Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

MEMORANDUM

TO: Amy Beatty, Community Services Director

FROM: Sally Thigpen, Assistant Director

DATE: July 14, 2023

SUBJECT: Tree Removal on Market St- Council Information

Nineteen declining Laurel Oaks stand in the median and plazas on Market St. between 12th St. and 21st St. Tree assessments conducted by ISA Certified Arborists on staff resulted in the recommendation to remove these trees in the near term. They pose a safety risk to pedestrian and vehicular traffic as well as public and private infrastructure. Coordination with City Traffic Engineering and NCDOT occurred in April. The following memo outlines the details for this recommendation.

1. **Introduction**
    a. Wilmington's urban forest is a green infrastructure asset providing essential environmental, social and economic benefits to the city. Proactively managing trees is part of the strategy outlined in the Urban Forestry Master Plan (UFMP). Recommendation #3 states that *reactive public tree maintenance negatively impacts the overall condition, value, and sustainability of Wilmington's trees. It also leads to inefficient, inequitable, and more costly service delivery as well as lower customer satisfaction.* This is evidenced by the $250,000 investment the City made in FY23 to fund hazard tree removal contracts to address the volume of high-risk trees on public property. The UFMP continues in this section *Proactive tree management maximizes benefits; improves tree health, longevity and public safety (fewer risks); and improves customer service.*

2. **Tree Assessment Results**
    a. Tree assessments were conducted by staff ISA Certified Arborists. They are credentialed by the International Society of Arboriculture (ISA) with the Tree Risk Assessment Qualification (TRAQ).
    b. The species of tree is Laurel Oak, *Quercus laurifolia*.
    c. The sizes range from 13" dbh to 55" dbh (diameter at breast height measured at 4.5')
    d. A description of each tree is at the end of this document.

3. **UFMP section on Wilmington Laurel Oaks**
    a. The failure profile of the Laurel Oak is well documented in the urban forestry and arboriculture profession.

Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

b. The Davey Resource Group team commented on the significance of declining Laurel Oaks in Wilmington during their presentation to City Council on June 6th, 2023.
c. Laurel Oak decline is included in the UFMP (Section 2, page 38).

Laurel Oaks

Wilmington is home to a sizable population of *Quercus laurifolia* (laurel oak) trees. As the 2022 street tree inventory shows, **laurel oaks constitute 13% of all existing street trees within the 1945 limits**. Many decades ago, when Wilmington's now-mature laurel oaks were originally planted, the species was commonly recommended as a prime choice for municipal street tree plantings in the southeastern United States. This early recommendation was based on the laurel oak's tolerance of poor soils, its quick growth rate, and its ability to provide large areas of shade over municipal streets and sidewalks. Today, fast-growing oak trees, such as the laurel oak, are understood to have short life spans (up to 80 years on average) when compared to their slower-growing relatives. Fast-growing tree species often suffer from health maladies and structural defects associated with a rapid rate of growth. For laurel oaks, the primary defect of concern is heartwood decay (heart rot), which typically sets in at 50 years of age and is now becoming more prevalent in Wilmington's canopy as more laurel oaks reach this milestone. The different species of fungi that cause heart rot in laurel oaks are untreatable. Disease resulting from heartwood infection will ultimately lead to partial or whole tree failure, at some point during a laurel oak's lifetime. Wilmington's Forestry staff are faced with the challenge of mitigating public safety hazards caused by decaying trees while preventing substantial canopy loss.

4. Wilmington Tree Commission

a. Forestry staff presented this information to the Wilmington Tree Commission at their regular meeting on June 21st, 2023. The Commissioners were very supportive of this action and offered to assist with education and outreach as needed.

5. Communication

a. Community Services is presently working with Communications staff on a public information campaign associated with the tree removal/replacement. Final details will be shared with Council.

Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

6. Removal Plan

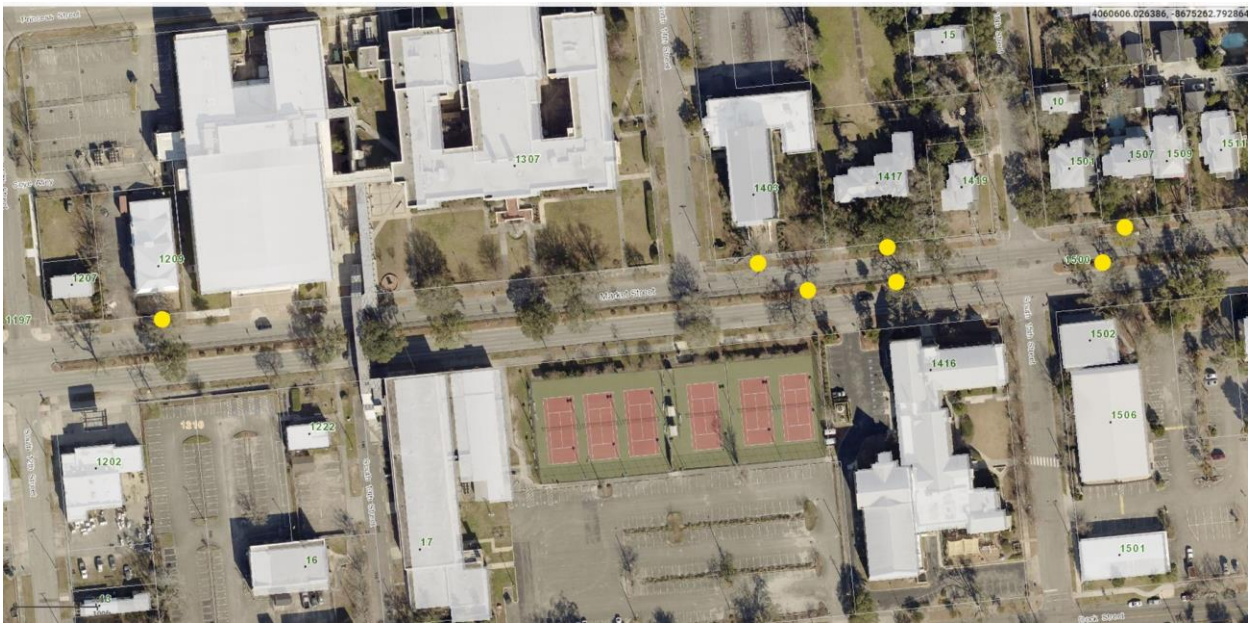
a. The removals will occur with in-house crews in the Forestry Section supplemented with contractor support as needed. The work will be completed in coordination with Traffic Engineering and potentially NCDOT.
b. Road closures will be advertised ahead of the work.
c. Work is tentatively scheduled for August and September with the potential for both weekday and weekend work depending on weather, equipment and availability of coordinated staff.
d. Stumps are part of the removal plan and will be ground within the same period.

7. Replanting Plan

a. Replanting trees is critical to sustaining the urban forest. If the removals are authorized for this summer, there is a sufficient window to plan for replacements in the next planting season. Tree planting occurs between October and April. This planting would likely occur in early 2024.
b. Tree selection is site dependent, however there will be an emphasis on large maturing native trees such as Live Oaks.

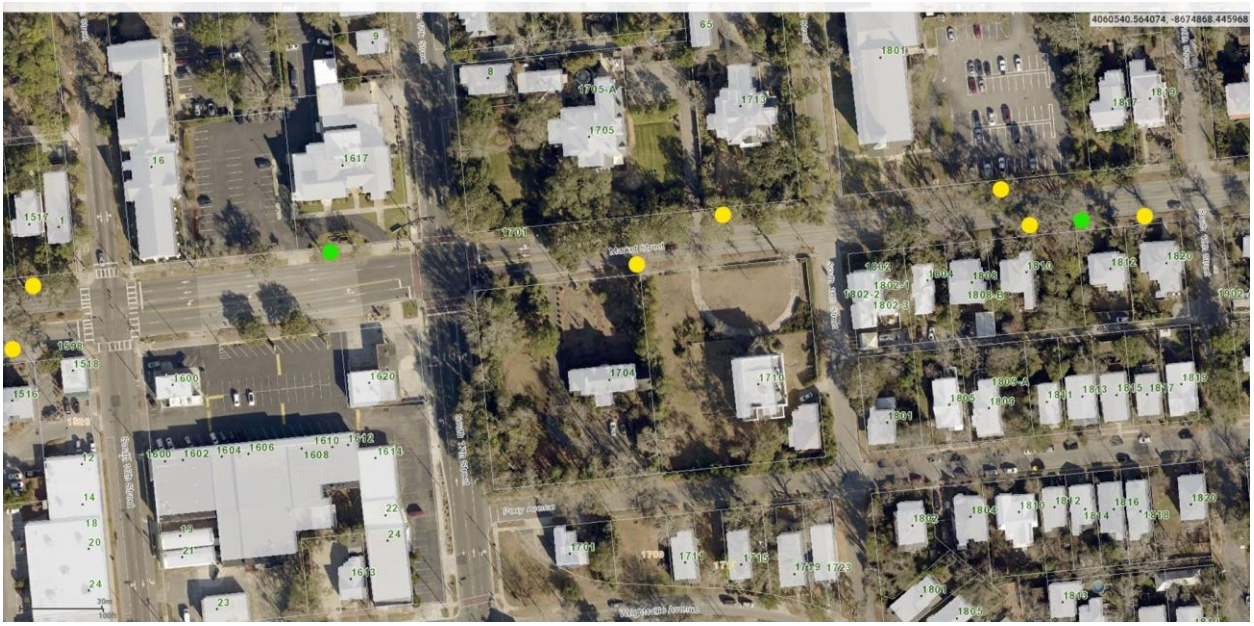
8. Tree locations

Market St. from 12th St. to 15th St.

