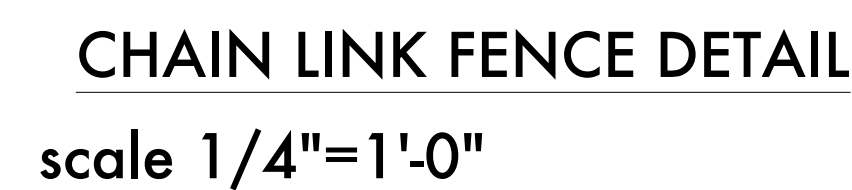
No, it does not. The exception I am applying for is in compliance with necessary building standards to protect the grand tree.

**In granting a variance, the Board of Zoning Appeals may attach to it such conditions regarding the location, character, or other features of the proposed building or structure as the Board may consider advisable to protect established property values in the surrounding area or to promote the public health, safety, or general welfare.**

2141 EDISTO AVE.	
LOT INFORMATION	
TMS #:	TMS 343-06-00-107
LOT SIZE:	0.15 ACRES 6,534 SF
LOT WIDTH:	50.27'
LOT DEPTH:	130.00'
FLOOD ZONE:	X ZONE
REQUIRED FINISHED FLOOR:	N/A
ZONING:	R-4
PRINCIPAL SETBACKS	
FRONT SETBACK:	20'-0"
REAR SETBACK:	10'-0"
INTERIOR SIDE SETBACK:	5'-0"
IMPERVIOUS COVERAGE	
MAX PERMITTED (40%) :	2,613.6 SF
EXISTING: (21%)	1,364 SF
PRINCIPAL BUILDING - FIRST FLOOR: 888.4 SF PRINCIPAL BUILDING - PORCHES+ STAIRS: 153 SF HVAC : 12 SF ACCESSORY BUILDING : 207.6 SF GREENHOUSE: 103 SF	
PROPOSED: (36.4%)	2,376.6 SF
PRINCIPAL BUILDING - FIRST FLOOR: 1,718 SF PRINCIPAL BUILDING - PORCHES+ STAIRS: 439 SF HVAC : 12 SF ACCESSORY BUILDING : 207.6 SF	
MAX HEIGHT	
MAX PERMITTED :	35'-0"
EXISTING :	23'-6.5"
PROPOSED :	23'-6.5"











CONSULTING GROUP

Tree Risk Assessment  
&  
Preservation Plan  
For  
Michael Rentz

Located in  
2141 Edisto Avenue  
James Island, SC  
29412

May 12, 2025



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## NARRATIVE

### SUMMARY

This report has been prepared with Michael Rentz's desire to locate, grade, and preserve the Grand Live oak on the site with a Tree Preservation Plan (TPP).

A Level 2: Basic Tree Risk Assessment (BTRA) was performed on the subject tree. Based on this level 2 evaluation, the Tree Management Plan included in this report will help aid and reduce the failure of the tree assessed.

### BACKGROUND

In February 2025, Michael Rentz contacted SavATree - Charleston Tree Experts and expressed his desire to preserve the Grand tree on site. Sales Arborist, David San Fratello, discussed the terms of our engagement and upon approval of the Arborist Report line item, Tree Risk Assessment Qualified Arborist Aron Landsaw was scheduled for a site inspection to perform a BTRA.

### ASSIGNMENT

Prepared for:  
Michael Rentz

Parcel location:  
2141 Edisto Avenue  
James Island, SC  
29412

Prepared by:  
Aron Landsaw



[alandsaw@savatree.com](mailto:alandsaw@savatree.com)  
T# (843) 647-3612  
SavATree, LLC  
2851 Maybank Hwy  
Johns Island, SC 29455

After discussing the terms of our engagement and the levels of assessment with Michael Rentz, he agreed that we would conduct the following:

1. Identify the tree species.
2. Measure and determine the diameter at breast height (DBH).
3. Assess and provide a health grade and risk rating to the trees.
4. Provide recommendations for the trees outlined in this report.
5. Provide my findings in a booklet style report.

### LIMITS OF ASSIGNMENT

Our inspection was performed at ground level using visual observations, and our knowledge of the site history was limited to the past-history details provided by Michael Rentz. These were our only limitations in addition to the normal restrictions of a Level 2: BTRA.

We followed the national tree care industry consensus standard for tree risk assessment and performed an American National Standards Institute (ANSI) A300 Basic (Level 2) Tree Risk Assessment. This included a 360-degree ground-based visual observation of the tree and above ground tree parts. We measured the tree with a diameter tape at a height of 4.5 feet above ground and utilized a mallet and probe to sound or probe for decay.

The tree risk assessment is a qualitative assessment based upon the premise of likelihood of failure and impact x consequences = risk (Table 1). Tree risk assessments include the site, potential targets and an evaluation of the tree and visible defects. Risk ratings of low, moderate, high or extreme are possible.

**Table 1 - Risk matrix.**

**Risk Rating Matrix**

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

### PURPOSE AND USE OF REPORT

The purpose of this report is to provide an accurate depiction of defective or hazardous conditions of the tree and site, and develop recommendations based on that data. This report is intended to be used by Michael Rentz to establish a Tree Preservation Plan.



## OBSERVATIONS

### SITE

The 71.5" live oak resides on a well-established single family housing site with a Critical Root Zone (CRZ) established throughout the construction area. The branches of the tree pose a moderate risk to the new addition.

### ANALYSIS

The future site improvements and house are targets of concern within 1x height of the trees. The encroachment of the CRZ is less than 8% encroachment which I believe will have a minimal impact on the health of the tree.

### TREE CONDITION AND INVENTORY TABLE

Table 2 - Tree data.

TREE #	DBH	SPECIES	GRADE	RISK RATING	NOTES
1	71.5	Live oak	C	Moderate	Stems 34.5/37. Cavity, decay, forked, deadwood.

### TREE GRADING SYSTEM

A - Specimen tree exhibiting vigorous growth and showing little or no sign of disease or storm damage.

B - Healthy tree, exhibiting vigorous growth, showing minimal signs of disease, but having suffered notable storm damage.

C - Semi-healthy tree, showing some signs of decline which are perhaps correctable (i.e., some insect infestations, some diseases, soil compaction, etc.); still shows signs of growth, but suffered significant storm damage.

D - Tree in declining health; has suffered extensive storm damage; tree may still live for many years posing a low hazard but may not be successfully treated to again become a healthy, specimen tree.

F - Tree which is determined to be irreparably damaged, diseased or hazardous.

## DISCUSSION

### Tree Risk Assessment

Trees provide numerous benefits to the urban environment. These benefits increase as the age and size of the trees increase. However, as a tree becomes larger and more mature, it is likely to shed branches or develop decay or other conditions that can predispose it to failure. In assessing and managing trees, we strive to strike a balance between the risk that a tree poses and the benefits that individuals and communities derive from trees.

Tree risk assessment (TRA) is the systematic approach used to identify, analyze and evaluate tree risk. By identifying the tree risk, mitigation can be conducted to reduce risk while preserving the trees that meet acceptable levels of risk.

