



Case # BZA-03-24-00763

Charleston County BZA Meeting of May 6, 2024

Applicants/Property Owners: Hermelindo Menolez Leyva and Araceli Ruiz

Property Location: 2414 Midland Park Road – North Area

TMS#: 478-15-00-022

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

Request: Variance request for an impervious driveway that was constructed within three times the DBH (Critical Root Zone) of a 44" 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."*

## 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.
- G. When Lots lack a sufficient number of Trees to meet the requirement for DBH/number of Trees per acre, this requirement shall be fulfilled by existing Trees and must equal 40 inches per acre combined DBH. On Lots with less than 40 inches per acre combined DBH, additional Trees shall be planted on the Lot equaling or exceeding 40 inches per acre combined DBH. Planting schedules shall be approved by the Zoning and Planning Director. Properties within the Industrial (IN) District may elect to mitigate the removal of 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 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:

CASE # BZA-03-24-00763  
TMS # 478-15-00-022  
ZONING MAP



WHITCOMB DR

CITY OF NORTH CHARLESTON

SUBJECT PROPERTY

R-4

COUNTY OF CHARLESTON  
R-4

RAYMOND AV

INTERSTATE 26

R-4

COUNTY OF CHARLESTON

R-4

RHONDA JEROME CT

MIDLAND PARK RD

RAYMOND AV

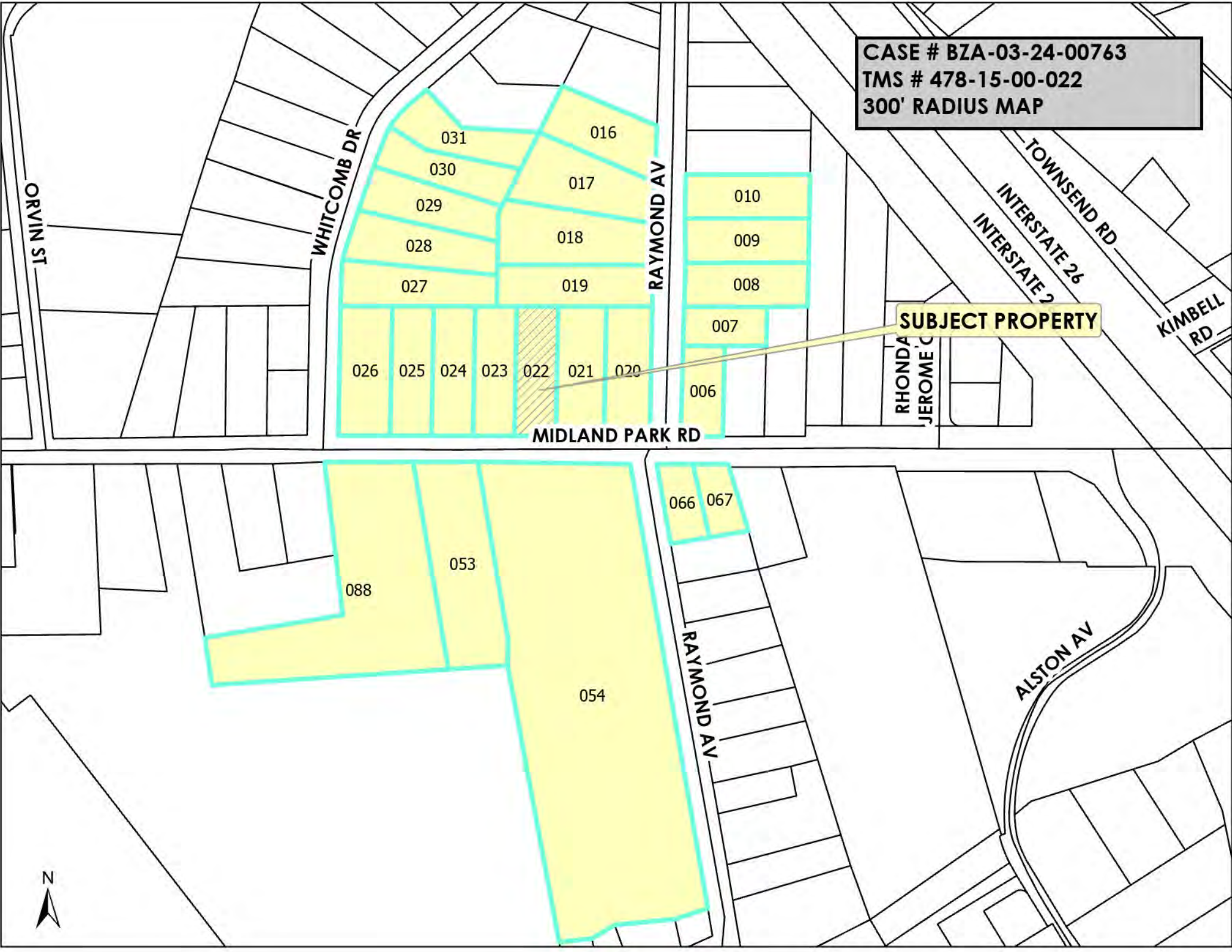
R-4

**Legend**

 SUBJECT PROPERTY	 MUNICIPAL BOUNDARIES
 Parcel Boundaries	 CHARLESTON COUNTY
<b>Zoning Districts</b>	 NORTH CHARLESTON
 R-4; LOW DENSITY RESIDENTIAL	

CASE # BZA-03-24-00763  
TMS # 478-15-00-022  
300' RADIUS MAP

SUBJECT PROPERTY



CASE # BZA-03-24-00763  
TMS # 478-15-00-022  
AERIAL VIEW

WHITCOMB DR

SUBJECT PROPERTY

RAYMOND AV

MIDLAND PARK RD

RAYMOND AV



CASE # BZA-03-24-00763  
TMS # 478-15-00-022  
AERIAL VIEW

SUBJECT PROPERTY



SAL LN

WHITCOMB DR

ALFONZO CIR

ORVIN ST

RAYMOND AV

TOWNSEND RD

INTERSTATE 26

KIMBELL RD

RHONDA JEROME CT

MIDLAND PARK RD

RAYMOND AV

ALSTON AV

Case # BZA-03-24-00763

BZA Meeting of May 6, 2024

Subject Property: 2414 Midland Park Road – North Area

Proposal: Variance request for an impervious driveway that was constructed within three times the DBH (Critical Root Zoning) of a 44" DBH Grand Live Oak Tree.