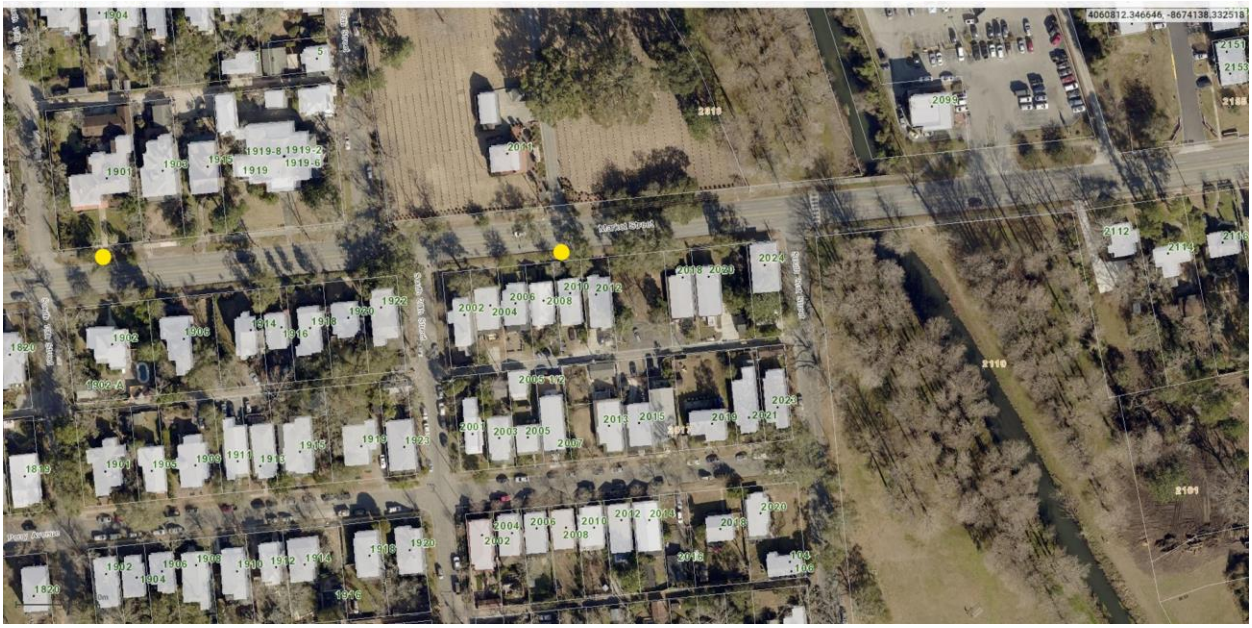


Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

**Market St. from 16th St. to 19th St. ***green dot indicates aerial inspection to confirm removal.



Market St. from 19th St. to 21st St.



Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

9. Tree descriptions – as of 7/13/23

1. TREE ID #2
    a. 1901 Market St.
    b. 21" DBH Laurel Oak
    c. Decay in crown over road. Splitting seam/included bark. History of failures evident.
2. TREE ID #6
    a. 1801 Market St. (Temple Baptist Church)
    b. 33.5" DBH Laurel Oak
    c. Decay in crown over road. Cracked limb over sidewalk and parking lot. History of failures evident. Basal decay.
3. TREE ID #7
    a. 1713 Market St.
    b. 33.75" DBH Live Oak
    c. A significant structural defect caused by repeated truck damage. Possible crack above defect.
4. TREE ID #8
    a. 1704 Market St.
    b. 26" DBH Laurel Oak
    c. Dieback in crown. Extensive water sprouts.
5. TREE ID #5
    a. 1810 Market St.
    b. 55.5" DBH Laurel Oak
    c. Significant signs of basal decay. Ganoderma conks present.
6. TREE ID #4
    a. 1812 Market St. (INSPECTION AT HEIGHT REQUIRED)
    b. Aerial inspection required for large codominant stems with crack.
7. TREE ID #3
    a. 1820 Market St.
    b. 35" DBH Laurel Oak
    c. Significant decay in trunk and crown.
8. TREE ID #1
    a. 2010 Market St.
    b. 13.5" DBH Laurel Oak
    c. Snag with borers, POLYPORE FUNGAL CONK ON LOWER STEM
9. TREE ID #9
    a. 1617 Market St. (Funeral Home) (INSPECTION AT HEIGHT REQUIRED)
    b. Laurel Oak
    c. Large pocket of decay on street side @13'
10. TREE ID #10
    a. 1517 Market St.
    b. 44" DBH Laurel oak
    c. Significant decay in crown.
11. TREE ID #12

Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

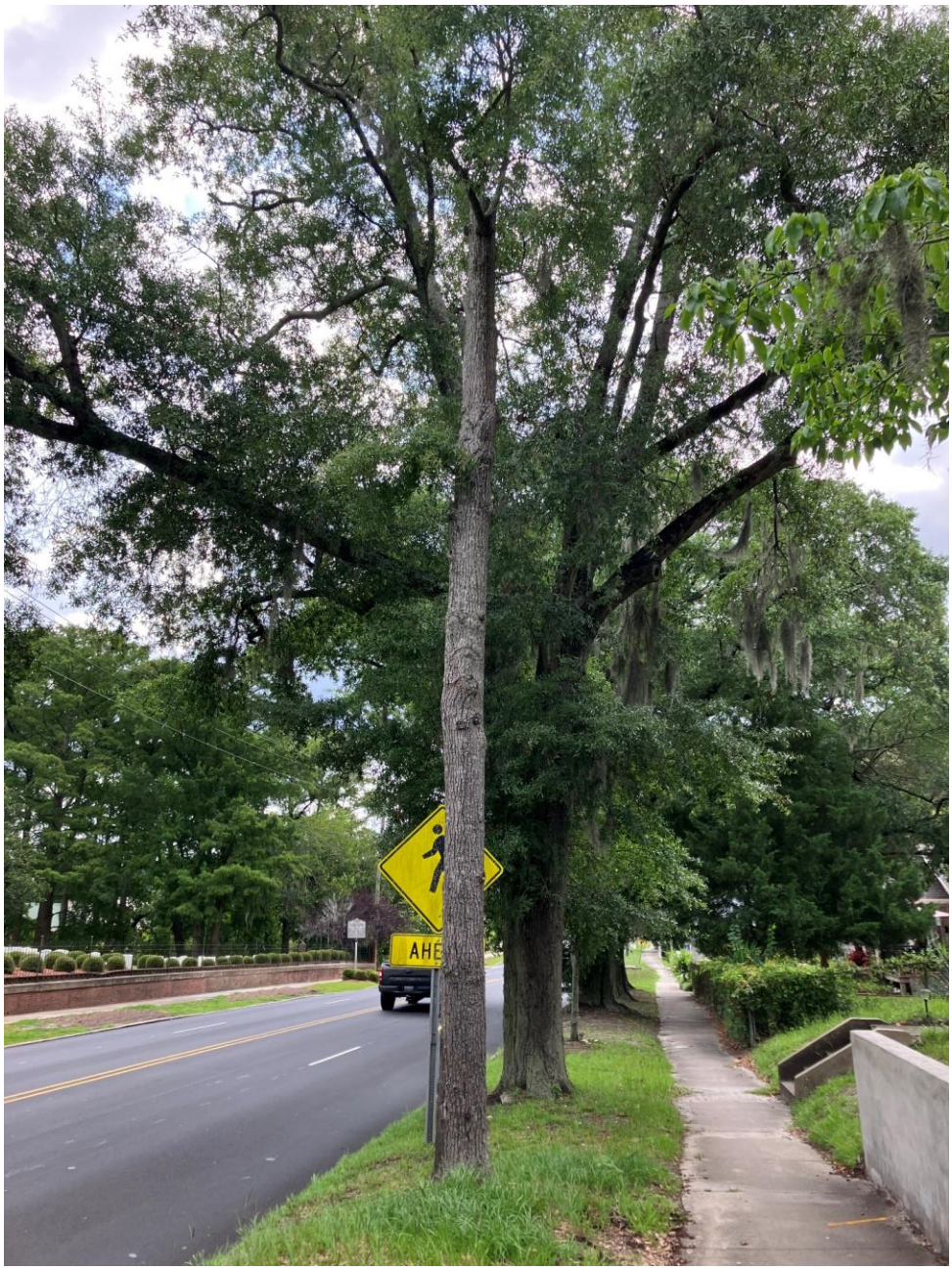
a. 1507 Market St.
b. 32.5" DBH Laurel Oak
c. Significant decay in roots and trunk. Decay in crown.

12. TREE ID #14
    a. 1417 Market St.
    b. 31.5" DBH Laurel Oak
13. TREE ID #15
    a. 1417 Market St.
    b. 1 Laurel Oak in median
    c. Decay in crown. History of large limb failures.
14. TREE ID #16
    a. NEW 7/13/23
    b. 1419 Market St.
    c. Unmeasured DBH Laurel Oak in median
    d. Decay in crown.
15. TREE ID #18
    a. 1403 Market St. (Trinity United Methodist Church)
    b. 36" DBH Laurel Oak
16. TREE ID #17
    a. 1403 Market St. (Trinity United Methodist Church)
    b. 20" DBH Laurel Oak in median
    c. Significant decay in central crown and trunk.
17. TREE ID #19
    a. 1209 Market St.
    b. 26" DBH Laurel Oak
    c. Split in trunk. Deadwood in crown.
18. TREE ID #13
    a. 1502 Market St.
    b. 22" DBH Laurel Oak (In median)
    c. Significant decay in crown.
19. TREE ID #11
    a. 1516 Market St.
    b. 29" DBH Laurel Oak
    c. Significant decay in crown. History of limb failures.