A primary goal of TRA is to provide the tree owner with resourceful information about the level of risk posed by a tree over a period of time. This is accomplished by conducting a qualitative analysis and determining the likelihood and consequences of tree failure. If the risk rating defined for a tree exceeds the level of acceptable risk, mitigation is recommended.

### Tree Preservation

Trees and green spaces provide many benefits to the community and add significant value to developments. The ability of trees to improve and maintain the quality of water, soil, and air and to remove pollutants from the air is well known and understood. Trees also provide shade and help lower temperatures during hot weather, enrich people's lives and beautify landscapes. Preserving trees has positive effects on the image and attractiveness of communities, developments and enhances developers' reputations and profits.

Preserving trees in communities, developments, and single-family home improvements increases a project's attractiveness, monetary value, and marketability by providing aesthetic and functional values. Lots where trees are preserved can be sold more quickly and at higher prices. Research has shown that mature trees increase the worth of a property by 12 percent or more. Architects, developers and property owners who understand these values realize that it is in their best interest to encourage the preservation of trees and green spaces. These entities can take advantage of different opportunities when considering the preservation of trees. Individual historic, landmarks, and ornamental trees are all good choices for preservation, as are native trees in groves and woodlots. Opportunities differ from one development to another, but many of the recommendations for preserving trees remain the same.

Various people, such as arborists, engineers, architects, planners, property owners and municipal officials, may become involved in preserving trees. Properly preserving trees in development, new development, remodel, and improvements takes time, good design, communication, and money. However, the results are worth the effort when the project is completed. Tree preservation starts with a basic understanding of the health of trees, the site, and the soils that support trees.



## TREE PEST ISSUES AND FAILURE PROFILES

### **Cavity**

A cavity in a tree is an opening or hollow space within the trunk, branches or roots of a tree. Cavities can be caused by a variety of factors, including fungal infections, insect infestations, physical damage or decay. They can vary in size and location within the tree and can have varying negative effects on the tree's health and structural stability.

Cavities weaken the structural integrity of a tree and make it more susceptible to failure or collapse. Cavities can form in several different ways. One of the most common causes is fungal infections, which can cause the wood to decay and soften, creating an opening or hollow space within the tree. Insects can also cause cavities by burrowing into the wood and creating hollow spaces. Physical damage, such as from storms, mechanical impact, or pruning, can also create cavities by removing or damaging the protective bark layer, allowing pathogens or insects to enter the tree. Once inside the tree, pests and diseases can cause additional damage and accelerate the decay process, further weakening the tree's structural integrity.

Cavities can be difficult to detect, especially in larger trees with complex branching structures. Signs of a cavity may include visible openings or holes in the trunk or branches, soft or spongy wood, or a hollow sound when the tree is struck with a mallet. However, not all cavities will be visible or audible.

### **Decay**

Decay in trees is a process that occurs as a result of the breakdown of complex organic compounds, such as lignin and cellulose, within the tree's tissues. This breakdown is carried out by microorganisms, such as fungi and bacteria, that feed on organic matter and convert it into simpler compounds that can be absorbed and digested by the attacking disease.

Fungi are the primary agents of decay in trees. They feed on dead and decaying organic matter, including dead wood and leaf litter, and can colonize living trees through wounds or openings in the bark. Fungal spores can also enter trees through natural openings such as stomata or through wounds caused by insects, pruning, or environmental stressors. Once inside the tree, fungi can spread throughout the tree's tissues, infecting and digesting the wood and causing it to decay. The decay process can weaken the tree's vigor and structural integrity and make it more susceptible to breaking, falling, and/or entering a severe state of decline.

In addition, decay can create openings for pests and secondary diseases to enter the tree, further compromising its health and structural stability. There are several factors that can contribute to the development of decay in trees. One of the most common factors is physical damage to the tree, such as from storms, pruning, or construction activities. This damage can create openings in the bark that allow fungal spores to enter the tree. Other factors that can contribute to decay include environmental stress, such as drought or flooding, and insect infestations that damage the tree's bark and create entry points for fungi and disease.

### **Deadwood**



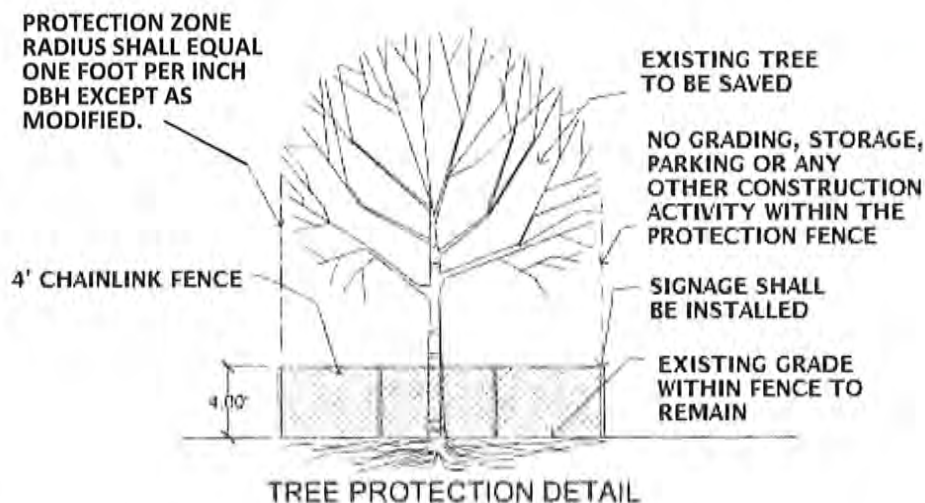
"Deadwood" in trees refers to branches or limbs that are no longer alive or functioning, often characterized by their lack of foliage and the presence of dry, brittle wood. These dead branches can vary in size from small twigs to large limbs and are typically identified by their ashen or grayish appearance, as well as the absence of healthy bark. Deadwood can be found throughout a tree, sometimes extending from the trunk or main branches.

The presence of deadwood in a tree can result from various factors, including disease, pest infestation, mechanical injury, or environmental stress. For example, deadwood often occurs when a tree suffers from a fungal infection, which compromises the vitality of certain branches. Similarly, damage from storms, pests, or poor growing conditions can lead to the dieback of limbs. As the affected branches lose their vascular function, they eventually become non-viable, contributing to the accumulation of deadwood.

Deadwood poses several challenges for tree health and safety. While it may not directly impact the tree's overall stability, it can attract pests and diseases, which may spread to other parts of the tree. Additionally, dead branches are more prone to breaking off, creating hazards and increased risk for people, property, and other vegetation.