# 44" DBH Live Oak Tree





# Subject Property



# Midland Park Road



Staff Review:

The applicants and property owners, Hermelindo Menolez Leyva and Araceli Ruiz, are requesting a variance for an impervious driveway that was constructed within three times the DBH (Critical Root Zone) of a **44" Diameter Breast Height (DBH)** Grand Live Oak Tree at 2414 Midland Park Road (TMS # 478-15-00-022) in the North Area of Charleston County.

The subject property and properties to the north, east, and west are located in the Low Density Residential (R-4) Zoning District. The property to the south is located in the City of North Charleston's Jurisdiction. The 0.46-acre subject property contains a 1,787 sq. ft. single family residence.

The applicant's letter of intent explains, *"We contracted a company to expand our driveway for vehicle parking. It was our understanding that the company was responsible for following the regulations for the work they were contracted and paid for."*

The impervious concrete driveway is located approximately 3 feet to 4 feet from the trunk of the tree. To meet Zoning Ordinance Tree Preservation requirements, the pavement must be located 11 feet from the trunk of the tree **to be out of the tree's Critical Root Zone**. However, removing the pavement would exacerbate the situation. Therefore, if the BZA approves the variance, Staff recommends if the tree dies within 3 years of the date of this approval, the tree shall be mitigated. In addition, staff recommends that the applicant/property owner retain a Certified Arborist to monitor and treat the tree and to prepare a Tree Preservation Plan for Staff review and approval.

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 April 17, 2024. 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 are extraordinary and exceptional conditions pertaining to the property regarding the location of the existing impervious driveway. If the driveway were to be removed, it would cause greater damage to the tree. Therefore, the request meets this criterion.

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

Response: These conditions are unique to the subject property and do not generally apply to other properties in the vicinity. Therefore, the request meets 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 2414 Midland Park Road would unreasonably restrict the utilization of the property. The applicant would have to demolish the driveway which would cause greater damage to the tree. Therefore, the request meets 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: Authorization of this variance request may not be of substantial detriment to adjacent properties or to the public good if the BZA approves the **variance with Staff's suggested conditions**. Therefore, the character of the Low Density Residential (R-4) Zoning District may not be harmed. Thus, 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 is not the **result of the applicant's own actions** because the applicant hired a company with the understating that the driveway would be constructed properly to protect the tree. **The applicant's** letter of intent states, **"We contracted a company to expand our driveway for vehicle parking. It was our understanding that the company was responsible for following the regulations for the work they were contracted and paid for."** 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 the Tree Preservation Plan approved by Planning Staff is implemented. 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-03-24-00763 [Variance request for an impervious driveway that was constructed within **three times the DBH (Critical Root Zone) of a 44" DBH Grand Live Oak Tree at 2414 Midland Park Road (TMS # 478-15-00-022) in the North Area of 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 BZA decides to approve the application, Staff recommends the following conditions:

1. If the Grand Tree requested for encroachment (**44" DBH Live Oak**) **dies within 3** years of the date of the approval, the applicant shall mitigate 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 ZLDR, or (c) a combination of both (a) and (b). The allotted mitigation shall be in place prior to its removal.
2. The applicant shall retain a Certified Arborist to monitor and treat **the 44" DBH Live Oak**. The applicant shall provide a copy of the Tree Preservation Plan to Zoning Staff for review and approval.

**ZONING VARIANCE APPLICATION**  
**Charleston County Board of Zoning Appeals (BZA)**

<b>Property Information</b>			
Subject Property Address: 2414 Midland Park Rd N. Charleston 29406			
Tax Map Number(s): 4781500022			
Current Use of Property: Resident Home			
Proposed Use of Property: N/A Living			
<b>Zoning Variance Description:</b>			
<b>Applicant Information (Required)</b>			
Applicant Name (please print): Hermelindo Menendez Leyva & Araceli Ruiz			
Name of Company (if applicable): N/A			
Mailing Address: Same as above			
City:	State:	Zip Code:	
Email Address: Hermelindo.mendez45@gmail.com		Phone #: 843-460-7533	
Applicant Signature: 		Date:	
<b>Representative Information</b> (Complete only if applicable. Attorney, Builder, Engineer, Surveyor etc.)			
Print Representative Name and Name of Company:			
Mailing Address:			
City:	State:	Zip Code:	
Email Address:		Phone #:	
<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:
<b>FOR OFFICE USE ONLY:</b>			
Zoning District: R-4	Flood Zone: X (0295K)	Date Filed: 03-26-2024	Fee Paid: \$250.00
Application #: 03-24-00763	TMS #: 478-15-00-022	Staff Initials: JAC	

**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.)

We contracted a company to span our driveway for vehicle parking. It was our understanding that the company was responsible for following the regulation for the work they were contracted and paid for.

**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:

No, that we are aware of and the concrete has already been done, completed.

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

No, work as already done

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:

No.



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

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?

Only To park cars.

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

yes

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

yes. do To The ordinance & The county with  
The 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.

April 23, 2024

Marshall Badeaux – Consulting Arborist

To Whom It May Concern:

Enclosed is a Tree Preservation Plan (TPP) ordered by Araceli Ruiz based on my independent field investigation of a 44" Live oak, *Quercus virginiana* located on the property at 2414 Midland Park Road, Charleston, SC 29406. It has been prepared for the consideration of her desire to determine the size, health and safety of the Grand tree and to meet the requirements outlined in the municipal ordinance for preservation of Grand tree impacted by construction. I have included my assessment of the tree's current conditions, as well as my recommendations for preservation. Further, I have found the Grand tree to be healthy enough to withstand the impacts of construction if the Orders of Preservation herein are followed.

Please feel free to contact me with any questions you may have about this report, or any other service we can provide.