Total trees for removal = **17**
Total trees that require inspection at height to determine required work = **2**

Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 1 TREE 1

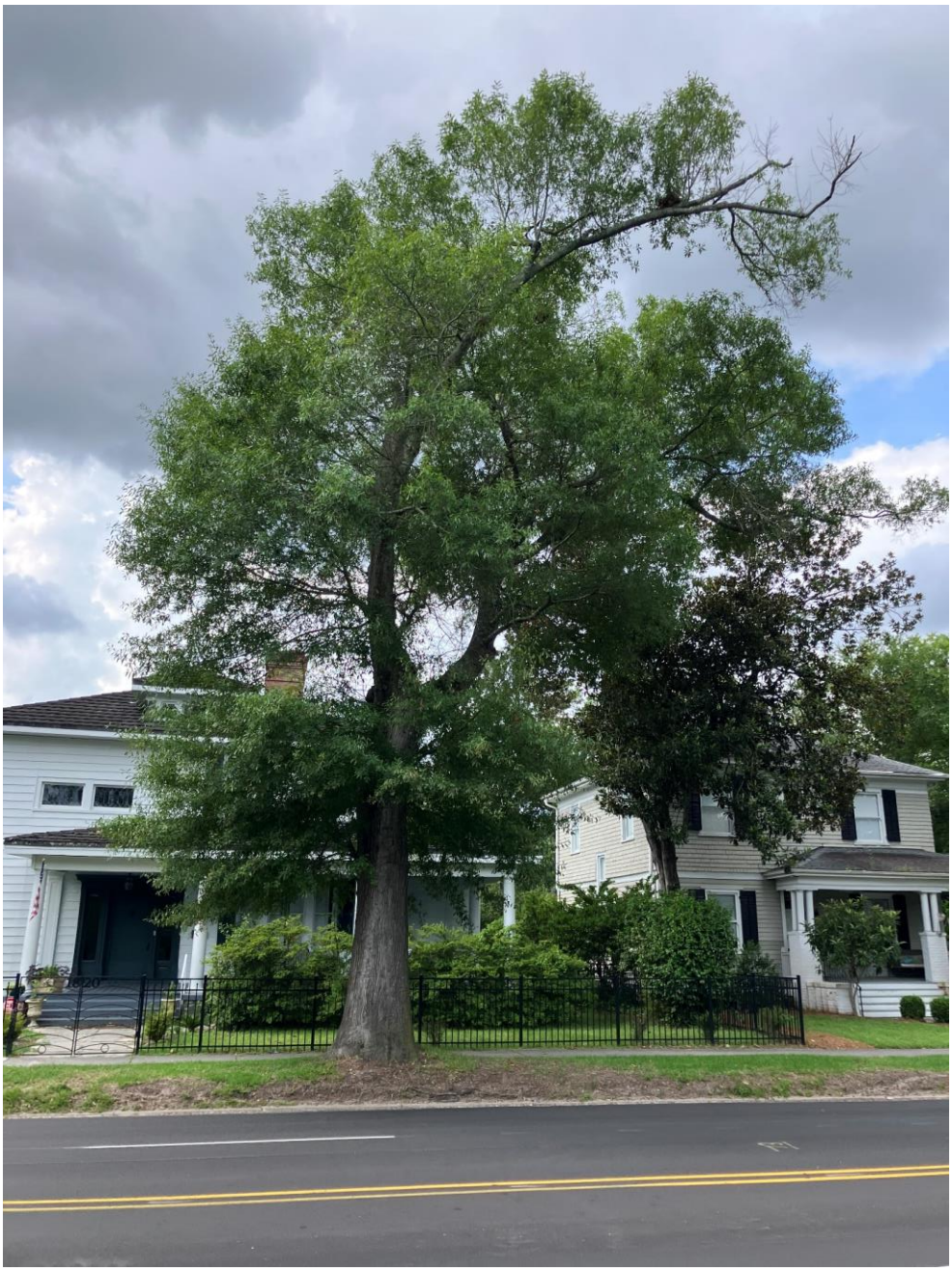


Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 2 TREE 2

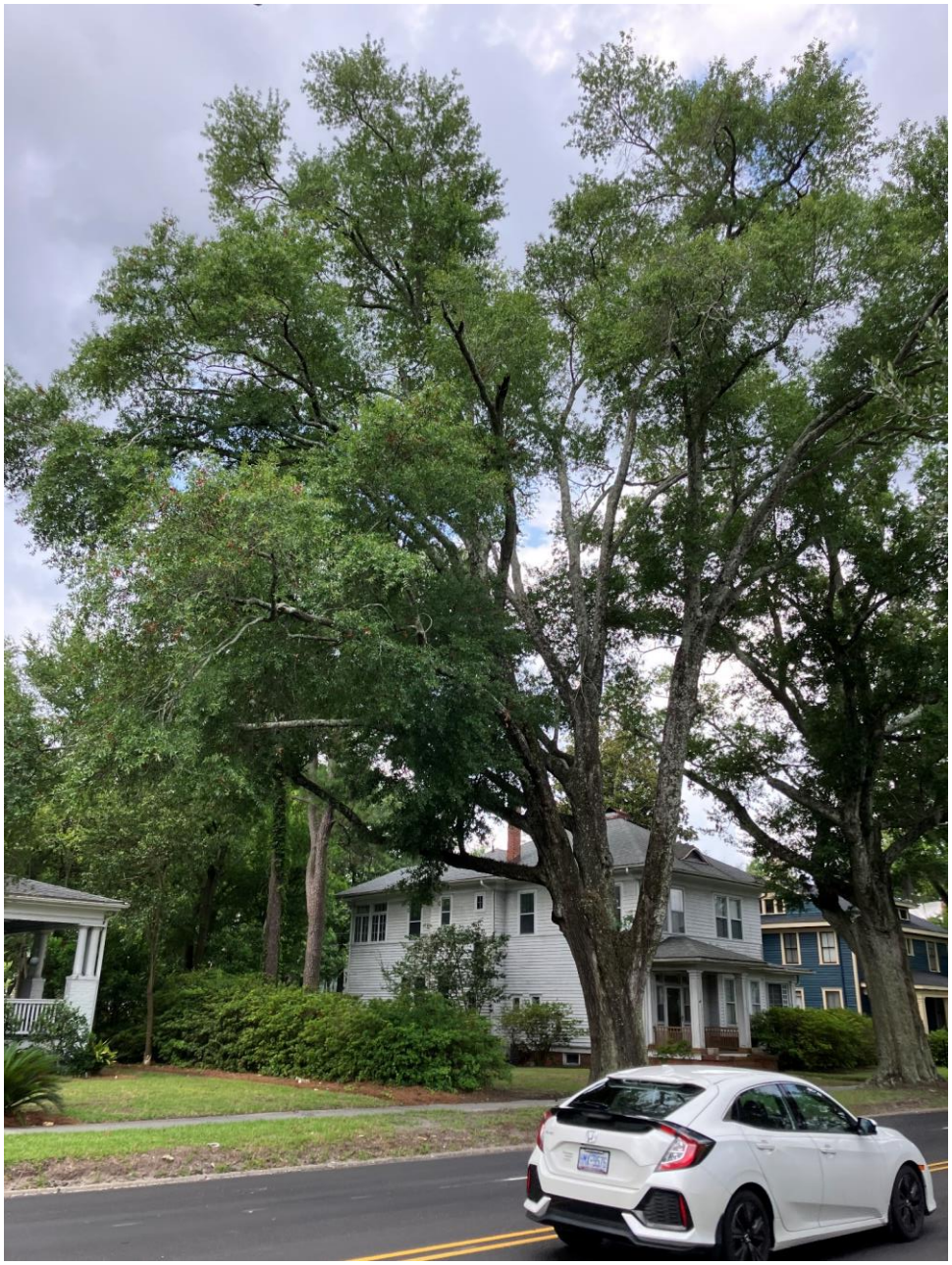
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 3 TREE 3



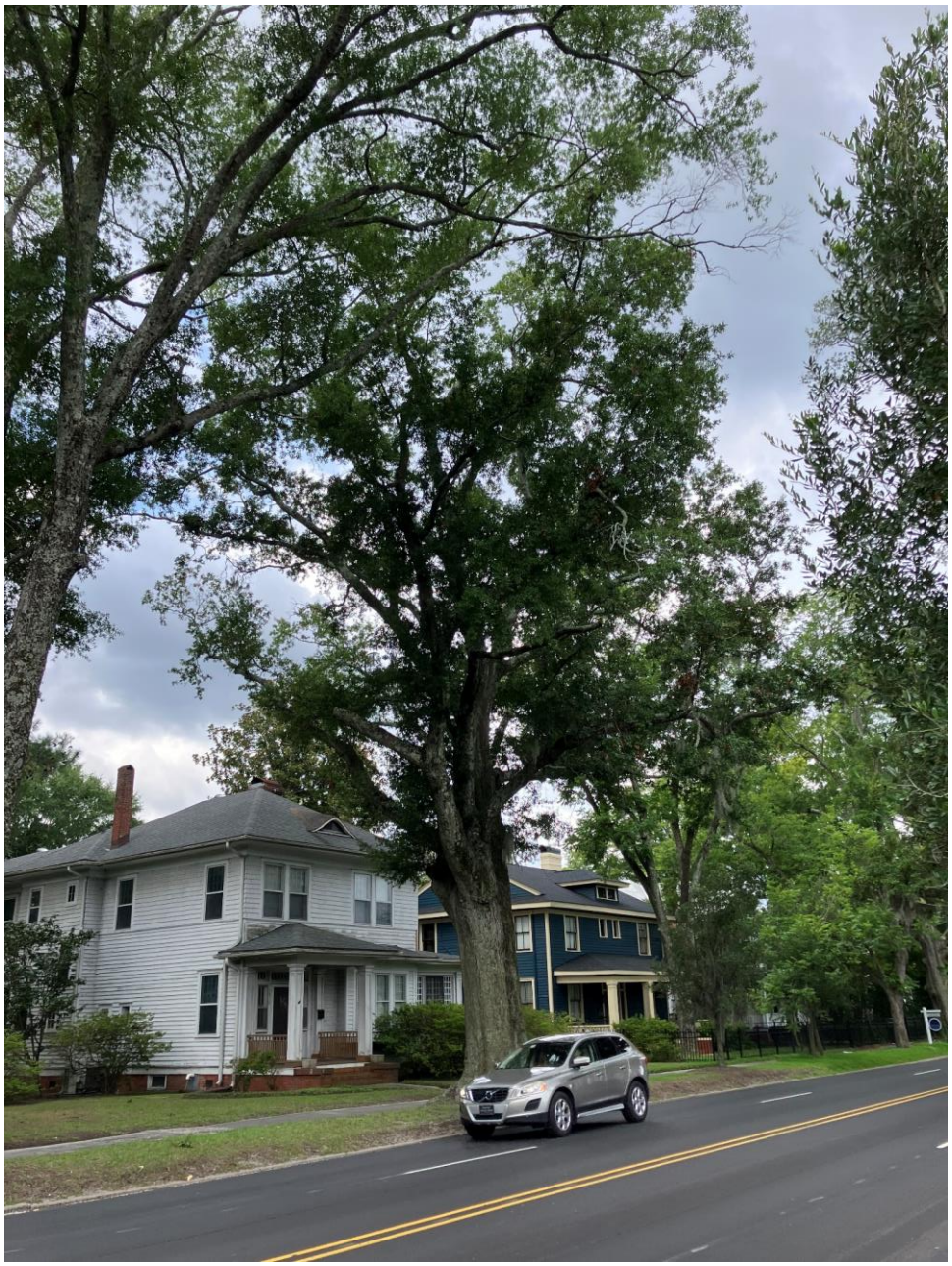
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 4 TREE 4