## TREE PROTECTION CONSTRUCTION STANDARDS

### Tree Protection Fencing



Prior to any clearing, grubbing, trenching, grading, or any land disturbances, tree protection fencing must be installed as follows:

The fencing shall be chain-link, temporary, readily visible, and a minimum of 4 feet high. The fencing shall effectively:





1. Keep the foliage, crown, branch structure and trunk clear from damage by equipment, materials or disturbances.
2. Preserve roots and soil in an intact and noncompacted state; and identify the Tree Protection Zone (TPZ) zone.
3. Chain link fencing is used for the Grand tree. According to the Charleston County Zoning and Land Development Regulations Ordinance, tree barricades shall be placed beneath the canopy Drip Line or one-foot times the DBH of the tree as a radius from the trunk, whichever is greater. Modify or reduce the barricade as necessary to provide for improvements.
4. Install erosion control barrier along the outside perimeter of each TPZ to prevent erosion and contamination.

The most essential roots form the Structural Root Plate which is the zone of rapid root taper that provides the tree stability against wind throw. These large roots can extend several feet from the trunk. Damaging these roots in any way is usually fatal and may leave a tree unable to stabilize itself.

Verification that tree protection fencing has been installed pursuant to the approved TPP shall be performed by the zoning department prior to zoning approval and before construction commences.

### Signage

One English language and one Spanish language, readily visible, durable, waterproof “Keep Out” or “Tree Protection Area” sign shall be installed on the fence around each individual Grand tree. See figure 1.



Figure 1 - Sign example.

### Pre-Construction Soil Analysis and Treatment

A soil sample will be obtained and sent to a soil laboratory for analysis to determine the lacking nutrients and minerals in the soil. A detailed prescription of soil amendments will be compiled to ensure the tree receives the necessary nutrients to maintain prime health.

At least 30 days prior to starting construction a Tree Growth Regulator and other various plant health care treatment materials will be applied via soil injection to supply a balance of one or more nutrients essential to the growth of the tree to promote health and vigor. These injections are composed of a unique blend of plant derived amino acids, plant hormones, humic and





fulvic acids, cytokinins, carbon, stimulants, and numerous essential and beneficial elements for optimal root growth. Insecticide will be applied to provide resistance to leaf and wood feeding insects. These treatments will boost the overall health and vigor of the tree encouraging optimal sustainability. Treatments shall start one month prior to construction activities and continue until one year after the completion of construction.

The tree to be protected is currently not being irrigated by traditional sprinkler systems. However, prior to construction and throughout, irrigation should be provided as needed within the TPZ to maintain a moist environment. A deep watering of the tree is ideal. Water should penetrate six to eight inches deep within and throughout the TPZ. The construction crew should install a temporary irrigation system or develop a watering regime for the tree on regular intervals if the soil becomes too dry.

## **DURING CONSTRUCTION**

### **Tree Protection Zone Restrictions**

No ground disturbance, grading, trenching, construction activities or structural development shall occur within the tree protection zone (TPZ) except as specifically authorized by this permit and the approved TPP.

No equipment, soil, or construction materials shall be placed within the TPZ. No oil, gasoline, chemicals, paints, solvents, or other damaging materials may be deposited within the TPZ or in drainage channels, swales or areas that may lead to the TPZ.

Unless otherwise directed by the project arborist, all work done within the TPZ, including brush clearance, digging, trenching and planting, shall be done with hand tools, small hand-held power tools, or gas-powered, push-type or walk-behind equipment designed for brush or undergrowth clearing, that are of a depth and design that will not cause root damage.

Trenching within the Tree Protection Zone (TPZ) should be avoided and can damage the root system of a tree and lead to tree decline or death. Ninety percent of fine roots that absorb water and minerals are found within the top few inches of soil. Roots require air, space, and water, and grow most vigorously when these requirements are met, which is usually near the surface of the soil. If trenching is required through the TPZ, it should be performed by hand, not mechanically, whenever it is reasonable to do so. Whenever roots are cut due to trenching, the cut should be clean and not leaving torn edges. Tunneling and bridging should be used to preserve roots two inches in diameter or greater, and wherever it is reasonable. Underground lines should occupy common trenches. Multiple trenching is destructive as it impacts a greater percentage of the root system. Trenching to be performed via direction of a Certified Arborist on site throughout the duration of that scope of the project.

Grade changes outside of the TPZ shall not significantly alter drainage to trees. The grade outside the tree protection zone shall only be decreased with the use of approved retaining



walls or terracing plans. Grading within the TPZ shall use methods that minimize root damage and ensure that roots are not cut off from air. Fill may be allowed upon prior approval of the Department of Planning and Development and with the prior installation of an aeration system. A decrease in grade shall not be allowed within the TPZ. Where erosion may be a factor, return and protect the original grade or otherwise stabilize the soil. The lowering or raising of grade within the root zone can damage or kill a tree. The normal exchange of moisture and gases within the root zone is disrupted with any change in grade. The original grade should be maintained as far out from the trunk as possible. As little as four inches of soil placed over the root system of some species of trees can be fatal. The change in grade can have both immediate and long-term adverse effects on the tree.

Trees shall not be used for posting signs, electrical wires or pulleys; for supporting structures; and shall be kept free of nails, screws, rope, wires, stakes and other unauthorized fastening devices or attachments.

No paving with concrete, asphalt, or other impervious material shall be done within such proximity as to be harmful to a Grand tree. Impervious surface restricts movement of water and air in the root zone. If excavation is performed within the TPZ, significant damage to the tree root systems will occur and decline or death of the tree may follow.

### **Tree Care and Treatment**

Mulch installation with organic mulch within the tree protection zone (TPZ) will be done to promote soil microorganism activity, improving soil tilth and help lessen soil compaction caused by construction equipment. It also inhibits weed germination and growth and holds moisture protecting tree roots from drying out. The mulch is applied at 2"-4" in depth. The trees in the construction zone are subject to soil compaction from vehicles, the purposed construction and heavy debris placed in the TPZ. Soil compaction occurs when the pore space between soil particles is reduced significantly. This causes the reduction of oxygen available to the tree and leads to decline or mortality in the tree. Use of equipment, digging, grading, and heavily used walking paths can cause soil compaction in the construction area. Use of protective fencing, mulching within the TPZ, and limited amounts of access routes will minimize compaction. Soil shall be tilth by a Certified Arborist using an air-spade upon completion of construction.

Throughout construction, plant health care treatment materials will be applied via soil injection to supply a balance of one or more nutrients essential to the growth of the trees to promote health and vigor. These injections are composed of a unique blend of plant derived amino acids, plant hormones, humic and fulvic acids, cytokinins, carbon, stimulants, and numerous essential and beneficial elements for optimal root growth.

Insecticide will be applied to provide resistance to leaf and wood feeding insects. The proposed plant health care treatments shall be applied once monthly throughout construction. These treatments will boost the overall health and vigor of the tree encouraging optimal sustainability. Treatments shall start one month prior to construction activities and continue until one year after the completion of construction.



## **Pruning**

Tree care services proposed, include crown cleaning which involves the removal of vines, Spanish moss accumulation, dead, dying, diseased, crossed, and weakly attached branches to promote tree health and safety. It also includes crown reduction which involves reduction pruning of large limbs back to appropriate laterals to reduce weight and width of the tree. These services would reduce the risk of foliage, crown, and branch damage by equipment, materials, or disturbances.