Best regards,



E. Marshall Badeaux, RCA #742, BCMA SO-7159B  
Registered Consulting Arborist  
ISA Board Certified Master Arborist  
(843) 501-4297  
marshall@charlestontreeexperts.com  
2851 Maybank Hwy  
Johns Island, SC 29455





## TREE PRESERVATION PLAN

www.charlestoneexperts.com  
[marshall@charlestoneexperts.com](mailto:marshall@charlestoneexperts.com)  
(843) 952-8300

**Report for:**  
2414 Midland Park Road  
Charleston, SC 29406

**Prepared for:**  
Araceli Ruiz

**Prepared By:**  
Marshall Badeaux, RCA #742, BCMA SO-7159B  
ASCA, Registered Consulting Arborist  
International Society of Arboriculture Board Certified Master Arborist  
Member, American Society of Consulting Arborists  
TPAQ, Tree and Plant Appraisal Qualified  
CTSP, Certified Treecare Safety Professional #03122  
EHAP, Electrical Hazards Awareness Program

April 23, 2024

# TABLE OF CONTENTS

<b>NARRATIVE</b> .....	<b>2</b>
Summary .....	2
Background.....	2
Assignment .....	2
Limits of Assignment.....	3
Purpose and Use of Report .....	3
<b>OBSERVATIONS</b> .....	<b>4</b>
Site .....	4
Analysis.....	4
Tree Condition and Inventory Table.....	4
Tree Grading System .....	4
Discussion .....	5
<b>TREE PROTECTION CONSTRUCTION STANDARDS</b> .....	<b>7</b>
A. Pre-Construction .....	7
B. During Construction.....	9
C. Post-Construction.....	11
<b>TREE VALUATION</b> .....	<b>13</b>
<b>CONCLUSION</b> .....	<b>13</b>
<b>ORDERS OF TREE PRESERVATION</b> .....	<b>14</b>
<b>GLOSSARY</b> .....	<b>15</b>
<b>APPENDIXES</b> .....	<b>17</b>
Appendix A - Tree Map.....	17
Appendix B - GIS Map .....	18
Appendix C – Tree #1 .....	19
Appendix D – Assumptions and Limiting Conditions.....	23
Appendix E - Certification of Performance .....	24

## NARRATIVE

### Summary

This report has been prepared with Araceli Ruiz's desire to locate and preserve the Grand tree on the site with a Tree Preservation Plan (TPP).

I performed a Level 2: Basic Tree Risk Assessment (BTRA) of the subject tree. Based on this level 2 evaluation, I have provided a Tree Preservation Plan for the 44" Live oak, *Quercus virginiana*. I have found the tree healthy enough to withstand the impacts of construction if the Orders of Preservation herein are followed.

### Background

In March 2024, Araceli Ruiz contacted my firm and expressed her desire to preserve the Grand tree impacted by construction activities. My Qualified Arborist, Lizzie Scruggs discussed the terms of my engagement and upon approval of the Arborist Report line item, I was scheduled for a site inspection to perform a BTRA.

### Assignment

Prepared for:  
Araceli Ruiz

Parcel location:  
2414 Midland Park Road  
Charleston, SC 29406

Prepared by:  
Marshall Badeaux, RCA #742, BCMA SO-7159B  
Charleston Tree Experts  
2851 Maybank Hwy  
Johns Island, SC 29455

After discussing the terms of my engagement and the levels of assessment with Araceli Ruiz, she agreed that I 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 tree.
4. Provide recommendations for the tree outlined in this report.
5. Provide my findings in a booklet style report.

### **Limits of Assignment**

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

### **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 Araceli Ruiz to establish a Tree Preservation Plan. Upon submission, this report will become the property of Araceli Ruiz and its use will be at her discretion. Reproduction or making of additional copies without explicit consent by the preparing Arborist is strictly prohibited.

## OBSERVATIONS

### Site

The tree resides at TMS# 478-15-00-022, a 0.46-acre single family residential homesite.

### Analysis

The family home, neighboring home to the left and overhead utilities are targets of concern within 1x height of the tree.

### Tree Condition and Inventory Table

Tree #	(DBH)	Species	Health	Risk Rating	TPZ (1ft x DBH) Radius from the trunk.	Comments
1	44"	Live oak, <i>Quercus virginiana</i>	C	Moderate	44'	Construction damage caused by excavation of soil to install concrete driveway extension overtop critical root zone (CRZ).

### 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, root 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 without posing a 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

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 a tree failure. If the risk rating defined for a tree exceeds the level of acceptable risk, mitigation is recommended.

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, landmark, 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.

The critical root zone (CRZ) of a tree is the area around the tree where the majority of the tree's roots are located. This area is essential for the tree's health and stability



because it provides the tree with the necessary nutrients, water, and oxygen to survive. Construction damage to the CRZ will have several negative impacts on the tree's health and longevity.

One of the primary effects of construction damage to the CRZ is the disruption of the soil structure. Heavy machinery and equipment used during construction can compact the soil, making it difficult for roots to penetrate and absorb water and nutrients. This can lead to a decrease in the tree's ability to uptake essential nutrients and water, making it more susceptible to drought, disease, and pests. The addition of fill dirt to a site has the same effect on a tree.

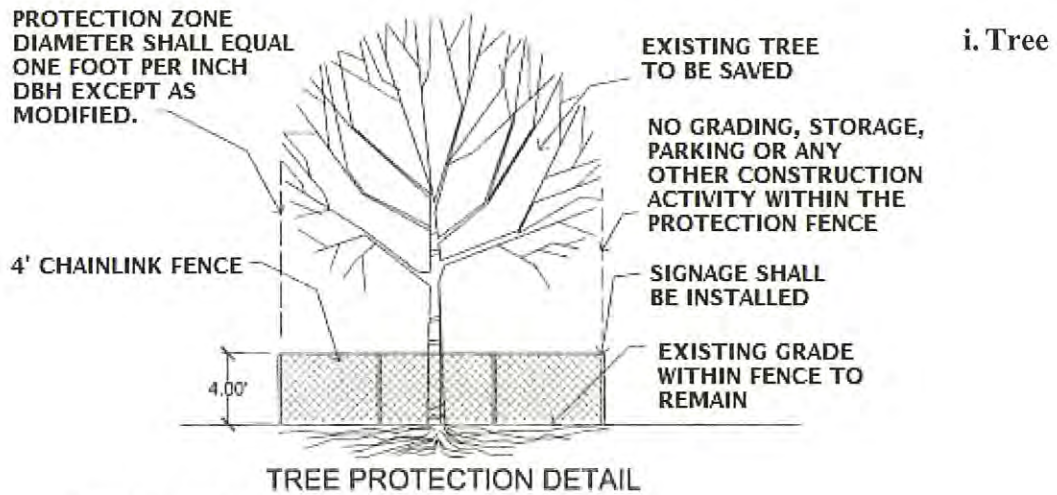
Construction damage to the CRZ can also cause physical damage to the roots themselves. Heavy equipment or digging can break or sever roots, reducing the tree's ability to take up water and nutrients. This damage can also create open wounds on the tree, which can allow pathogens and pests to enter and cause further damage to the tree's health. In addition to physical damage, construction damage to the CRZ can also cause environmental stress on the tree. The removal of vegetation, soil disturbance, and changes in water flow can alter the microclimate around the tree, making it more difficult for the tree to regulate its temperature and moisture levels. This stress can weaken the tree's immune system, making it more susceptible to disease and pests.

