



City Council Meeting APRIL 17, 2017

ALPHARETTA CITY HALL
COUNCIL CHAMBERS
2 PARK PLAZA
6:30 PM

- I. CALL TO ORDER
- II. ROLL CALL
- III. PLEDGE TO THE FLAG
- IV. PUBLIC HEARING

A. V-17-08 Shamoun/1021 Colony Drive Setback Variance (Council Only)

NOTE: This item has been deferred and will be neither heard nor considered during this session. It has been rescheduled to the May 15, 2017 meeting.

Consideration of a variance request to reduce the rear and side yard setbacks for a residential accessory structure from 10' to 4' at the rear and 5' on the side to allow for a storage shed and pavilion structure. The property is located at 1021 Colony Drive and is legally described as being located in Land Lot 1129, 2nd District, 2nd Section, Fulton County, Georgia.

B. PH-17-10 Gutman/Canton Street Road Abandonment (Council Only)

Consideration of a request to abandon a remnant portion of the Canton Street right-of-way adjacent to 401 Canton Street. The property is legally described as being located in Land Lot 1180, 2nd District, 2nd Section, Fulton County, Georgia.

C. MP-16-13/Z-16-11/CU-16-19/V-16-26: TPA/FUQUA DEVELOPMENT/PERIDOT

Consideration of a request to amend the Peridot (A.K.A. MetLife) Master Plan and previous conditions of zoning to allow 320 'For-Rent' residential units, 167 'For-Sale' Attached units, 55,500 square feet of retail/restaurant use, 664,400 square feet of office use, and a 200-room hotel. A rezoning is requested on 15.51 acres from O-I (Office-Institutional) to MU (Mixed-Use) and a conditional use is requested to allow 'Dwelling, 'For-Rent' and 'Bank, Savings and Loan' uses. A variance is requested to allow first floor 'For-Rent' dwellings on three building sides and to allow first floor 'For-Rent' dwellings on a Storefront Street. The property is located on the west side of Haynes Bridge Road south of Lakeview Parkway and is legally described as Land Lots 744, 745, 752, and 753, 1st District, 2nd Section, Fulton County, Georgia.

D. PH-16-12 Tree and Landscape Ordinance Amendments

Consideration of text amendments to the UDC to consolidate landscape and tree requirements into one location within the UDC, clarify and simplify certain requirements to provide for ease of use and implementation, and provide incentives and options to save trees during land development.

V. NEW BUSINESS

A. Alcohol Ordinance Amendments (1st reading)

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF ALPHARETTA, GEORGIA TO AMEND CHAPTER 3 (ALCOHOLIC BEVERAGES) OF THE CODE OF THE CITY OF ALPHARETTA, GEORGIA; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING THE SALE OF ALCOHOLIC BEVERAGES FOR CONSUMPTION ON THE PREMISES; TO PROVIDE EXCEPTIONS APPLICABLE TO ART STUDIOS, GALLERIES AND COOKING CLASSES FROM CERTAIN REGULATIONS GOVERNING ON-PREMISES CONSUMPTION; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING ANCILLARY WINE TASTING LICENSES; TO MODIFY THE DEFINITION OF "DOWNTOWN DISTRICT" SET FORTH IN SECTION 3-181; TO DELETE, MODIFY AND ADD PROVISIONS PERTAINING TO THE SALE AND CONSUMPTION OF ALCOHOLIC BEVERAGES IN CERTAIN PUBLIC PARKS LOCATED IN THE DOWNTOWN DISTRICT; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING BREWERIES; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES

- VI. PUBLIC COMMENT**
- VII. REPORTS**
- VIII. ADJOURNMENT TO EXECUTIVE SESSION**



City Council Meeting STAFF REPORT

Submitting Department: Community Development

Submitted By:

Meeting Date: April 17, 2017

I. AGENDA ITEM TITLE: V-17-08 SHAMOUN/1021 COLONY DRIVE SETBACK VARIANCE (COUNCIL ONLY)

NOTE: THIS ITEM HAS BEEN DEFERRED AND WILL BE NEITHER HEARD NOR CONSIDERED DURING THIS SESSION. IT HAS BEEN RESCHEDULED TO THE MAY 15, 2017 MEETING.

CONSIDERATION OF A VARIANCE REQUEST TO REDUCE THE REAR AND SIDE YARD SETBACKS FOR A RESIDENTIAL ACCESSORY STRUCTURE FROM 10' TO 4' AT THE REAR AND 5' ON THE SIDE TO ALLOW FOR A STORAGE SHED AND PAVILION STRUCTURE. THE PROPERTY IS LOCATED AT 1021 COLONY DRIVE AND IS LEGALLY DESCRIBED AS BEING LOCATED IN LAND LOT 1129, 2ND DISTRICT, 2ND SECTION, FULTON COUNTY, GEORGIA.

II. RECOMMENDATION:

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT

IV. REPORT IN BRIEF:

V. ALTERNATIVES:

VI. ATTACHMENTS:

Council Agenda Report, Zoning Map, Location Map, Citizenship Part B, Application



CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT
SUBMITTED BY: KATHI COOK
DRAFTED BY: MICHAEL WOODMAN

I. AGENDA ITEM TITLE: V-17-08 SHAMOUN/1021 COLONY DRIVE VARIANCE

CITY COUNCIL: APRIL 17, 2017

II. RECOMMENDATION:

Approve V-17-08 Shamoun/1021 Colony Drive Variance subject to the following conditions:

1. The location and size of the structure shall be limited to the submitted plans, labeled Exhibit A.
2. There shall be no additional residential accessory structures permitted on the subject property.
3. A building permit shall be required for the accessory structure. A Certificate of Completion (CC) for the building permit, in compliance with these conditions, shall be issued no later than June 17, 2017.
4. A combination plat shall be required reflecting the additional land at the rear of the property and the approved variance. Combination plat shall be reviewed and approved by the City and recorded in the Fulton County records.

III. REPORT IN BRIEF:

The applicant, Joseph D. Shamoun, is requesting consideration of a variance from Unified Development Code (UDC) Section 2.3.3 (C)(3-4) to reduce the minimum side and rear yard residential accessory structure setbacks from 10' to 4' from the rear property line and 5' from the side property line. The purpose of the request is to bring the residential accessory structure into compliance with the setback requirements. The subject property is located at 1021 Colony Drive in the Mayfield subdivision.

DISCUSSION

The applicant, Joseph D. Shamoun, is requesting a variance to reduce the side and rear yard setbacks for residential accessory structures from ten (10) feet to four (4) feet from the rear property line and five (5) feet from the side property line. If approved, the setback variance will bring a non-conforming residential accessory structure (shed and pavilion) into compliance with the UDC. The subject property is zoned R-15 (Dwelling, 'For-Sale' Residential) and is located at 1021 Colony Drive in the Mayfield subdivision.

Unified Development Code (UDC) Section 2.3.3 (C)(3-4) requires a ten (10) foot side and rear yard setback for residential accessory structures such as sheds and miscellaneous free-standing structures. The applicant's site plan depicts the shed and pavilion structure four (4) feet from the rear property line and five (5) feet from the side property line. The rear property line backs up to Hearthstone Phase III, which is a single-family detached residential subdivision currently under construction by Sharp Residential, formerly known as the Johnson Tract. The side property line is shared with a single-family detached lot within the Mayfield subdivision with the address of 1011 Colony Drive.

The applicant added-on to an existing accessory structure (shed) without a building permit and is trying to correct a non-conformity. According to the applicant, the accessory structure was constructed over the rear property line onto the Hearthstone Phase III property due to a surveying mistake. The applicant removed a portion of the structure and Sharp Residential deeded the applicant 0.009 acres at the rear of the property. However, the land acquired from Sharp Residential is not sufficient to bring the structure into compliance with the residential accessory structure setback requirements.

The applicant's rear yard is heavily wooded, including many trees and shrubs between the structure and the adjacent properties. Hearthstone Phase 3 includes a landscape strip between the applicant's property and the adjacent residential lot. The Hearthstone Phase 3 landscape strip consists of a combination of established trees and new evergreen plantings. In addition, a privacy fence is provided along the rear and side property lines, as depicted below.



VARIANCE REQUIREMENTS

The City of Alpharetta Unified Development Code Article IV, Section 4.5.3 outlines the criteria set forth for granting a hardship variance. The ordinance specifically states..."a variance may be granted in whole or in part, or with conditions, in such individual case of unnecessary hardship upon a finding that":

1. There are extraordinary and exceptional conditions pertaining to the particular piece of property in question because of its size, shape or topography; or

Response: There are no extraordinary or exceptional conditions pertaining to this particular piece of property. The applicant is trying to correct a non-conformity.

2. The application of the Ordinance to this particular piece of property would create an unnecessary hardship; or

Response: The application of the UDC would require the applicant to remove the structure.

3. There are conditions that are peculiar to the property which adversely affect its reasonable use or usability as currently zoned; or

Response: There are no peculiar conditions that apply to the subject property. The applicant is trying to correct a non-conformity.

4. Relief, if granted, would not cause substantial detriment to the public good or impair the purpose and intent of the Ordinance.

Response: The applicant's requested variance will not cause a substantial detriment to the public good, if conditions are placed on the property requiring a combination plat and building permit.

CONCURRENCES

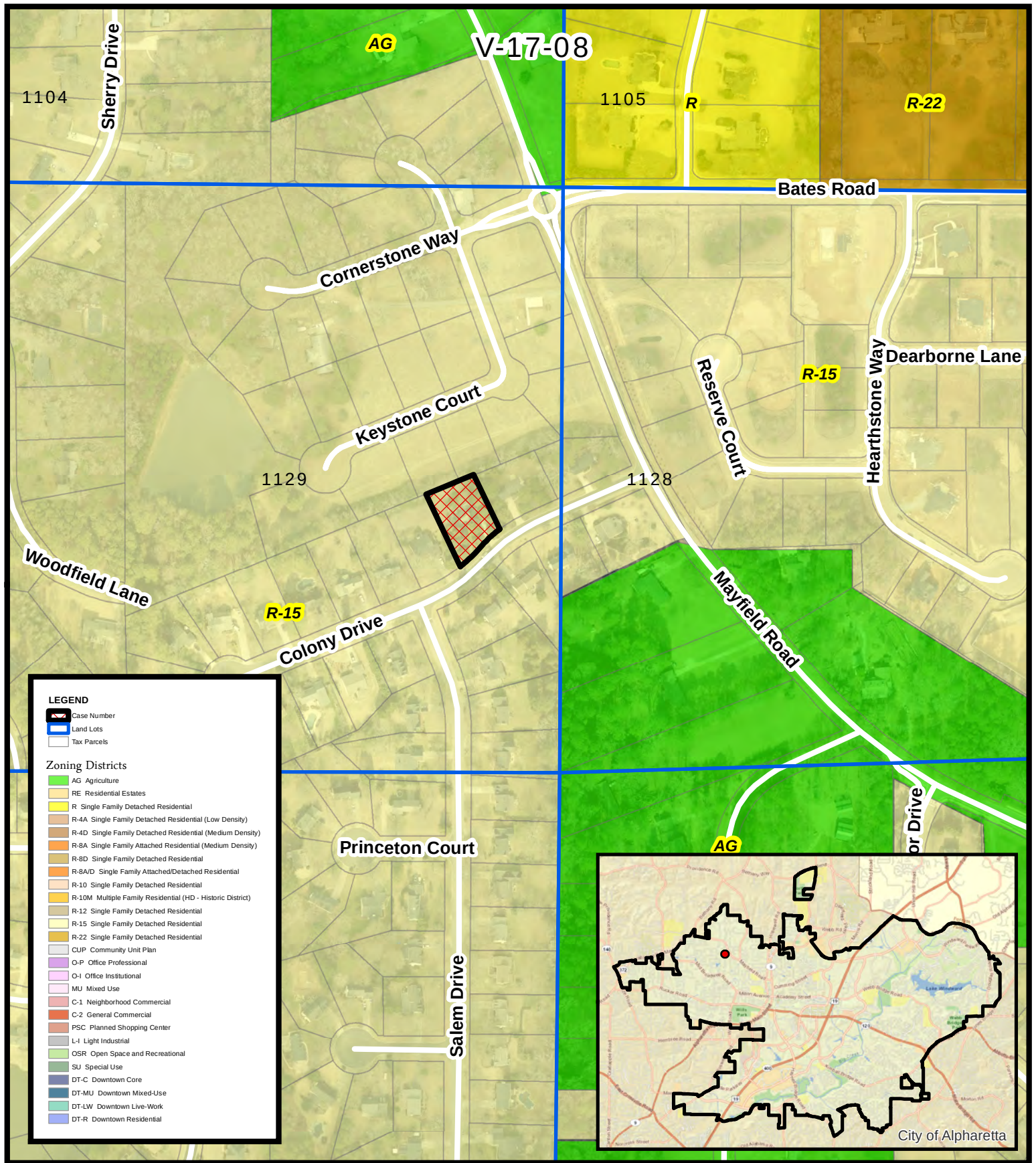
Staff has reviewed the application and is in general agreement with the requested setback variance. Although the residential accessory structure was constructed without a building permit, the applicant is making a concerted effort to correct the situation by purchasing land from the adjacent property owner, requesting a setback variance and applying for a building permit. If approval is considered, conditions are recommended limiting expansion of the residential accessory structure, as well as assigning a time limit to bring the property into compliance.

CITIZEN PARTICIPATION PLAN

The applicant notified adjacent property owners of the variance request and intent for the property. The citizen participation report states that no comments were received.

IV. ATTACHMENTS:

- Site Plan
- Elevations

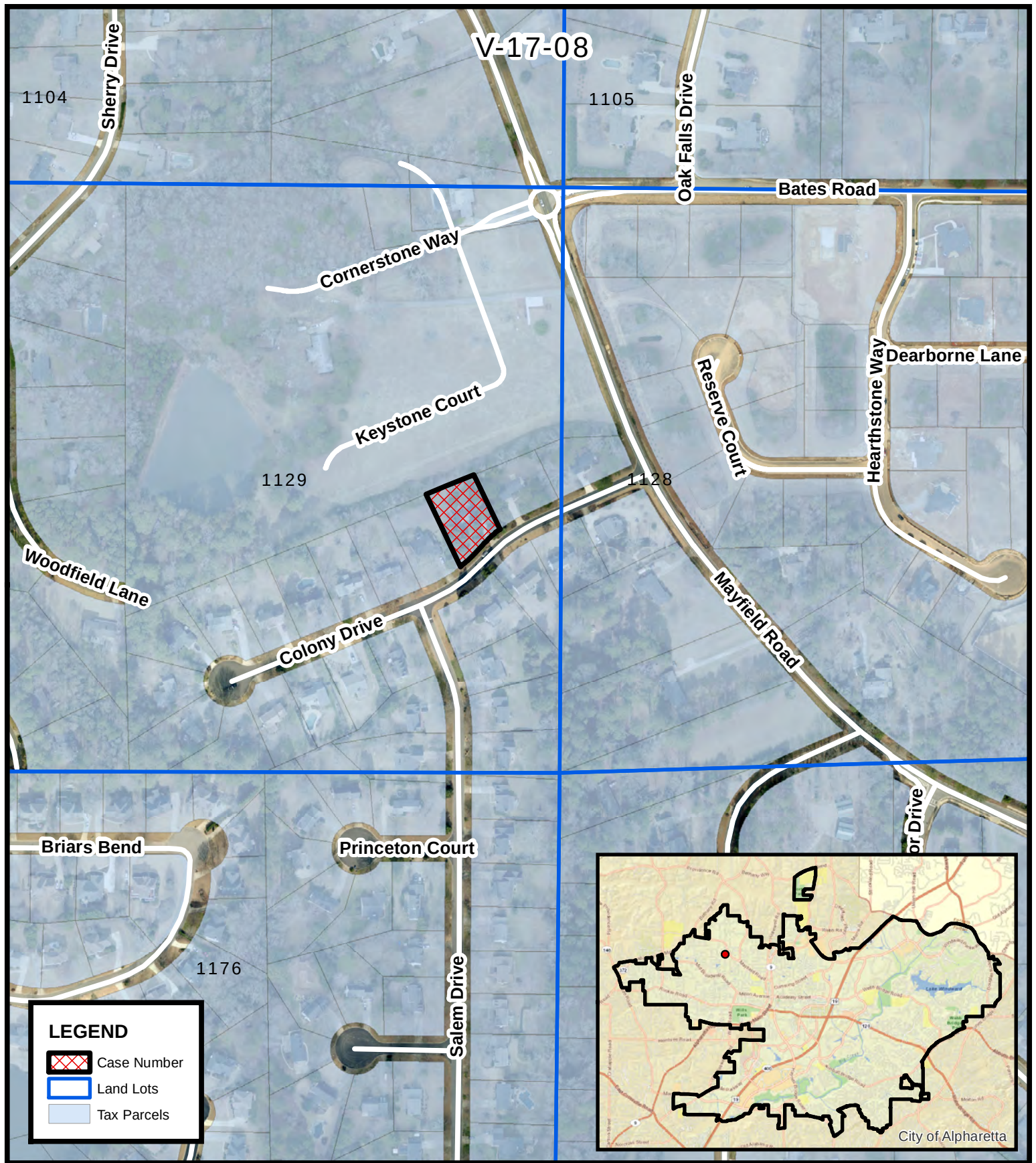


Zoning Map
Shamoun--Variance
1021 Colony Drive

V-17-08
D/LL: 2/2/1129
CC Date: 4/17/17



Location Map Provided by:
Community Development - GIS



Location Map
Shamoun--Variance
1021 Colony Drive

V-17-08
D/LL: 2/2/1129
CC Date: 4/17/17



Location Map Provided by:
Community Development - GIS

REF: List on section B., Citizenship

Subject: SHAMOUN VARIANCE HEARING scheduled April 17, 2017

All adjoining property owners have been notified:

1. matt stokes contacted j.d. about a Quit claim deed and resolved the land boundary...and approved all setbacks & design
Matt is the land acquisition person At Sharp development as Tom Sharp approved the final.
Land to to the rear of 1021 colony drive involving building.
2. contacted Chad Bishop: adjoining neighbor [visit at 1011 colony drive, Alpharetta GA. 30009]. Chad is 100% agreement with the setbacks
And design
3. contacted Bill lehr and Donna Bemont ,adjoining neighbors [visit at 1031 colony drive, Alpharetta GA. 30009] They are both in 100%
agreement of all setbacks and design, thereof

The following people have contacted J.D. Shamoun to offer to either sign a document or arrive at the meeting. J.D. did not solicit any of these
People to assist with the variance hearing....THEY VOLUNTEERED...

- a. Kurt Schlop [owner of Gainesmille Grading]
- b. Robert Patush [lives in neighborhood]
- c. Brian Tumlin [personal assistant to j.d.]
- d. Brad Allen [person who built the structure with j.d.]
- e. Richard Owens [landscape architect] who inspected the design as well contacted j.d. by phone and expressed he will be present
he actually was one of the first homeowners in our subdivision.

Note: the adjoining property owners were notified by phone and personal visit

Additional: Tree preservation and beatification is active and ongoing

Homeowner Association: NONE

I, Joseph D. Shamoun Joseph D. Shamoun attest that this is a true and accurate statement of fact
and that, if sworn in a court of law, will testify to those facts under oath.

4-05-2017

4-05-2017

CITIZEN PARTICIPATION FORM - PART B

This form must be completed and submitted to the City of Alpharetta Community Development Department a minimum of twenty (20) working days prior to the scheduled Public Hearing. Failure to do so will result in cancellation of the scheduled hearing.

Public Hearing or Project Name: Shamoun Variance 1031 Colony Drive

Contact Name: Joseph D. Shamoun Telephone: 678-223-5995

Please describe comments and concerns provided by any and all individuals contacted as part of the the Citizen Participation Program. If any individuals provided written correspondence, please attach copies of same to this report.

1. Contracted CHAD Bishop 1011 Colony Drive, Alpharetta 30009 @ 334-524
8905 & visited at home - He is in 100% agreement of
all setbacks AND construction design.
2. Contracted Bill Lehr & DONNA BEMONT @ 1031 Colony Drive,
Alpharetta 30009 (visited at home) Both are in 100% agreement of all
setbacks AND design of construction
3. Contracted MATT Stokes @ sharp development 940 - 940-2375
Matt also contacted J.D. Shamoun to give a Quit claim
deed for new rear boundary & approved all setbacks &
construction

Method by which these individuals were contacted. Please mark all that apply. Please provide samples of any and all written communications used to provide notification.

☐

Letter

☒

Personal Visits

☐

Telephone

☐

Group Meeting

☐

Email

☐

Other (Please Specify) _____

Attach a list of people who have been notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified.

ALL adjoining property owners have been notified - Bishop, Lehr, Bement &
Stokes.
Several people have contacted J.D. about
coming to the hearing. Michael Martano, Robert Patash, Kent Schlip, Brian Turbin
BRAD Allen, Richard Owen

I, the undersigned, as an authorized representative of the applicant and Public Hearing item identified above, do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Citizen Participation Form - Part B and in any and all documents provided in support of this report are true and accurate. I further understand that any false statements provided by representatives of the applicant as part of this report may result in penalties up to and including denial of the subject application.

Signature of Authorized Agent: Joseph D. Shamoun

Date: 4-5-2017

Print Form

CITY OF ALPHARETTA

PUBLIC HEARING APPLICATION

FOR OFFICE USE ONLY

Case #: PHA170009
☒ waived Fee Paid Initial: BP

COMMUNITY DEVELOPMENT DEPARTMENT

2 PARK PLAZA

ALPHARETTA, GA 30009

1. This page should be the first page in each of your completed application packets.
2. It is preferred that all responses be typed. Illegible applications will not be accepted.
3. Prior to signing and submitting your application, please check all information supplied on the following pages to ensure that all responses are complete and accurate. Incomplete applications will not be accepted.
4. Payment of all applicable fees must be made at the time of application. Payment may be made via cash, credit card (American Express, Master Card or Visa), or check made payable to "City of Alpharetta."
5. Applications will be accepted only on the designated submittal dates between the hours of 8:30 AM and 3:30 PM.
6. If you have any questions regarding this form, please contact the Community Development Department by calling 678-297-6070.

Contact Information:

Contact Name: Joseph D. Shamoun Telephone: 678-223-5495

Address: 1021 Colony Drive Suite: _____

City: Alpharetta State: GA. Zip: 30009 Fax: _____

Mobile Tel: 678-223-5495 Email: jd@72tree.com

Subject Property Information:

Address: 1021 Colony Drive SF Residential
Current Zoning: R1

District: 2nd Section: 2 Land Lot: 1129 Assessor's Parcel No: 002-2448-3-1129-003
Parcel ID: Lot 5-9 Block A

Proposed Zoning: R1 Current Use: Residential 22-4483 1129 003 0

This Application For (Check All That Apply):

- | | |
|---|---|
| ☐ Conditional Use | ☐ Master Plan Amendment |
| ☐ Rezoning | ☐ Master Plan Review |
| ☒ Variance | ☐ Public Hearing |
| ☐ Comprehensive Plan Amendment | ☐ Other (Specify): _____ |

APPLICANT REQUEST AND INTENT

What is the proposed use(s) of the property?

STORAGE -
 TOOLS -
 WIFE'S CRAFTS -

Applicant's Request (Please itemize the proposal):

1. NEED REAR BUILDING (PRE-EXISTING) SETBACKS APPROVED
 - A) 3ft to rear - SETBACK
 - B) 5ft Right-side (EAST) SETBACK

ADDED ATTACHED PAVILION -
 C) 14ft section - 5ft Right-side (EAST) SETBACK

Applicant's Intent (Please describe what the proposal would facilitate):

Intent is to utilize an organic structure
 in a woodland setting while preserving
 100yr old Eastern Red Cedars -

Rear Building; for storage & crafts

Rear Pavilion for a gathering place (quiet time)
 with family. 3-sided open structure -
 structure built for wife who is a recovering
 cancer patient.

PROPERTY OWNER AUTHORIZATION

Property Owner Information:

Contact Name: Joseph D SHAMOUN Telephone: 678-223-5495
 Address: 1021 Colony Drive Suite: _____
 City: Alpharetta State: GA Zip: 30009

Authorization:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of Fulton County, Georgia, of the property identified below, which is the subject of the attached Application for Public Hearing before the City of Alpharetta, Georgia.

As the legal owner of record of the subject property, I hereby authorize the individual named below to act as the applicant in the pursuit of the Application for Public Hearing in request of the items indicated below.

- | | |
|---|--|
| ☐ Annexation | ☐ Special Use |
| ☐ Rezoning | ☐ Conditional Use |
| ☒ Variance | ☐ Master Plan |
| ☐ Land Use Application | ☐ Other _____ |

Identify Authorized Applicant:

Name of Authorized Applicant: Joseph D. SHAMOUN Telephone: 678-223-5495
 Address: 1021 Colony Drive Suite: _____
 City: Alpharetta State: GA Zip: 30009

So Sworn and Attested:

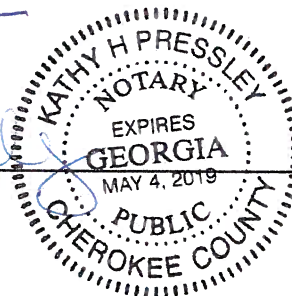
Owner Signature: Joseph D. Shamoun

Date: FEB 1, 2017

Notary:

Notary Signature: Kathy H Pressley

Date: 2/1/17



DISCLOSURE FORM

The Official Code of Georgia Annotated requires disclosure of campaign contributions to government officials by an applicant or opponent of a rezoning or public hearing petition (O.C.G.A. 36-67 A-1).

Applicants must file this form with the City of Alpharetta Community Development Department within ten (10) days after filing for rezoning or public hearing. Opponents to a rezoning or public hearing petition must file this form five (5) days prior to the Planning Commission meeting at which the subject rezoning or public hearing petition is scheduled to be heard.

Name of Applicant or Opponent:

Joseph D. Shamoun

Subject Public Hearing Case:

Variance for Paville Setback

Campaign Contribution Information:

Please provide the requested information for each contribution with a dollar amount or value of \$250 or more made within the past two (2) years to an Alpharetta Official by the individual identified above. Please use a separate form for each Alpharetta Official to whom such a contribution as been made.

If the individual identified above has made no such contributions to an Alpharetta Official within the past two (2) years, please indicate this by entering "N/A" on the appropriate lines below.

Name of Official:

Position:

Description of Contribution:

N/A

Value:

Description of Contribution:

N/A

Value:

Description of Contribution:

N/A

Value:

Description of Contribution:

N/A

Value:

Description of Contribution:

N/A

Value:

Campaign Contribution Information:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Disclosure Form is true and accurate and that I have disclosed herein any and all campaign contributions made to an Official of the City of Alpharetta, Georgia in accordance with O.C.G.A. 36-67 A-1.

Signature:

Joseph D. Shamoun

Date:

2-1-2017

BOARD OF ZONING APPEALS REVIEW CRITERIA

Please respond to the following ONLY if you are applying for a zoning variance.

Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, or topography? Please describe them.

NO

Would the application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship? Please explain.

yes, If demolition is required — this would be a major job involving a 100-ton-crane. Why? to preserve the 100 yr old cedars that the pavillion was designed to co-exist.

Are there conditions that are peculiar to the subject property? Please describe them in detail.

unclear about the context — of 'peculiar'.
But the pavillion was meticulously designed to compliment the woodland setting without removing 100yr+ old trees.

Would relief, if granted, cause substantial detriment to the public good or impair the purpose and intent of the Zoning Code? Please defend your response.

NO — the neighbors were in agreement before construction & approved the design as well as this structure gives them privacy also.
The design is NOT offensive nor does the current setback cause any harm.

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

CITIZEN PARTICIPATION FORM - PART A

This form must be completed and submitted with the applicant's completed Public Hearing Application. Applications submitted to the City of Alpharetta without a completed Citizen Participation Form - Part A will not be accepted.

Public Hearing or Project Name:

Shamoun Pavillion & Rear Property Setback Variance

Contact Name:

Joseph D. Shamoun

Telephone:

678-223-5495

The following people will be notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified. Use additional pages as needed.

Chad Bishop ¹⁰¹¹ 1031 Colony Drive

cell: 334-524-8905Approved

Bill Leha 1031 Colony Drive

cell: 404-597-6438Approved

Matt Stoke ^{REAR PROPERTY} Sharp Residents

cell: 770-940-2374Approved

Method by which these individuals will be contacted. Please mark all that apply. If you select "Other," please provide a description of the method of contact that will be used.

☐

Letter

☒

Personal Visits

☐

Telephone

☐

Group Meeting

☐

Email

☐

Other (Please Specify)

Please describe the method(s) by which these individuals will have the opportunity to respond or contact the applicant with questions or concerns about the proposal.

phone:

1021 Colony Drive, Alpharetta GA. 30009 SHAMOUN PAVILLION & OUTBUILDING SETBACK VARIANCE

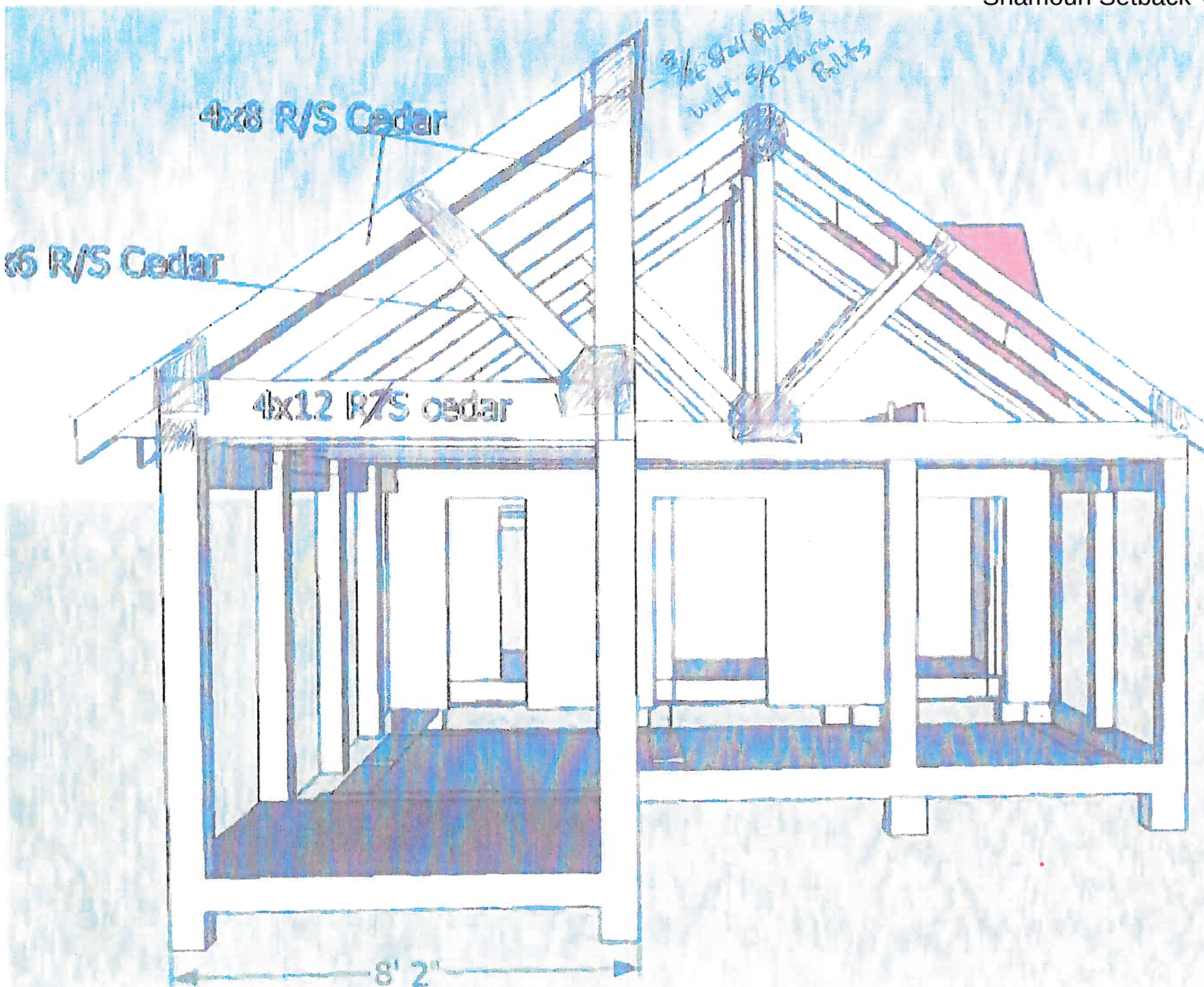
Mitigation points: listed in *bullet* fashion for clarity & simplicity

1. moved in neighborhood 2002 [needed an interim home] ...decision was made to raise my 2 boys because of the Many children their ages at the time. The children actually grew up together with many friends today from pre-school to College. CASE IN POINT: old fashion neighborhood ...healthy living....all the boys at an early age assisted with a TREE HOUSE Still erect today in rear , near outbuilding. A rarity these days to have the many children grow up together. Mr. Shamoun Spent many hours with these boys and even today....they congregate at our home.
2. This home was literally not our dream home but we basically did a 100% restoration while spending over 600.00 on a 175k Home which tremendously enhanced the property & neighborhood. Whole house water filtration, subzero, UV water Treatment, ALL organic , timeless design, 2 ½ year project. TOO many features to list. Wife became ill with cancer as we Finished the home. SHE always loved the 100yr old cedars. [keep in mind that zero development was going on at the time]
{ yes, it was not a financially good decision to spend this kind of money in this neighborhood BUT the caveat is no amount Of money can buy all those years of the interaction of those boys going into the wooded buffer in the rear while playing And developing those relationships that they can share the rest of their lives. The Shamoun house was the 'gathering house Of Mayfield. And it is today also when the boys come home from college.
3. MR. Johnson [the older gentleman , the owner of the rear Johnson Tract]] was bush-hogging the field [which is now sharp dev.]and pointed to the rear lot
boundary line which was an old hog wire fence. Their was a remnant of an old building at 1021 colony drive which we Made into a tool shed.. Mr. Johnson , I believe perished shortly after this. Later, Sharp developed the property And provided a new survey that was different from what Mr. Johnson had pointed to. Matt S. , then agreed upon j.d. Tearing down a portion of the building and then gave us a Quit Deed to the new survey...which you already have. The building is approx.. 3 ft. off line to the rear with a 5 ft. set back on right side: The City already knew about this building Before and basically did not have a problem with it because it was pre-existing.
4. THEN , we added a pavilion [3 sided open structure] with a metal roof....in which only 14ft. of the east side is also 5 ft. Setback on right. Pavillion was stamped and approved to be structurally sound with a Licensed engineer. [this structure was Designed to be friendly and non-evasive as well as organic meaningit blended in with the existing 100yr old cedars like it Had been here for many many years. Before we constructed this we wanted to make sure that our neighbors were OK with it. They actually welcomed it because of the detail work involved to offer an aesthetically pleasing structure to the eye. ' termed organic , modern farmhouse type' built with Western red cedar, spruce, bald cypress, & standing seam metal roof. NO cheap products on this structure I can assure you. Everyone that comes out to see it feels the nature like an arboretum. { mr. shamoun owns 72 TREE, SEED & LAND CO., LLC.....ecological restoration corporation and is an ISA certified arborist wih Many years of arboriculture, construction & ,management expertise.. Again , the pavilion was specifically designed for my Wife to try and extend her life with a tranquil setting to sit back and enjoy the nature.
5. [In retrospect...when we bought this property....the rear area must have been a staging zone for construction debri as in Concrete , steel, trash, ect. Mr. Shamoun cleaned the entire rear zone , beautified the area,pruned the existing trees, Planted 2,000 lb Canadian hemloks, magnolias, hollies, etc. and installed a privacy fence with clean lines to co-exist with Sharp development. [approximate expense incurred 17,000.00 to 20,000 dollars. Not including all of my time.
6. in conclusion we bought a home that was in disrepair and brought new life into it while making contributions to society That may not have had the financial means to do what we did in our neighborhood. WE also planted over 16 bald cypress Trees on our property with over 7 to 8 additional ornamentals, deodar cedar, Canadian hemlock, hydrangea, vines, ect. WE added the pavilion to an existing structure and are asking the City to grant us a variance to mainly my wife [Linda] To offer her a natural , quiet setting as a recovering cancer patient. Mr. shamoun has spent many many years and hours Cultivating this property with a tremendous amount of sweat equity as well as financial. Thanks for the opportunity for us To plead our case for a variance.

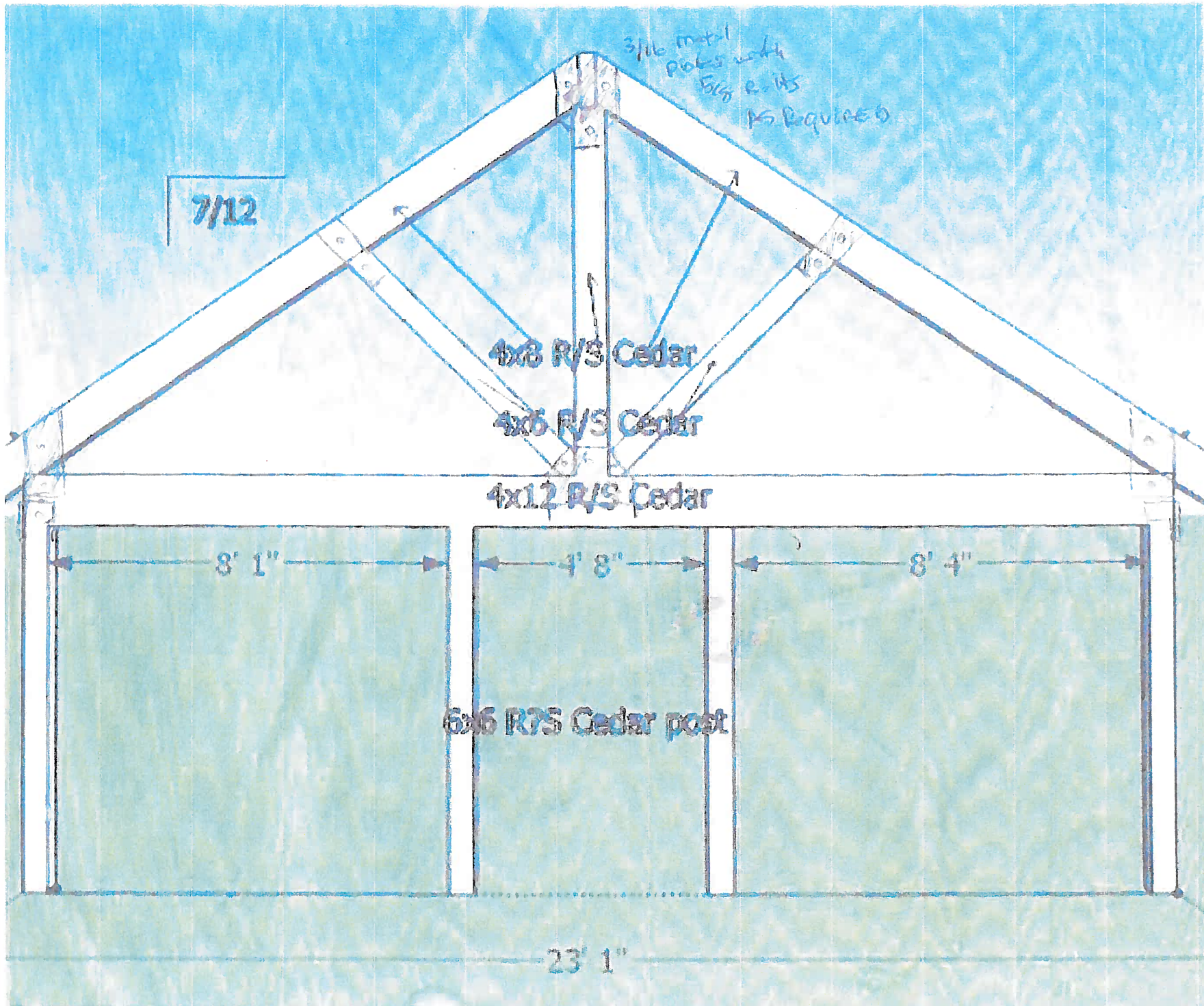
Thank you, Joseph D. Shamoun Sr. / owner

1021 COLONY DR., ALPHARETTA, GA

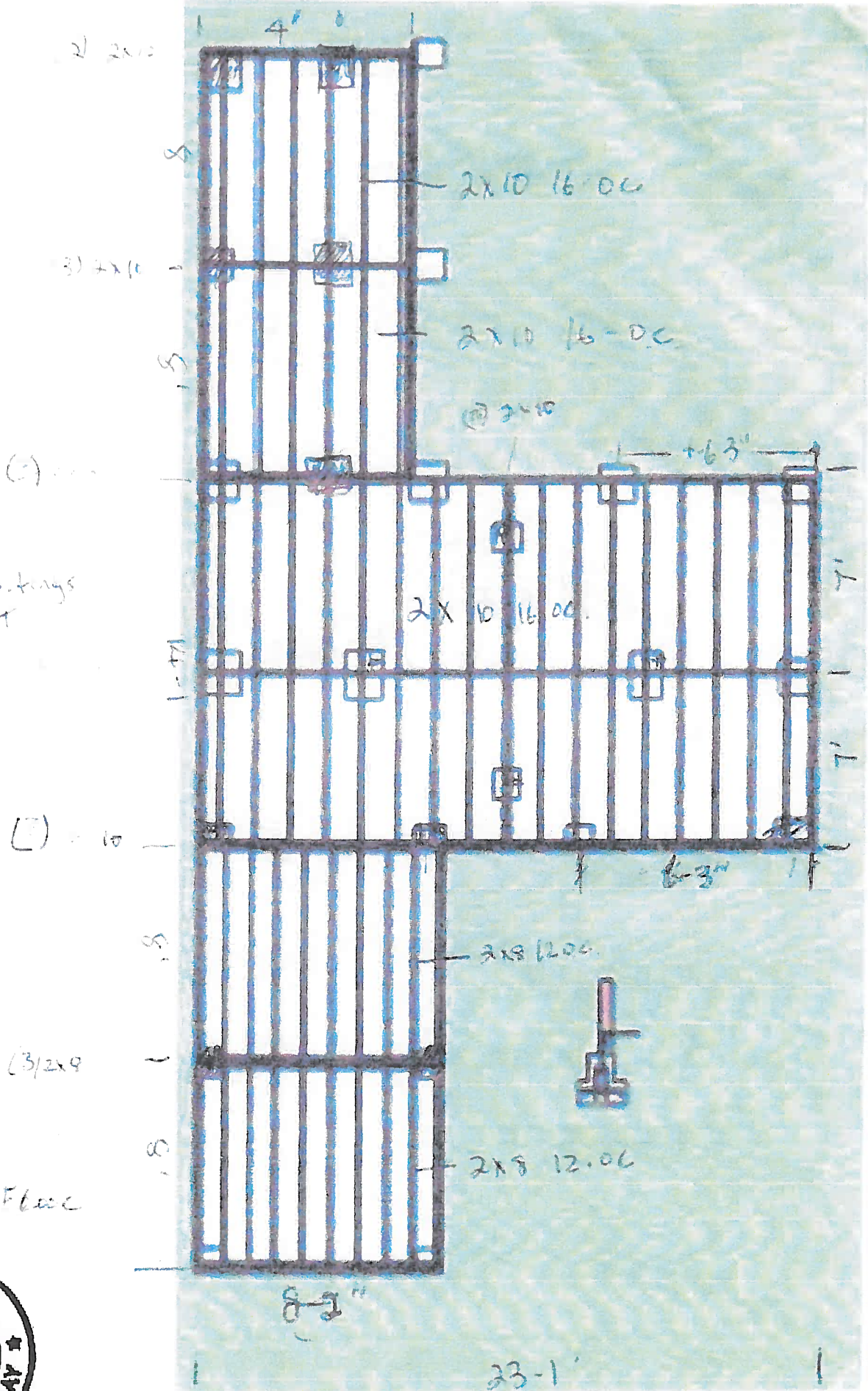
BK170023



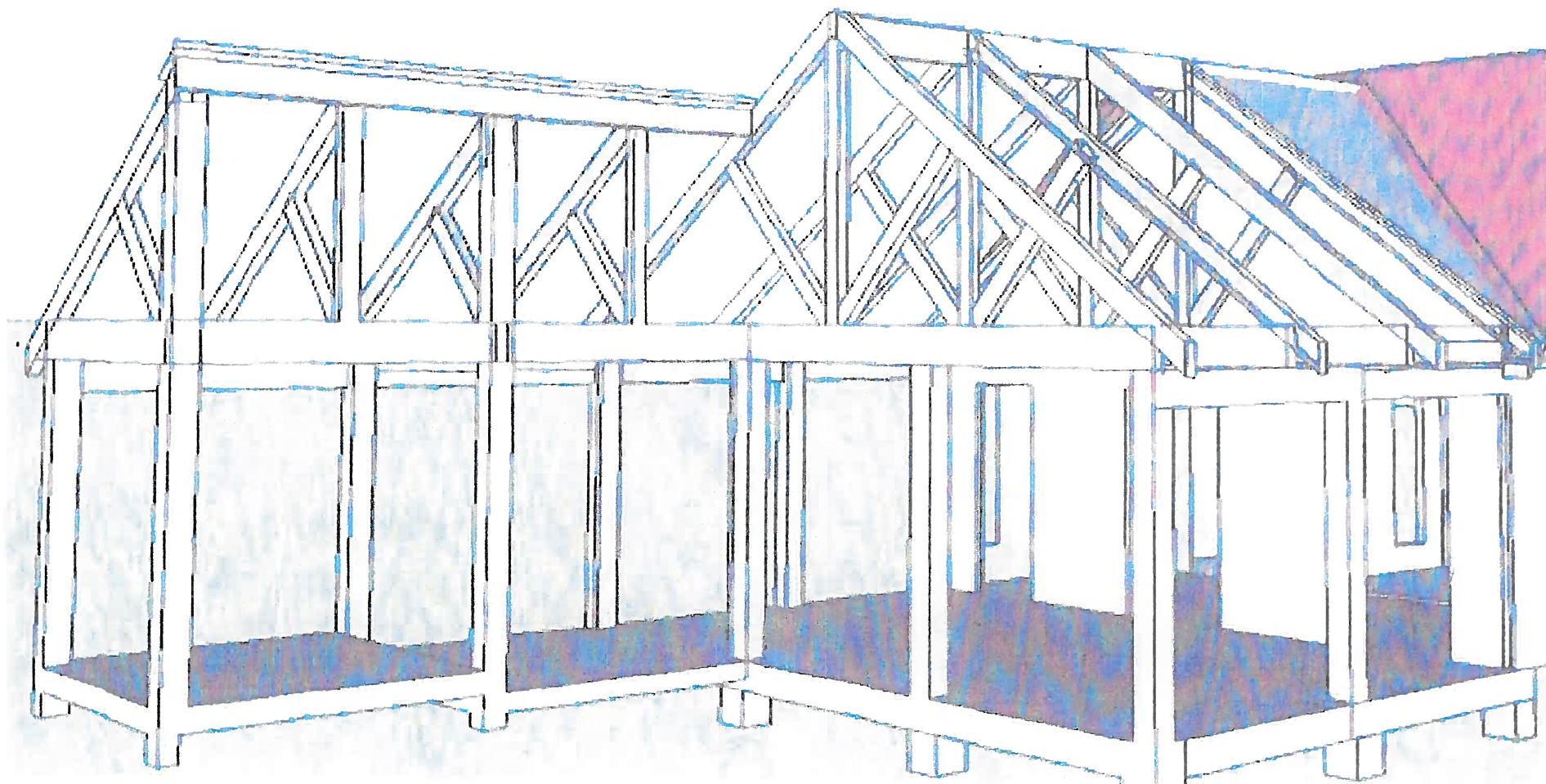
1021 COLONY DR., ALPHARETTA, GA



* Extra Fastings
+ 1/2"



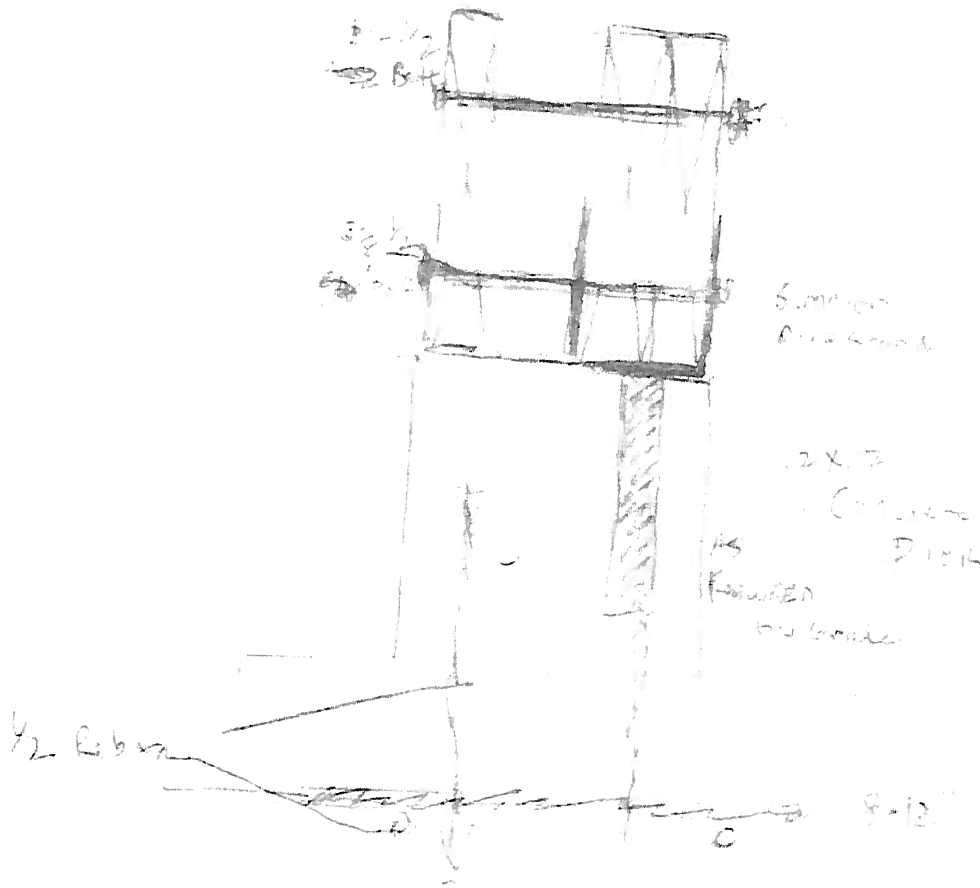
1021 COLONY DR., ALPHARETTA, GA



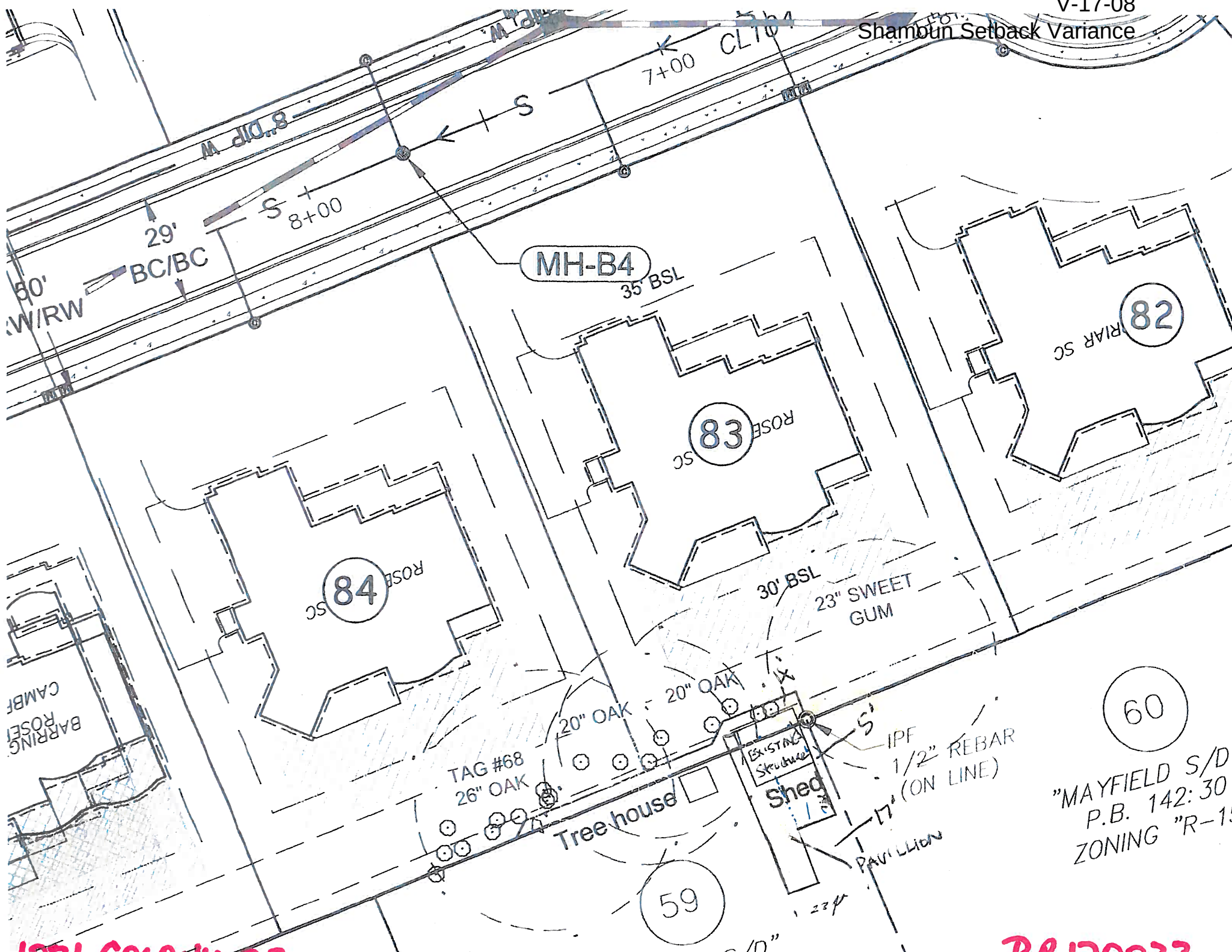
1021 COLONY DR., ALPHARETTA, GA



6x6
Cedar
Post



Typ. Footing
DETAIL



"MAYFIELD S/D
P.B. 142:30
ZONING "R-1"

RE 170022



City Council Meeting STAFF REPORT

Submitting Department: Community Development

Submitted By:

Meeting Date: April 17, 2017

I. AGENDA ITEM TITLE: PH-17-10 GUTMAN/CANTON STREET ROAD ABANDONMENT (COUNCIL ONLY)

CONSIDERATION OF A REQUEST TO ABANDON A REMNANT PORTION OF THE CANTON STREET RIGHT-OF-WAY ADJACENT TO 401 CANTON STREET. THE PROPERTY IS LEGALLY DESCRIBED AS BEING LOCATED IN LAND LOT 1180, 2ND DISTRICT, 2ND SECTION, FULTON COUNTY, GEORGIA.