- Pruning shall be in accordance with the American National Standards Institute, ANSI: A300 Pruning Standards for Shade Trees. Climbing gaffs shall not be used on live wood.
- No live tissue may be removed from a Grand tree solely for the purpose of altering the appearance of a tree.
- Pruning will not exceed more than twenty-five percent of the leaf surface on both the lateral branch and the overall foliage of a mature tree that is pruned within a growing season. Pruning will leave the remaining one-half of the foliage of a mature tree evenly distributed in the lower two-thirds of the crown and individual limbs upon completion of any pruning.
- Pruning may be performed to reduce width/dripline to allow greater building space.

## **Damage**

There will be heavy equipment and vehicles used near the tree. Wounds to the trees branches, trunk, and root collar caused by mechanical damage, may reduce tree stability by decreasing the wood strength, the internal movement of water and nutrients, and the ability to compartmentalize against decay. Enclosing the TPZ with a chain link fence will prevent damage from construction equipment. (Matheny, et, al, 1998).

## **POST-CONSTRUCTION**

### **Post-Construction Treatment**

For one complete year post construction, plant health care treatment materials will be applied via soil injection to supply a balance of one or more nutrients essential to the growth of the trees to promote health and vigor. These injections are composed of a unique blend of plant derived amino acids, plant hormones, humic and fulvic acids, cytokinins, carbon, stimulants, and numerous essential and beneficial elements for optimal root growth.

Insecticide will be applied to provide resistance to leaf and wood feeding insects. The proposed plant health care treatments will be applied for one complete year post construction. These treatments will boost the overall health and vigor of the tree encouraging optimal sustainability. Treatments shall start one month prior to construction activities and continue until one year after the completion of construction.

### **Other Post-Construction Recommendations**



No additional pruning shall be conducted within the next two years with the exception of clearances for construction and hazards. The pruning shall be performed in accordance with the ANSI A300 Pruning Standard. It is important we retain as many water-sprouts as possible to allow photosynthesis to continue unhindered.

No nitrogen fertilizer to be used until year two to discourage growth of wood decay fungi present in the soil.

### **Mitigation**

The tree in preservation during construction appears to be healthy and does not need to be replaced at this time. As required by local ordinance the contractor is to replace any trees damaged during construction or destroyed within two years of completion of construction due to construction damage. If the trees are insured or the municipality, community or property owner wish to utilize alternative methods at their disposal; then an accepted appraisal method of determining value of a tree outlined in the Council of Tree & Landscape Appraisers' Guide to Plant Appraisal, 10th Edition, using a TPAQ, Tree and Plant Appraisal Qualified arborist shall by acceptable means of mitigation.

## **RECOMMENDATIONS**

- Implement Order of Preservation included in this report for Tree #1.
- Use of temporary root protection mats in CRZ, such as 4" – 6" of wood chip mulch covered with  $\frac{3}{4}$ " plywood or for easier cleanup a product such as Geocell from BaseCore.
- No machinery to be used in CRZ, hand tools only.
- Any digging should be performed by a Certified Arborist using non-invasive equipment such as an air spade (a high-pressure pneumatic wand that will not harm the root structure).
- Reassessment of the tree 1 year after construction,

## **ORDERS OF TREE PRESERVATION**

### **SITE REGULATIONS**

#### **Pre-Construction**

- Root protection matting should be temporarily installed in the CZR where construction is not being carried out.
- All tree preservation work shall be overseen, performed, or supervised by an ISA Board Certified Master Arborist® or ISA Certified Arborist® with a South Carolina Commercial Pesticide Applicator License and experienced in the preservation of trees impacted by construction. Herein referred to as the "Arborist".
- The general contractor shall hold a pre-construction meeting with the Arborist, architect, engineer, principal subcontractors, and zoning administrator. Prior to the meeting, all site improvements shall be staked and there shall be a written



construction timeline for review. Construction plans will depict all tree protection zones (TPZ) and tree protection barricades (TPB) and are to be free of staging, excavation, filling, and trenching activities.

- The tree protection barricade shall be approved by the zoning administrator prior to the performance of additional work on the site.
- The general contractor shall promote and champion the enforcement of these "Site Regulations" in the absence of the Arborist during the daily construction activities.

### **During Construction**

- Excavation, trenching, and filling in proximity to the TPB shall only be performed under the supervision and direction of the Arborist. The Arborist is to perform the initial root pruning if larger roots in the excavated area or near the TPZ need to be cut.
- If utilities pass through the protection zone, the contractor must use underground boring techniques.
- The general contractor should exercise sufficient duty of care to enforce these "Site Regulations" and shall assign the following requirements to the appointed site supervisor:
  - "Police" the tree protection barricade twice a day to ensure the barricade is in good working order.
  - Mitigate damage to the fencing material by making repairs and replacing hardware as needed.
  - Verify the TPB is free of debris and repair sediment runoff/erosion as needed. This work shall be performed with hand tools. No machines.
  - Notify the Arborist of any significant damage to the TPB or site changes that may impact the tree.
  - Provide the Arborist with progress reports on a frequent basis. For example, the Arborist shall be alerted one week in advance when the contractor plans to trench utilities or irrigation.
  - Contractors shall not enter the TPB without observation of the Arborist during entry.
  - The painting crew shall not, under any circumstances use the shady area beneath a tree to clean off their paintbrushes.
  - Suppliers and vendors shall establish the loading/unloading area away from any TPB.
- The Arborist and zoning administrator shall have the authority to amend the tree protection plan as necessary to provide a greater level of protection for the trees in preservation if, during the construction project, the Arborist becomes aware of site conflicts due to unforeseen circumstances. For example, the Arborist can increase the level of care in the preservation protocol to authorize additional encroachment or pruning activities.
- 

### **Post Construction**

- The landscape plan shall receive Arborist approval prior to installation.



- The area within the TPB shall be retained as a natural mulch landscape bedding. No lawn or turf. No trenching irrigation. Limited fill, lighting, and plantings may be installed if approved by the Arborist.
- Nitrogen, phosphorus, and potassium fertilizers (NPK) products shall not be applied within the TPZ within the first two years following the completion of construction.
- The contractor shall hold a landscape planning meeting with the Arborist and landscape installer prior to landscape activities on the site.
- The tree protection barricade shall not be removed until approved by the zoning administrator.
- Only the Arborist is authorized to dismantle, move, or remove the tree protection barricade.
- There shall be no additional pruning to the trees impacted by construction for two years following the completion of construction, except where needed to mitigate hazard.

## **ARBORIST DUTIES**

### **Pre-Construction**

- 30 days prior to construction - The Arborist should prune the Grand Tree in accordance with the ANSI A300 pruning standard and as necessary for hazard mitigation and construction clearances.
- At the time of pruning - The Arborist should install chain-link, silt fence, and signage as specified in the TPP drawing, tree protection detail, and tree protection zone specifications outlined in this report.
- At the time of pruning - The Arborist should perform a soil analysis for trees identified for preservation.
- At the time of pruning - The Arborist should administer the first month tree health care treatments and amend the soil as necessary to promote health and vigor as part of the monthly construction impact treatment program.
- At the time of pruning - The Arborist should install mulch within the TPB at a thickness of 2-4" or as needed.