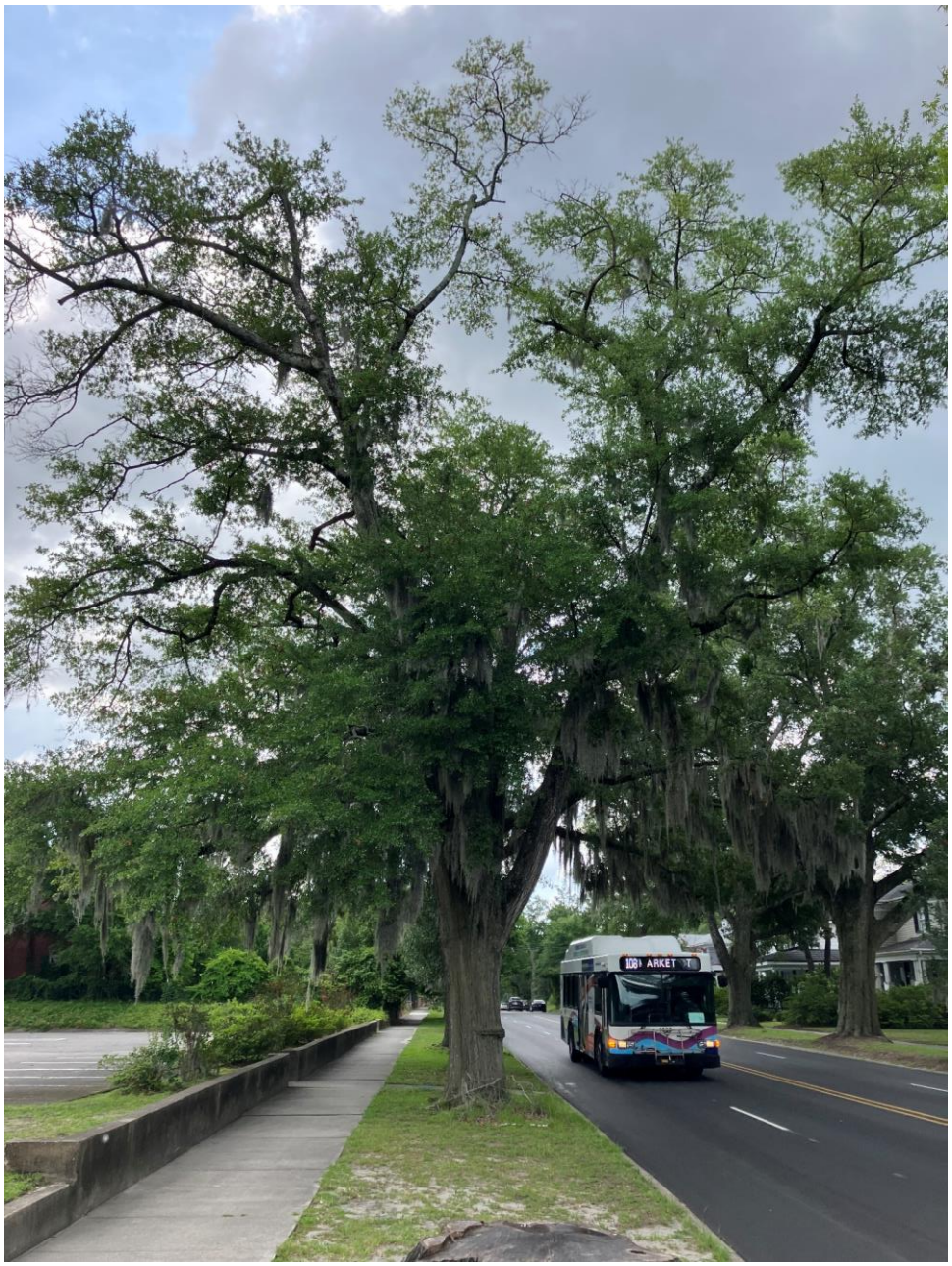
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 5 TREE 5



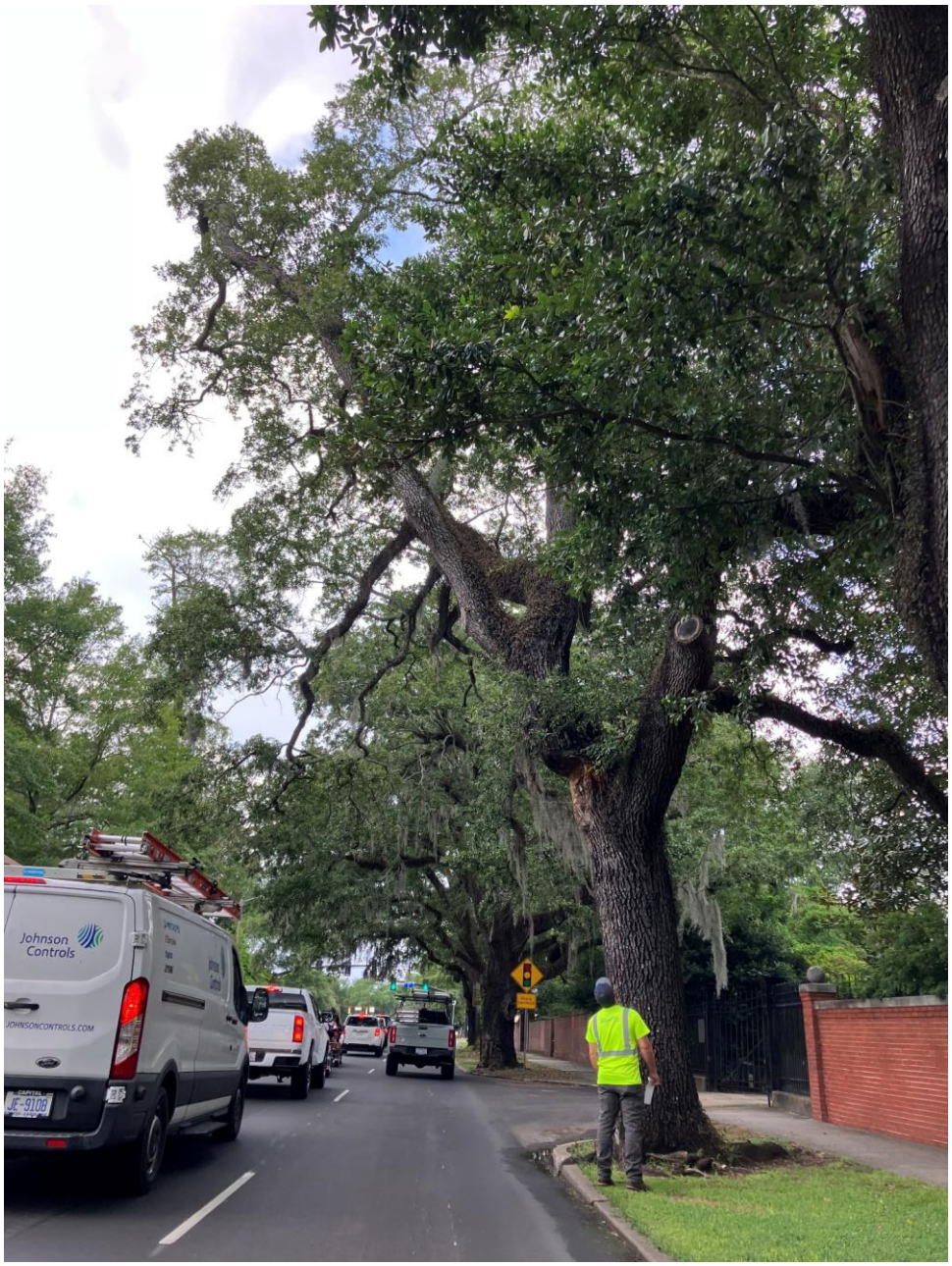
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 6 TREE 6



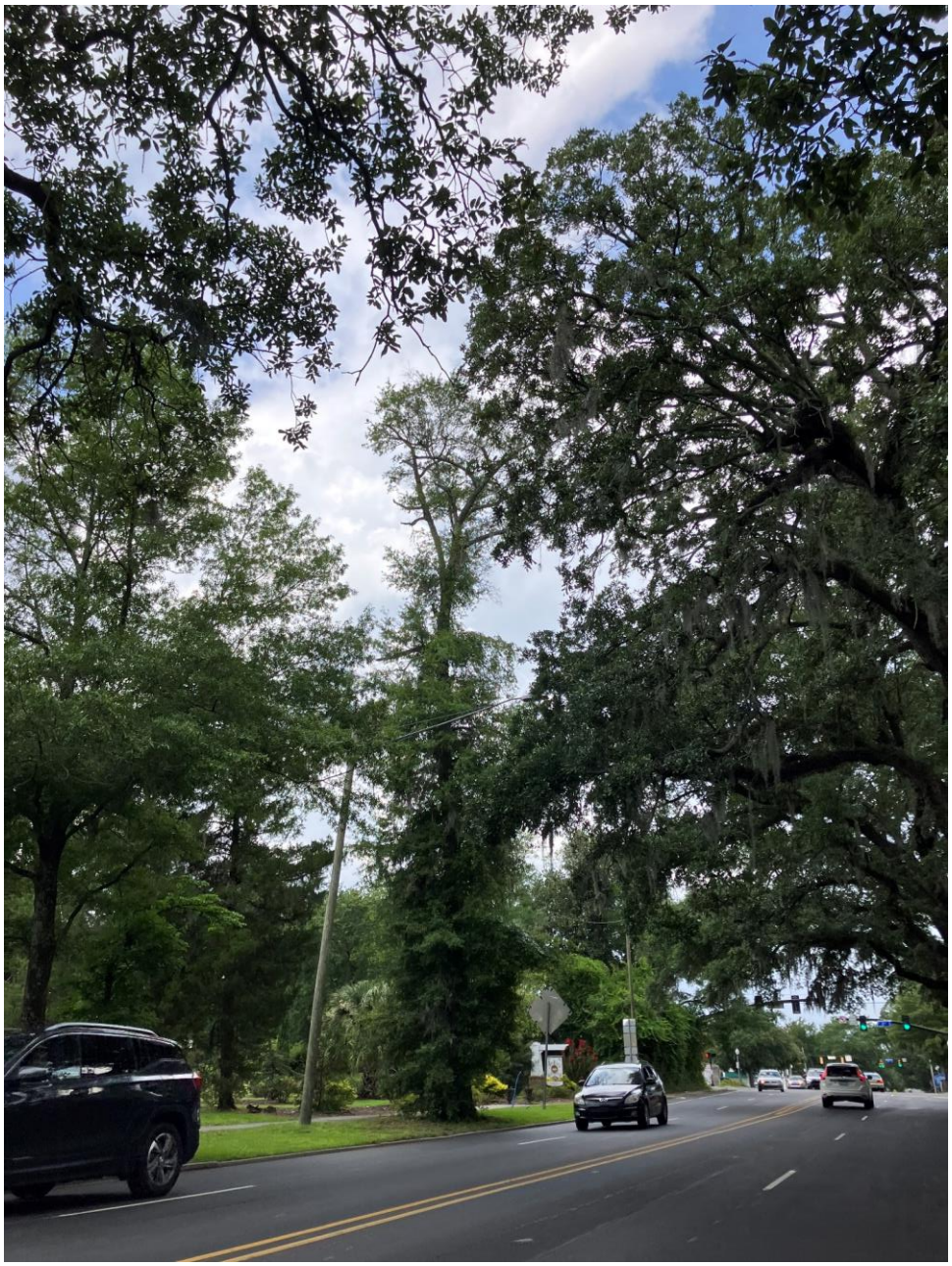
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 7 TREE 7