II. RECOMMENDATION:

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>

EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>

IV. REPORT IN BRIEF:

V. ALTERNATIVES:

VI. ATTACHMENTS:

Council Agenda Report, Location Map, Resolution, Citizenship Part B Report, Application, Survey

RESOLUTION NO. _____

**A RESOLUTION OF THE CITY COUNCIL OF ALPHARETTA PROVIDING FOR THE
ABANDONMENT AND DISPOSITION OF A CERTAIN PUBLIC RIGHT OF WAY
(A portion of Canton Street)**

WHEREAS, the City of Alpharetta has received an application for the abandonment of a portion of a public right-of-way known as Canton Street, located in Land Lot 1180, 2nd District, 2nd Section, Fulton County, Georgia.

WHEREAS, after due consideration and investigation, the Mayor and Council for the City of Alpharetta (the "City Council") have determined that the right-of-way of Canton Street described in the attached Exhibit "A" has ceased to be used by the public to the extent that no substantial public purpose is served by it; and

WHEREAS, the City has notified the public and the abutting property owners of its intention to abandon said right-of-way; and

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Alpharetta hereby resolves that Canton Street described in the attached Exhibit "A" is hereby abandoned as a public road and shall no longer be part of the City street system and the Mayor and such other City officials as may be appropriate are hereby authorized to dispose of Canton Street described in the attached Exhibit "A": as stipulated as a result of the public hearing process in accordance with the provisions of applicable law.

SO RESOLVED this _____ day of _____ 2017.

CITY OF ALPHARETTA

BY: _____
David Belle Isle, Mayor

Council Members:

_____	_____
_____	_____
_____	_____

ATTEST: _____
City Clerk

PH-17-10

Hopewell Road

1180

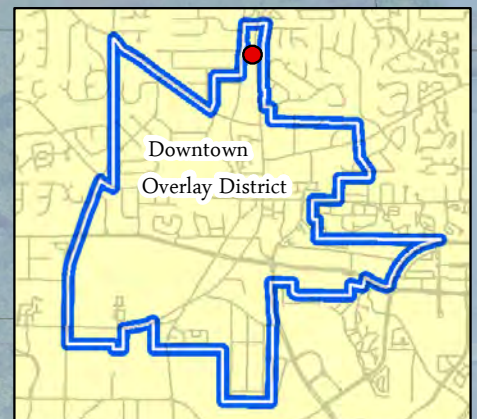
Pebble Trail

Canton Street

401 Canton St

LEGEND

-  Abandonment Area (0.04 Acres)
-  Land Lots
-  Tax Parcels



Location Map
Canton Street Road Abandonment
401 Canton Street

PH-17-10
D/LL: 2/2/1180
CC Date: 4/17/17

Location Map Provided by:
Community Development - GIS



RESOLUTION NO. _____

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WHEREAS, the City has notified the public and the abutting property owners of its intention to abandon said right-of-way; and

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Alpharetta hereby resolves that Canton Street described in the attached Exhibit "A" is hereby abandoned as a public road and shall no longer be part of the City street system and the Mayor and such other City officials as may be appropriate are hereby authorized to dispose of Canton Street described in the attached Exhibit "A": as stipulated as a result of the public hearing process in accordance with the provisions of applicable law.

SO RESOLVED this _____ day of _____ 2017.

CITY OF ALPHARETTA

BY: _____
David Belle Isle, Mayor

Council Members:

_____	_____
_____	_____
_____	_____

ATTEST: _____
City Clerk

CITIZEN PARTICIPATION FORM - PART B

This form must be completed and submitted to the City of Alpharetta Community Development Department a minimum of twenty (20) working days prior to the scheduled Public Hearing. Failure to do so will result in cancellation of the scheduled hearing.

Public Hearing or Project Name: PH-17-10 Gutman/Canton ST RD Amendment 7

Contact Name: JAMES GUTMAN

Telephone: 770-548-2882

Please describe comments and concerns provided by any and all individuals contacted as part of the the Citizen Participation Program. If any individuals provided written correspondence, please attach copies of same to this report.

NO RESPONSE FROM ANYONE CONTACTED VIA LETTER. I DID
SPEAK DIRECTLY WITH KATIC HARDING (383 CANTON ST) IN
PERSON & SHE RAISED NO OBJECTION.

Method by which these individuals were contacted. Please mark all that apply. Please provide samples of any and all written communications used to provide notification.

- | | |
|--|---|
| ☒ Letter | ☒ Personal Visits |
| ☐ Telephone | ☐ Group Meeting |
| ☐ Email | ☐ Other (Please Specify) _____ |

Attach a list of people who have been notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified.

I, the undersigned, as an authorized representative of the applicant and Public Hearing item identified above, do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Citizen Participation Form - Part B and in any and all documents provided in support of this report are true and accurate. I further understand that any false statements provided by representatives of the applicant as part of this report may result in penalties up to and including denial of the subject application.

Signature of Authorized Agent: _____

Date: 4-5-2017

Print Form

February 14, 2017

Elizabeth Daniel
393 Canton Street
Alpharetta, GA 30009

Abutting property owner : 393 Canton Street

Dear property owner,

This notice is to inform you that we have filed a Road Abandonment application with the City of Alpharetta to abandon the section of unused road that fronts our property. The Alpharetta City Council will hold a public hearing on April 17, 2017. All persons having an interest in these matters may attend and make their views known at that time.

If you have any questions please call me at 770-548-7282 or email me at jmigtuttman@aol.com.

Sincerely,

James Guttman, property owner
401 Canton Street
Alpharetta, GA 30009

February 14, 2017

Vishal T, LLC
5675 Jimmy Carter Blvd. Ste.500
Norcross, GA 30071

Abutting property owner :410 Main Street

Dear property owner,

This notice is to inform you that we have filed a Road Abandonment application with the City of Alpharetta to abandon the section of unused road that fronts our property. The Alpharetta City Council will hold a public hearing on April 17, 2017. All persons having an interest in these matters may attend and make their views known at that time.

If you have any questions please call me at 770-548-7282 or email me at jmigtuttman@aol.com.

Sincerely,

James Guttman, property owner
401 Canton Street
Alpharetta, GA 30009

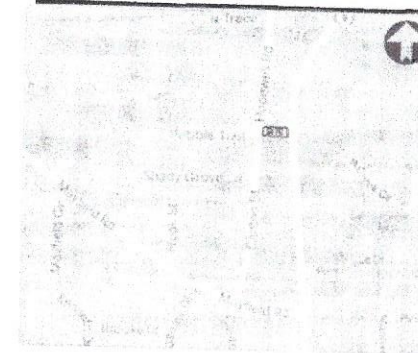
Symbols & Abbreviations

● MONUMENT FOUND	PIPE POWERPOLE
○ MONUMENT SET	— DUY PIPE
■ P.X. NAIL FOUND	— DUE OVERHEAD ELECTRIC
□ P.X. NAIL SET	— DUE FORCE LINE
△ PND X MARK	○ OPEN TOP PIPE
▲ SET X MARK	DN SIDEWALK
▲ R/L SPIKE FOUND	SC/PG BACK OF CURB
▲ R/L SPIKE SET	UP EDGE OF PAVEMENT
— BOUNDARY	UC EDGE OF CONCRETE
— CONC. R/W MARKER	— PROPERTY LINE
(4) RECORD DATA	— DRAINAGE EASEMENT
(24) MEASURED DATA	— LANDSCAPE EASEMENT
(12) CALCULATED DATA	— SANITARY SEWER EASEMENT
R/W RIGHT OF WAY	— SANITARY SEWER RISING
SL D/G DETACK LINE	— SEWER MANHOLE
PLD PLASTIC PIPE	CO CLEAN OUT
ML METAL	PS MON PW SET
L/L LANDSCAPING	1/2" REBAR 1/2" REBAR FOUND
— TREE	TOP TOP PIPE FOUND
— COMPUTED POINT	P.O.C. POINT OF COMMENCEMENT
— FOR UTILITY	P.O.B. POINT OF BEGINNING
	— TEMPORARY BENCH MARK
	— CORRODED METAL PIPE
	— REINFORCED CONC PIPE
	— WATER VALVE

NOTES

THIS SURVEY IS TO SHOW THE SUBJECT PROPERTY AND RIGHT OF WAY GRANTED.

Vicinity Map ~ N.T.S.



Surveyor's Notes

1. THIS SURVEY IS CLASSIFIED AS A "RIGHT OF WAY SURVEY".
2. THE FIELD DATA FOR THIS SURVEY WAS OBTAINED WITH A LEICA 1200 SMARTSTATION ROBOTIC INSTRUMENT ON JAN. 10, 2017.
3. THE FIELD DATA UPON WHICH THIS SURVEY IS BASED EXCEEDS THE 95% CONFIDENCE LEVEL AND WAS ADJUSTED USING THE LEAST SQUARES METHOD.
4. THIS PLAT OR MAP HAS BEEN CALCULATED FOR CLOSURE AND HAS A CLOSURE PRECISION RATIO OF 1" IN 111,682.
5. UNDERGROUND UTILITIES AS SHOWN BY THIS SURVEY ARE APPROXIMATE AND SHOULD BE FIELD-VERIFIED PRIOR TO ANY CONSTRUCTION AND/OR LAND DISTURBING ACTIVITIES.

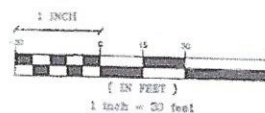
THIS DRAWING WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-2 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN THE GEORGIA PLAT ACT O.C.G.A. 15-6-81 AUTHORITY O.C.G.A. SECS. 15-6-87, 43-10-4, 43-10-5, 43-10-10, 43-10-22.

S. G. Evans
SAMUEL G. EVANS
CAREL'S 1188



Know what's below.
Call before you dig.

GRANTED AREA
1,690 S.F.
0.0387 AC



EDI ENGINEERS
SAM EVANS PE & RLS

Land Surveying & Civil Engineering

1815 HEMBREE RD. #502

ALPHARETTA, GA 30009

770-777-1515

JEAN7764@ATT.NET

SURVEY OF: 401 CANTON STREET
LAND LOT 1180, 2ND DISTRICT, 2ND SECTION
FULTON COUNTY, GEORGIA

Date of Survey

01/21/2017

Scale

1" = 30'

Sheet No.

1 OF 1

Job/File No.

CANTON STREET

N/F
ZHL REALTY LLC
401 CANTON STREET

N/F
ELISABETH M. DANIEL
393 CANTON STREET

EX R/W

LEGEND

EX R/W EXISTING RIGHT OF WAY
EX PL EXISTING PROPERTY LINE

PROP.
SIDEWALK

PROP.
DRIVEWAY

PROP.
MAILBOX

PROP.
DRIVEWAY

PROP.
MAILBOX

CANTON STREET
R/W VARIES

PROP. CURB
AND GUTTER

20'

40'

E: 1" = 20'

DATE: MARCH 2, 2016



EXHIBIT

LAND LOT 1180 - 2ND DISTRICT, 2ND SECTION
CITY OF ALPHARETTA, FULTON COUNTY, GEORGIA

MAGNETIC
N

N23°04'23"E
26.25'

A=70.34'
R=590.59'
N22°51'43"E
CH=70.30'

CANTON STREET

650.8' TO THE SOUTH
LINE OF LAND LOT 1180

N/F
JACK M. BUCKNER
DB 130 PG 71

S88°52'20"E
139.01'

AXLE FOUND
3.7' N.W.

REBAR SET

OUR FENCE

NEIGHBORS FENCE

OPEN TOP FOUND

REBAR FOUND

144.47'

N/F

DOLPHIN POOLS INC.
DB 24405 FG 289

S01°27'08"W
90.78'(ACTUAL)

90.82'(DEED)

150.68'

REBAR FOUND

40.9'

REBAR FOUND

174.34'

N88°30'00"W

OUR FENCE OVER IE 1.4'

NAIL FOUND
1.05' S.W.

REBAR SET

POST
.61' N.E.

6.7'

CARPORT

8.2'

CONC DRIVE

57.0'

TOTAL=96.59'

ONE STORY FRAME

DECK

REBAR SET

OUR FENCE

NEIGHBORS FENCE

OPEN TOP FOUND

REBAR FOUND

150.68'

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N88°30'00"W



CITY OF ALPHARETTA

ROAD ABANDONMENT REQUEST FORM

Please check all information supplied on the following pages to ensure that all spaces are filled out completely and accurately and that all required supporting materials have been supplied before signing this form.

Please make your check payable to "City of Alpharetta". The application fee is \$400, which must be submitted at the time of application.

Remit application and fee to the Department of Community Development, 2 Park Plaza, Alpharetta, GA 30009. If you have questions, please contact the department by calling 678-297-6070.

FOR OFFICE USE ONLY

Case # _____

Date In _____

Date Out _____

☐ \$400 Fee Paid *Wain*

Applicant Information:

Contact Name James Guttman

Company Name _____

Mailing Address 515 Spring Gate Lane

City Alpharetta State GA Zip Code 30009

Telephone 770-548-7282 Fax 866-629-9087

Email Address jmguttman@aol.com

Property Information:

Current Road Name Canton street

Land Lot(s) 1180 District / Section 2nd/2nd

The subject property for which abandonment is being requested is identified by (select one):

☒ Survey Dated 4-25-07 Prepared By michael noles

☒ Other Plat Specify sidewalk improvement sketch exhibit March 2, 2016

Reason For Request:

In the space provided, please explain the reason for which you are requesting abandonment of the subject property. Please attach additional pages if necessary.

Road is not being used and is an eye sore. We are hoping to purchase 1,690 sq. ft. (0.0387 acres) in front of our property to incorporate into our landscape plan.

Please list all property owners, including address and telephone number, who have property abutting the subject road. Attach additional pages as necessary.

	Name	Address	Telephone
①	Vishal I LLC	410 Main St	
	Mailing address 5675 Jimmy Carter Blvd, Ste 500		
	(22-4813-1180-017-7) Norcross, GA 30071		
②	Elizabeth M. Daniel	393 Canton St	
	(22-4813-1180-015-1) Alpharetta, GA 30009		

Please list anyone, including address and telephone number, who presently resides on property abutting the subject road. Attach additional pages as necessary.

Name	Address	Telephone

In the space provided, please describe the efforts that you have undertaken to notify the aforementioned property owners and residents of your request to abandon the subject road. If such notification was in writing, please attach a sample of the letter or other document used. If such notification was mailed, please attach proof of mailing.

Is any of the property abutting the subject road for sale? ☐ Yes ☒ No

Is the sale of the property contingent upon the road abandonment? ☐ Yes ☒ No ☐ N/A

Is any portion of the subject road to be included in the sale of property? ☐ Yes ☒ No ☐ N/A

Please describe the location and the acreage involved.

See Attached survey/site plan

Is an alternate road proposed in lieu of the road to be abandoned? If "yes", please attach a site plan indicating the location of the proposed substitute road. ☐ Yes ☒ No

Will access be denied to any property as a result of this road abandonment? If "yes", please list these properties by address, including owner's name and telephone number. Attach additional sheets if necessary. ☐ Yes ☒ No

Name	Address	Telephone

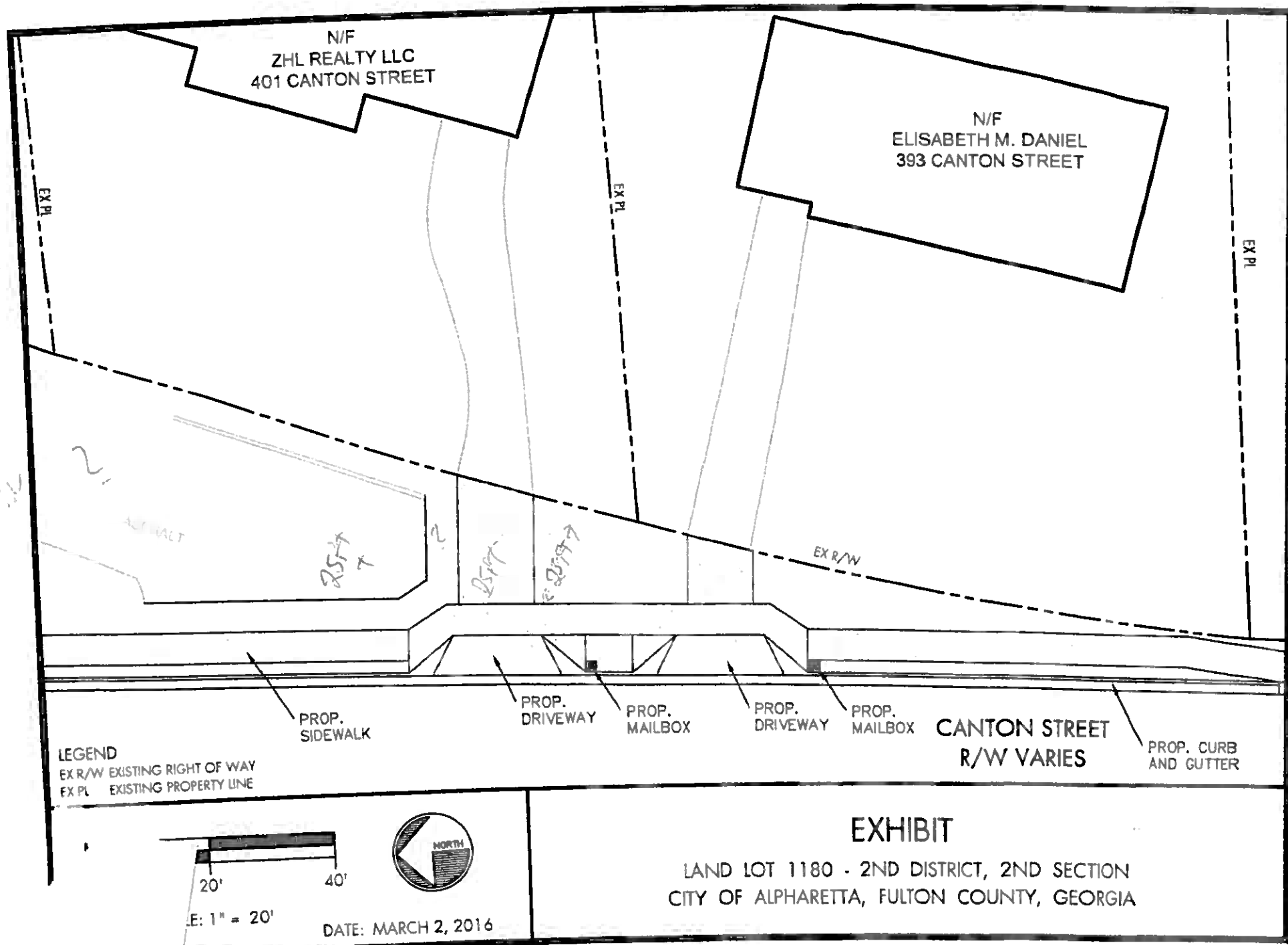
For properties that have frontage on the subject road, are there alternate points of access to enter and exit these properties? If yes, please identify alternate points of access for each property. Attach additional sheets if necessary. ☐ Yes ☐ No
N/A

Address	Alternate Access Point

Please provide twenty (20) copies of a boundary survey showing the proposed road abandonment, all utility locations, existing rights-of-way, acreage and contiguous property owners. Include a location map on the survey and a legal description of the subject roadway.

Please be advised that the City of Alpharetta may require a traffic study and property appraisal in conjunction with this petition.



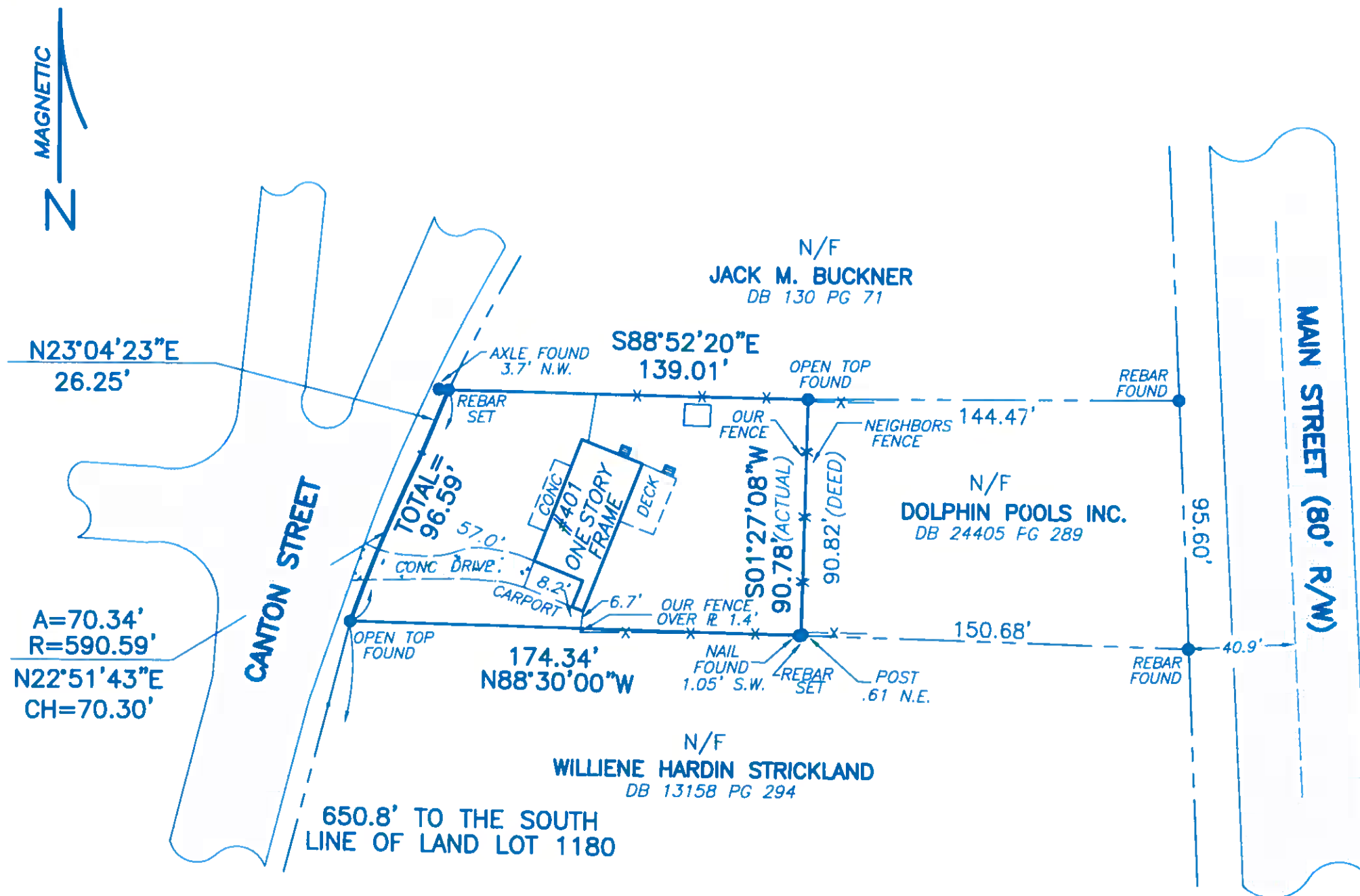


Pirolt, Barbara

From: James Guttman <jmiguttman@aol.com>
Sent: Wednesday, November 16, 2016 9:38 AM
To: Pirolt, Barbara



Sent from my iPhone



1. STORM SEWER, SANITARY SEWER AND OTHER BURIED UTILITIES MAY HAVE BEEN PAVED OR COVERED OVER. THE LOCATION OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES. BEFORE EXCAVATIONS ARE BEGUN, CALL THE UTILITIES PROTECTION CENTER FOR ADDITIONAL INFORMATION.
THROUGH OUT GEORGIA 1-800-282-7411
2. SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT A CURRENT TITLE SEARCH MAY DISCLOSE.
3. THIS PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS OR ENTITY NAMED HEREON. THIS PLAT DOES NOT EXTEND TO ANY UNNAMED PERSON, PERSONS, OR ENTITY WITHOUT THE EXPRESS RECERTIFICATION OF THE SURVEYOR NAMING SUCH PERSON, PERSONS OR ENTITY.
4. THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 10,000+ FEET, AND AN ANGULAR ERROR OF 02" PER ANGLE POINT, AND WAS ADJUSTED USING COMPASS RULE. THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 100,000+ FEET. LINEAR AND ANGULAR MEASUREMENTS WERE OBTAINED BY USING A TOPCON TOTAL STATION.
BEARINGS SHOWN WERE COMPUTED FROM ANGLES TURNED FROM A SINGLE MAGNETIC OBSERVATION.
5. THIS PLAT NOT INTENDED FOR RECORDING.

TOTAL AREA= 0.326 ACRES
OR 14,197 SQ. FT.

401 CANTON STREET
ALPHARETTA, GEORGIA

PROPERTY OF
WILLIAM P. NETTLES

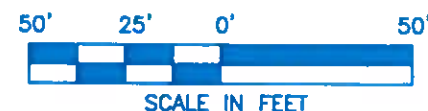
LAND LOT 1180
DISTRICT 2ND SECTION 2ND
COUNTY FULTON
GEORGIA

PLAT PREPARED: 4-25-07
FIELD: 4-23-07 SCALE: 1"=50'

PB
PG
DB 38334
PG 351
WNCW

LEGEND

B.S.E.	BELLSOUTH EASEMENT
S.S.E.	SANITARY SEWER EASEMENT
SSMH	SANITARY SEWER MANHOLE
D.E.	DRAINAGE EASEMENT
CB	CATCH BASIN
DI	DROP INLET
SMH	STORM MANHOLE
JB	JUNCTION BOX
HW	HEADWALL
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED METAL PIPE
U.E.	UTILITY EASEMENT
L.L.L.	LAND LOT LINE
B	BUILDING LINE
P	PROPERTY LINE
C	CENTERLINE



DB: CL	No.	Revision	Date

McLUNG
SURVEYING SERVICES, INC.