### **During Construction**

- The Arborist should inspect the tree and site monthly until completion of construction and landscaping activities.
- The Arborist should provide a monthly tree health care treatment protocol throughout construction.
- The Arborist should perform the initial root pruning if larger roots in the excavated area or near the TPZ need to be cut.
- The Arborist should install temporary irrigation or implement a sufficient water schedule if soil within the TPB becomes dry.
- The Arborist shall have the authority to amend the tree protection plan as necessary to provide a greater level of protection for the tree in preservation if, during the construction project, the Arborist becomes aware of site conflicts due to unforeseen





circumstances. For example, the Arborist can increase the level of care in the preservation protocol to authorize additional encroachment or pruning activities.

#### **Post Construction**

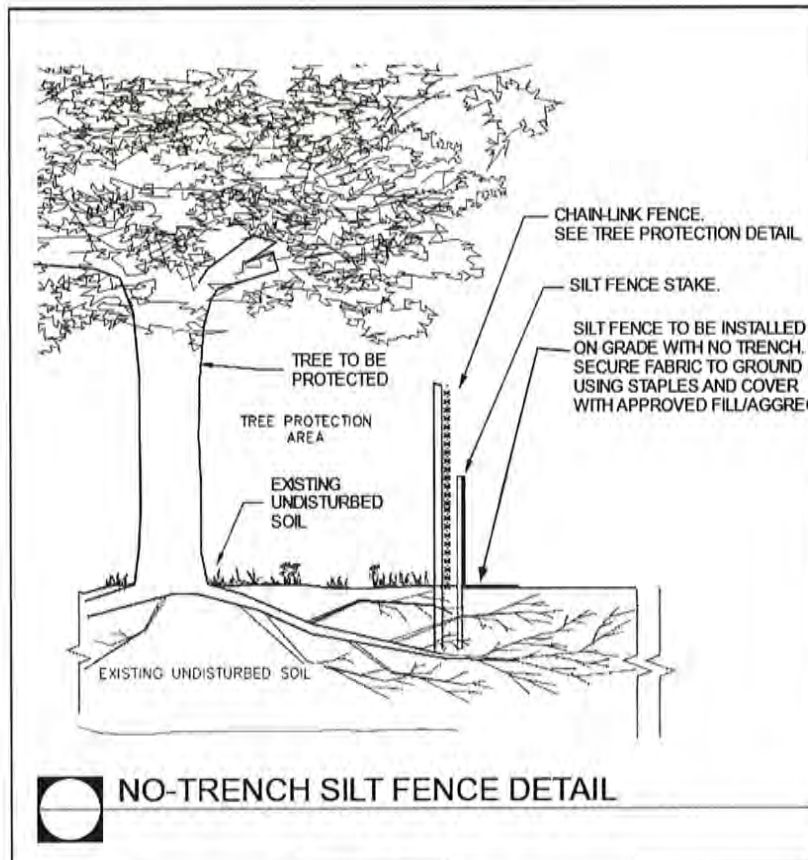
- The Arborist should remove the tree protection barricade when authorized by the zoning administrator.
- The Arborist should tilth the soil with an air-spade root remediation tool within the TPZ of each tree being preserved to reduce compaction.
- The Arborist should review the landscape plan to verify minimal impact to the tree associated with elevation changes, filling, installation of lighting and irrigation, planting, lawn/turf, hardscape, and other site improvements. The Arborist may approve or order changes to the design.
- The Arborist should continue providing monthly tree health care treatments for a period of one year following the completion of construction.



**TREE DETAIL**





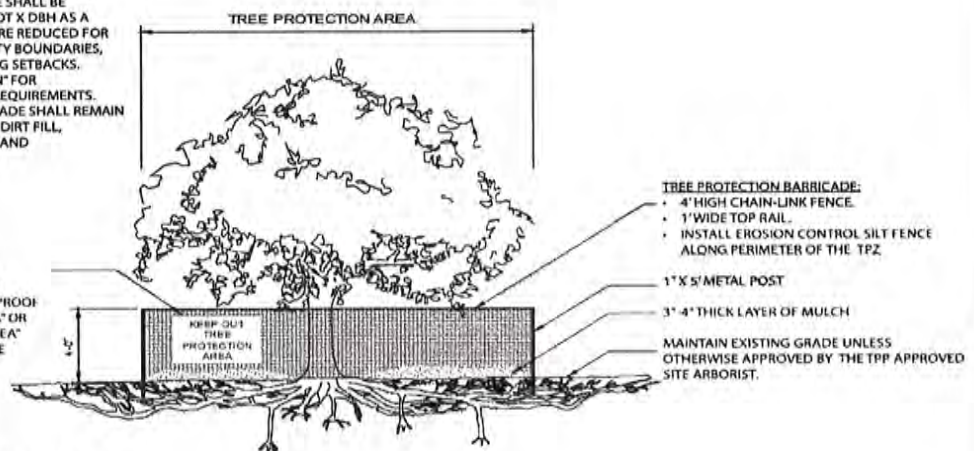



**NOTES:**

1. LIMIT OF ENCROACHMENT IS AS DEMONSTRATED ON THE TPP DRAWING.
2. TPZ - TREE PROTECTION ZONE, AREA OF PROTECTION AROUND THE TREE WHERE TPB WILL BE INSTALLED.
3. TPB - TREE PROTECTION BARRICADE SHALL BE INSTALLED AT A DISTANCE OF 1 FOOT X DBH AS A RADIUS ON ALL SIDES EXCEPT WHERE REDUCED FOR CONSTRUCTION ENVELOP, PROPERTY BOUNDARIES, ACCESS, IMPERVIOUS AND BUILDING SETBACKS.
4. SEE THE "ORDERS OF PRESERVATION" FOR OVERARCHING TREE PROTECTION REQUIREMENTS.
5. THE AREA WITHIN THE TREE BARRICADE SHALL REMAIN FREE OF ALL BUILDING MATERIALS, DIRT FILL, CONSTRUCTION DEBRIS, VEHICLES, AND DEVELOPMENT ACTIVITIES.