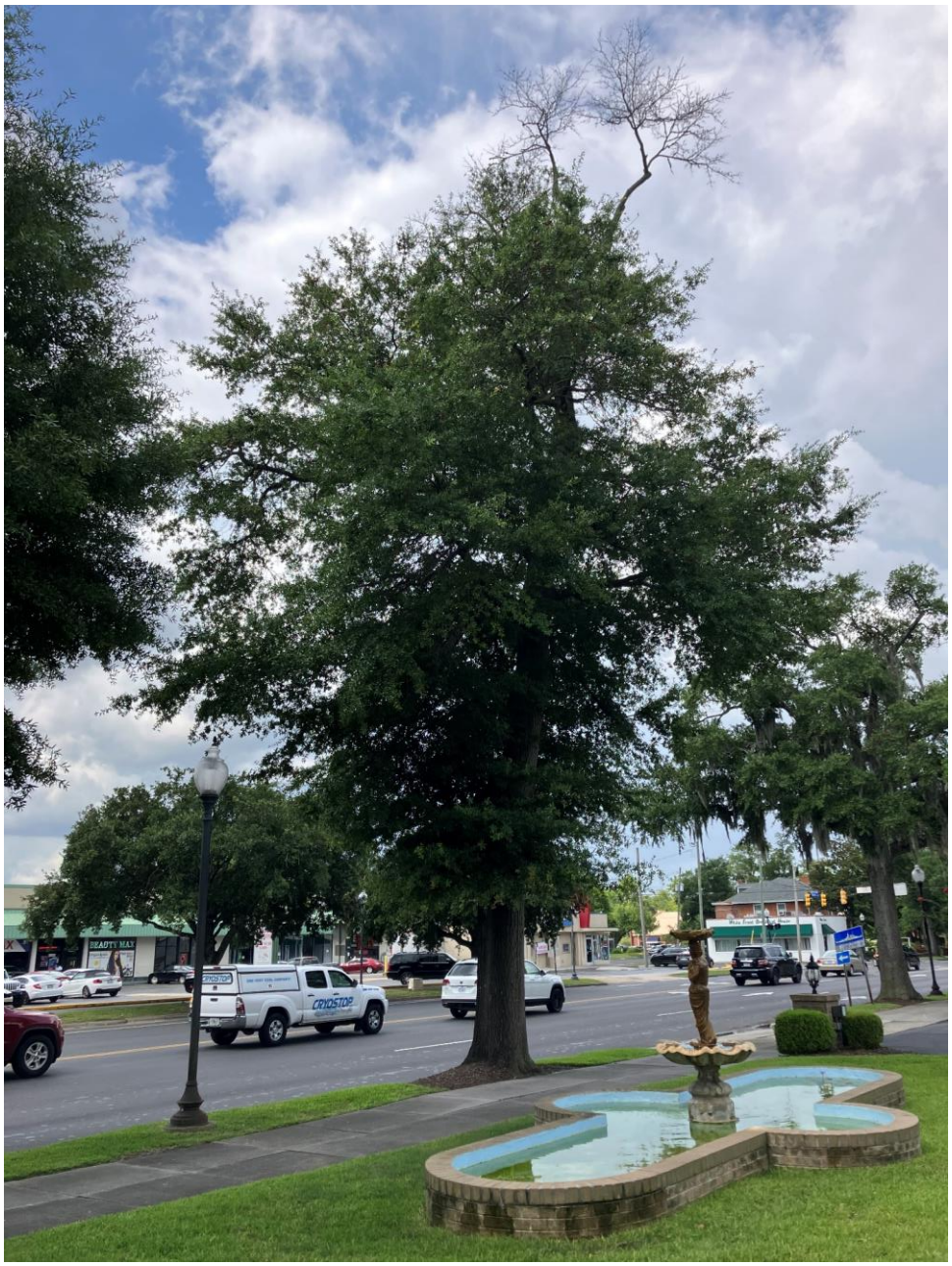
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 8 TREE 8



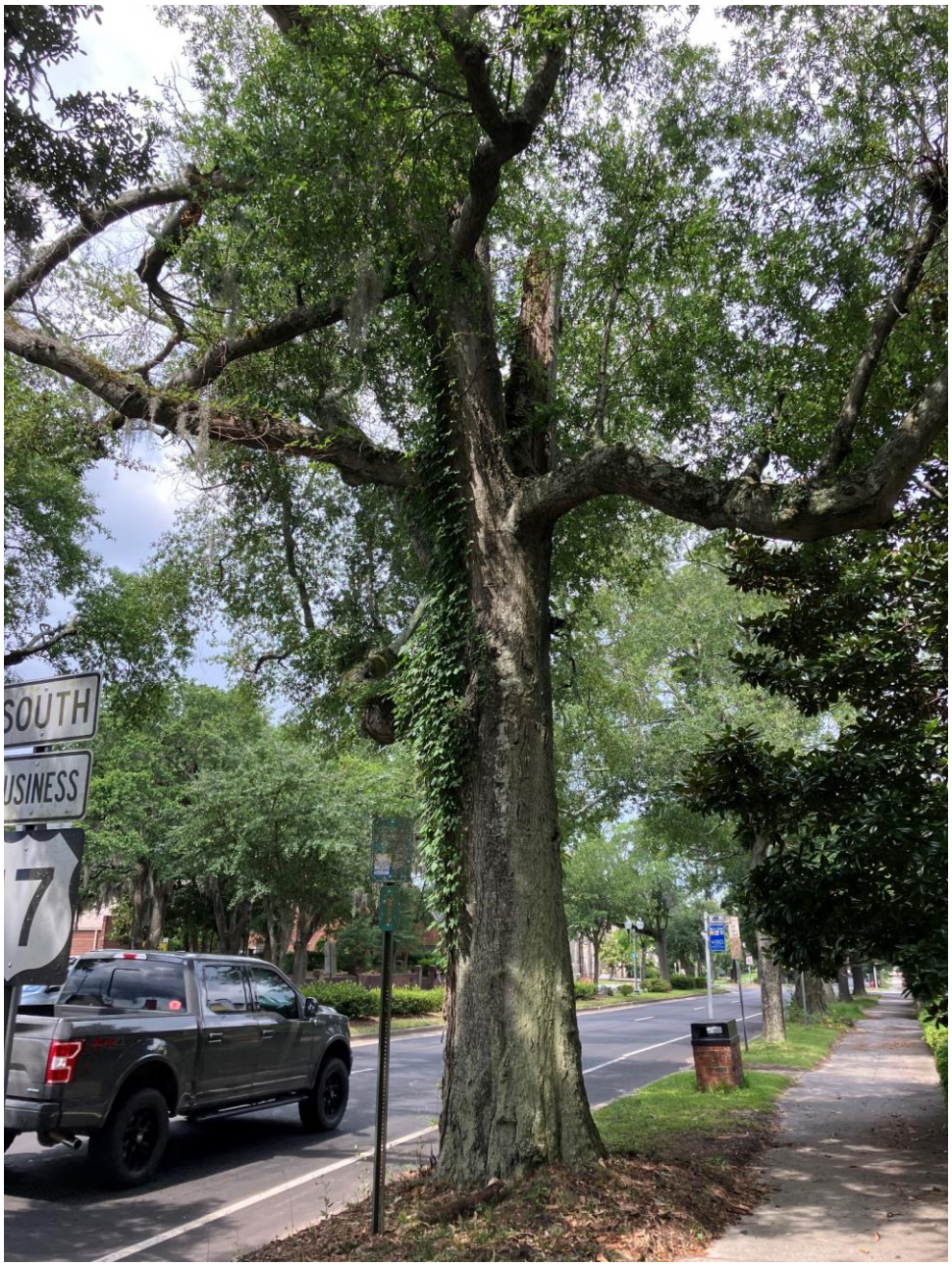
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 9 TREE 9