Overall, construction damage to the critical root zone of trees can have severe negative effects on the health and longevity of trees. It is essential to take measures to protect the CRZ during construction to minimize damage and preserve the health of trees in the area.

The forgoing is an explanation and depicting of how Grand trees should be preserved prior, during and post construction. See Orders of Preservation for remediation services.

# TREE PROTECTION CONSTRUCTION STANDARDS

## A. Pre-Construction



### 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
- 3) identify the TPZ zone. 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. Other protective devices or construction techniques may be used as approved by the Zoning and Planning Director.
- 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, strong roots extend up to 11 feet from the stem in larger diameter trees. 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.

**ii. 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.



**iii. Pre-Construction Soil Analysis and Treatment**

A soil sample will be obtained and sent to the Clemson Home Gardening 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 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. The proposed plant health care treatments shall be applied once monthly for one complete year post construction. These treatments will boost the overall health and vigor of the tree encouraging optimal sustainability.

The tree to be protected is currently not being irrigated by traditional sprinkler system. 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 will need to penetrate six to eight inches deep within and throughout the TPZ (Fite and Smiley, 2008). Contractor shall install a temporary irrigation system or hire a Certified Arborist to water the tree on regular intervals.

## **B. During Construction**

### **i. 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 Protect 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, water, and grow most vigorously when these requirements are met, which is usually 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. (Fite and Smiley, 2008).

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 tree. 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. Moderate 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 tree can be fatal. The change in grade can have both immediate and long-term adverse effects on the tree. (Matheny, et, al, 1998)
- 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. Pervious 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.

## **ii. Tree Care**

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 hold moisture protecting tree roots from drying out. The mulch is applied at 2”-4” in depth. The tree in the construction zone is 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 lead 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. (Matheny, et al, 1998). Soil shall be tilth by a Certified Arborist using an air-spade upon completion of construction.

## **iii. 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 to 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 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.

#### **iv. Damage**

There will be heavy equipment and vehicles used near the tree. Wounds to tree 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 chain link fence will prevent damage from construction equipment. (Matheny, et, al, 1998).

### **C. Post-Construction**

#### **i. Post-Construction Treatment**

At least 30 days prior to starting construction, throughout construction and 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 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. The proposed plant health care treatments shall start 30 days prior to starting construction, be applied once monthly throughout construction and 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.

**ii. 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 to 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.

**iii. 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 tree damaged during construction or destroyed within two years of completion of construction due to construction damage. If the tree is 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.

## TREE VALUATION

While I have not completed an appraisal of the tree, based on my experience with the Trunk Formula Technique (TFT); I would typically appraise trees of these sizes and conditions at approx. \$1,000 per inch DBH.

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## CONCLUSION

- Tree #1 is a viable specimen that should not be condemned based on recent construction activities.
- Implement Order of Preservation for Tree #1 to remediate and repair damage to critical root zone and restore vigor.



## **ORDERS OF TREE PRESERVATION**

1. All tree preservation work is to be conducted by arborist firm with an ISA Certified Arborist on Staff. Orders may be altered, amended, or added to provide a greater level of tree preservation based on unanticipated specifications of the site plan and construction project as determined by BCMA.
2. No additional pruning for the next two years except for utility right-of-way and hazard mitigation.
3. Conduct a soil analysis for the tree in preservation.
4. Perform a one-year treatment regime to remediate damage to tree roots and boost vigor.
5. Arborist firm to continue to provide monthly PHC soil/root treatments throughout construction.
6. Certified Arborist to inspect the site monthly and monitor for changes to tree health until completion treatment regime.

## 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.

**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.

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

**foliage**--leaves of a plant.

**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.

**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 of a 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.

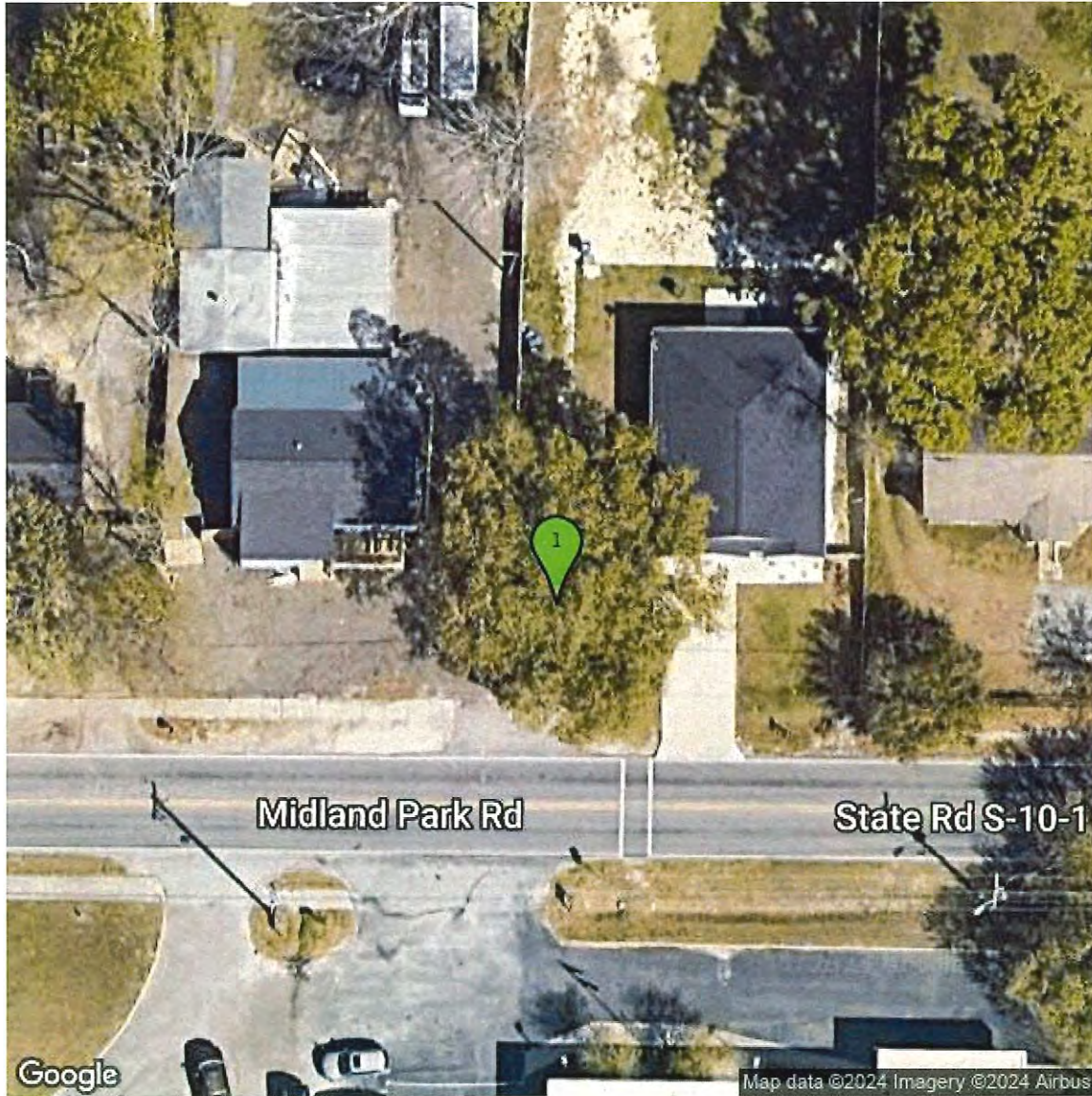
**species**--taxonomic group of organisms composed of individuals of the same genus that can reproduce among themselves and have similar offspring.