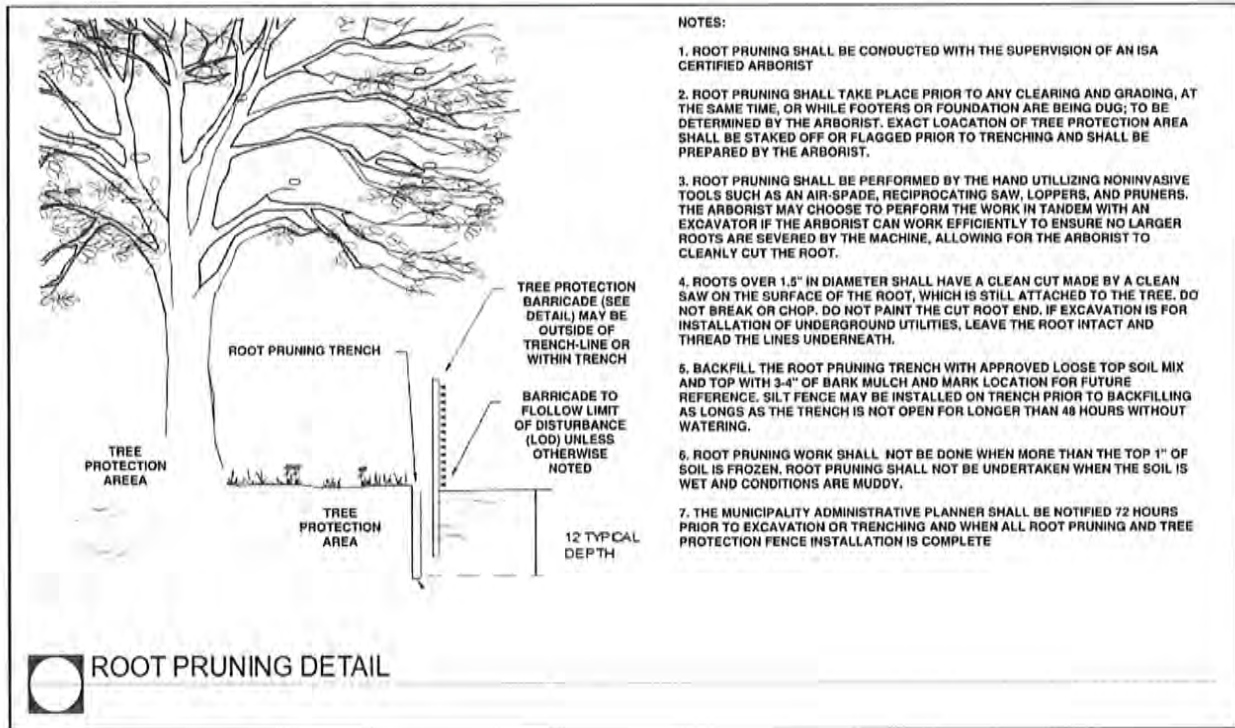
**SIGNAGE:**

- STANDARD 12" X 18" DIMENSION
- ENGLISH AND SPANISH LANGUAGE
- READILY VISIBLE, DURABLE, WATERPROOF
- "KEEP OUT TREE PROTECTION AREA" OR "NO ENTRY TREE PRESERVATION AREA"
- SHALL BE INSTALLED ON THE FENCE AROUND EACH GRAND TREE




**TREE PROTECTION DETAIL**







## GLOSSARY

**acceptable risk**—the degree or amount of risk that the owner, manager, or controlling authority is willing to accept.

**aeration** —provision of air to the soil to allow root and microbial respiration.

**aesthetic**—pleasing to the senses, visually or otherwise.

**analysis**—detailed examination of the elements or structure of something.

**ANSI**—American National Standards Institute, a private, nonprofit organization that oversees the development of voluntary consensus standards by accredited representatives of government agencies industry, and other stakeholders.

**ANSI A300**—in the United States, industry-developed, national consensus standards of practice for tree care.

**applicator**—1) a qualified person engaged in the application of materials such as, but not limited to pesticides, growth regulators, and fertilizers. 2) a tool or device used to apply a substance

**appraisal**—(1) placing a monetary value on a tree, other plant, other landscaping, including hardscape, or an entire property. (2) a report stating an opinion of appraised value. (3) particularly outside the United States, an evaluation of non-monetary landscape or plant characteristics.

**approved**—in the context of guidelines, standards, and specifications, that which is acceptable to federal, state, provincial, or local enforcement authorities or is an accepted industry practice.

**arborist**—professional who possesses the technical competence, through experience and related training, to provide for or supervise the management of trees and other woody plants in residential, commercial, and public landscapes.

**barrier** —see root barrier and tree protection zone barrier.

**booklet style report**—booklet reports present information in an abbreviated book form. Booklet reports are probably the most commonly used and readily recognizable report format.

**branch** —secondary shoot or stem in a woody plant; generally smaller than the parent.

**canopy**—upper portion of the tree consisting of scaffolding branches, smaller limbs, and twigs.



**crown**—the upper part of a tree, measured from the lowest to the highest branch including all the branches and foliage.

**dbh**—diameter at breast height [U.S., 4.5 feet above ground] measured in inches.

**decay**—(1) (noun) an area of wood that is undergoing decomposition. (2) (verb) decomposition of organic tissues by fungi or bacteria.

**diameter**—the length of a straight line through the center of a circle.

**dripline**—imaginary line defined by the branch spread of a single plant or group of plants.

**duty of care**—legal obligation that requires an individual to use a reasonable standard of care when performing tasks that may potentially harm others.

**failure**—breakage of a stem, branch, or roots, or loss of mechanical support in the root system.

**foliage**—leaves of a plant.

**grand tree**—tree with a DBH of 24" or greater.

**hazard**—situation or condition that is likely to lead to a loss, personal injury, property damage, or disruption of activities; a likely source of harm. Tree part identified as likely source of harm.

**height**—tree height either visually estimated or measured. If measured, the tool used for measurement should be noted in Tools used.

**high**—(risk rating) defined by its placement in the risk rating matrix; consequences are significant, and likelihood is very likely or likely, or consequences are severe, and likelihood is likely.

**impact**—(verb) striking a target or causing disruption that affects activities.

**inspection**—a procedure to inspect a tree or trees. Variables used to describe a tree include position (if not already plotted on a topographical survey), species identity, maturity, various dimensions (main stem diameter, height, crown radius etc.), aspects of form, vigor, condition, incidence of pests, diseases, damage and defects, evidence of past management etc. Site factors, position in the landscape and site usage may also be relevant, usually including its position, species identity, dimensions, age class, condition, conservation value etc. as appropriate, and to identify and evaluate defects. It is also common to make management recommendations. Tree inspection is a fundamental of tree management and advisory practice in arboriculture.





**mitigation**—in tree risk assessment, the process for reducing risk.

**moderate**—(risk rating) defined by its placement in the risk rating matrix; consequences are minor, and likelihood is very likely or likely, or likelihood is somewhat likely and consequences are significant or severe.

**radius**—distance from the center to the perimeter of a circle. One half diameter.

**root collar**—is the area where the roots join the main stem or trunk. This area is typified by a flare leading to the major buttress roots. The root collar is part of the tree's trunk and requires the movement of oxygen and carbon dioxide in and out of the phloem (inner bark) to survive.

**shall**—word that designates a mandatory requirement within the ANSI standards or contract documents.

**species**—taxonomic group of organisms composed of individuals of the same genus that can reproduce among themselves and have similar offspring.