4833 South Cobb Drive Suite 200
Smyrna, Georgia 30080 (770) 434-3383

This property (●) (is not)
located in a Federal Flood
Area as indicated by F.I.R.M.
Official Flood Hazard Maps.

In my opinion this plat is a
correct representation of the
land platted.

Fences should not be placed
using side dimensions from house.



Michael R. Noles
Georgia RLS #2646
Member SAMSOG
JOB#224083

WNCW

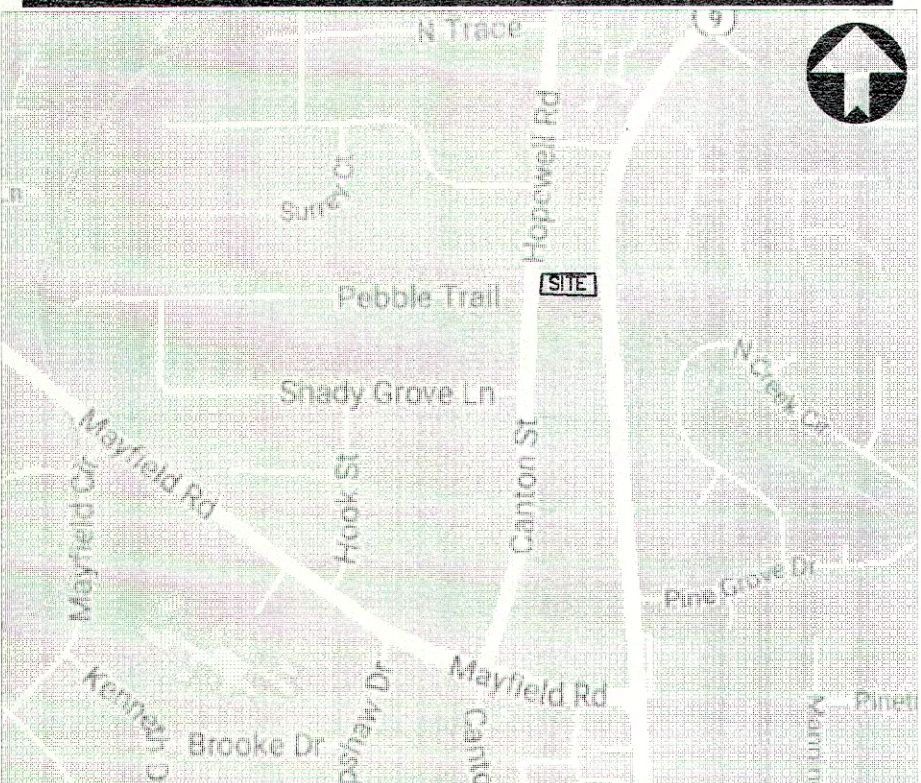
Symbols & Abbreviations

● MONUMENT FOUND	PP ^{CO} POWERPOLE
○ MONUMENT SET	— GUY WIRE
■ P.K. NAIL FOUND	—OHE—OVERHEAD ELECTRIC
□ P.K. NAIL SET	—X—X— FENCE LINE
× FND X MARK	OTF OPEN TOP PIPE
× SET X MARK	SW SIDEWALK
▲ R.R. SPIKE FOUND	BC/BOC BACK OF CURB
△ R.R. SPIKE SET	EP EDGE OF PAVEMENT
⊕ BENCHMARK	EC EDGE OF CONCRETE
⊞ CONC. R/W MARKER	R PROPERTY LINE
(R) RECORD DATA	D.E. DRAINAGE EASEMENT
(M) MEASURED DATA	L.E. LANDSCAPE EASEMENT
(C) CALCULATED DATA	S.S.E. SANITARY SEWER ESMT
R/W RIGHT OF WAY	— SS— SANITARY SEWER PIPING
BSL BLDG SETBACK LINE	⊙ SEWER MANHOLE
PVC PLASTIC PIPE	CO CLEAN OUT
MTL METAL	IPS IRON PIN SET
L/S LANDSCAPING	1/2" RBF 1/2" RE-BAR FOUND
○ TREE	1" CTP 1" CRIMP TOP PIPE FOUND
CP COMPUTED POINT	P.O.C. POINT OF COMMENCEMENT
□ FIRE HYDRANT	P.O.B. POINT OF BEGINNING
	T.B.M. TEMPORARY BENCH MARK
	CMP CORRUGATED METAL PIPE
	ROP REINFORCED CONC PIPE
	WV WATER VALVE

NOTES

THIS SURVEY IS TO SHOW THE SUBJECT PROPERTY AND RIGHT OF WAY GRANTED.

Vicinity Map ~ N.T.S.



EDI ENGINEERS
SAM EVANS PE & RLS

Land Surveying • Civil Engineering
1815 HEMBREE RD, #502
ALPHARETTA, GA 30009
770-777-1515
JEAN7764@ATT.NET

SURVEY OF: 401 CANTON STREET
LAND LOT 1180, 2ND DISTRICT, 2ND SECTION
FULTON COUNTY, GEORGIA

Date of Survey

01/21/2017

Scale

1" = 30'

Sheet No.

1 OF 1

Job/File No.

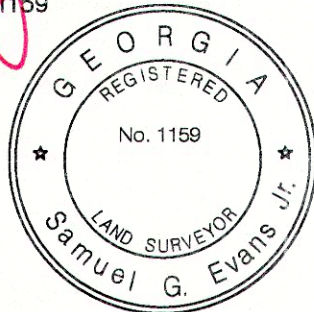
CANTON STREET

Surveyor's Notes

1. THIS SURVEY IS CLASSIFIED AS A "RIGHT OF WAY SURVEY".
2. THE FIELD DATA FOR THIS SURVEY WAS OBTAINED WITH A LEICA 1200 SMARTSTATION ROBOTIC INSTRUMENT ON JAN. 10, 2017.
3. THE FIELD DATA UPON WHICH THIS SURVEY IS BASED EXCEEDS THE 95% CONFIDENCE LEVEL AND WAS ADJUSTED USING THE LEAST SQUARES METHOD.
4. THIS PLAT OR MAP HAS BEEN CALCULATED FOR CLOSURE AND HAS A CLOSURE PRECISION RATIO OF 1' IN ±115.692.
5. UNDERGROUND UTILITIES AS SHOWN BY THIS SURVEY ARE APPROXIMATE AND SHOULD BE FIELD-VERIFIED PRIOR TO ANY CONSTRUCTION AND/OR LAND DISTURBING ACTIVITIES.

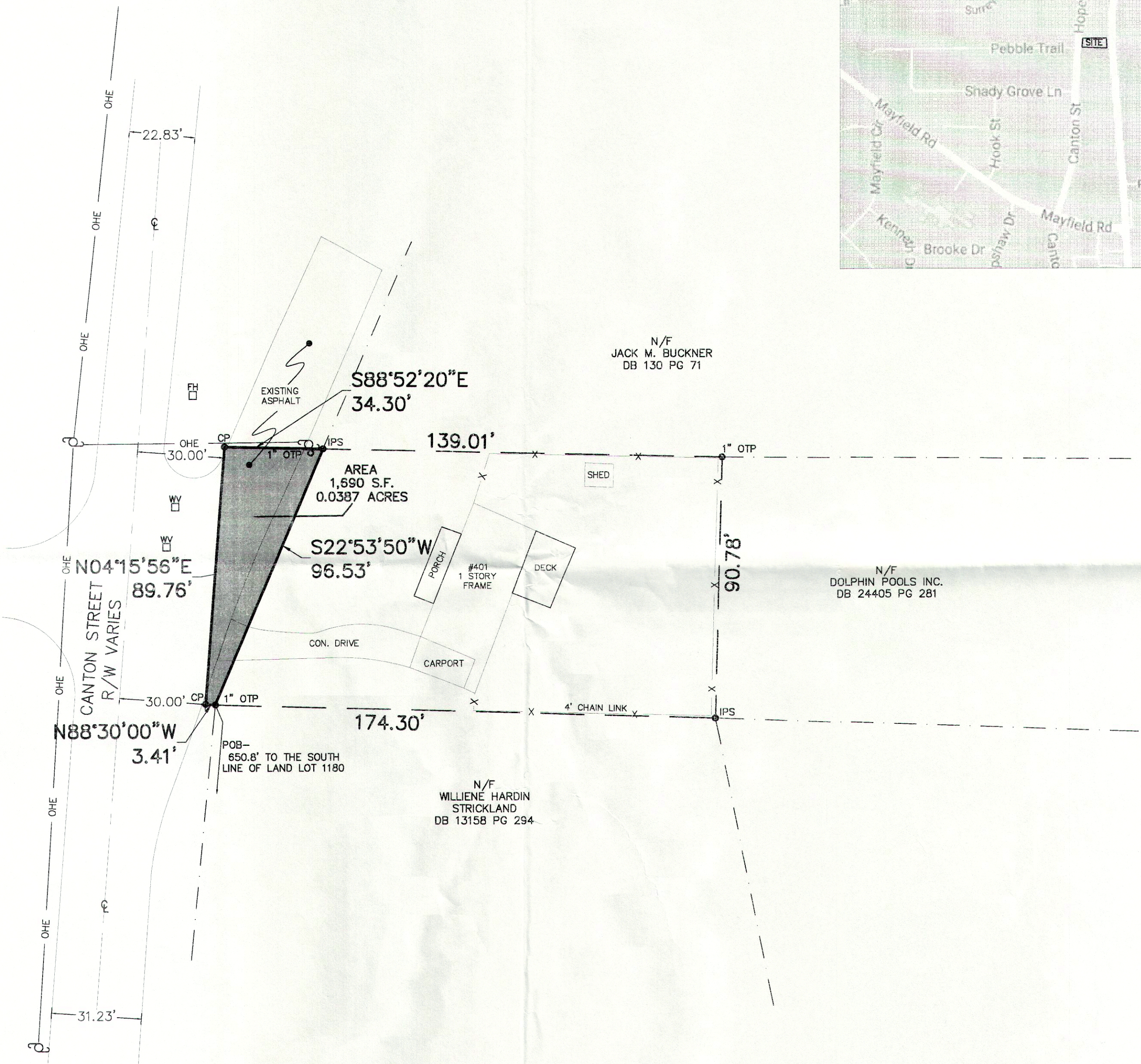
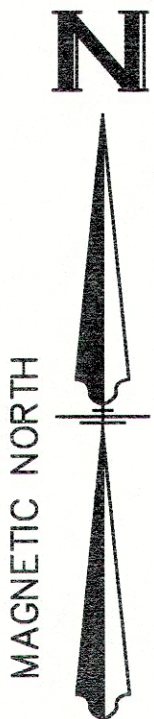
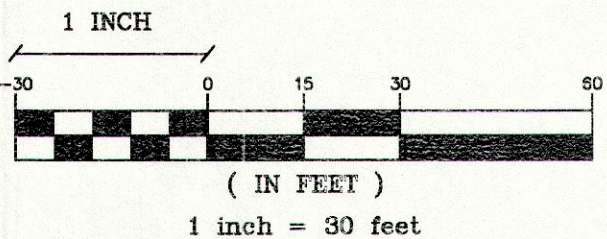
THIS DRAWING WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN THE GEORGIA PLAT ACT O.C.G.A. 15-8-67, AUTHORITY O.C.G.A. SECS. 15-8-67, 43-15-4, 43-15-5, 43-15-19, 43-15-22

SAMUEL G. EVANS GA R.L.S. 1159



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CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT
SUBMITTED BY: KATHI COOK
DRAFTED BY: MICHAEL WOODMAN

I. AGENDA ITEM TITLE: MP-16-13/Z-16-11/CU-16-19/V-16-26 TPA FUQUA/PERIDOT

CITY COUNCIL: APRIL 17, 2017

This item was heard at the November 3, 2016 Planning Commission meeting. The applicant requested a deferral. After discussion, the Planning Commission recommended to defer the request. Vote (7-0)

This item was heard at the March 2, 2017 Planning Commission meeting. Citizens spoke both for and against the request. Planning Commission recommended that the lake be activated by bringing non-residential uses closer to the lake and moving the townhomes and/or stacked townhomes away from the lake, which is consistent with the site layout reflected on the 2011 site plan. After discussion, the Planning Commission recommended to approve the request subject to staff conditions with a few amendments, including a change to the site plan in order to activate the lake. Vote (6-1)

The applicant provided a revised site plan for the purpose of addressing concerns raised by the Planning Commission. The new site plan depicts a lake side plaza with seating and area for food trucks. However, the site plan shows both the townhome and stacked townhome product next to the lake, which is contrary to the site plan recommended for approval by the Planning Commission. Staff has reviewed the new site plan and believes that it does not adequately address the concerns raised about activating the lake. The site plan referenced in the Planning Commission recommendation (SP-2, dated 9/28/16) depicts an office building next to the lake. Planning Commission recommended approval of this site plan because it included non-residential uses closer to the lake and more closely resembled the site layout on the 2011 plan. There were concerns that people would be reluctant to use the trail due to its close proximity to the residential product. Planning Commission suggested that the office building near the lake include a restaurant and that the dock and lake side plaza include an active use to draw visitors down to the lake.

II. RECOMMENDATION:

Approve MP-16-13/Z-16-11/CU-16-19/V-16-26 TPA Fuqua/Peridot subject to the following conditions:

Conditions that end with (GRTA) are conditions recommended by the Georgia Regional Transportation Authority. All GRTA recommendations are incorporated in a document dated July 13, 2015, RE: DRI 2499 – Innovation.
RED= Changes to previously approved conditions.

1. The **62.47-acre** property shall be zoned MU. Site shall be developed substantially similar to plans by **Wakefield Beasley & Associates**, dated **9/28/16 (SP-2)**, subject to the approved conditions. **Architectural style of all buildings shall be Post-Industrial Mercantile style similar to the renderings and architecture in the 2016 application with non-residential buildings approved by the Design Review Board and residential buildings approved by Staff. Townhomes shall be substantially as depicted in Exhibit A. Subject to approved conditions. Applicant shall work to add additional features to activate the lake; such as, hardscape, restaurants or other commercial uses as approved by Staff.**
2. Development regulations shall be as follows:

- a. Office – 664,400 square foot maximum. Building height shall be limited as depicted on site plan dated 2/21/2017 with 1 building up to 12 stories, remaining office limited to a maximum 6 stories. Mixed use buildings shall be limited to a maximum of 5 stories or 60', whichever is less.
 - b. Up to 63 'For-Sale' townhome units and up to 104 'For-Sale' stacked townhomes shall be permitted in up to 4-story buildings with a maximum height of 50'. In lieu of the stacked townhomes, that portion of the property may be developed with zero lot line 'For-Sale' detached units with no reduction in the overall open space and within the same footprint of the stacked townhomes as depicted on the 12/13/2016 alternate plan prepared by Travis Pruitt and Associates, attached as Exhibit B. A minimum 25% of all residential units shall be 'For-Sale' units. No more than 10% of the 'For-Sale' residential units shall be permitted to be rented, as recorded in the development covenants.
 - c. Retail –Maximum of 26,100 square feet and height of 2 stories or 35', whichever is less. Permitted retail square footage shall include a 9,600 square foot food hall/market. Mixed use buildings shall be limited to a maximum of 5 stories or 60', whichever is less. No more than 3 free standing retail buildings shall be permitted. No more than 2 free-standing 'Bank or Savings and Loan' buildings shall be permitted and shall be a minimum of 2 stories, or 24', and shall have significant architectural features as approved by Staff. Standalone retail buildings shall have a minimum height of 18'. A minimum 3,000 square foot neighborhood grocery shall be required.
 - d. Hotel – One boutique or full-service hotel as approved by staff with a maximum of 200 rooms and 7 stories shall be permitted. Hotel may not be an extended stay facility.
 - e. Restaurant – Maximum of 29,400 square feet and height of 2 stories or 35', whichever is less. A maximum of 3 free-standing restaurants with a combined square footage of not less than 3,500 square feet and not more than 10,000 square feet with no drive-thru or pick up windows. Individual restaurants may be attached via architectural features such as metal arches, outdoor seating areas, patios and similar amenities as approved by Staff. An open air "special event facility" shall be permitted adjacent to the lake with a maximum of 20,000 square feet. One jewel box building shall be permitted in the central park as depicted on the site plan.
 - f. 'For-Rent' Residential – After March 27, 2018, 220 'For-Rent' attached units shall be permitted a Certificate of Occupancy in accordance with UDC 'For-Rent' requirements. 'For-Rent' residential shall be permitted above office or retail uses on at least 1 side of the building. At-grade 'For-Rent' units shall have walkouts with sidewalk connections. Building maximum height shall be 5 stories or 60 feet, whichever is less. No more than 40% of the units may be 2-bedroom units. 'For-Rent' units shall be constructed concurrently with retail, 25% 'For-Sale' units and a minimum 60,000 square feet of office use. A Certificate of Occupancy shall not be issued for rental units until 60,000 square feet of office has been constructed or is substantially under construction as determined by Staff. The units shall be part of a mixed-use project containing a minimum of 50 acres and incorporating retail, 'For-Sale' residential units, hotel, neighborhood grocery, restaurant, and the 60,000 square foot office. 'For-Rent' units shall have first class amenities, which shall include a private pool, fitness center, secure gated parking, resident's lounge, business center, on-site management office, concierge services and secure elevator access. If a building permit is not issued by March 27, 2019 residential units shall revert to 'For-Sale' only.
 - g. Parking Decks – Maximum of 5 levels, except parking deck along Haynes Bridge Road shall be a maximum of 2 levels. With the exception of the 2 parking decks serving office buildings, all parking decks shall be wrapped with residential or non-residential uses where visible from the public right-of-way. Parking decks visible from Haynes Bridge Road, Lakeview Parkway and Morrison Parkway shall be treated with comparable materials and finishes as the buildings they serve or screened from view with evergreen landscaping as approved by Staff. Parking decks visible from Georgia 400 and the interchange shall be screened from view with evergreen landscaping. Suitability of parking deck elevation, visibility and landscape screening shall be approved by the Design Review Board.
3. The Master Plan area shall be limited to the following uses and further restricted by conditions of zoning:
 - a. office
 - b. retail

- c. restaurant (no drive thru)
 - d. hotel
 - e. residential
4. Retail uses shall be those uses customarily accessory to or amenities for office uses, restricted to the following uses:
 - a. Art Gallery
 - b. Bakery
 - c. Barber Shop
 - d. Beauty Shop
 - e. Book Store
 - f. Bowling Entertainment Venue (with approval of a conditional use permit)
 - g. Computer Supply Store
 - h. Copy Center/Print Shop
 - i. Drug Store (not to exceed 2,000 SF)
 - j. Dry Cleaning Pick-up Station
 - k. Fitness Studio
 - l. Florist, Retail without Greenhouse
 - m. Gourmet Food Store
 - n. Office Supply Store (not to exceed 2,000 SF)
 - o. Package Shipping/Mail Box Store
 - p. Restaurant (no drive-thru)
 - q. Retail Sales and Services Establishment
 - r. Shop or Studio, Craftsman/Artist
 - s. School, Commercial
 - t. Spa Services (with approval of a conditional use permit)
 5. Building Setbacks along Haynes Bridge Road and Morrison Parkway shall be 30' building setback with a 20' landscape strip. Building setbacks along Lakeview Parkway shall be 25' with a 20' landscape strip.
 6. Building setbacks along internal streets shall be 0' for the first 60' of building height. Above 60' in height, a 10' setback shall be provided from back of curb. Sidewalks and street trees shall be incorporated throughout the development. Pedestrian bridges, stairs, elevators and escalators may encroach over and into public spaces provided that they don't impede pedestrian circulation or safety.
 7. A building permit shall not be issued for any free-standing retail building before a building permit is issued for the 60,000 square foot office use.
 8. Specimen trees on the site shall be given special consideration and every attempt to incorporate them into the applicant's site plan shall be made as stipulated in the Tree Protection Ordinance. In addition, specimen trees #473, 477, 512, 545, 563, 566, 568, 821, 591, 593, 596, and 600 shall be saved.
 9. A minimum 12.35 acres of park land is required for the proposed development with at least 6.18 acres required to be passive park area. A minimum 6.25 acres of public space shall be required. 29.36 acres of open/green space shall be provided as depicted on the 2/21/2017 zoning plan. The greenspace to the east of the lake shall remain undisturbed, except for the trail and related improvements around the lake. A bocce ball court, or an alternative outdoor recreational feature approved by Staff, shall be required within an area designated public space as approved by Staff.

Design Conditions:

10. At-grade pedestrian and bicycle connections shall be provided throughout the site, including between buildings and recreational facilities within the development and across Lakeview Parkway to the existing office development. Pedestrian crossings throughout development shall be ramped and the surface materials shall be brick pavers, cobblestones or architecturally treated concrete products as approved by Staff. Bicycle facilities shall be provided throughout the development.

11. Detention facilities shall not be visible from a public right-of-way, except a decorative water feature approved by Staff.
12. Parking decks and retaining walls shall receive architectural façade treatment or be heavily landscaped, **as described in paragraph 2.g**. Retaining walls visible from developed areas exceeding 16' in height shall be terraced. In areas where the parking decks are visible to the public, the decks will be screened by landscaping or materials approved by DRB or other materials as approved by Staff, **as described in paragraph 2.g**.
13. Except for the 'For-Sale' product, priority parking spaces shall be provided for alternative fuel vehicles along with accommodation for a vehicle charging station.
14. **The developer shall provide bicycle racks, benches, trash receptacles, decorative crosswalks, planters, kiosks and other street furniture, where appropriate, throughout the development. A bus drop-off area with shelter and dedicated lane shall be incorporated into the plan design along Haynes Bridge Road or at an alternative location acceptable to MARTA. Developer shall work in good faith with MARTA to add the development to city bus routes in order to assist with transportation service for employees, residents and guests. The public shall be permitted to park in the office parking lots on evenings and weekends.**
15. **Prior to LDP for development, the applicant shall submit for approval a document to be entitled 'TPA/Fuqua Design Standards'. This document shall include elevations or architectural themes of buildings, specifications for street furniture including benches, trash receptacles, lighting, fountains, bicycle racks, bus shelter, signage landscaping themes and focal point features and shall be substantially similar to the renderings filed with the 2016 application, as amended. Design standards will be presented to Staff and the Design Review Board for review and approval. This document also shall detail entrance treatment for the Haynes Bridge Road/Lakeview Parkway intersection, which shall compliment any existing or changed entrance feature across Lakeview Parkway. Retaining walls also shall be complementary.**
16. Plans for buildings, landscaping and signage (in the form of a 'sign package') shall be subject to review and approval by the Design Review Board.
17. Awnings shall be provided on buildings at street level **in commercial areas** where reasonably appropriate in order to protect pedestrians from inclement weather.
18. Surface parking areas other than on-street parking shall be screened from the public right-of-way in compliance with the current UDC. A decorative, short wall shall be located along Lakeview Parkway where needed in order to obscure views of surface parking from Lakeview Parkway.
19. All buildings along Haynes Bridge Road, Morrison Parkway and Lakeview Parkway must face those streets or appear to face those streets. Backside of buildings or 'back of house' functions (such as loading or dumpster area) shall not be visible from those streets. Parapet walls shall be used as needed to screen roof-top mechanical equipment and views.
20. Measurement of building heights shall not include spires or other decorative architectural features.
21. **Streets within the development shall be private and shall include a planted median with sufficient space for tree plantings, as approved by Staff.**
22. **A view corridor shall be created from Haynes Bridge Road to the lake, along the main boulevard, as depicted on the plan. A structure for seating or gathering, such as a gazebo or similar structure, shall be provided at the end of the boulevard near the lake as approved by Staff.**
23. **The corner of Haynes Bridge Road and Lakeview Parkway shall be designed with a minimum 5,000 square foot green space and shall incorporate existing wall and landscaping with a focal point feature (sculpture) added with final approval by the local arts committee. Applicant shall provide a minimum of 6 original sculptures located at prominent locations throughout the development as approved by Staff and the local arts committee. Locations shall include the corner of Lakeview Parkway and Haynes Bridge Road. Approval and construction of 1 sculpture shall be required concurrent with the first CO. A minimum of 1 additional sculpture shall be required concurrent with the first CO of each subsequent phase of development. All sculptures shall be required prior to final CO issued for the last building constructed.**
24. **In order to further 2035 Comprehensive Plan strategy LU 6.2, no stand-alone retail development shall be located within 500' of the GA 400 interchange.**

25. Prior to the first LDP for development, applicant shall submit a construction phasing plan that shall demonstrate how construction will be staged and implemented in a manner that screens construction views from adjacent roadways.
26. Prior to the first LDP for development, applicant shall submit a revised master plan for the entire parcel to the City, which shall incorporate the approved conditions, as well as the following:
 - Approved specifications and standards identified for each use within the total development.
 - Pedestrian network.
 - Overall planned green space areas.
27. Every plan submitted for a land disturbance permit shall include an on-going density and acreage tabulation.
28. Alcohol license distance requirements from residential development shall be waived.
29. Rooftop signs shall be permitted as approved by the Design Review Board.
30. All site plans and civil design plans hereafter submitted to the City of Alpharetta shall state as the first note: "This plan reflects conditions stipulated through public hearing regarding case MP-16-13/Z-16-11/CU-16-19/V-16-25 TPA/Fuqua"

Landscape Conditions:

31. A 20' landscape strip with trees and shrubs shall be provided along Haynes Bridge Road, Lakeview Parkway and Morrison Parkway. Along Lakeview Parkway, the existing sidewalk shall be widened with brick or similar pavers an additional 2' in the beauty strip to the back of curb. All new utilities shall be located underground. Existing landscape strips adjacent to the development along Morrison Parkway, Haynes Bridge Road and Lakeview Parkway shall be replanted where needed, as approved by Staff. Parking areas adjacent to Lakeview Parkway shall be heavily screened with landscape material as approved by Staff.
32. Landscaping areas shall not contain any parking, water detention area or buildings, or portion thereof, except that a detention pond or ponds may be located within the landscaping area if decorative and will provide an amenity. However, there shall be no encroachment into the Georgia 400 tree buffer, except for multi-use path as approved by Staff.
33. At least 1 roof-top amenity shall be required within the development. In addition, at least 25% of the space occupied by restaurant uses shall be located in open air dining areas. Outdoor dining areas will not count against the min. 29,400 SF of restaurant space.
34. Provide detailed street planting for Haynes Bridge Road, Morrison Parkway and Lakeview Parkway. Landscape plan shall be approved prior to issuance of a Land Disturbance Permit and shall include retaining the current mature street trees, except at curb cuts and in accordance with an approved stream piping plan along Lakeview Parkway, Morrison Parkway and Haynes Bridge Road with final approval by Staff.
35. The developer and/or property owner shall be responsible for the planting and maintenance of medians within the development site and for the medians located on Lakeview Parkway which are contiguous to the development site. The planting and maintenance shall be in accordance with a plan approved by Staff.
36. Parking lot islands shall be planted with trees, shrubs and ground covers (not with mulch only). Provide sufficient green space to provide screening for parking decks. Investigate, as directed by Staff, the possibility of adding shade structures on the top floor of parking decks to cover a minimum 15% of this surface.
37. The developer shall dedicate a permanent easement to the City and construct a 12' multi-use trail with continuous connection from the adjacent Honda property, through the site, around the lake and through the Georgia 400 buffer to Haynes Bridge Road and to the west property line, with final alignment/design approved by Staff and construction completed prior to the first Certificate of Occupancy for residential units. A trail crossing shall be provided across Morrison Parkway at the existing signalized intersection at Lakeview Parkway and shall be constructed of paver material approved by Staff. Trail entrance gateways/arches shall be provided on Morrison Parkway and Haynes Bridge Road. The applicant shall hand clear undergrowth, invasive species and dead materials within the Georgia 400 buffer for the installation of the trail; maintain such condition to the City's satisfaction until accepted for maintenance; and promote use of the area to the public by providing parking, access and trails for public enjoyment. A bike share station shall be provided

at a location(s) along the trail as approved by Staff. Way finding signage shall be placed at key locations along the trail.