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

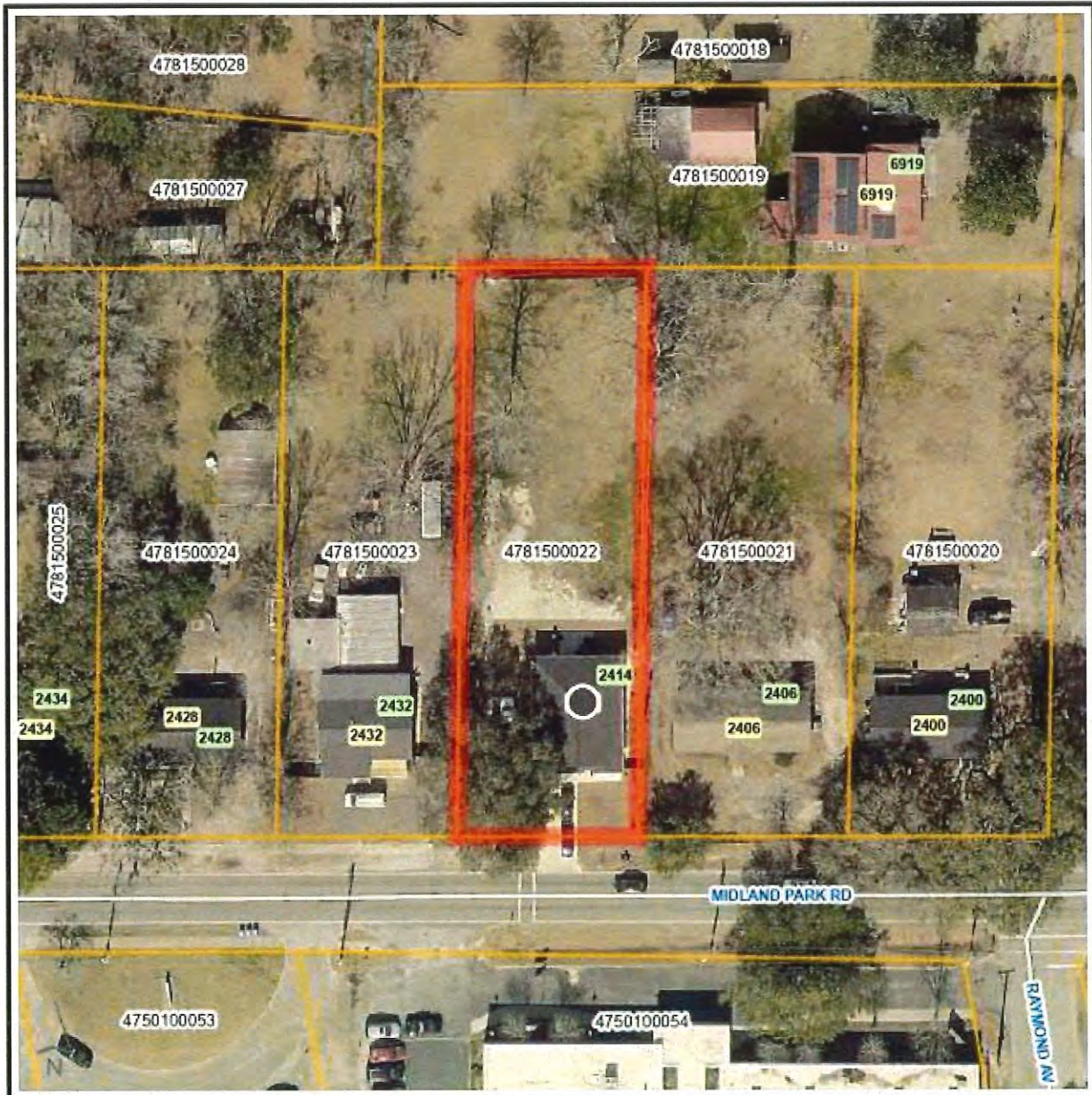
**vigor**--overall health. Capacity to grow and resist stress. Sometimes limited in reference to genetic capacity.

# APPENDIXES

## Appendix A - Tree Map

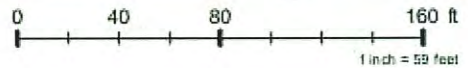


### Appendix B - GIS Map



### Charleston County SC

**PID:** 4781500022  
**OWNER1:** RUIZ ARACELI COUTINO  
**PLAT BOOK PAGE:** G-93  
**DEED BOOK PAGE:** 0821-184  
**Jurisdiction:** COUNTY OF CHARLESTON



**Note:** The Charleston County makes every effort possible to produce the most accurate information. The layers contained in the map service are for information purposes only. The Charleston County makes no warranty, express or implied, nor any guaranty as to the content, sequence, accuracy, timeliness or completeness of any of the information provided. The County explicitly disclaims all representations and warranties. The reader agrees to hold harmless the Charleston County for any cause of action and costs associated with any causes of action which may arise as a consequence of the County providing this information.

Author: Charleston County SC  
 Date: 4/23/2024

Appendix C – Tree #1

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**LIVE OAK, *QUERCUS VIRGINIANA***



Figure 1: Construction damage caused by excavation of soil to install concrete driveway extension overtop critical root zone (CRZ).



Figure 2: Construction damage caused by excavation of soil to install concrete driveway extension overtop critical root zone (CRZ).