**standard**—an established or widely recognized authority or acceptable performance.

**vigor**—overall health. Capacity to grow and resist stress. Sometimes limited in reference to genetic capacity.



## APPENDIXES

### APPENDIX A – TREE MAP

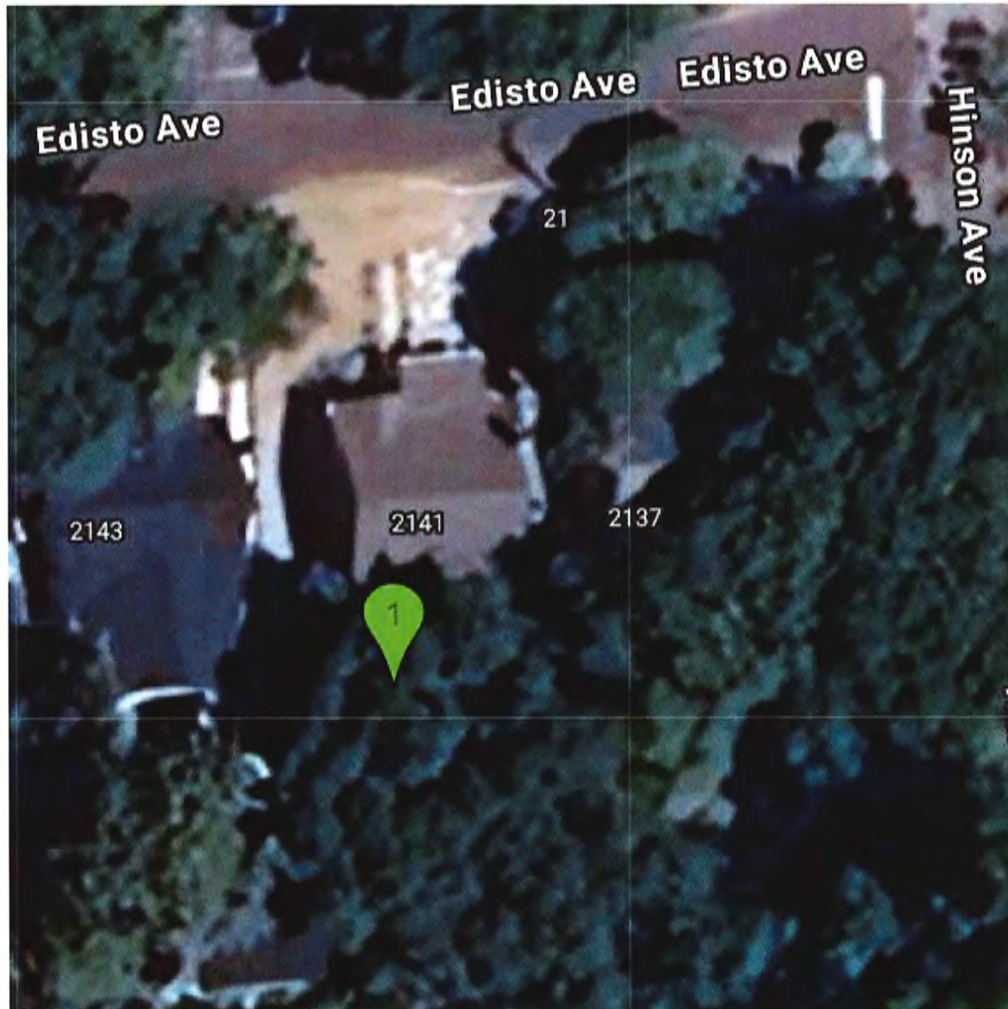


Figure 2 - Tree location.



APPENDIX B – TREE PHOTOS

#1 Live oak, *Quercus virginiana*



Figure 3 - Tree #1



## APPENDIX C – ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership of any property 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.
2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The consultant shall not be required to give testimony or attend court or any other meeting, public or private, by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the original or subsequent proposal.
4. Loss or alteration of any part of this report invalidates the entire report.
5. Possession of this report or a copy thereof does not imply the right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.
6. Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant as stated in his qualification.
7. This report and values expressed herein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
8. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
9. Unless expressed otherwise: (1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and (2) 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 problems or deficiencies of the plants or property in question may not arise in the future.



# EXHIBIT A

2141 EDISTO AVE.

## LOT INFORMATION

TMS #: TMS 343-06-00-107  
 LOT SIZE: 0.15 ACRES 6,534 SF  
 LOT WIDTH: 50.27'  
 LOT DEPTH: 130.00'  
 FLOOD ZONE: X ZONE  
 REQUIRED FINISHED FLOOR: N/A  
 ZONING: R-4

## PRINCIPAL SETBACKS

FRONT SETBACK: 20'-0"  
 REAR SETBACK: 10'-0"  
 INTERIOR SIDE SETBACK: 5'-0"

## IMPERVIOUS COVERAGE

MAX PERMITTED (40%): 2,613.6 SF

EXISTING: (21.8) 1,364 SF

PRINCIPAL BUILDING - FIRST FLOOR: 888.4 SF  
 PRINCIPAL BUILDING - PORCHES+ STAIRS: 153 SF  
 HVAC: 12 SF  
 ACCESSORY BUILDING: 207.6 SF  
 GREENHOUSE: 103 SF

PROPOSED: (29.6) 2,551.6 SF

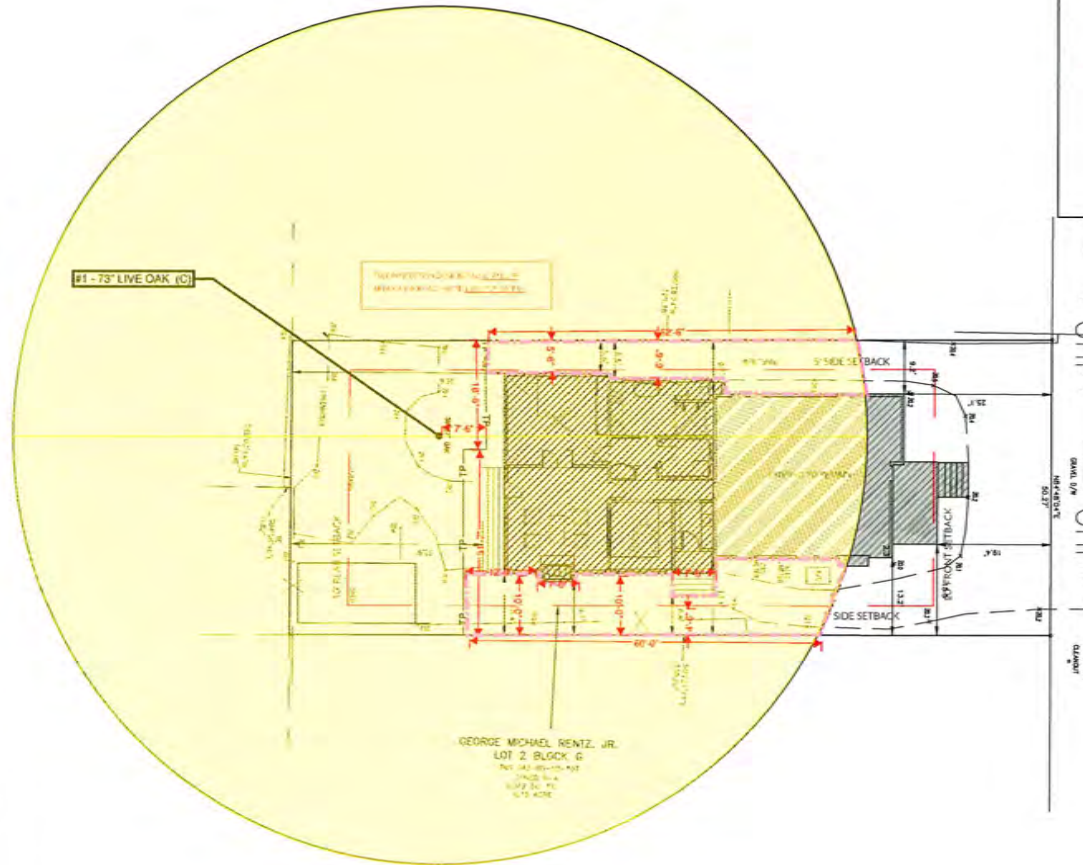
PRINCIPAL BUILDING - FIRST FLOOR: 2,040 SF  
 PRINCIPAL BUILDING - PORCHES+ STAIRS: 272 SF  
 HVAC: 12 SF  
 ACCESSORY BUILDING: 207.6 SF