38. The 50' perimeter around the lake shall include a minimum 12' wide multi-use trail and gathering areas (gazebo, grilling stations, fire pits, benches, etc.) and exercise stations around the lake, as approved by Staff. The width of the multi-use trail may be reduced to save trees, as approved by Staff. The condition of the existing pedestrian bridges across the lake shall be assessed, repairs and widening shall be made by the developer/property owner as approved by Staff.
39. The 37,505 square foot park space near the corner of Haynes Bridge Road and Lakeview Parkway shall include landscape and hardscape for public space for recreation, entertainment, and/or civic purposes.
40. The lake shall be designed for active recreation, including stocking the lake with fish and constructing a dock.
41. Wetlands shall be counted as park space, if applicant improves the area with boardwalks, walkways, or educational amenities.
42. Site access off Lakeview Parkway shall be unsignalized. The right-in/right-out only drive on Lakeview Parkway shall be channelized to prevent unlawful turning movements. A roundabout is recommended at site driveway 2. Design of roundabout or other intersection improvement shall meet City LOS standards as approved by Staff.
43. Master Plan approval shall revert to 2015 approval, uses and site plan, if a building permit is not issued for office use by 3/27/2019.

General Conditions of Approval to GRTA Notice of Decision:

44. Development Intensity and Use

- Provide a mix of residential, office and retail uses.

45. Access Management

- Signalized intersections along Lakeview Parkway shall be a minimum of 1,000' from the existing signal at the intersection of Haynes Bridge Road and Lakeview Parkway.
- Provide a maximum of 4 site driveways on Lakeview Parkway.
- Align driveways on Lakeview Parkway with opposing existing driveways or offset by a minimum of 150'.
- Any full movement site driveway on Lakeview Parkway must be a minimum of 450' from Haynes Bridge Road.
- Any right-in/right-out site driveways on Lakeview Parkway must be a minimum of 200' from Haynes Bridge Road.
- No direct site access is allowed onto Haynes Bridge Road.
- No outparcels are allowed direct access on Haynes Bridge Road or Lakeview Parkway.
- Provide shared driveway between adjacent property (shown as "MetLife") and the proposed development, as shown on plan.
- All internal intersections shall be a minimum of 100' from Lakeview Parkway.

46. Pedestrian Facilities

- Provide a system of sidewalks throughout the development providing pedestrian access to all uses, building entrances and site driveways.
- Provide safe pedestrian crossings at all site driveway intersections (four-legged intersections) on Lakeview Parkway, including roundabouts.

47. Road Improvements to GRTA Notice of Decision:

Haynes Bridge Road at Lakeview Parkway/Northwinds Parkway

- Construct 1 additional northbound left-turn lane along Haynes Bridge Road onto Lakeview Parkway creating dual northbound left-turn lanes.
- Construct 1 additional eastbound right-turn lane along Lakeview Parkway onto Haynes Bridge Road creating dual eastbound right-turn lanes.
- All intersections with Haynes Bridge Road and Lakeview Parkway shall be designed as directed by staff.

III. REPORT IN BRIEF:

The applicant, TPA and Fuqua, is requesting a master plan amendment to the Metropolitan Life/Peridot Master Plan to change the development mix and previous conditions of zoning. A request to rezone 15.51 acres from O-I (Office-Institutional) to MU (Mixed-Use), as well as requests for conditional use to allow 'For-Rent' residential use and a bank or savings and loan use. A variance is requested to allow first-floor 'For-Rent' dwellings on three (3) building sides and to allow first-floor 'For-Rent' dwellings on a Storefront Street. If developed as submitted, the development would consist of 55,500 square feet of retail/restaurant, up to a 200-room hotel, 664,400 square feet of office (510,000 square feet new), 320 'For-Rent' units and 167 'For-Sale' townhome and stacked flat units on 62.47 acres. The property is located west of Haynes Bridge Road, south of Lakeview Parkway and north of Georgia 400.

DISCUSSION

The submitted request, if approved, will allow for the construction of a mixed-use development consisting of 55,500 square feet of retail/restaurant use, 664,400 square feet of office use, 167 'For-Sale' townhome and stacked flat units, 320 'For-Rent' apartment units, and a 200-room hotel. The proposed residential density is 7.80 dwelling units/acre. The subject property is located west of Haynes Bridge Road, south of Lakeview Parkway and north of Georgia 400.

The subject property is currently zoned MU (Mixed Use) and O-I (Office-Institutional) and surrounding properties are zoned O-I to the north and east and LI (Light Industrial) to the west. The 62.47 acres is bounded to the north by Lakeview Parkway, to the west by Honda Motor Corp., to the south by Georgia 400, and Haynes Bridge Road to the east.

The applicant is requesting a master plan amendment for a project called "360 Tech Village" to change the permitted mix of uses and changes to previous conditions of zoning. The site is currently entitled for 100,035 square feet of retail, a 211-room hotel, 447,200 square feet of office space and 470 'For-Sale' residential units. A rezoning is requested for 15.51 acres from O-I to MU, subject to the Metropolitan Life/Peridot Master Plan. Conditional use is requested to allow 'Dwelling, 'For-Rent' use and 'Bank, Savings and Loan' use. A variance is requested to allow first-floor 'For-Rent' dwellings on three (3) building sides and to allow first-floor 'For-Rent' dwellings on a Storefront Street.

A conceptual development plan for the assembled tract was submitted in August 2007 at which time Staff submitted the application to the Department of Community Affairs for a Development of Regional Impact Review. On January 24, 2008, the ARC issued a finding that the proposal was in the best interest of the Region, and therefore the State. In 2011, a master plan amendment was approved along with a stream buffer variance. The 2011 master plan amendment did not require DRI review. GRTA submitted a "Notice of Decision" stating the project was approved as submitted with recommended conditions. A master plan amendment was approved in 2015, which included changes to previous conditions of zoning as reflected in the attachment labeled Exhibit A.

The table below provides a comparison between the applicant's current proposal and previously proposed and approved master plan and amendments for the subject property.

		New Plan vs Previous Plans		
	2016 Proposed Plan	2011/2015 Plan	1988 Plan	Changes 2015-2016
Acreage	62.47 acres	47.05 acres	45.5 acres	+15.42 acres
Retail/Rest.	55,500 SF	100,035 SF	119,700 SF	-44,535 SF
Residential	487 Total Units: 167 'For-Sale' Attached 320 'For-Rent' units	470 Total Units: 445 'For-Sale' Condominium units, 25 'For-Sale' Townhomes	0	+320 'For-Rent' -303 'For-Sale' Attached
Density	7.8 du/ac	10 du/ac	0	-2.2 du/ac
Hotel	200 rooms	211 rooms	200 rooms	-11 rooms
Office	664,400 SF	447,200 SF	1,015,520 SF	+217,200 SF
Parking	3,372 spaces	3,415 spaces	N/A	-43 spaces
Open/Park	29.36 acres	11.08 acres	N/A	+18.28 acres

The property is also located within the Tier 1 North Point Development Node as depicted on the 2035 Future Land Use Plan. The City's Comprehensive Land Use Plan describes the North Point Activity Center Character Area in the following way:

"PRESERVE the North Point area as a regional destination for shopping, jobs and entertainment, and ENHANCE the area with improvements and new development that supports a walkable and vibrant community destination with places to shop, work, entertain and live."

"Future development should emphasize connectivity, uses that generate a high level of activity and transit-oriented development that anticipates the extension of MARTA transit service to the area. It should reinforce a walkable, mixed-use destination supported by a range of housing types and transportation modes. It should also focus on expanding the street network, enhancing public transit service, creating a pedestrian-friendly environment by adding sidewalks and supporting bicycle use with infrastructure that makes biking safe and convenient. This complete transportation system should link adjacent residential, office and commercial areas to major destinations within the activity center or serve as a safe and convenient connection to other destinations in the community. Expand entertainment uses and capitalize on amphitheater location."

The property is located in an area of the North Point Activity Center LCI designated Mixed-Use Commercial Center Area, which is described in the following way:

"Mixed-use Commercial Centers seek to take advantage of Georgia 400, Mansell Road, and Haynes Bridge Road to accommodate significant vehicular traffic by locating high intensity uses within a short distance of the Georgia 400 interchanges. While still providing pedestrian connectivity to the mixed-use village center, the two commercial centers are better suited to accommodate taller, regional serving development with higher vehicular traffic demands."

'FOR-RENT' RESIDENTIAL

The applicant requests a conditional use to allow 320 'For-Rent' units in a 4-story building with a parking deck. One (1) side of the building will contain 1st floor retail and/or office uses along the street frontage. The building will include studio, 1-bedroom and 2-bedroom units with rents from \$1,145 for 540 – 610 square feet studios, \$1,400 – \$1,500 for 700 – 800 square foot 1-bedroom units, and 2-bedroom units will be 1,048 – 1,175 square feet and with rents from \$2,000 – \$2,250. Residents will have access to parking and a variety of amenities, including a pool, fitness center, dog park, cyber café, game room and business center.

Careful consideration should be given to maintaining a balance between 'For-Rent' versus 'For-Sale' product in the City. The 2035 Comprehensive Land Use Plan identifies the following policy as it relates to maintaining a balance of 'For-Sale' versus 'For-Rent' housing in the City:

Housing Policy 2: Maintain a balance between 'owner-occupied' and 'renter-occupied' in Alpharetta such that at least 68% of the housing stock is 'owner-occupied'.

There are several factors that should be considered with requests for apartments, such as mix of uses, design, long-term viability, impacts to City facilities and services, as well as traffic and school impacts. Office space already exists on the site and high density housing should be tied to office space where jobs exist and are created and service uses are available to limit vehicular trips. The existing 406,853 square feet of office employs 2,034 people and the 510,000 square feet of new office will generate approximately 2,550 employees (1 employee per 200 square feet). A total of 4,584 office employees could be generated to support the residential and retail uses. Current apartment conditions in the City reflect occupancy ranges from 93% to 100% leased.

The City's Rental Housing Study, which was prepared in May 2015 and recently updated, recommends that the City target an entitlement of between 93 and 159 'For-Rent' units per year in order to achieve a goal of 32% rental housing in the City. It should be noted that this annual target recommendation is not an approved City policy; however, the 32% 'For-Rent' policy is included in the 2035 Comprehensive Land Use Plan.

'FOR-SALE' RESIDENTIAL

The applicant is requesting 167 'For-Sale' units, which represents a reduction of 303 'For-Sale' units from the current master plan entitlement. It is recommended that a mixed-use development contain a variety of residential types. The applicant's proposed development mix provides a greater mix of 'For-Sale' vs. 'For-Rent' residential product as compared to the mixed-use developments at Milton Park and Avalon. Avalon is approved for 16% 'For-Sale' product and Milton Park has over 25%. Staff recommends that the project provide a minimum of 25% 'For-Sale' units.

The applicant's site plan depicts 63 'For-Sale' townhome units and 104 'For-Sale' stacked condominium units. The applicant is requesting flexibility to allow for zero lot line single-family detached units in lieu of the stacked condominiums. Townhome units will range from 2,200 – 2,800 square feet with a price point between \$400,000 – \$600,000. Stacked condominiums will range from 1,250 – 1,700 square feet with price points beginning in the high \$200,000's. If single-family detached units are constructed, homes will be 2,000 – 3,000 square feet with a price point between \$500,000 – \$700,000.

OFFICE

The applicant proposes 510,000 square feet of new office on the site, which is in addition to the 406,853 square feet of office existing in three (3) buildings within the Metropolitan Life/Peridot Master Plan. Two (2) office buildings are located north of Lakeview Parkway and the third is on the west side of the subject property. If the applicant's request is approved, a total of 916,853 square feet of office could be

constructed within the master plan. For comparison, Northwinds is approved for 2.8 million square feet of office on 260 acres and Avalon for 660,000 square feet on 86 acres.

The request includes a 12-story, 300,000 square foot office building near the existing lake, a six (6) story, 150,000 square foot office building along Morrison Parkway and a three (3) story, 60,000 square foot loft-style flex office building near Haynes Bridge Road. The applicant states that the 60,000 square foot office building will be constructed in the first phase of the development. The existing office buildings are six (6) and seven (7) stories and are 93.6% occupied.

RETAIL/RESTAURANT

The development proposes 55,500 square feet of retail/restaurant uses located in freestanding and mixed-use buildings. This represents a 44,535 square foot reduction in retail/restaurant uses from the current master plan entitlement, which is consistent with an office-focused mixed-use development. The applicant proposes 16,500 square feet of retail space, 29,400 square feet of restaurant space, 400 square foot retail jewel box and 9,600 square foot market/food hall building surrounding the town center green and on the first floor of the 'For-Rent' building. A minimum 3,000 square foot neighborhood grocery will be provided within the requested entitlement of 55,500 square feet of retail/restaurant use. Retail uses will be those that are typically accessory to office use and retail services to support the proposed residential uses.

HOTEL

The applicant proposes one (1) boutique or full-service hotel with a maximum of 200 rooms and seven (7) stories. A boutique hotel is defined as a small hotel that typically has between 10 to 100 rooms in unique settings with upscale accommodations and design. The current master plan entitlement is for a 211-room hotel, with a minimum of 6,000 square feet of meeting space. The applicant has indicated that the number of hotel rooms constructed will likely be less than the 200 rooms requested.

PARK & PUBLIC SPACE

The applicant's site plan depicts 3.74 acres of park land, a 9.83-acre lake, a 4.5-acre wetland area, and 3.16 acres in other public spaces. Park space and public space shall not include the Georgia 400 tree buffer (except area improved for multi-use path), building setbacks, or landscape strips. The 4.5-acre wetland area may only be counted as public/park space, if improvements such as boardwalks, walkways, or educational amenities are included.

The 37,505 square foot town center green will be lined with ground floor retail, restaurant and office uses. Restaurants will have outdoor seating and the town center green will offer places for diners to sit and eat. The town center green will also include an outdoor band stand. Five (5) small park areas, totaling 0.57 acres, are depicted in the area of the townhomes and stacked flats. The lakeside park is shown to be 95,100 square feet.

A 9.83-acre lake amenity will be active and include recreational amenities. The lake perimeter already includes walking paths and pedestrian bridges over the lake. The lake should be improved with wider walking paths, gathering and seating areas, grilling stations and exercise stations. The path around the lake will become part of the City's Alpha Loop system and shall be a minimum 12-feet wide.

A 12' multi-use path will be provided through the subject property and connecting into the City's Alpha Loop system. The applicant's site plan depicts the multi-use path beginning at Morrison Parkway and running along Lakeview Parkway and Haynes Bridge Road. The path is also shown around the lake and on the south side of the lake. A future multi-use path easement is depicted running through the Georgia 400 buffer. Staff recommends that the developer provide an easement and construct the 12' multi-use path from Morrison Parkway, running along Lakeview Parkway before entering the site through the townhome portion of the development, continuing around the lake and running east and west along the south side of the property.

The MU zoning district requires a minimum 10% of the land area be designated for public uses, such as recreation, entertainment and/or civic space. Based on the total site area, a minimum of 6.25 acres in public space is required for the proposed development. The total park space goal in the MU zoning district is one (1) acre of parkland per 100 population. Based on the table below, the applicant's proposed development will generate a population of 1,235 people. Therefore, 12.35 acres of parkland is required for the proposed development, of which at least 50%, or 6.18 acres, shall be passive park area.

2011-2013 American Community Survey 3-Year Estimates – Average Household Size

	Alpharetta city, Georgia	
	Estimate	Margin of Error
Total:	2.72	+/-0.09
Owner-occupied	2.93	+/-0.13
Renter-occupied	2.33	+/-0.16

BUILDING ELEVATIONS

The Metropolitan Life/Peridot Master Plan was amended on September 28, 2015, which included a condition of zoning requiring a Mercantile/warehouse architectural style, substantially similar to the renderings dated June 26, 2015. The applicant has submitted building architecture, which is described as Post-Industrial Mercantile style. The applicant provided the following description of the proposed mixed-use development, which will have a technology focus with a post-industrial theme.

"The 360 Tech Village Development is a large 62.4-acre mixed use development of which 29.3 acres are open/green space with an extensive pedestrian/bicycle trail. The retail, the 60,000 square foot office building and the multifamily building and hotel will be a traditional post-industrial/mercantile design. They shall include rich building colors, brick, brick detailing, articulation to break up massing, dark mullioned windows, oversized and/or arched windows, cornice treatments, canopies, awnings, and soft lines to emulate post-industrial/mercantile design. Roll up garage doors are encouraged on retail structures, as are roof top signs of materials intended to reflect the design features of the post-industrial era. The design does not prohibit use of branding elements, glass or traditional architecture but instead encourages consistency with an industrial theme through the development. The 6 to 12 story office buildings may be curtain wall. The single family residential structures also shall compliment this theme. The intent is to blend glass components that suggest "hi-tech" with the mercantile brick facades in an artful and tasteful way. The retail spaces each will have its own brand and will incorporate their façade into a pleasing blend with a mercantile background. The hospitality component will also be very branded and more modern in exterior design. Overall, the style

will reflect an extremely engaging variety of architectural styles with complimentary proportions and materials, and consistent with the theme of Alpharetta being the “technology hub” for the southeast.”

EMPLOYEES

The applicant prepared an Area of Influence analysis consistent with those previously required by ARC and GRTA was conducted for the proposed development. According to the employee recapture analysis, the site is likely to accommodate 3,529 employees based on the mix of land uses, projected occupations, and average monthly income likely to be paid to employees. 3,322 of those employees are generated from the proposed office space based on one (1) employee per 200 square feet.

TRAFFIC

Kimley-Horn and Associates, Inc. prepared an update to the previous Traffic Impact Analysis. A comparison of trip generation from the applicant’s current proposal versus the 2015 proposal is provided below. The analysis found that the current proposal will result in a net 27.6% reduction in PM Peak Hour trips as compared to the 2015 proposal.

Gross Trip Generation Comparison

Site Plan	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
360 Tech Village (2017)	14,858	1,420	1,525
Innovation Mixed-Use (2015)	20,582	704	2105
Percentage Difference	-27.8%	101.7%	-27.6%

The updated traffic analysis also included capacity analysis of the intersections and proposed site driveways along Lakeview Parkway. Similar to the previous traffic studies, the intersection at Morrison Parkway is expected to operate well with the proposed development traffic. At Haynes Bridge Road, the recommendations from the DRI study remain relevant; add dual northbound left-turn lanes along Haynes Bridge Road at Lakeview Parkway and provide dual eastbound right-turn lanes along Lakeview Parkway onto southbound Haynes Bridge Road. The added right-turn lane would connect to an extension of the Georgia 400 right-turn lane along Haynes Bridge Road.

Analysis of site driveways along Lakeview Parkway resulted in poor levels of service for vehicles exiting the site. Specifically, vehicles wishing to turn left onto Lakeview Parkway are expected to experience significant delay during the peak travel times. The study further contends that traffic conditions will not likely meet federal guidelines to warrant a traffic signal. Previous site plans included a roundabout to reduce delay at these intersections. Including at least one roundabout along Lakeview Parkway would also help calm traffic and facilitate an offset left turn. The best location would be the highest traffic intersection, proposed site driveway 2. Based on the anticipated traffic movements, some modification will be required of the existing median islands along Lakeview Parkway in order to accommodate vehicle queuing and limit access.

SCHOOLS

Residential development is known to increase school enrollment. Fulton County Schools calculated the potential number of children who may live on the property by using their standard calculation to distinguish

the number of children that a residential development will generate. The following table outlines these figures:

FULTON COUNTY SCHOOLS – 167 Townhomes & 320 Apartments

School	Estimated # New FCS Students Generated
Manning Oaks Elementary School	15 – 223
Northwestern Middle School	6 – 57
Milton High School	21 – 126
Total	42 – 406

Based on the total figure for all three school levels, it can be assumed that the proposed development could house approximately 42 – 406 school age children. All three schools are shown to be over capacity.

STANDARDS FOR ZONING CHANGES

The Planning Commission and the City Council shall consider the following standards in considering a rezoning application, giving due weight or priority to those factors particularly appropriate to the circumstances of each application:

- a. Whether the zoning proposal will permit a use that is suitable in view of the zoning use and development of adjacent and nearby property.

Response: The proposed rezoning would permit uses that are consistent with the North Point Activity Center LCI and Comprehensive Land Use Plan designation of the property.

- b. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property.

Response: The proposed rezoning would permit a mixed-use development, which is consistent with adjacent non-residential properties. Surrounding properties are located with the North Point Activity Center LCI, which envisions a mix of uses in a walkable environment.

- c. Whether the zoning proposal will adversely affect the natural environment.

Response: The proposed development respects the on-site stream buffers. If approved, staff recommends a condition to save certain specimen trees.

- d. Whether there are substantial reasons why the property cannot or should not be used as currently zoned.

Response: The property is currently zoned O-I, which allows the requested office use by right. The applicant requests a rezoning of the 15.51-acre O-I parcel to MU to achieve a density of 7.80 dwelling units per acre over the 62.47-acre site.

e. Whether the zoning proposal will result in a use that will or could cause an excessive or burdensome use of public facilities or services, including but not limited to existing streets and transportation facilities, schools, water or sewer utilities, and police or fire protection.

Response: While the proposed mixed-use development would have impacts on public facilities and services, the purpose of a mixed-use development is to reduce impacts on facilities and services by promoting a place to live, work and play. If approved, the applicant's proposal would result in a net reduction in traffic as compared to the current master plan entitlement.

f. Whether the zoning proposal is supported by new or changing conditions not anticipated or reflected in the existing zoning on the property.

Response: The proposed MU zoning district is consistent with the Comprehensive Land Use Plan designation of the property, which is Mixed Use.

g. Whether the zoning proposal reflects a reasonable balance between the promotion of the public health, safety, morality or general welfare against the right to unrestricted use of property.

Response: The request to rezone a portion of the property from O-I to MU reflects a reasonable balance as the proposed zoning is consistent with the Comprehensive Land Use Plan designation of the property, which is Mixed Use.

h. Whether there are substantial reasons why the property cannot be used in accordance with existing zoning.

Response: The property is currently zoned O-I, which allows the requested office use by right. The applicant requests a rezoning of the 15.51-acre O-I parcel to MU to achieve a density of 7.80 dwelling units per acre over the 62.47-acre site.

i. The extent to which the zoning proposal is consistent with the Comprehensive Plan.

Response: The subject property is consistent with the Comprehensive Land Use Plan designation, which is Mixed Use.

CONDITIONAL USE REVIEW CRITERIA

City staff has reviewed the applicant's request and compared it to the conditional use standards established in UDC Sec. 4.2.3 (B) which are as follows:

A conditional use otherwise permitted within a zoning district shall be considered to be compatible with other uses permitted in the district, provided that due consideration is given to the following objective criteria at a public hearing and satisfactory provisions or arrangements are made for:

1. Access into and out of the property with regard to traffic and pedestrian safety, volume of traffic flow, and emergency vehicles, as well as the type of street providing access;

Response: The project has three (3) full-access driveways and a right-in/right-out driveway on Lakeview Parkway. The proposed development consists of a network of streets featuring connectivity throughout. The proposed mix of uses will reduce vehicular trips generated by the development.

2. The extent to which refuse areas, loading and service areas, off street parking, and buffers and screening are provided on the property;

Response: The proposed mixed-use development can sufficiently address all development requirements mentioned above.

3. Ensuring that the conditional use will not be injurious to the use and enjoyment of the environment or of other property in the immediate vicinity or diminish and impair property values within the surrounding neighborhood;

Response: The applicant proposes 'For-Rent' use in association with a mixed-use development, which is consistent with the UDC. The proposed 'For-Rent' use is also consistent with the vision of the Comprehensive Land Use Plan and future land use designation of the property, which identifies the Georgia 400 corridor as an appropriate location to establish mixed-use activity centers and higher residential densities. Staff recommends capping the 'For-Rent' use to no more than 220 dwelling units. The units will accommodate employees from the existing office space, as well as future office space. In addition, this location at the Georgia 400 interchange provides convenient access for higher residential densities. However, careful consideration should be given to the desired ratio of rental units in the City.

4. Ensuring that the conditional use will not increase local or state expenditures in relation to the cost of servicing or maintaining neighboring properties;

Response: Not applicable.

5. Ensuring that the conditional use will not impede the normal and orderly development of surrounding property for uses predominant in the area; and

Response: The proposed 'For-Rent' use will not impede the normal and orderly development of surrounding properties. The subject property is already entitled as a mixed-use development.

6. Ensuring that the location and character of the conditional use is considered to be consistent with a desirable pattern of development for the city, in general.

Response: The applicant proposes 'For-Rent' product in association with a mixed-use development, which is consistent with the UDC. The proposed 'For-Rent' use is also consistent with the vision of the Comprehensive Land Use Plan and future land use designation of the property, which identifies the Georgia 400 corridor as an appropriate location to establish mixed-use activity centers and higher residential densities. However, careful consideration should be given to the desired ratio of owner- versus renter-occupied units in the City.

VARIANCE REVIEW CRITERIA

The City of Alpharetta Unified Development Code Article IV, Section 4.5.3 outlines the criteria set forth for granting a variance. The ordinance specifically states..."a variance may be granted in whole or in part, or with conditions, in such individual case of unnecessary hardship upon a finding that":

(1) There are extraordinary and exceptional conditions pertaining to the particular piece of property in question because of its size, shape or topography; or

Response: The subject property is currently approved as a mixed-use development where walkability, mix of uses, site design and architecture are key components to a successful development. The applicant's request to eliminate office or retail under 'For-Rent' uses on 3 sides of each building is a reasonable request given that the Metropolitan Life/Peridot Master Plan is an office-focused mixed-use development and retail uses are limited. At-grade 'For-Rent' units will include individual entrances to each unit.