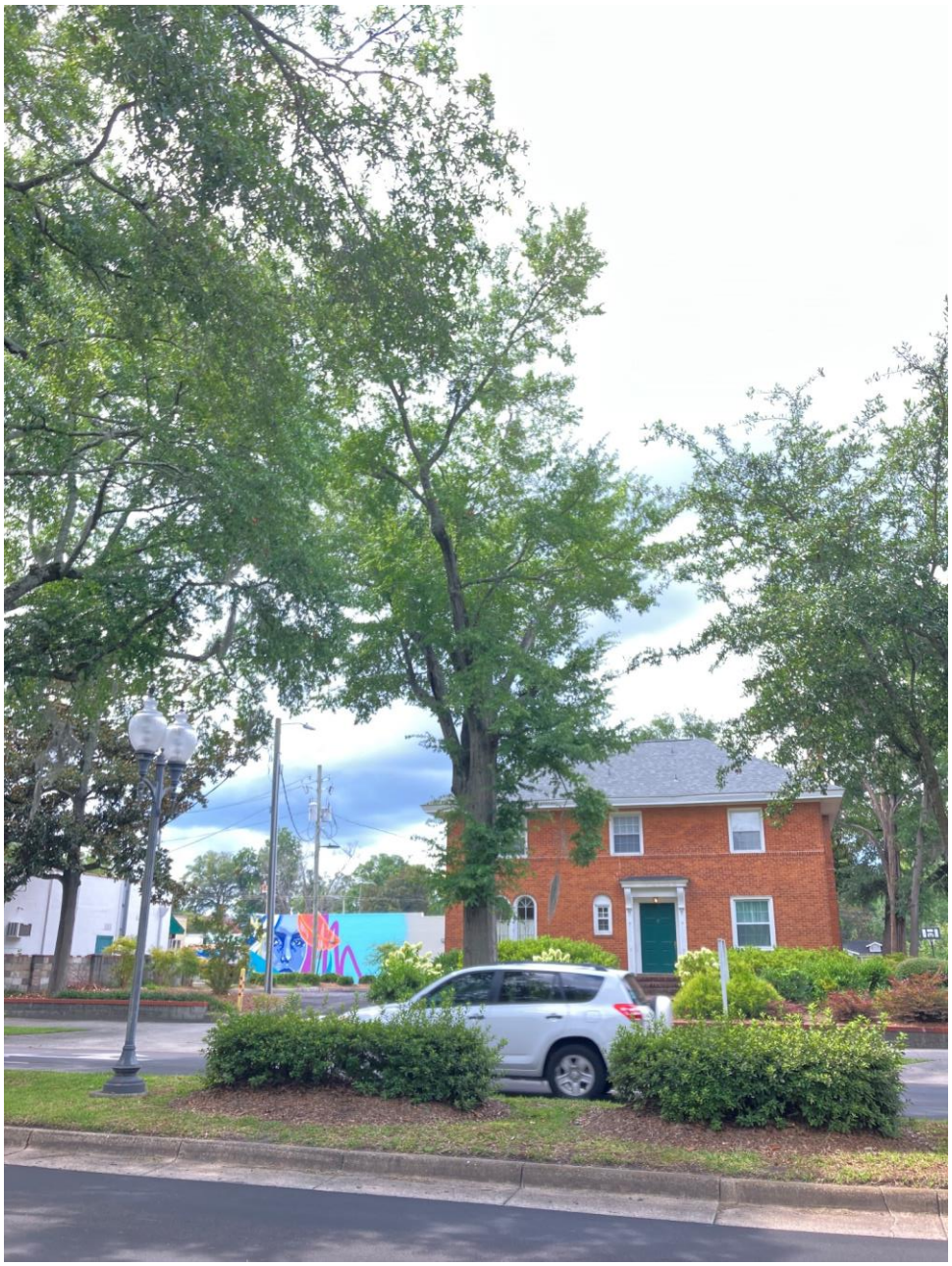
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 10 TREE 10



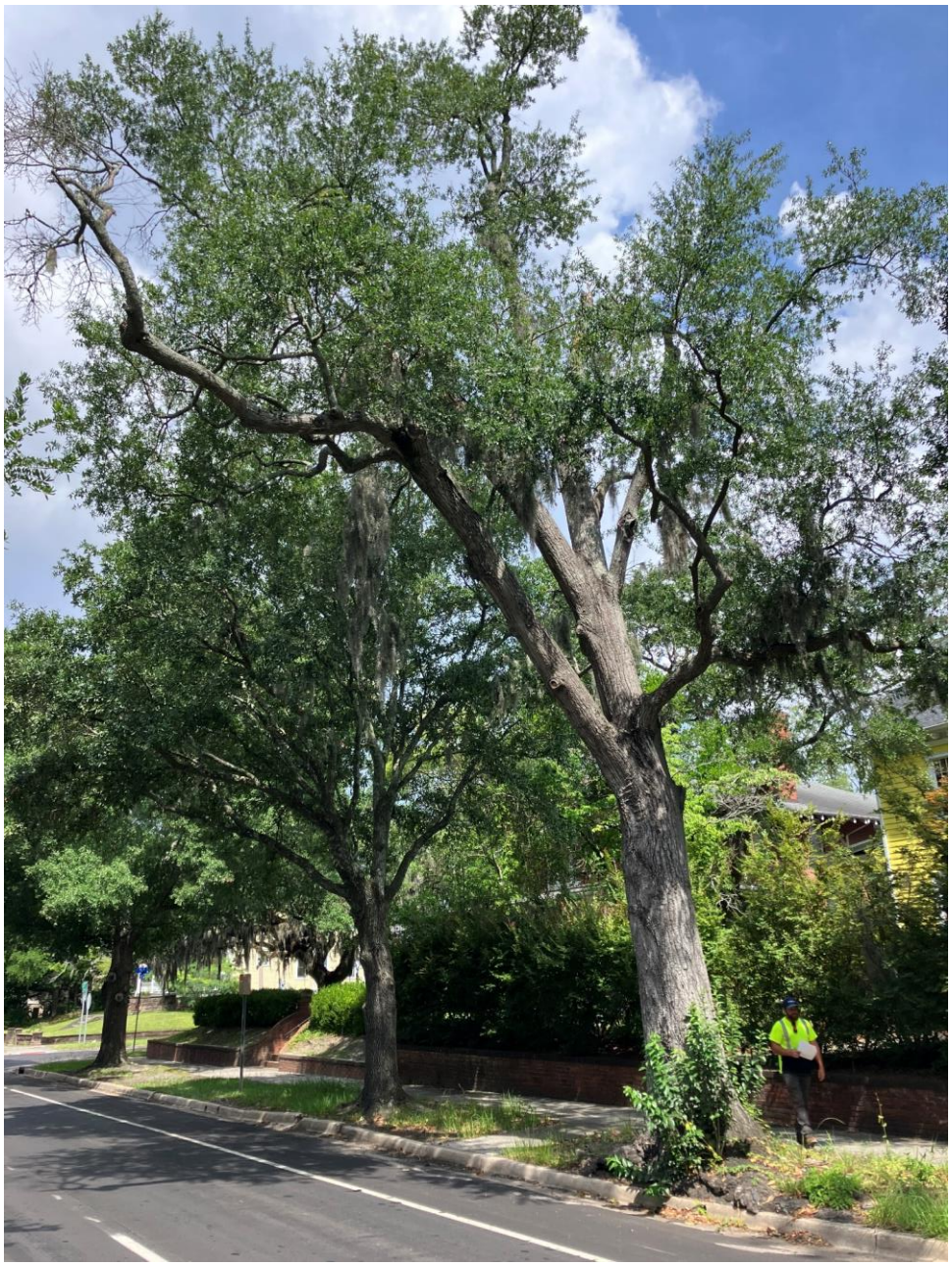
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 11 TREE 11



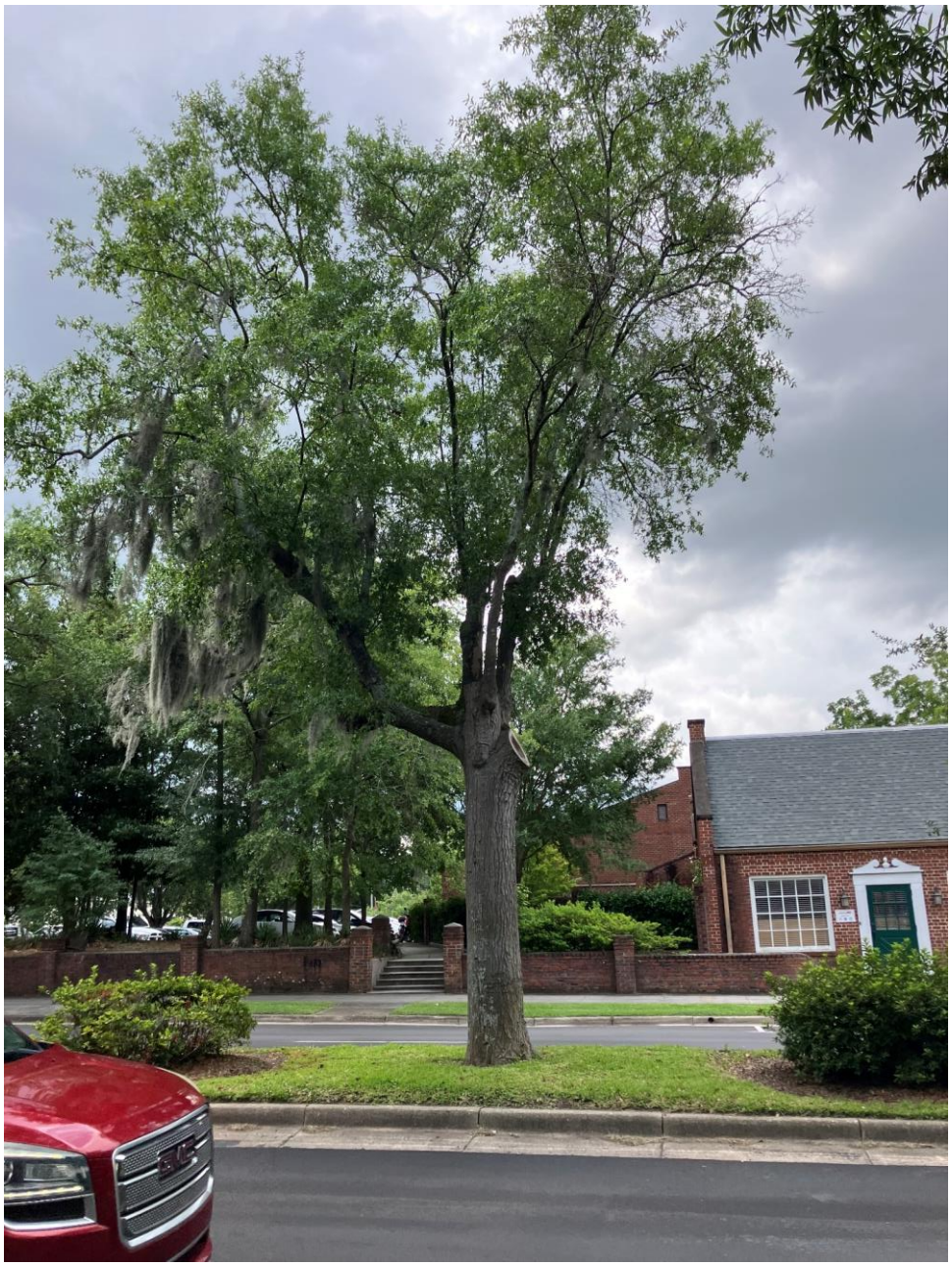
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 12 TREE 12