## MAX HEIGHT

MAX PERMITTED: 35'-0"

EXISTING: 27'-6.5"

PROPOSED: 27'-6.5"



1 PROPOSED SITE PLAN  
 scale 1"=10'-0"

TP TREE PROTECTION FENCING



CRITICAL ROOT ZONE

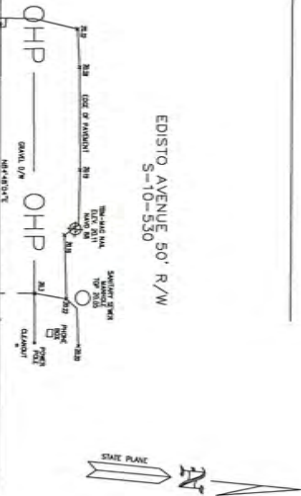
AS SHOWN ON DRAWING IS SUBJECT TO CHANGE AT DISCRETION OF OWNER

ROOT PROTECTION MATERIAL

TREE PROTECTION ILLUSTRATION PREPARED

BY:  
 SAVATREE, LLC  
 ARON LANDSAW

ISA CERTIFIED ARBORIST #IL-9434A  
 TREE RSK ASSESSMENT QUALIFIED



ADDRESS: 2141 EDISTO AVE, CHARLESTON, SC 29412

DATE: PER-111 05.01.25

SHEET: S3

AUMENT DESIGN STUDIO

1 cool blow street, # 130  
 charleston, south carolina 29403  
 T.243.822.4426



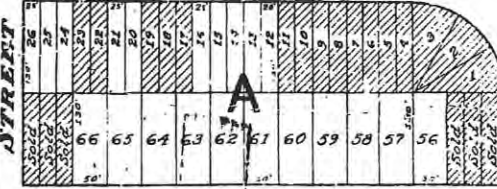
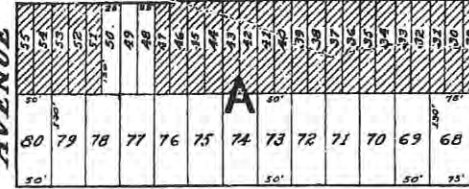
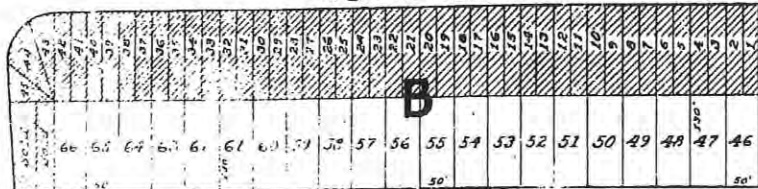


Riverland

Terrace

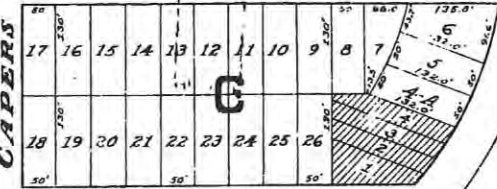
WAPP00

DRIVE



MEDWAY

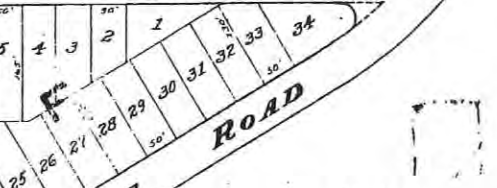
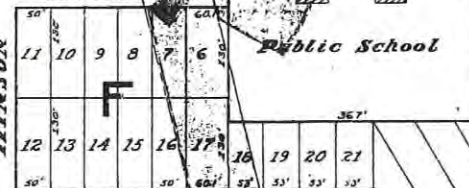
ROAD



EDISTO

AVENUE

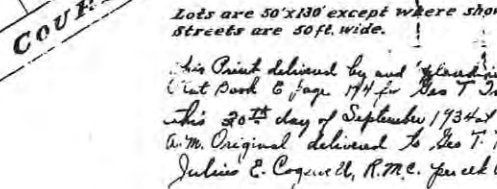
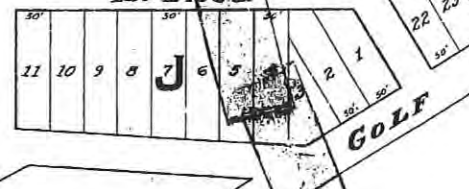
EDISTO AVE.



WELCH

AVENUE

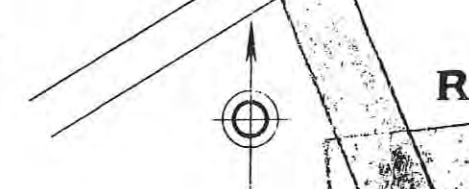
COURSE



STONO

DRIVE

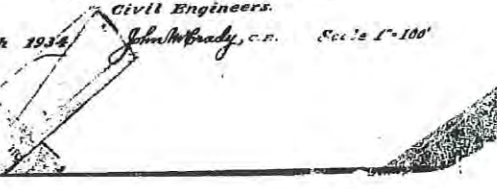
DRIVE



GOLFVIEW

DRIVE

DRIVE



Note:  
 Lots are 50'x130' except where shown otherwise.  
 Streets are 50 ft. wide.  
 This map delivered by and for the  
 City of Savannah, Georgia  
 This 30th day of September 1934  
 Wm. Original delivered to the T. Tinscott  
 Julius E. Cogswell, R.M.C. for A.D.

# MAP OF RIVERLAND GOLFVIEW

JAMES ISLAND, S. C.

Made by  
 The John McCrady Co.,  
 Civil Engineers.

March 1934 John McCrady, C.E. Scale 1"=100'

Lots sold are shown thus