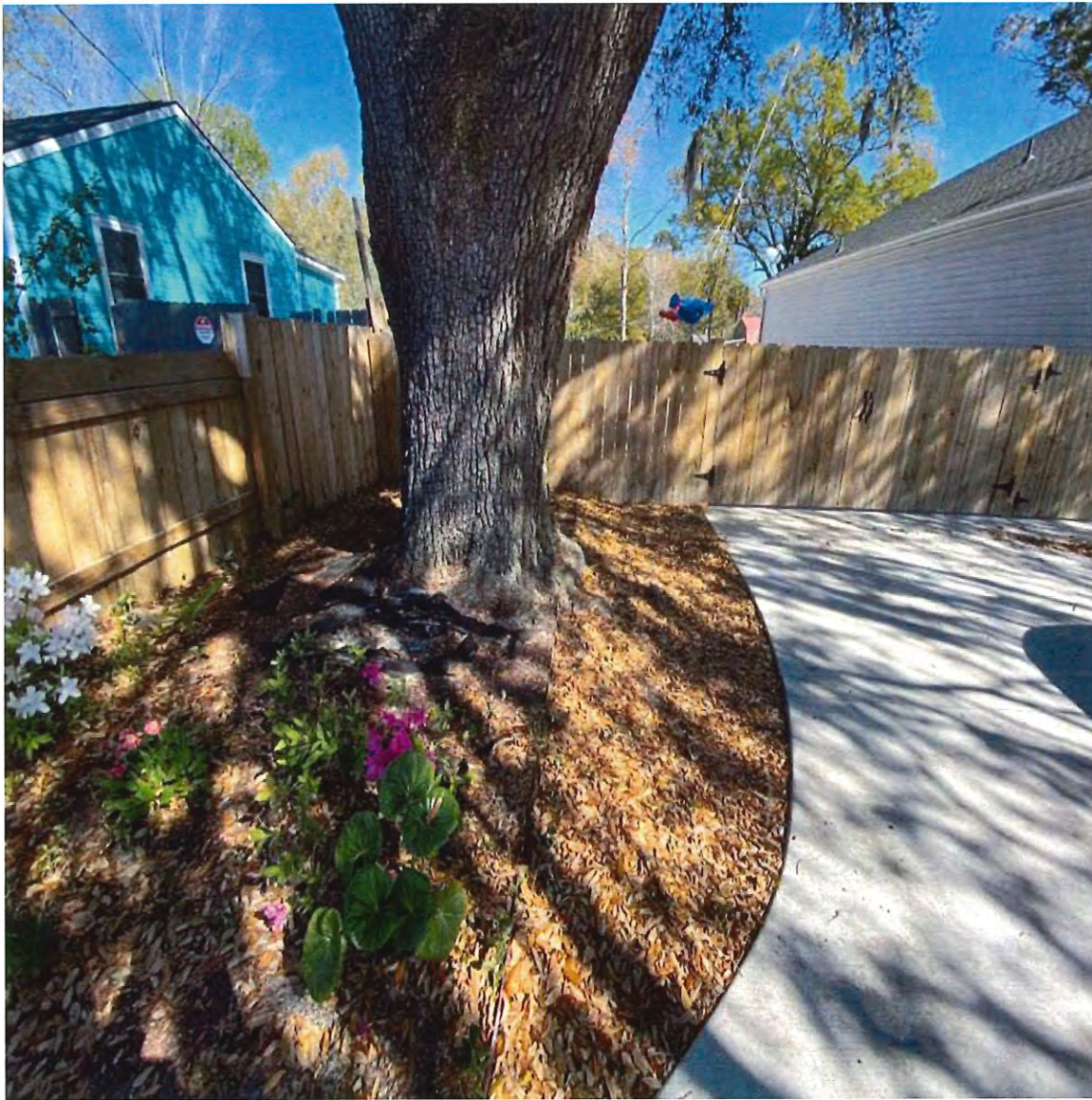


Figure 3: Construction damage caused by excavation of soil to install concrete driveway extension overtop critical root zone (CRZ).





Figure 4: Construction damage caused by excavation of soil to install concrete driveway extension overtop critical root zone (CRZ).

## **Appendix D – Assumptions and Limiting Conditions**

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable.
2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible for the accuracy of information provided by others.
3. The consultant/appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services described in the fee schedule and contract of engagement.
4. Loss or alteration of any report invalidates the entire report.
5. Possession of this report of a copy thereof does not imply right of publication or use for any purpose by any person other than to whom it is addressed, without the prior expressed written consent of the consultant/appraiser.
6. This report and values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser'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.
7. 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.
8. 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 trees or property in question may not arise in the future.

## Appendix E - Certification of Performance

I, Marshall Badeaux, certify:

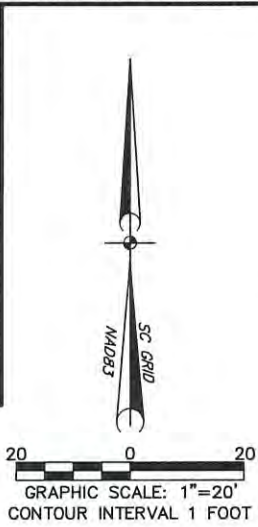
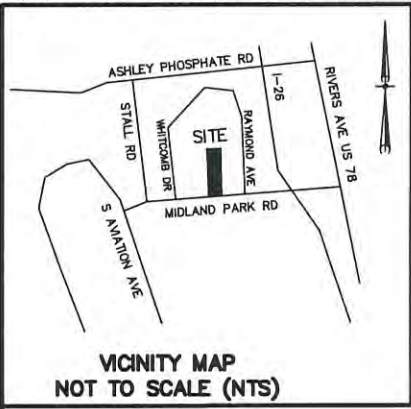
1. That I have personally inspected the trees referred to in the report, and have stated my findings accurately. The extent of the evaluation is stated in the attached report;
2. That I have no bias with respect to the parties involved;
3. That the analysis, opinion and conclusions stated herein is my own and is based on current scientific procedures and facts;
4. That my analysis, opinion and conclusions were developed and this report has been prepared according to commonly accepted Arboriculture practices;
5. That no one provided significant professional assistance to me, except as indicated within the report;
6. That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results if the assignment of stipulated results, or the occurrence of any subsequent events.

I furthermore certify that I am a member in good standing of the American Society of Arboriculture and the International Society of Arboriculture. I have been involved in the practice of Arboriculture and the care of trees for over 20 years.