(2) The application of the Ordinance to this particular piece of property would create an unnecessary hardship; or

Response: The applicant could provide additional retail uses under 'For-Rent' uses. However, the Metropolitan Life/Peridot Master Plan envisioned an office-driven mixed-use development where retail uses are limited to those that are accessory to office, as well as retail services to support the residential uses.

(3) There are conditions that are peculiar to the property which adversely affect its reasonable use or usability as currently zoned; or

Response: Not applicable.

(4) Relief, if granted, would not cause substantial detriment to the public good or impair the purpose and intent of the City of Alpharetta ordinances.

Response: Approval would not cause substantial detriment to the public good, if conditions are in place requiring architectural review and concurrent development of office, residential, retail and recreational uses.

CONCURRENCES

Staff has reviewed the application and is in general agreement with the requests for master plan amendment, rezoning, conditional use and variance. The proposed rezoning to MU is consistent with the vision of the Metropolitan Life/Peridot Master Plan, the North Point Activity Center LCI and Comprehensive Land Use Plan designation of the subject property, which includes a mix of uses within a walkable environment. However, the proposed number of 'For-Rent' units exceeds the annual target range recommended in the City's Rental Housing Study, as well as exceeding the City's desired balance between owner- and renter-occupied dwelling units. Therefore, staff recommends that no more than 220 'For-Rent' units be approved on the subject site in order to maintain the desired housing balance.

The applicant's request is consistent with the following land use, transportation, housing and community services and facilities strategies in the 2035 Comprehensive Plan:

LU Strategy 8.1: Allow mixed use patterns that will create activity nodes in appropriate areas, as established by the Future Development Map, that provide jobs and services within walking distance of residences, preserve open spaces, and make public transportation more effective.

LU Strategy 8.3: Encourage owners/developers with large land holdings to plan for multiple land uses.

LU Strategy 8.4: Establish varying levels of mixed use development densities, through overlay districts or other means, such that the highest densities of office, retail and residential development will be located along the GA-400 corridor.

T Strategy 1.2: Support transit friendly streets, bicycle routes and walkable communities that provide linkages to activity centers within the city.

T Strategy 1.3: Promote the development of compact mixed-use and transit-oriented development particularly in the GA-400 corridor.

T Strategy 2.4: Encourage an interconnected public sidewalk and trail network within new developments and enhance connectivity area wide by linking new sidewalks and trails to existing sidewalks and trails in adjacent neighborhoods. In addition, the system should link residential areas to commercial, schools, employment centers, transit and parks.

T Strategy 4.2: Encourage development designs to promote pedestrian activity that reduces on-site vehicular dependence.

H Strategy 1.2: Encourage higher residential densities and appropriate mix of uses close to Downtown Alpharetta and in the GA-400 corridor.

CSF Strategy 3.7: Encourage developers to build recreational opportunities in conjunction with new development, and encourage permanent protection of open space for future generations to enjoy.

'For-Rent' housing should only be considered within mixed-use developments in the Downtown and at Georgia 400 interchanges. These mixed-use developments should provide sufficient office density to generate jobs/employees to live in the residential units and utilize on-site retail services, grocery and parks and recreational uses to reduce vehicular trips.

Since 2013, there have been three (3) 'For-Rent' mixed-use projects approved, including City Center with 168 units, Avalon with 526 units and Perling/Devore with 129 units. These mixed-use developments included 'For-Rent' product with retail, restaurant, and/or office uses on the first floor. Avalon has 101 'For-Sale' units and 526 'For-Rent' units resulting in a 16:84 ratio of 'For-Sale' to 'For-Rent' units. Milton Park, which was zoned in 1999, was developed prior to 2013 and has 490 'For-Rent' units on 107 acres. Milton Park has 150 'For-Sale' units representing over 25% 'For-Sale' units. If the applicant's request is realized, the mixed-use development would include 34% 'For-Sale' product.

Conditions are recommended to require Post-Industrial Warehouse style, which is important to brand this particular mixed-use development and differentiate it from other mixed-use developments. Additionally, sufficient residential amenities and parks and recreational opportunities should be required in order to limit impacts on the City's parks. Concurrent construction of retail, office, residential and recreational uses should be required in order to ensure that a reduction in vehicular trips is realized.

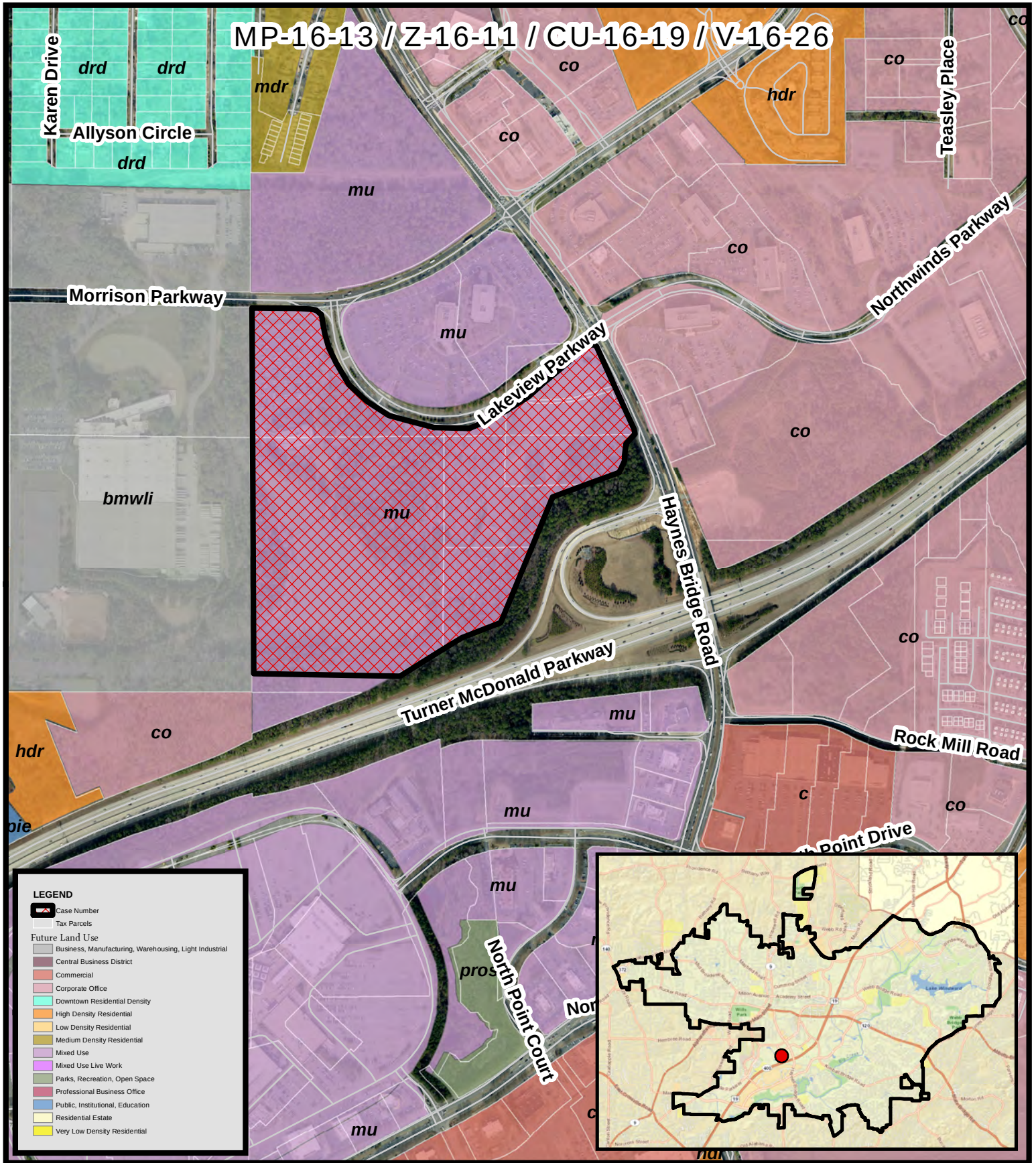
CITIZEN PARTICIPATION PLAN

The report submitted by the applicant states that letters were mailed to each property owner within 500' of the subject property stating the applicant's intent. The report states that no comments were received. The City has received correspondence from a resident objecting to the proposed development, specifically concerned with the rental units generating too much traffic.

IV. ATTACHMENTS:

- Site Plan
- Architectural Elevations and Renderings

MP-16-13 / Z-16-11 / CU-16-19 / V-16-26



LEGEND

- Case Number
- Tax Parcels
- Future Land Use**
 - Business, Manufacturing, Warehousing, Light Industrial
 - Central Business District
 - Commercial
 - Corporate Office
 - Downtown Residential Density
 - High Density Residential
 - Low Density Residential
 - Medium Density Residential
 - Mixed Use
 - Mixed Use Live Work
 - Parks, Recreation, Open Space
 - Professional Business Office
 - Public, Institutional, Education
 - Residential Estate
 - Very Low Density Residential

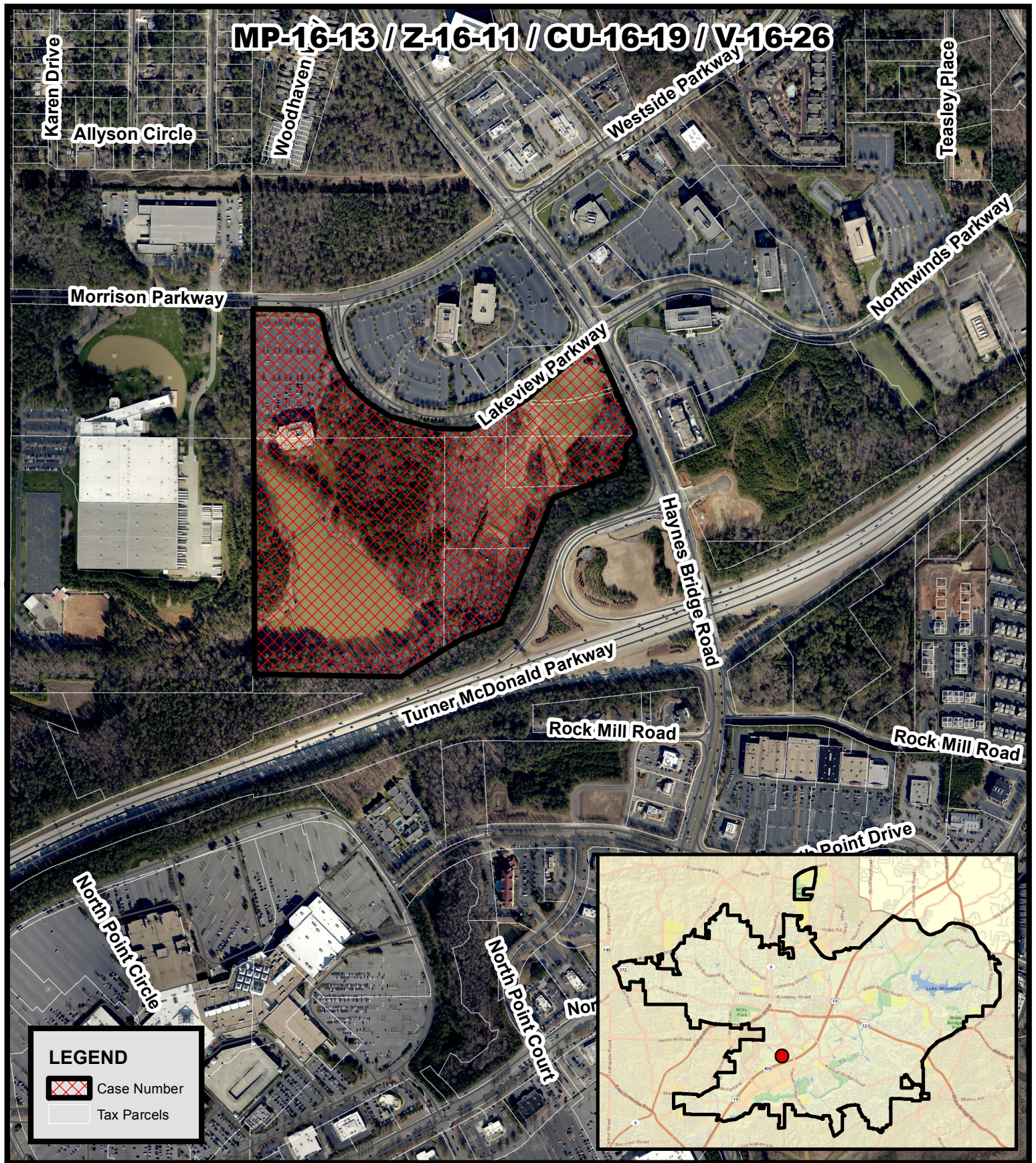
Future Land Use
TPA/ Fuqua Development
Peridot

MP-16-13 / Z-16-11
CU-16-19 / V-16-26
D/LL: 1/2/744, 745, 752, 753
PC: **03/02/17**
CC: **04/17/17**



Location Map Provided by:
Community Development - GIS

MP-16-13 / Z-16-11 / CU-16-19 / V-16-26



LEGEND

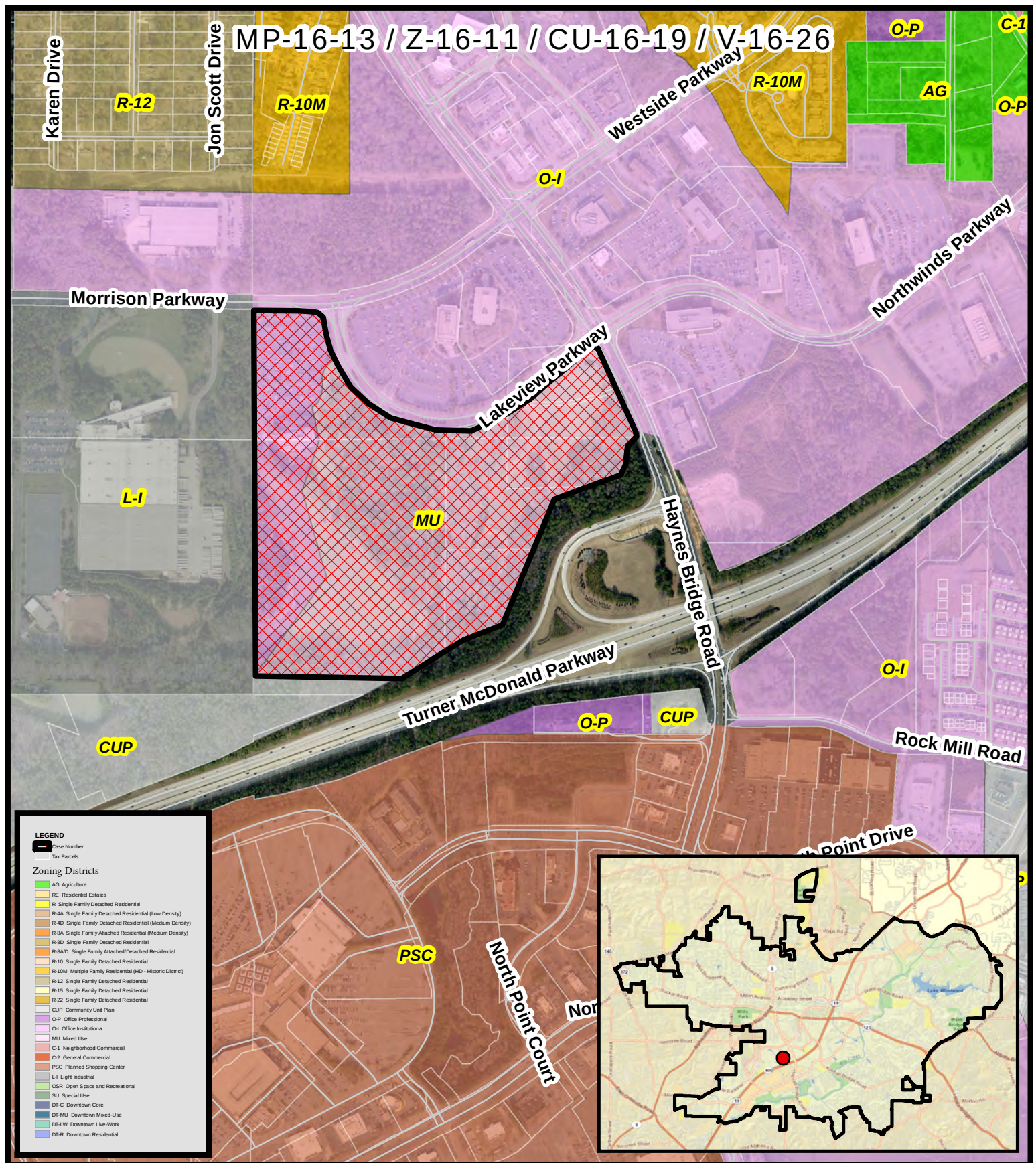
-  Case Number
-  Tax Parcels



**Aerial Map
TPA/ Fuqua Development
Peridot**

**MP-16-13 / Z-16-11
CU-16-19 / V-16-26
D/LL: 1/2/744, 745, 752, 753
PC: 03/02/17
CC: 04/24/17**

**Location Map Provided by:
Community Development - GIS**



Zoning Map TPA/ Fuqua Development Peridot

MP-16-13 / Z-16-11
CU-16-19 / V-16-26
D/LL: 1/2/744, 745, 752, 753
PC: **03/02/17**
CC: **04/24/17**



Location Map Provided by:
Community Development - GIS

stamp



Alpharetta, Georgia

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print record
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12 APRIL 2017 - SUBMITTED FOR ZONING

revisions

16 DECEMBER 2016
31 JANUARY 2017 - REVISED SITE PLAN
21 FEBRUARY 2017 - REVISED SITE PLAN
15 MARCH 2017 - REVISED SITE PLAN
20 MARCH 2017 - REVISED SITE PLAN
30 MARCH 2017 - REVISED SITE PLAN
12 APRIL 2017 - REVISED SITE PLAN

drawing title

drawing number

SP-8

SUBMITTED FOR ZONING



Deck Elevations 4.12.17



WAKEFIELD
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Alpharetta, GA 30009
P | 770.209.9393
F | 770.209.7050
www.wbassociates.com



360
TECH
VILLAGE

Alpharetta, Georgia

**TPA Group/
Fuqua Development**
Chris Hayes, Principal TPA Group
3250 Riverwood Parkway
Atlanta, GA 30328
P | 770.436.2997

DEVELOPMENT SUMMARY

SITE ACREAGE	62.47 acres (2,721,193 sf)
COMMERCIAL	182,200 sf
RETAIL	15,300 sf
RESTAURANTS	26,300 sf
MARKET	9,600 sf
ENTERTAINMENT	27,000 sf
HOTEL	104,000 sf (200 keys)
RESIDENTIAL UNITS	488 un
FOR RENT	320 un
FOR SALE	168 un
DENSITY	7.81 un/ac
OFFICE	664,400 sf
EXISTING	154,400 sf
NEW	510,000 sf
PARKING	3,320 spaces
SURFACE	429 sp
ON STREET	102 sp
DECKED	2,788 sp
OPEN/GREEN SPACE	29.40 acres (47.1 %)
PARK SPACE	4.38 ac (190,880 sf)
PUBLIC LOOP TRAIL AREA	3.05 ac (132,860 sf)
OPEN SPACE	7.64 ac (332,800 sf)
LAKE AREA	9.83 ac (428,320 sf)
WETLAND AREA	4.50 ac (196,000 sf)
TOTAL LOT COVERAGE	1,385,520 SF 50.9%

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[print record](#)

12 APRIL 2017 - SUBMITTED FOR JOURNALING

revisions

16 DECEMBER 2006

30 JANUARY 2017 - R
75 FEBRUARY 2017 - R

15 MARCH 2017 - REV

2017 MARCH 16, 2017 - 09:00

30 MARCH 2017 • RE

12 APRIL 2007 - RELV

12 APRIL 2017

Drawing title:

CONCEPTU

1000

Drawing number:

22

SP-8

SUBMITTED FOR

Deck Elevations 4.12.17

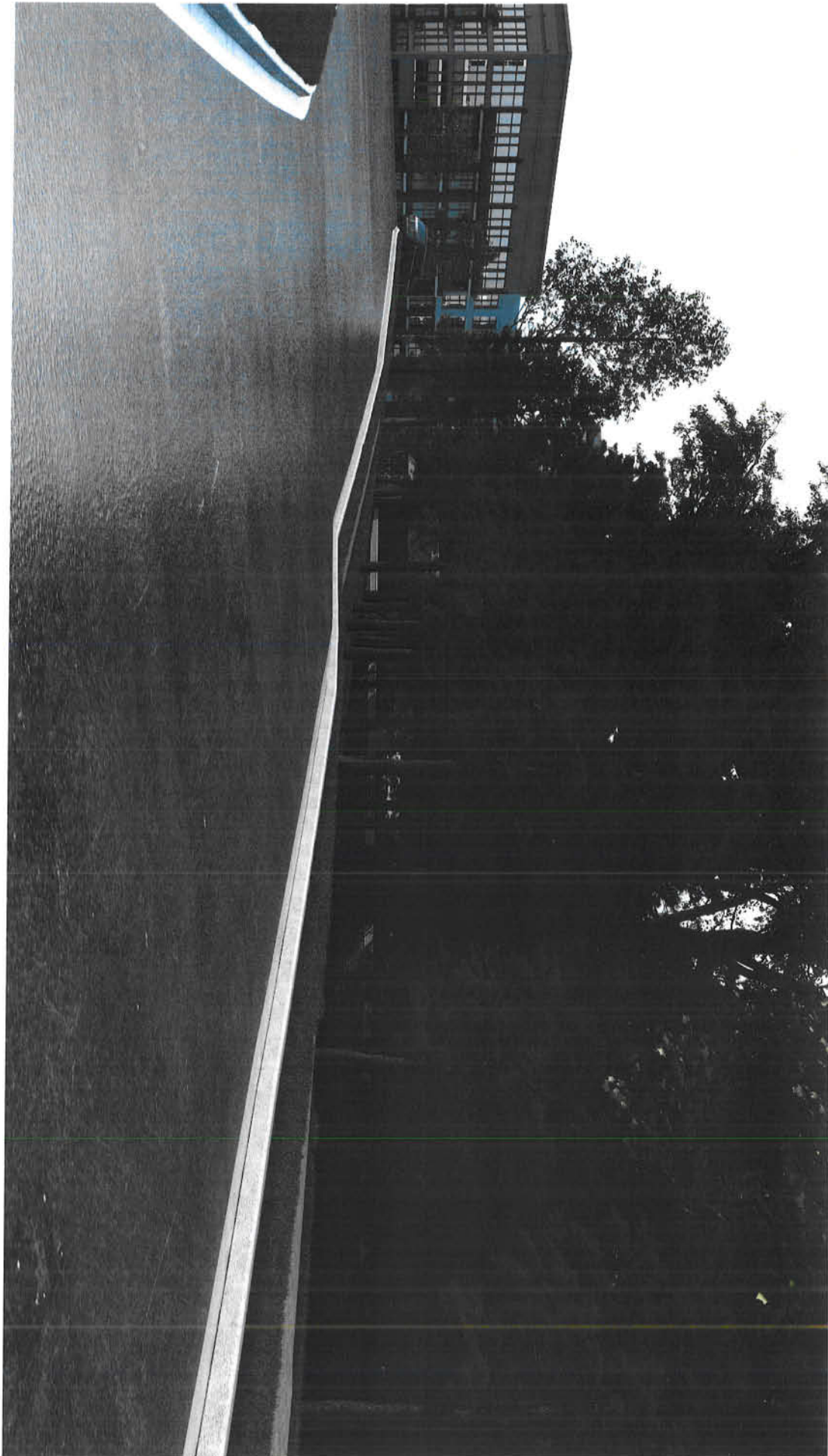


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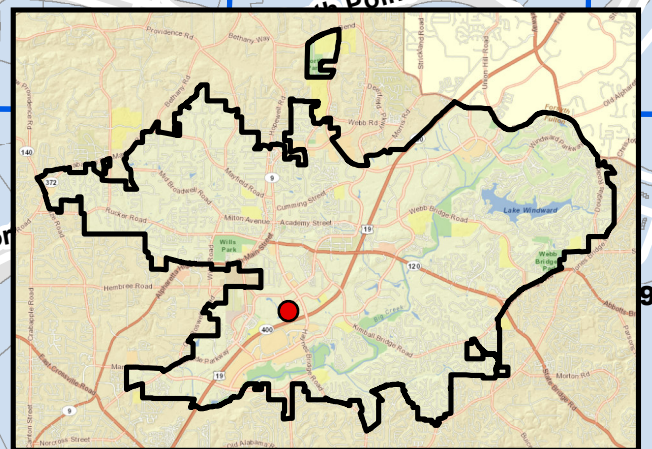
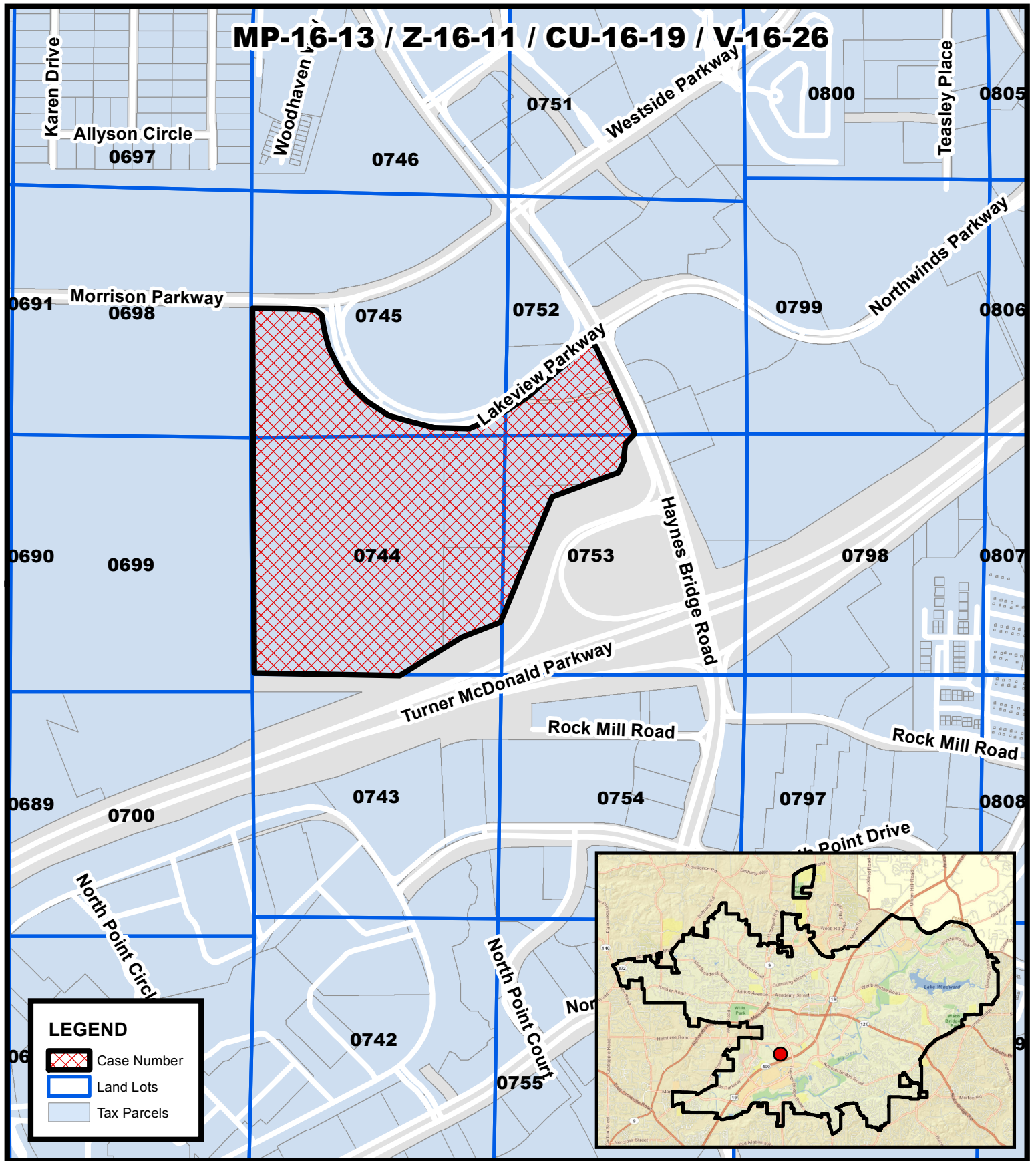