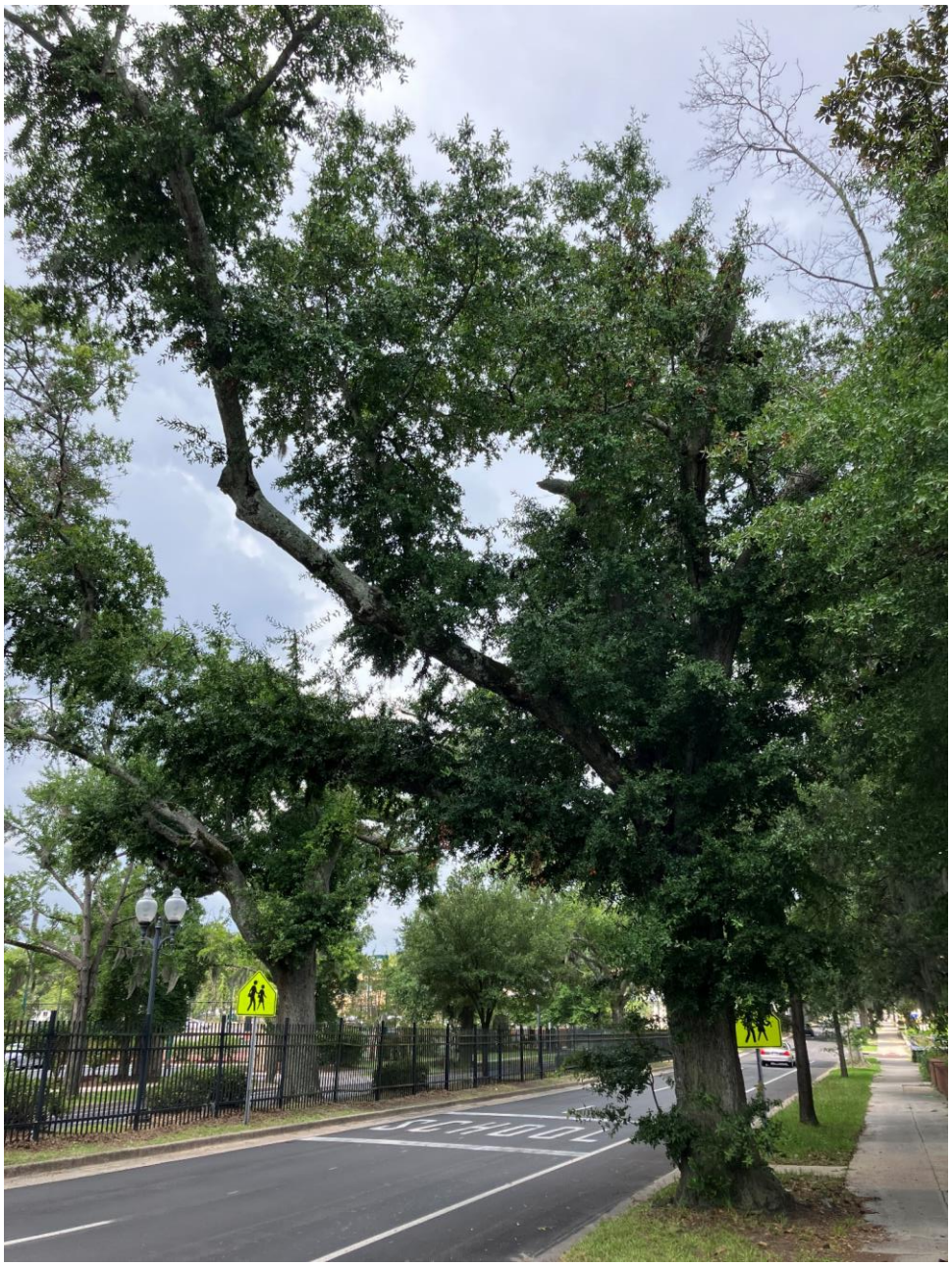
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 13 TREE 13



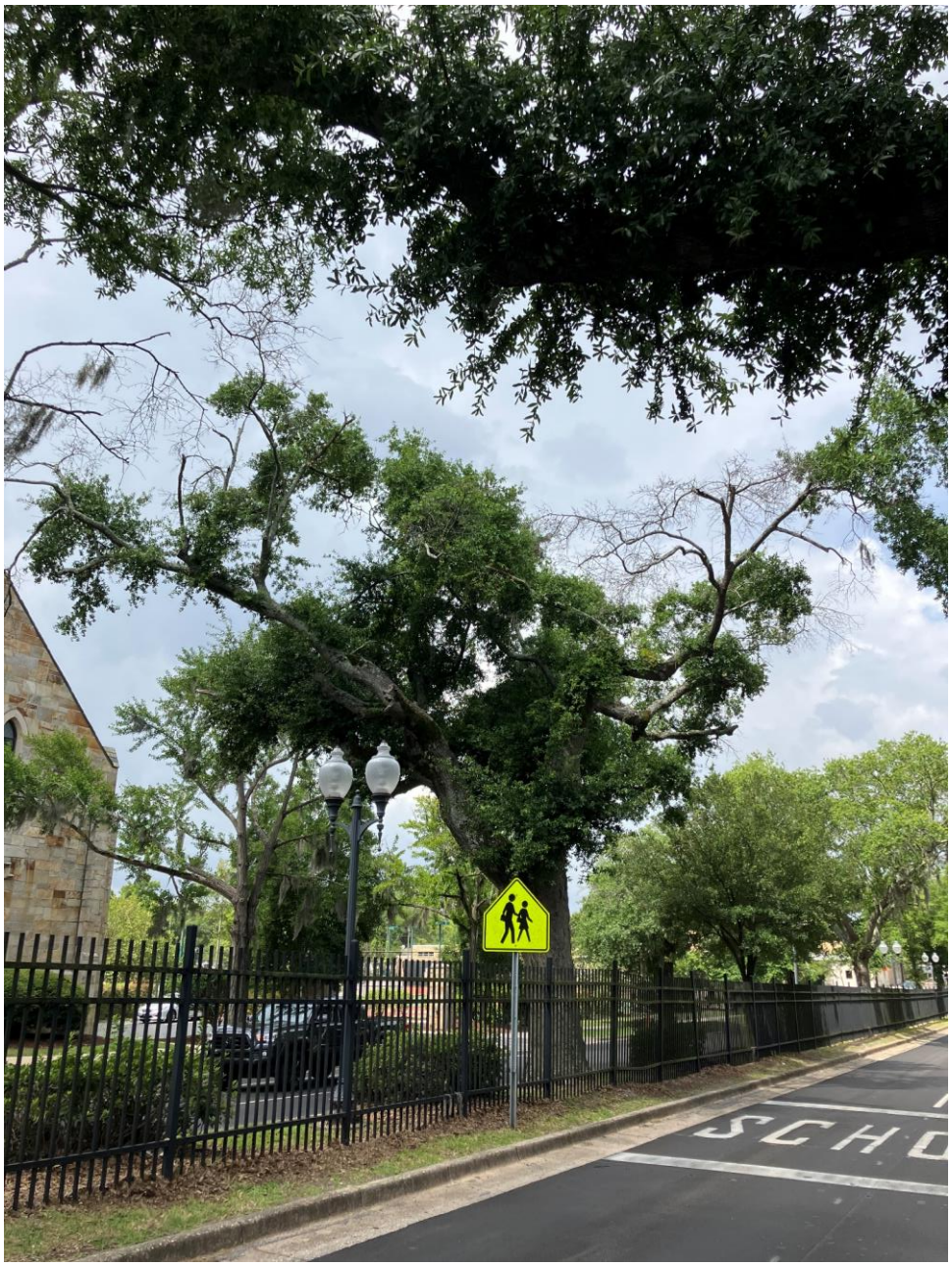
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 14 TREE 14