Signed: 

Date: April 23, 2024





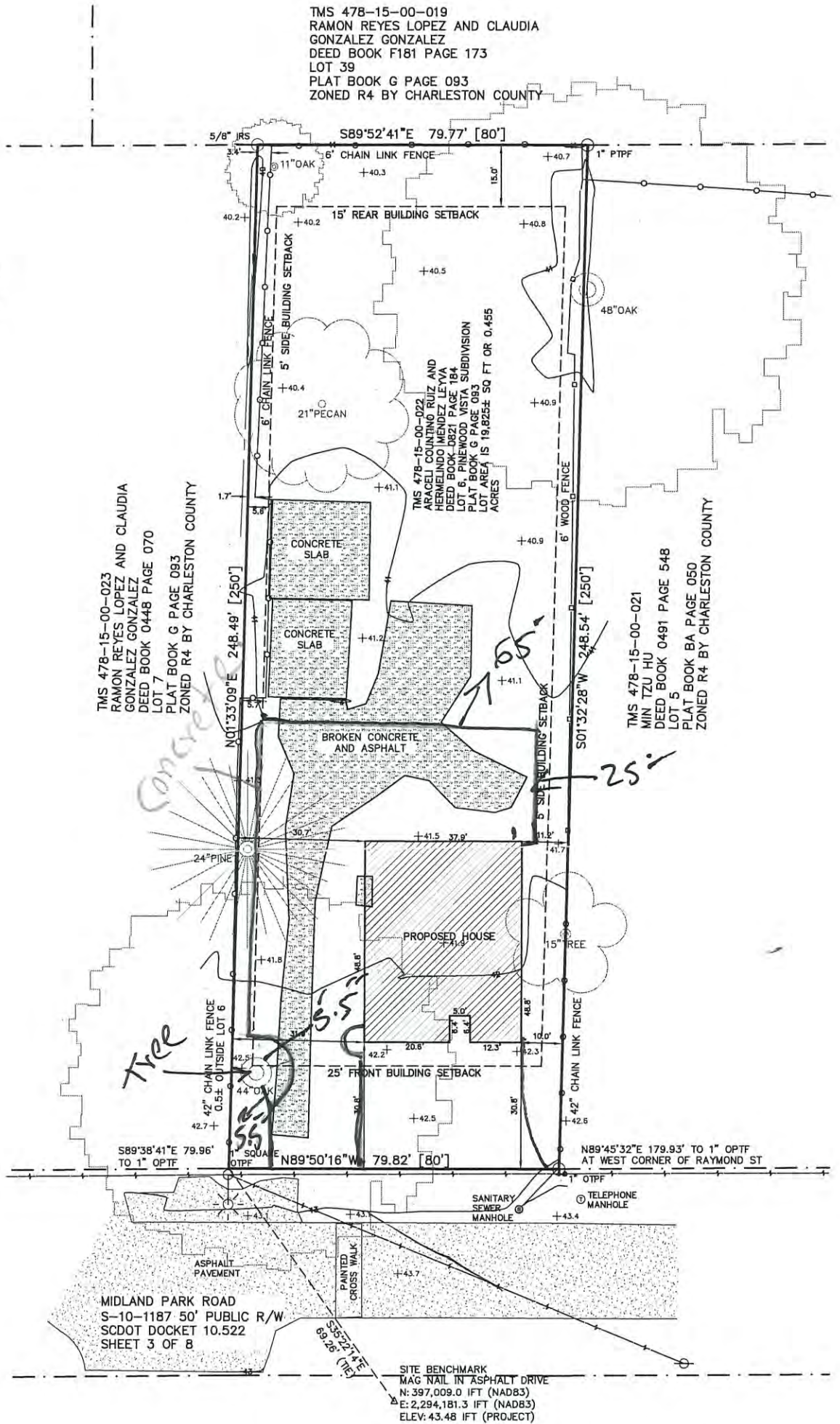
- LEGEND**
- SPOT ELEVATION (FROM SURFACE) +41.9
  - ELECTRIC METER
  - WATER METER
  - SEWER CLEAN OUT
  - LIGHT POLE
  - IRON ROD FOUND OR SET
  - RECORD DATA [XXX]
  - CURB/PAVEMENT LINE
  - CONCRETE
  - BOUNDARY LINE
  - ADJACENT BOUNDARY LINES
  - OVERHEAD POWER/ UTILITY
  - CHAIN LINK FENCE
  - WOODEN FENCE
  - IRS 5/8" IRON ROD SET
  - IRF IRON ROD FOUND
  - PTPF PUNCH TOP PIPE FOUND
  - R/W RIGHT OF WAY

**SURVEYORS NOTES:**

1. NORTH ORIENTATION IS BASED SC GRID USING ON-SITE CONTROL WITH SURVEY GRADE RECEIVERS AND THE SCVRS FROM NGS MONUMENT 10 232
2. ELEVATIONS ARE BASED ON GPS REDUCTION FROM NGS MONUMENT 10 232. DUE TO POOR ATMOSPHERIC CONDITIONS AT TIME OF SURVEY, ELEVATIONS ARE APPROXIMATE NAVD88 AND SHOWN AS PROJECT
3. THIS PARCEL APPEARS TO LIE IN FLOOD ZONE X, AS DEPICTED ON FEMA (FEDERAL EMERGENCY MANAGEMENT AGENCY) FIRM (FLOOD INSURANCE RATE MAP) 45019C 0295K, WITH A REVISION DATE OF JANUARY 29, 2021.
4. ONLY VISIBLE IMPROVEMENTS ARE SHOWN.
5. HOUSE SHOWN HERE ON IS BASED ON PLANS PROVIDED BY CLIENT
6. TITLE REPORT NOT SUPPLIED NOR OBTAINED BY HGS. THIS PARCEL SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.
7. ALL PLAT AND DEED REFERENCES ARE TO CHARLESTON COUNTY OFFICE OF REGISTER OF DEEDS.
8. THIS IS A RESURVEY OF AN EXISTING TAX PARCEL OF LAND
9. THIS PLAT IS INVALID UNLESS IT BEARS THE ORIGINAL RAISED SEAL AND SIGNATURE OF THE SURVEYOR

**PARCEL INFO:**  
TMS 478-15-00-022  
CURRENT OWNER:  
ARACELI COUNTINO RUIZ AND HERMELINDO MENDEZ LEYVA  
SITE ADDRESS  
2414 MIDLAND PARK RD  
NORTH CHARLESTON, SC 29406  
DEED BOOK 0821 PAGE 184  
LOT 6, PINWOOD VISTA SUBDIVISION  
PLAT BOOK G PAGE 093  
LOT AREA IS 19,825± SQ FT OR 0.455 ACRES