Deck Elevations 4.12.17



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MP-16-13 / Z-16-11 / CU-16-19 / V-16-26



LEGEND

-  Case Number
-  Land Lots
-  Tax Parcels

Location Map
TPA/ Fuqua Development
Peridot

MP-16-13 / Z-16-11
CU-16-19 / V-16-26
D/LL: 1/2/744, 745, 752, 753
PC: 03/02/17
CC: 04/17/17

Location Map Provided by:
Community Development - GIS



New office tower built on existng surface parking area - 6 stories +/- 150,000 sf

New parking deck building on existing surface parking lot - new deck to serve existing and new office buildings

Existing office building - 6 stories with 154,400 sf

Townhome product with park space connecting to lake side trail and park space - 70 units

Sidewalk system along internal streets provides connection from development to city 'Loop' path

Lake side park space 40,000 sf

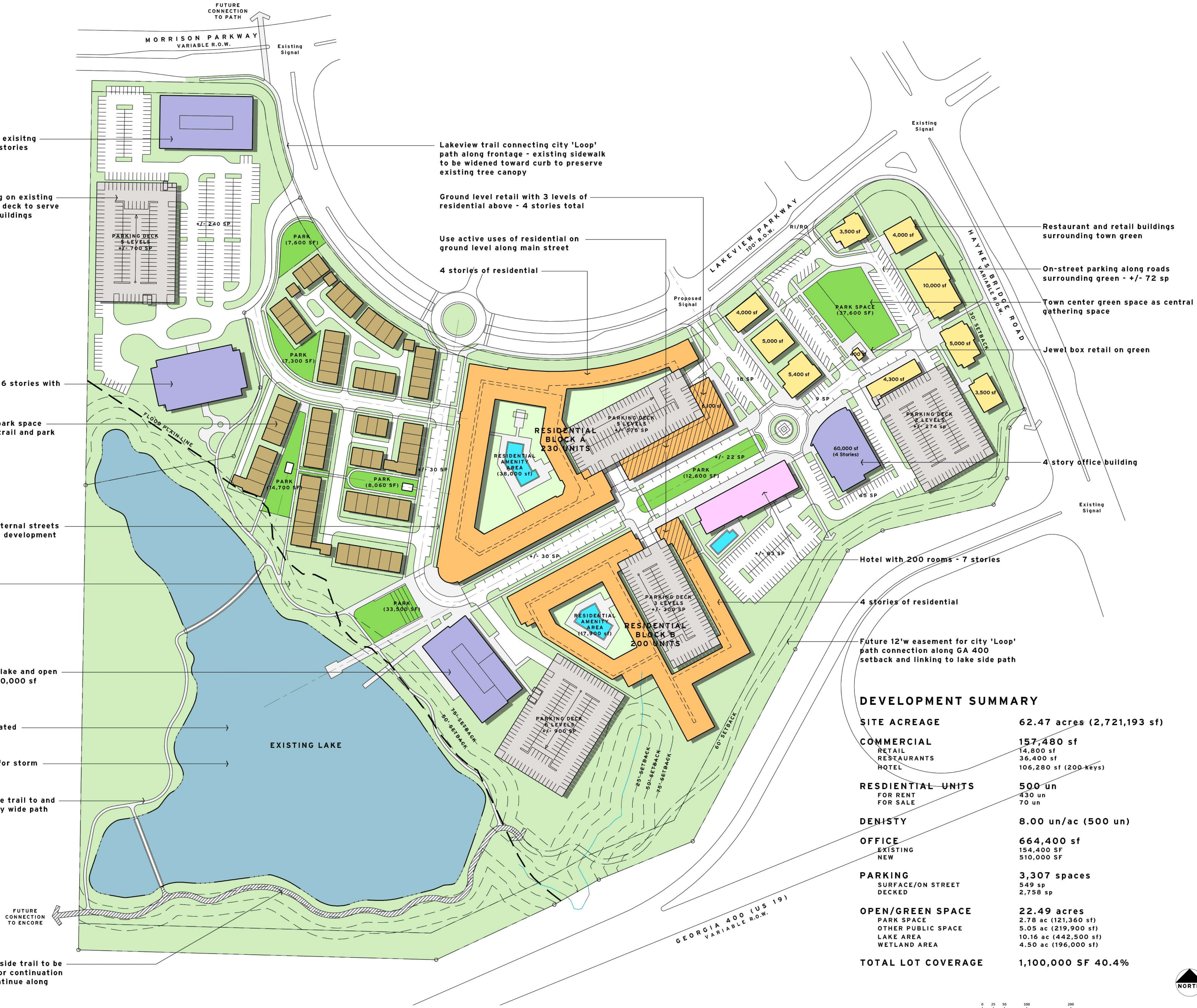
Office tower overlooking lake and open space - 12 stories +/- 300,000 sf

Lake amenity to be activated 605,200 sf

Existing lake to be used for storm water management

Improve existing lake side trail to and provide connection to city wide path system

Southern portion of lake side trail to be widened to 12' allowing for continuation of city 'Loop' path to continue along GA 400 frontage



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HAYNES
BRIDGE
MIXED-USE

Alpharetta, Georgia

TPA Group/
Fuqua Development
Chris Hayes, Principal TPA Group
3350 Riverwood Parkway
Atlanta, GA 30339
P | 770.436.2197

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print record

01 AUGUST 2016 - SUBMITTED FOR ZONING
25 AUGUST 2016 - REVISED SITE PLAN
28 SEPTEMBER 2016 - REVISED SITE PLAN
07 OCTOBER 216 - REVISED SITE PLAN

revisions

01 AUGUST 2016
25 AUGUST 2016
28 SEPTEMBER 2016
07 OCTOBER 2016

date
07 OCTOBER 2016

job number
1508064.00

drawing title

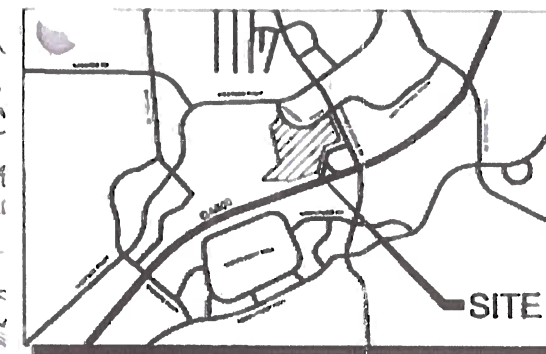
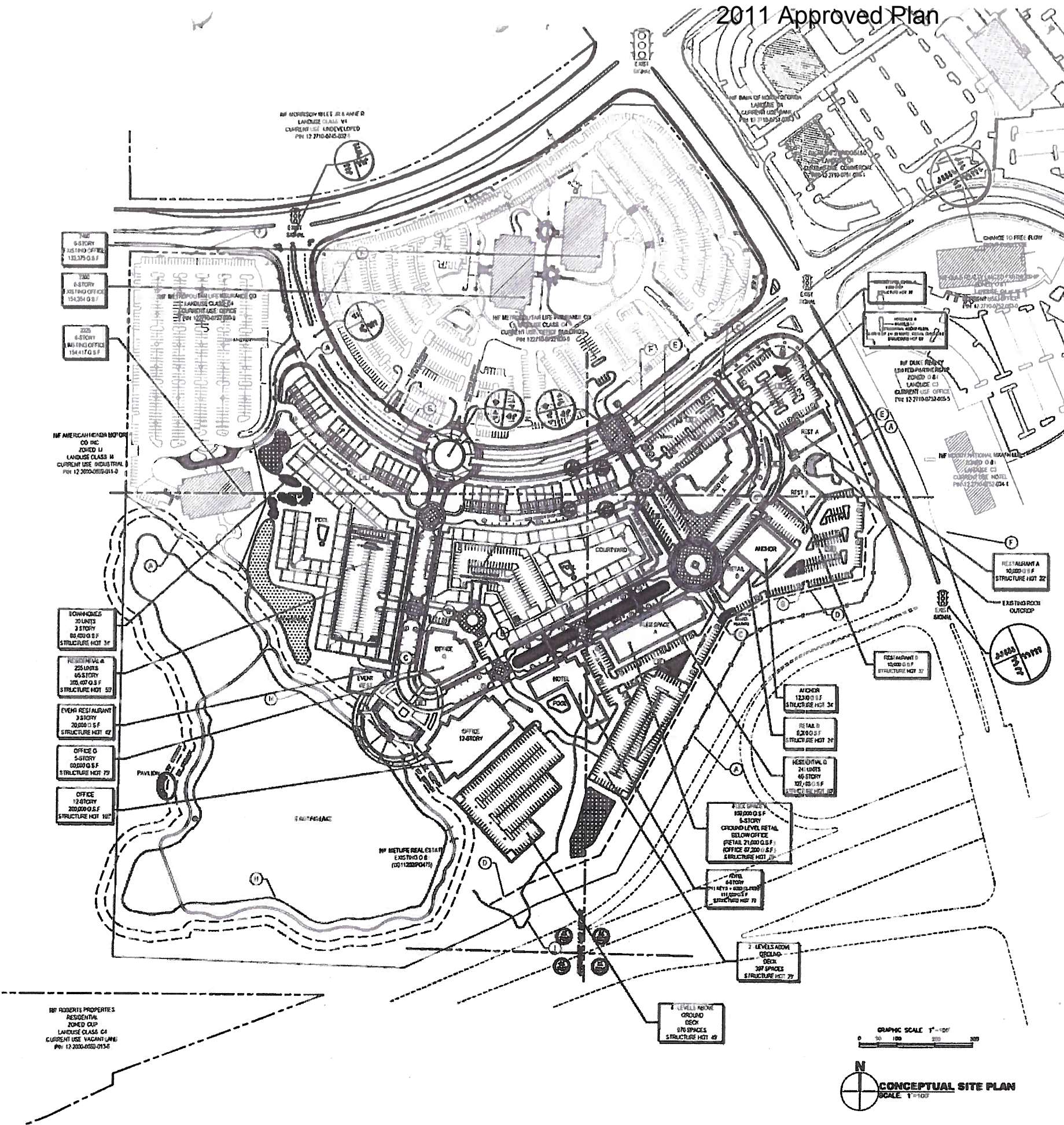
CONCEPTUAL SITE PLAN

drawing number

SP-2

SUBMITTED FOR ZONING

2011 Approved Plan



GENERAL INFORMATION:	
APPLICANT	MetLife ONE ALLIANCE CENTER 5500 LENOX ROAD - SUITE 1000 ATLANTA, GEORGIA 30326 PHONE: 770-310-2002 FAX: 770-310-3422
ARCHITECT	PIEPER O'BRIEN HERR ARCHITECTS 3000 ROYAL SOUTH BLVD SOUTH ALPHARETTA, GEORGIA 30022 PHONE: 770-569-1709 FAX: 770-569-1708
SURVEYOR	WATTS & BROWNING ENGINEERS 8502 PEACHTREE ROAD ATLANTA, GEORGIA 30341 PHONE: 770-451-7433 FAX: 770-451-3055

LAND USE	
PROPOSED	
EVENT RESTAURANT	20,000 GSF
RESTAURANTS A & B	20,000 GSF
RETAIL (SHOPPING CENTER)	20,000 GSF
GENERAL OFFICE	447,300 GSF
HOTEL (24 UNITS)	327,000 GSF
TOTAL NON-RESIDENTIAL	655,735 GSF
DENSITY	
RESIDENTIAL	9.10 UNITS / ACRE
NON-RESIDENTIAL	0.70 FAR
OPEN SPACE	
OPEN SPACE/GREEN SPACE	11.00 AC
NOTES	
MIXED USE ACREAGE	55.00 AC
CURRENT ZONING	O & I (OFFICE & INSTITUTIONAL)

PARKING SUMMARY	
REQUIRED SPACES	3,300
PROPOSED SPACES	3,415

TRAFFIC LEGEND	
EXISTING LANES	
RECOMMENDED LANES PER TRAFFIC STUDY	
* PLEASE REFER TO TRAFFIC STUDY FOR A MORE DETAILED DESCRIPTION OF PROPOSED IMPROVEMENT	

PLAN KEY	
PROPOSED BUILDING	
PROPERTY LINE	
PROPOSED CURB AND GUTTER	
PROPOSED SIDEWALK	
BUILDING SETBACK LINE	
EXISTING SIDEWALK	
EXISTING R.O.W. LINE	
EXISTING CONTOUR	
EXISTING EDGE OF LAKE LINE	
WETLANDS	



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DESIGNED FOR CONSTRUCTION

APPROVED

PERIODS

DATE	BY



PROJECT NO. 20-07031.00
DATE 16 NOV 2010
SHEET TITLE

ZONING SUBMITTAL
SITE PLAN

SHEET NO. SP-34



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360
TECH
VILLAGE

Alpharetta, Georgia

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28 SEPTEMBER 2016 - REVISED SITE PLAN
07 OCTOBER 2016 - REVISED SITE PLAN
12 OCTOBER 2016 - TRAIL SYSTEM OVERLAY PLAN
03 FEBRUARY 2017 - TRAIL SYSTEM OVERLAY PLAN REV

revisions

01 AUGUST 2016
25 AUGUST 2016
28 SEPTEMBER 2016
07 OCTOBER 2016
12 OCTOBER 2016
03 FEBRUARY 2017

DATE 12 OCTOBER 2016 JOB NUMBER 1608064.00

TRAIL SYSTEM OVERLAY PLAN

PROJECT NUMBER

SP-5

SUBMITTED FOR ZONING





























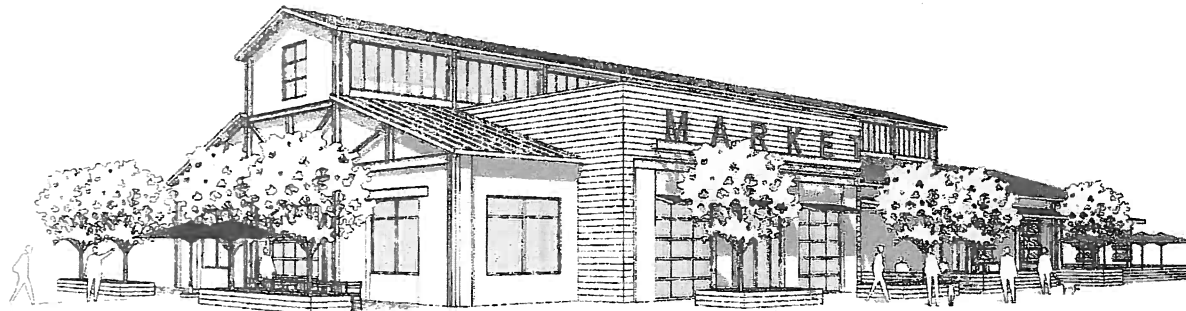


FOOD HALL

1. PROFORMA

Development Summary:		Capital Summary:		
Gross Cost of Development:	\$4,548,040	Land	192.18	35.3%
Net Cost of Development after Land Sales & Reimbursement:	\$4,548,040	Municipal & Permits	1.33	0.0%
Incremental Net Operating Income:		Off-site & Extraordinary	-	0.0%
1st Full Year (20xx)	\$453,264	Sitework	42.31	7.9%
3rd Year Stabilized (20xx)	\$460,856	Building	220.00	41.1%
Cash on Cash Rate of Return (Net Cost of Development):		Tenant Allowances	4.24	0.8%
1st Full Year (20xx)	9.87%	Architect & Engineers	21.54	4.0%
3rd Year Stabilized (20xx)	10.57%	Other Soft Costs	30.80	5.9%
		Development Fees	12.51	2.4%
		Commissions	3.39	0.6%
		Finance Costs	8.31	1.2%
		GROSS COSTS	535.06	100%
Square Footages:		Land Sales:		
Building	8,500	Net Outparcels		
GLA	3,600	Net Hotel & Multi Family Sales		
		NET COSTS AFTER SALES/REIMB		\$4,548,040

2. RENDERING SKETCH



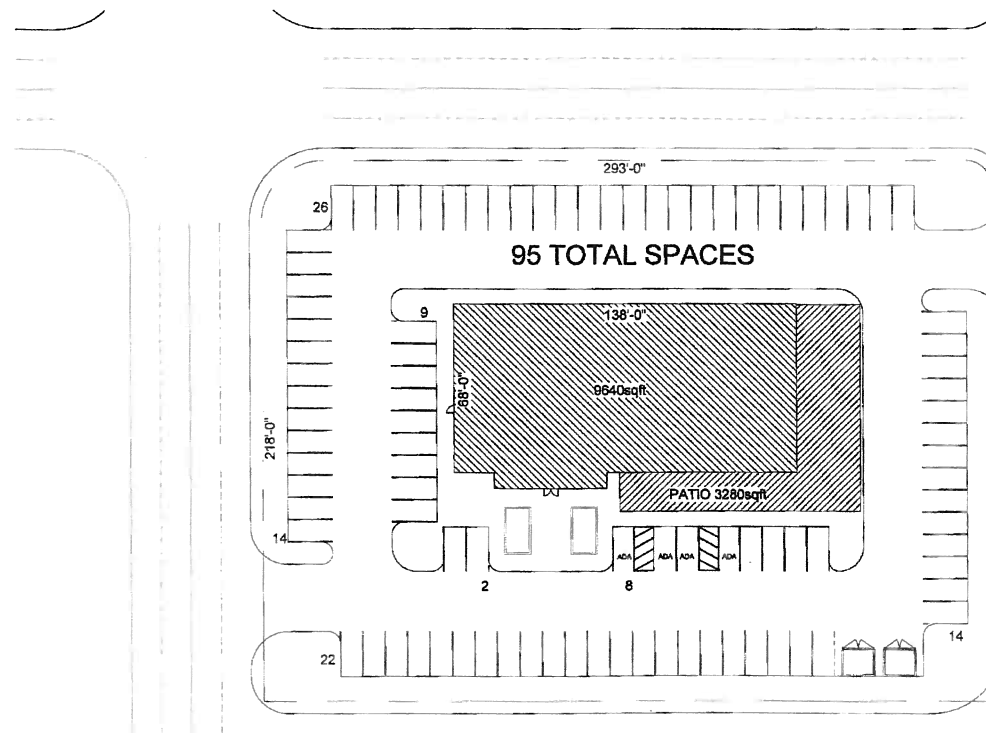
CHAPTER THREE

DEVELOPMENT / SITE SELECTION

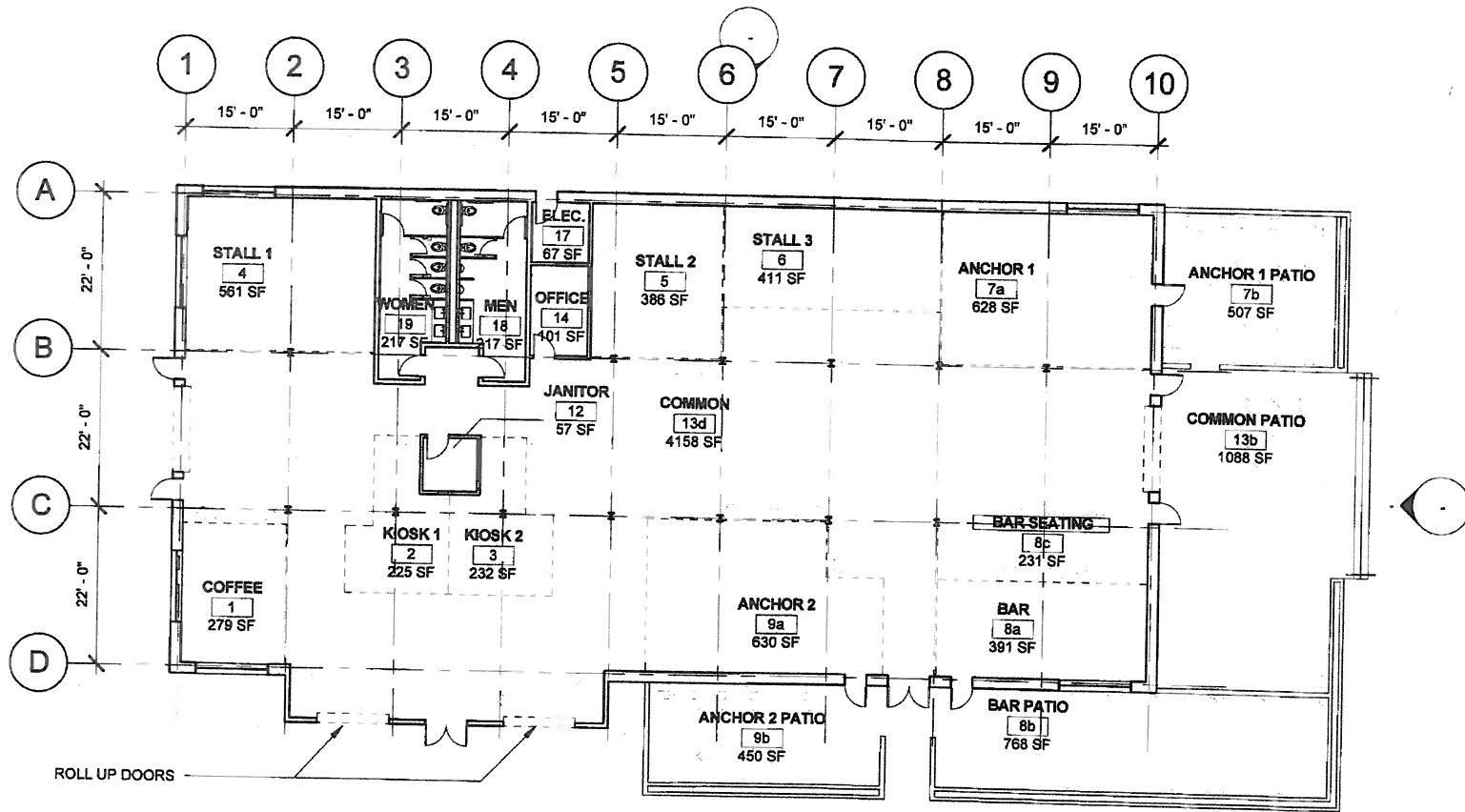
1. Proforma
2. Rendering Sketch
3. Site Plan

FOOD HALL

3. SITE PLAN - NOT TO SCALE



FOOD HALL



FLOOR PLAN - SCALE: 1/16" = 1'-0"



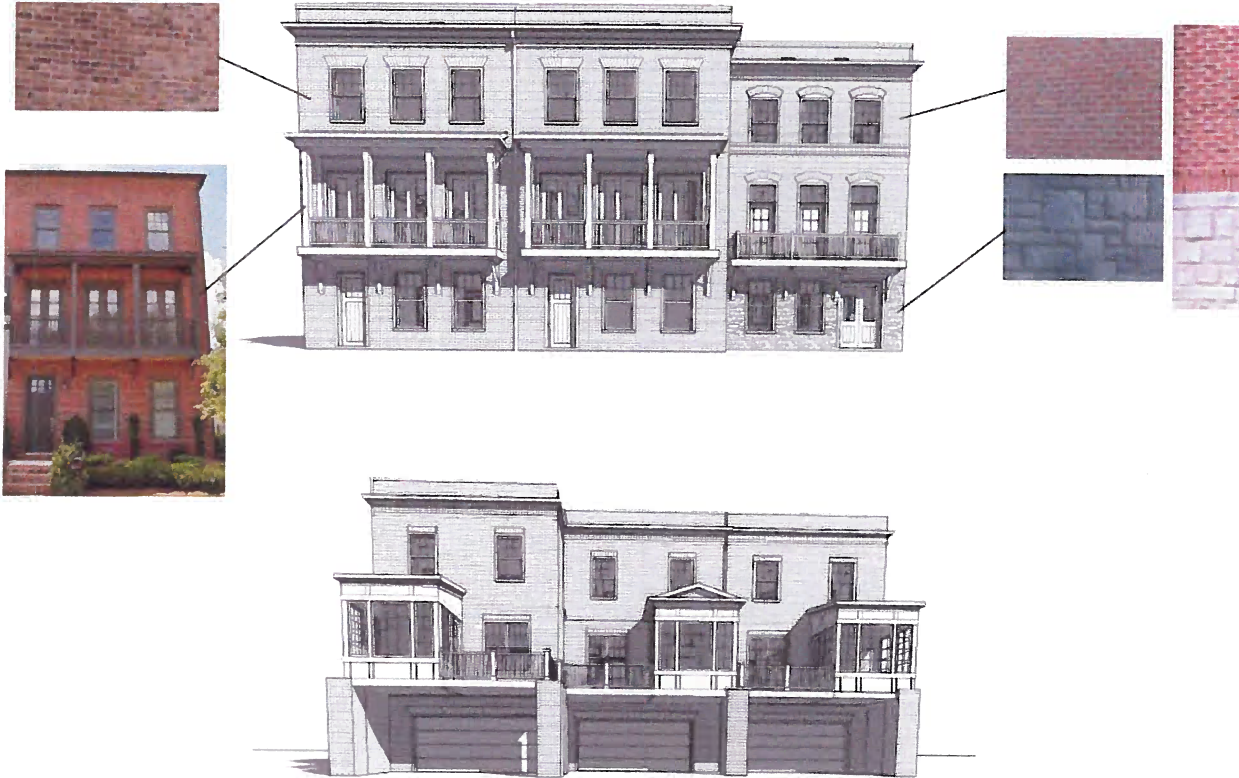
Food Hall



Townhome Product



Townhome Product



Office Building



Office Building



Multi-Family Elevation



Trackside Building





February 16, 2017

Eric Graves
City of Alpharetta
2 Park Plaza
Alpharetta, Georgia 30009

RE: *Memorandum for 360 Tech Village*
 (Previously *Innovation Mixed-Use DRI #2499* in 2015)
 Level-of-Service Comparison
 City of Alpharetta, Georgia

Dear Eric,

Kimley-Horn is pleased to provide this letter summarizing the level-of-service analysis for the 360 Tech Village development in the City of Alpharetta, Georgia.