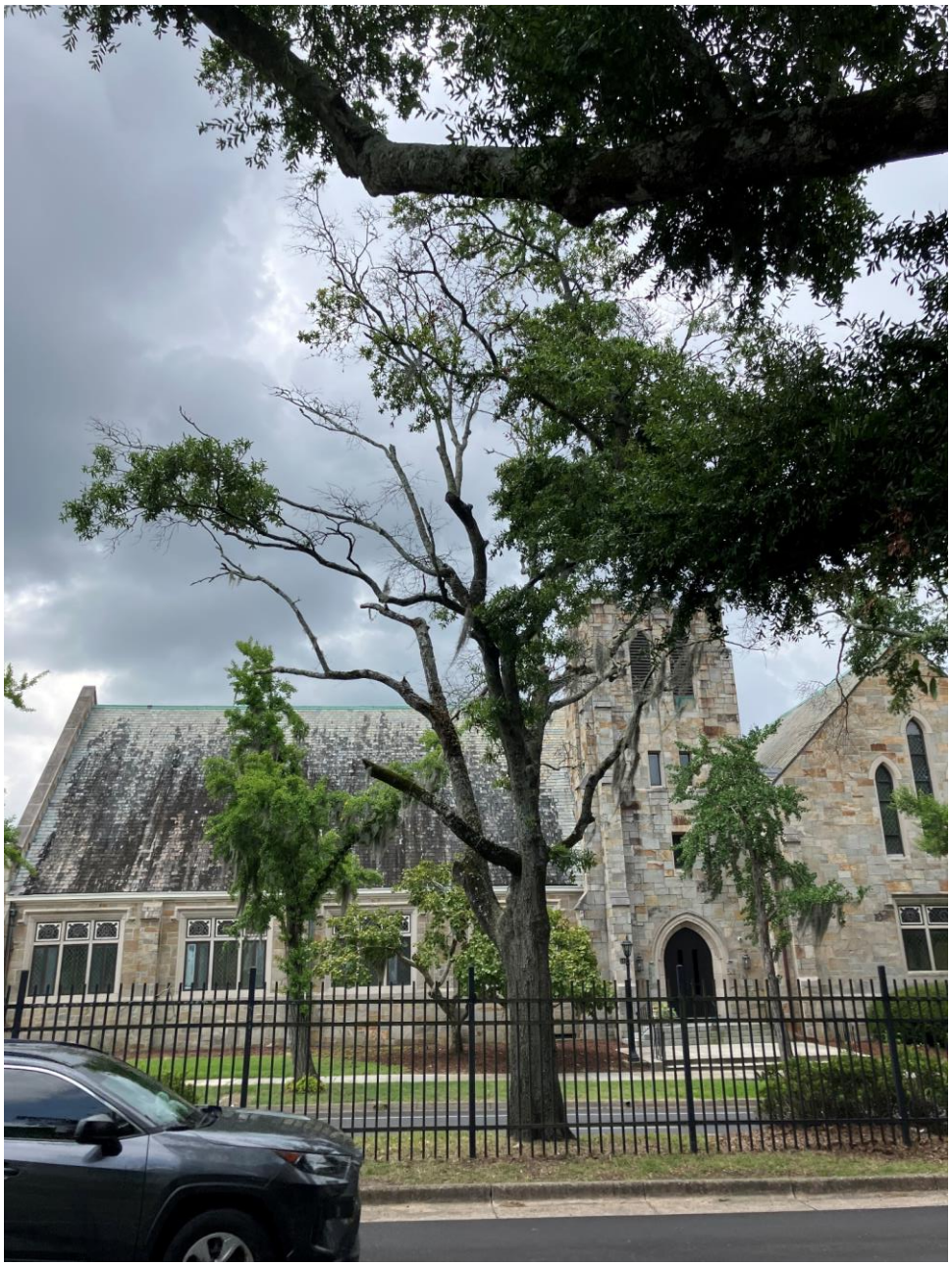
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 15 TREE 15



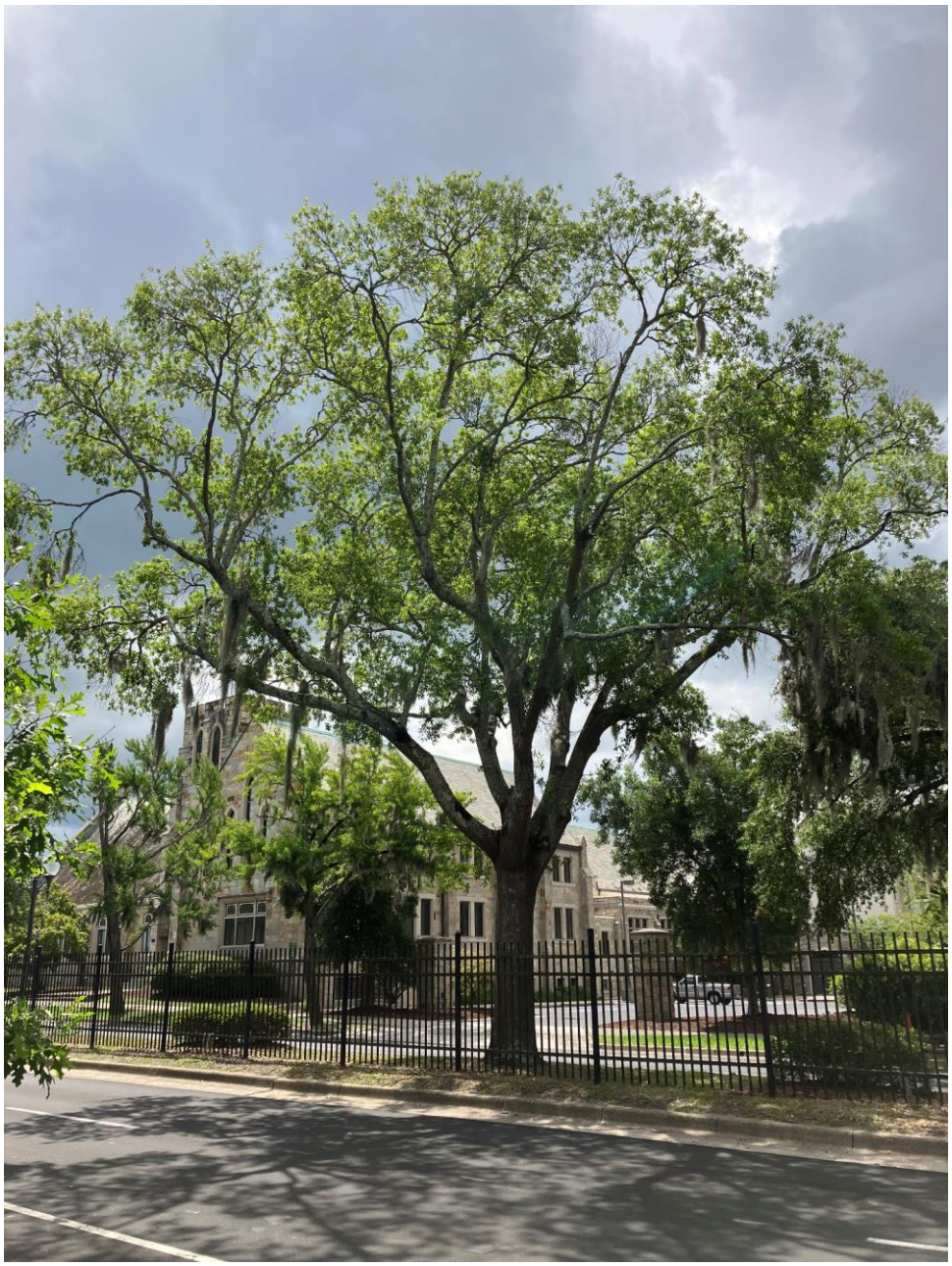
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 16 TREE 16



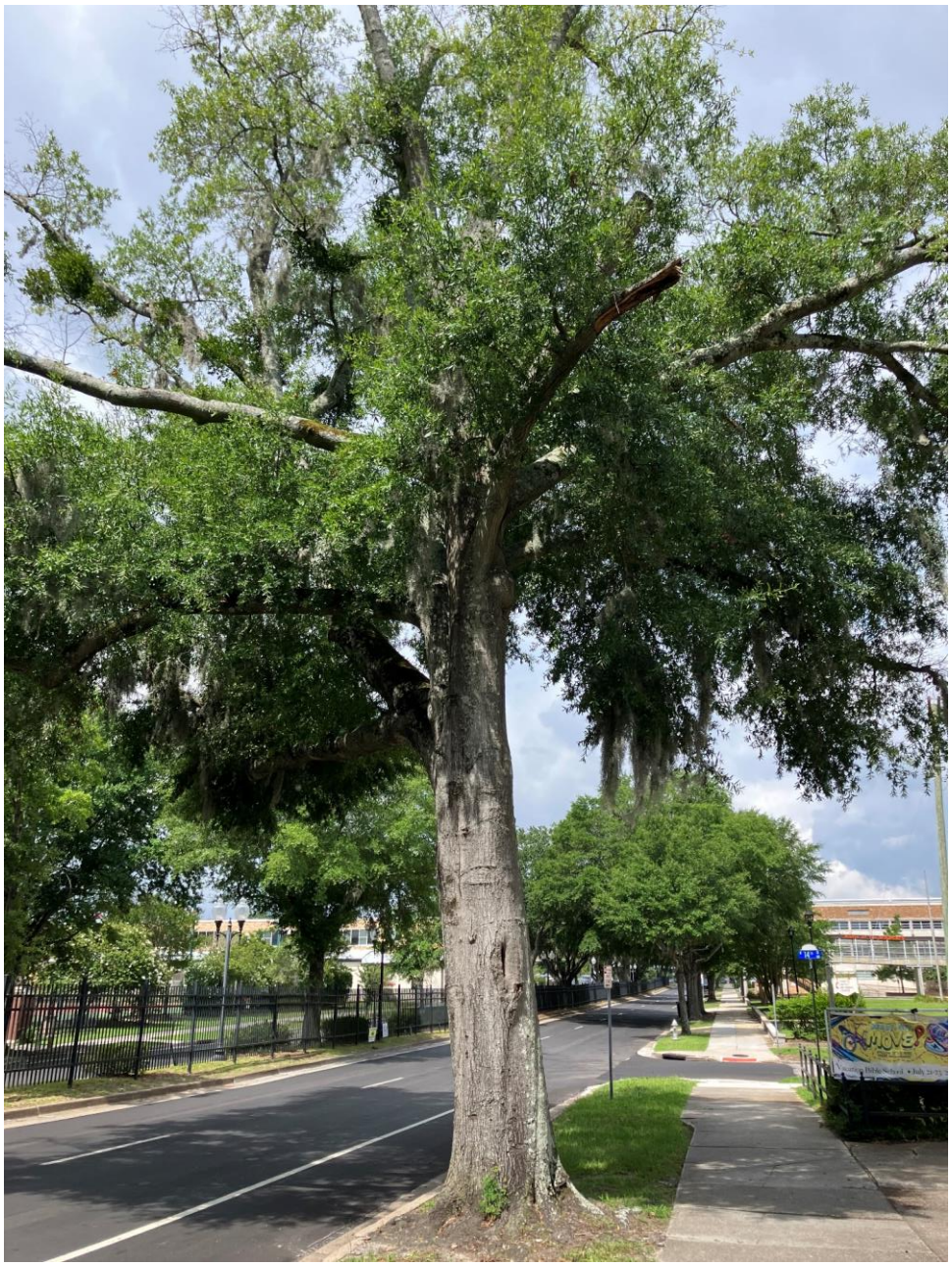
Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 17 TREE 17



Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 18 TREE 18



Community Services Department
Parks, Landscape, & Forestry Division
1702 Burnett Boulevard
Wilmington, NC 28401
(O) 910-341-7852 (F) 910-341-4663

Figure 19 TREE 19