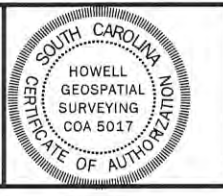
ZONED R4 BY CHARLESTON COUNTY  
MINIMUM LOT AREA 7,250 SQ. FT  
MINIMUM WIDTH 60 FEET  
SETBACKS ARE:  
FRONT 25'  
SIDE 5'  
REAR 15'  
OCRM 35'  
MAXIMUM COVERAGE 30%  
MAXIMUM HEIGHT 35'



**PLOT PLAN OF  
LOT 6, PINWOOD VISTA SUBDIVISION, BEING CHARLESTON COUNTY TMS 478-15-00-022,  
RECORDED IN THE OFFICE OF REGISTER OF DEEDS FOR CHARLESTON COUNTY IN PLAT BOOK  
G AT PAGE 093, OWNED BY ARACELI COUNTINO RUIZ AND HERMELINDO MENDEZ LEYVA AS  
DESCRIBED IN DEED BOOK 0821 AT PAGE 184, LOCATED NEAR NORTH CHARLESTON,  
CHARLESTON COUNTY, SC**

NEAR NORTH CHARLESTON CHARLESTON COUNTY SOUTH CAROLINA  
SURVEYED JULY 22, 2021 MAP DATE SEPTEMBER 19, 2021  
SCALE 1" = 20' CONTOUR INTERVAL 1 FOOT

HOWELL GEOSPATIAL SURVEYING, LLC  
191 LARISSA DRIVE  
CHARLESTON, SC 29414  
OFFICE (843) 647-5563  
CELL (843) 819-7496  
FAX (843)-647-5563  
HG-SURVEYING@COMCAST.NET



I HEREBY STATE THAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THE SURVEY SHOWN HEREIN WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARDS OF PRACTICE MANUAL FOR SURVEYING IN SOUTH CAROLINA, MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN.

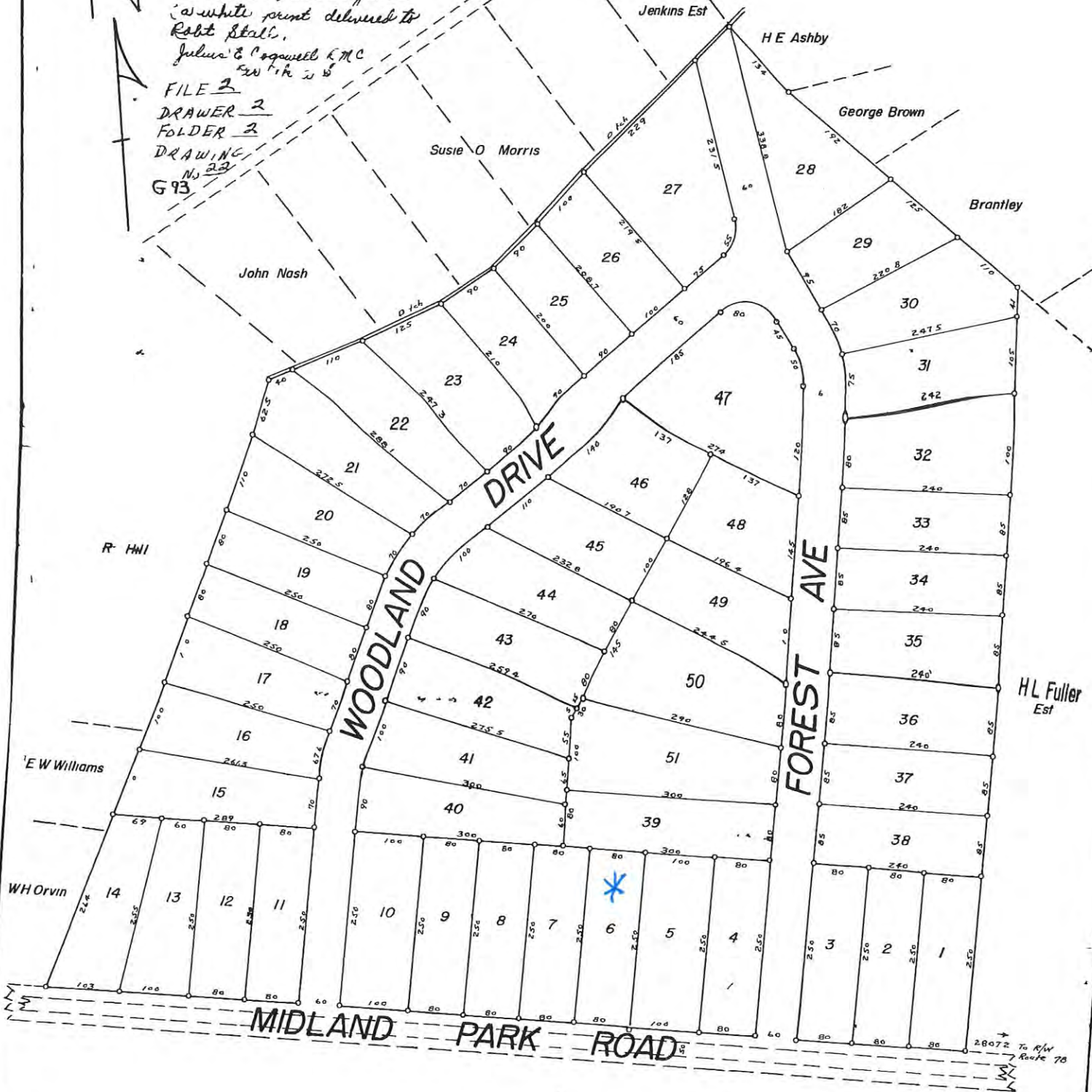
PRELIMINARY---FOR REVIEW ONLY  
F. LEE HOWELL, SC PLS 9316 SIGNATURE DATE  
FIELD BOOK 14/08

PROJECT NO. 7499-1
SHEET 1 OF 1

Register Great Consequence Office  
 Charleston County, SC  
 Recorded by filing in Plat Book 2  
 Page 93 E, 2 - 8' 0" x 10' 0"  
 Dec 29, 1949 this tracing  
 furnished by and original  
 (a white print delivered to  
 Robt Stahl,

Julius E. Cogswell & MC  
 227 1/2 St W

FILE 2  
 DRAWER 2  
 FOLDER 2  
 DRAWING  
 No 23  
 G 93



State of South Carolina  
 County of Charleston

SCALE 1"=100'

Subdivision of PINWOOD VISTA at Midland Park  
 December 1949

Walter Handley, Jr.  
 J. H. Hear, Jr.  
 Surveyors