Project Background

This letter presents the level-of-service (LOS) at intersections along Lakeview Parkway for the *360 Tech Village* development (formerly *Innovation Mixed-Use DRI #2499*) located in the City of Alpharetta, Georgia. The site is bordered by Lakeview Parkway to the north and Haynes Bridge Road to the east.

The study intersections for this analysis includes the following five intersections:

1. Morrison Parkway @ Lakeview Parkway (signalized)
2. Lakeview Parkway @ Existing Office Driveway / Proposed Site Driveway (unsignalized)
3. Lakeview Parkway @ Proposed Site Driveway 2 (unsignalized)
4. Lakeview Parkway @ Existing Office Driveway 2 / Proposed Site Driveway 3 (unsignalized)
5. Haynes Bridge Road @ Lakeview Parkway (signalized)

The following three scenarios were analyzed:

1. Existing 2015 Conditions
2. Projected 2019 No-Build Conditions
3. Projected 2019 Build Conditions

The roadway laneage and volumes for each of the three scenarios can be found in **Figure 1**, **Figure 2**, and **Figure 3**.

Level-of-Service Analysis

A level-of-service (LOS) analysis was performed using methodology consistent with the *Highway Capacity Manual 2010 (HCM 2010)* using *Synchro Professional, Version 9.0*.

Table 1 presents the level-of-service comparison between Existing 2015, Projected 2019 No-Build, and Projected 2019 Build conditions for the study intersections.

Table 1: Level-of-Service Comparison LOS (Delay in Seconds)							
Intersection	Approach	Existing 2015		Projected 2019 No-Build		Projected 2019 Build	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. Morrison Pkwy @ Lakeview Pkwy	Overall	A (8.7)	B (11.7)	A (8.9)	B (12.2)	A (9.5)	B (13.3)
2. Lakeview Pkwy @ Existing Driveway / Proposed Driveway	EB Approach	-	-	-	-	C (18.8)	F (54.0)
3. Lakeview Pkwy @ Proposed Driveway 2	NB Approach	-	-	-	-	F (79.7)	F (121.0)
4. Lakeview Pkwy @ Existing Driveway 2 / Proposed Driveway 3	NB Approach	-	-	-	-	B (10.1)	B (14.6)
5. Haynes Bridge Rd @ Lakeview Pkwy	Overall	B (17.8)	D (48.4)	C (20.4)	D (53.4)	E (69.6)	F (145.9)

As shown in **Table 1**, the unsignalized intersection of Lakeview Parkway at Existing Driveway / Proposed Driveway (Intersection 2) is projected to operate at LOS F during the PM peak hour for the Proposed Driveway approach. Additionally, the unsignalized intersection of Lakeview Parkway at Proposed Driveway 2 (Intersection 3) is projected to operate at LOS F during both the AM and PM peak hours for the Proposed Driveway approach.

The signalized intersection of Haynes Bridge Road at Lakeview Parkway (Intersection 5) is projected to operate at LOS E and LOS F during the AM and PM peak hours, respectively.

For the intersection of Lakeview Parkway at Proposed Driveway 2 (Intersection 3), the installation of a traffic signal would improve the LOS; however, based on the projected traffic volumes, a traffic signal at this location will likely not be warranted.

Table 2 provides the results for the Projected 2019 Build Improved traffic conditions with the following improvements applied:

Intersection #5: Haynes Bridge Road @ Lakeview Parkway

- Construct one (1) additional northbound left-turn lane along Haynes Bridge Road onto Lakeview Parkway (creating dual northbound left-turn lanes).
- Construct one (1) additional eastbound right-turn lane along Lakeview Parkway onto Haynes Bridge Road (creating dual eastbound right-turn lanes).

Table 2: Level-of-Service (Improved) LOS (Delay in Seconds)			
Intersection	Approach	Projected 2019 Build Improved	
		AM Peak	PM Peak
5. Haynes Bridge Rd @ Lakeview Pkwy	Overall	C (34.2)	D (49.0)

Summary

Based on this analysis, the unsignalized intersection of Lakeview Parkway at Existing Driveway / Proposed Driveway (Intersection 2) is projected to operate at LOS F during the PM peak hour for the Proposed Driveway approach. Additionally, the unsignalized intersection of Lakeview Parkway at Proposed Driveway 2 (Intersection 3) is projected to operate at LOS F during both the AM and PM peak hours for the Proposed Driveway approach.

The signalized intersection of Haynes Bridge Road at Lakeview Parkway (Intersection 5) is projected to operate at LOS E and LOS F during the AM and PM peak hours, respectively.

With the proposed improvements at the intersection of Haynes Bridge Road at Lakeview Parkway (Intersection 5), the intersection is projected to operate at acceptable levels-of-service.

If you have any questions concerning this letter or need additional information, please do not hesitate to contact me.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



John D. Walker, P.E., PTOE
Vice President/Senior Associate



Jin Seo, E.I.T.
Analyst

Attachments:

- Figure 1: Existing 2015 Conditions
- Figure 2: Projected 2019 No-Build Conditions
- Figure 3: Projected 2019 Build Conditions
- Trip Generation Table
- Proposed Site Plan
- Synchro Reports (Available Upon Request)

LEGEND

Existing Roadway Laneage

Existing Traffic Signal

Existing STOP Control

XX

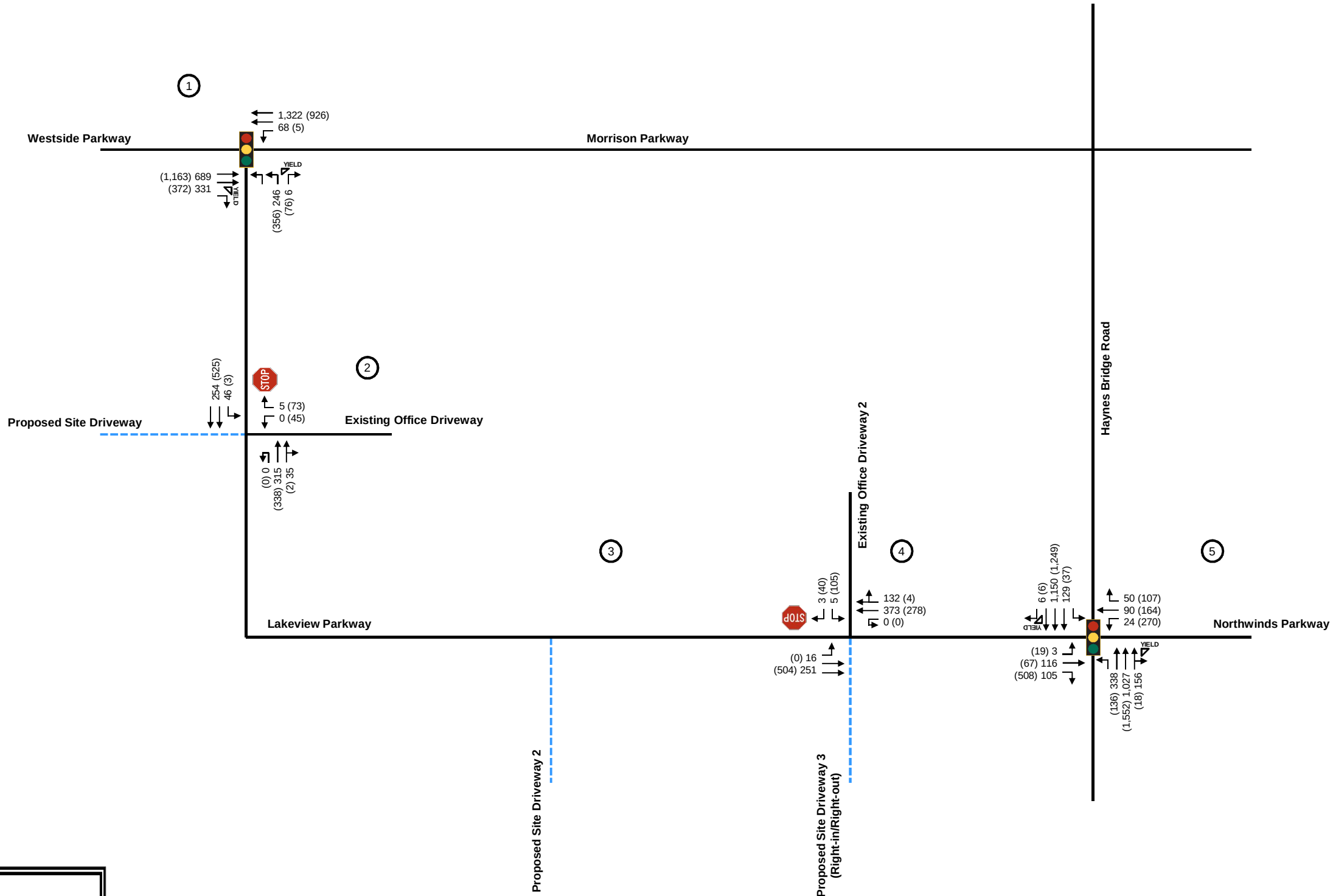
AM Peak Hour Traffic Volumes

(XX)

PM Peak Hour Traffic Volumes

#

Intersection Reference Number



NOT TO
SCALE

LEGEND

→

Existing Roadway Laneage

Existing Traffic Signal

STOP

Existing STOP Control

XX

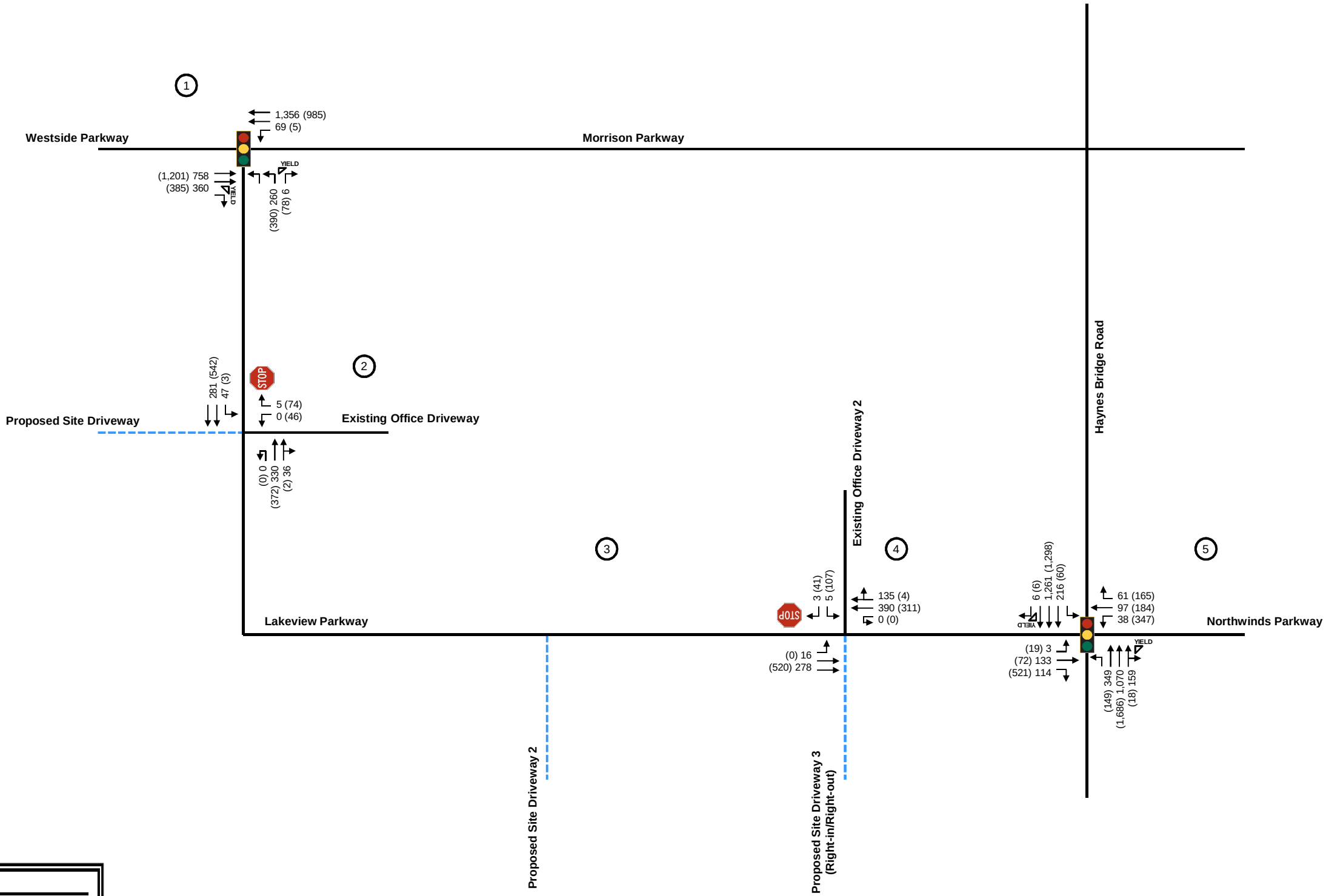
AM Peak Hour Traffic Volumes

(XX)

PM Peak Hour Traffic Volumes

#

Intersection Reference Number



NOT TO SCALE

LEGEND

Existing Roadway Laneage

Recommended Laneage for Build Improved Conditions

Existing Traffic Signal

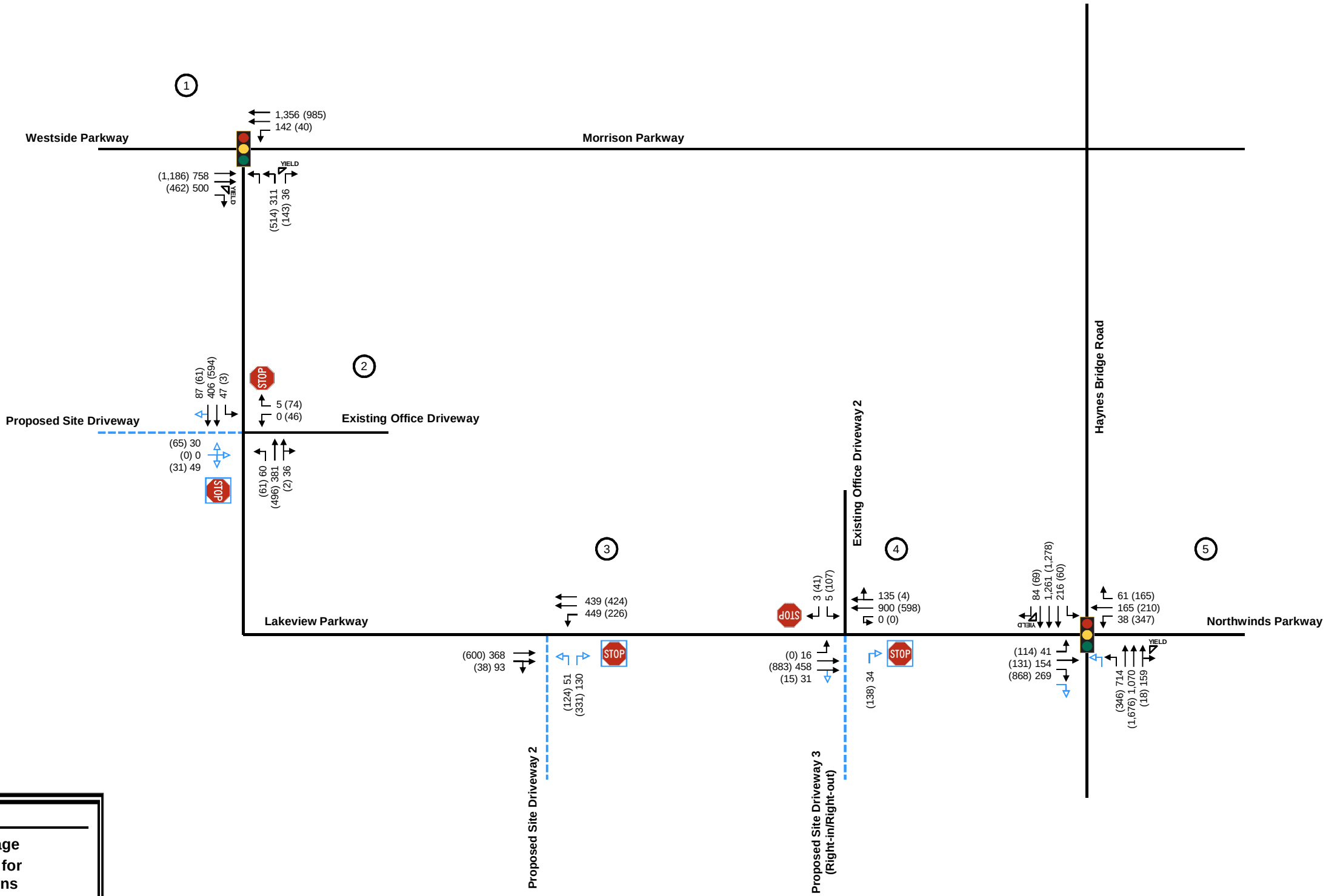
Existing STOP Control

Proposed STOP Control

XX AM Peak Hour Traffic Volumes

(XX) PM Peak Hour Traffic Volumes

Intersection Reference Number



Trip Generation Analysis (9th Ed.) 360 Tech Village (February 2017) Alpharetta, GA								
Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed Site Traffic								
220 Apartment	320 d.u.	2,062	161	32	129	194	126	68
230 Residential Condominium/Townhouse	167 d.u.	1,004	78	13	65	92	62	30
310 Hotel	200 rooms	1,418	106	63	43	120	61	59
710 General Office Building	510,000 s.f.	4,530	705	620	85	650	111	539
820 Shopping Center	16,500 s.f. gross leasable area	2,106	52	32	20	179	86	93
932 High-Turnover (Sit-Down) Restaurant	29,400 s.f.	3,738	318	175	143	290	174	116
Gross Trips		14,858	1,420	935	485	1,525	620	905
Residential Trips		3,066	239	45	194	286	188	98
Mixed-Use Reductions		-430	-44	-3	-41	-90	-53	-37
Alternative Mode Reductions		-132	-10	-2	-8	-10	-7	-3
Adjusted Residential Trips		2,504	185	40	145	186	128	58
Hotel Trips		1,418	106	63	43	120	61	59
Mixed-Use Reductions		-199	-27	-3	-24	-27	-16	-11
Alternative Mode Reductions		-61	-4	-3	-1	-5	-2	-2
Adjusted Hotel Trips		1,158	75	57	18	88	43	46
Office Trips		4,530	705	620	85	650	111	539
Mixed-Use Reductions		-250	-123	-73	-50	-27	-9	-18
Alternative Mode Reductions		-214	-29	-27	-2	-31	-5	-26
Adjusted Office Trips		4,066	553	520	33	592	97	495
Retail Trips		2,106	52	32	20	179	86	93
Mixed-Use Reductions		-284	-26	-16	-10	-119	-61	-58
Alternative Mode Reductions		-91	-1	-1	-1	-3	-1	-2
Pass By Reductions (Based on ITE Rates)		-588	0	0	0	-20	-10	-10
Adjusted Retail Trips		1,143	25	15	9	37	14	23
Restaurant Trips		3,738	318	175	143	290	174	116
Mixed-Use Reductions		-505	-134	-82	-52	-118	-60	-58
Alternative Mode Reductions		-162	-9	-5	-5	-9	-6	-3
Pass By Reductions (Based on ITE Rates)		-1,321	0	0	0	-70	-35	-35
Adjusted Restaurant Trips		1,750	175	88	86	93	73	20
Mixed-Use Reductions - TOTAL		-1,668	-354	-177	-177	-381	-199	-182
Alternative Mode Reductions - TOTAL		-660	-53	-38	-17	-58	-21	-36
Pass-By Reductions - TOTAL		-1,909	0	0	0	-90	-45	-45
New Trips		10,621	1,013	720	291	996	355	642
Driveway Volumes		12,530	1,013	720	291	1,086	400	687

k:\atl_tpto\015002001 haynes bridge mixed use (previously innovation), alpharetta - sept 2016\2017-02_haynes bridge mixed-use update\analysis\20170213 haynes bridge_analysis.xlsm\trip generation

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360 TECH VILLAGE

Alpharetta, Georgia

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revisions

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date
31 JANUARY 2017
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job number
1508064.00

CONCEPTUAL SITE PLAN

drawing number

SP-5

SUBMITTED FOR ZONING

New office tower built on existing surface parking area - 6 stories +/- 150,000 sf

New parking deck building on existing surface parking lot - new deck to serve existing and new office buildings

Existing office building - 6 stories with 154,400 sf

Townhome product with park space connecting to lake side trail and park space - 63 units

Sidewalk system along internal streets provides connection from development to city 'Loop' path

Lake side park space 2.18 ac (95,100 sf)

Potential location for bike rental station

Stacked townhome product 104 units

Lake amenity to be activated 428,320 sf

Existing lake to be used for storm water management

Improve existing lake side trail to and provide connection to city wide path system

Path connection into main street area for bicycles and pedestrians - sidewalks along internal street and village green to accommodate bicycle circulation

Southern portion of lake side trail to be widened to 12' allowing for continuation of city 'Loop' path to continue along GA 400 frontage

Lakeview trail connecting city 'Loop' path along frontage - existing sidewalk to be widened toward curb to preserve existing tree canopy

Market building opening on to village green with outdoor dining patio space

Ground level retail with 3 levels of residential above - 4 stories total

Active uses associated with residential on ground level along main street - includes leasing and amenity space

Residential building with 4/5 story height (4 stories tall along Lakeview and 5 stories tall along internal main street)

Project identity signage at corner of Haynes Bridge and Lakeview

Buildings pulled up to street with parking concealed behind structures

Town center green space surrounded by retail/restaurant buildings and serving as central gathering space

Jewel box retail on green

Lower level parking built to take advantage of slope with +/- 192 sp

3 story office building

Access to lower level parking

Hotel with 200 rooms - 7 stories

Office tower - 12 stories +/- 300,000 sf

Future 12'w easement for city 'Loop' path connection along GA 400 setback and linking to lake side path

DEVELOPMENT SUMMARY

SITE ACREAGE	62.47 acres (2,721,193 sf)
COMMERCIAL	161,800 sf
RETAIL	16,500 sf
RESTAURANTS	29,400 sf
MARKET	9,600 SF
HOTEL	106,300 sf (200 keys)
RESIDENTIAL UNITS	487 un
FOR RENT	320 un
FOR SALE	167 un
DENSITY	7.80 un/ac
OFFICE	664,400 sf
EXISTING	154,400 SF
NEW	510,000 SF
PARKING	3,477 spaces
SURFACE	600 sp
ON STREET	95 sp
DECKED	2,782 sp
OPEN/GREEN SPACE	29.36 acres (47.0 %)
PARK SPACE	3.74 ac (162,820 sf)
OTHER PUBLIC SPACE	3.16 ac (137,576 sf)
OPEN SPACE	8.13 ac (354,100 sf)
LAKE AREA	9.83 ac (428,320 sf)
WETLAND AREA	4.50 ac (196,000 sf)
TOTAL LOT COVERAGE	1,268,540 SF 46.6%



0 25 50 100 200 500

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	689	331	68	1322	246	6		
Future Volume (veh/h)	689	331	68	1322	246	6		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	733	0	72	1406	262	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2325	1040	520	2325	551	253		
Arrive On Green	0.66	0.00	0.66	0.66	0.16	0.00		
Sat Flow, veh/h	3632	1583	721	3632	3442	1583		
Grp Volume(v), veh/h	733	0	72	1406	262	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	721	1770	1721	1583		
Q Serve(g_s), s	5.8	0.0	3.1	14.7	4.5	0.0		
Cycle Q Clear(g_c), s	5.8	0.0	8.9	14.7	4.5	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2325	1040	520	2325	551	253		
V/C Ratio(X)	0.32	0.00	0.14	0.60	0.48	0.00		
Avail Cap(c_a), veh/h	2325	1040	520	2325	551	253		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	4.8	0.0	6.8	6.3	24.8	0.0		
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.7	2.9	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	5.2	0.0	1.2	11.7	4.3	0.0		
LnGrp Delay(d),s/veh	5.2	0.0	7.0	7.0	27.8	0.0		
LnGrp LOS	A		A	A	C			
Approach Vol, veh/h	733			1478	262			
Approach Delay, s/veh	5.2			7.0	27.8			
Approach LOS	A			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		49.0		16.0		49.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		42.7		10.4		42.7		
Max Q Clear Time (g_c+1), s		7.8		6.5		16.7		
Green Ext Time (p_c), s		30.8		0.4		23.6		
Intersection Summary								
HCM 2010 Ctrl Delay			8.7					
HCM 2010 LOS			A					

Intersection							
Int Delay, s/veh	0.7						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	0	5	0	315	35	46	254
Future Vol, veh/h	0	5	0	315	35	46	254
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	130	-	-	100	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	92	88	88	88	88
Heavy Vehicles, %	0	20	2	2	2	2	3
Mvmt Flow	0	6	0	358	40	52	289
Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	627	199	210	0	0	398	0
Stage 1	378	-	-	-	-	-	-
Stage 2	249	-	-	-	-	-	-
Critical Hdwy	6.8	7.3	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-
Follow-up Hdwy	3.5	3.5	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	420	756	1055	-	-	1157	-
Stage 1	669	-	-	-	-	-	-
Stage 2	775	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	401	756	1055	-	-	1157	-
Mov Cap-2 Maneuver	401	-	-	-	-	-	-
Stage 1	669	-	-	-	-	-	-
Stage 2	740	-	-	-	-	-	-
Approach	WB	NB		SB			
HCM Control Delay, s	9.8	0		1.3			
HCM LOS	A						
Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	1055	-	-	756	1157	-	
HCM Lane V/C Ratio	-	-	-	0.008	0.045	-	
HCM Control Delay (s)	0	-	-	9.8	8.3	-	
HCM Lane LOS	A	-	-	A	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	0.1	-	

Intersection							
Int Delay, s/veh	0.3						
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	16	251	0	373	132	5	3
Future Vol, veh/h	16	251	0	373	132	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	130	-	60	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	97	97	92	97	97	97	97
Heavy Vehicles, %	2	5	2	2	2	2	2
Mvmt Flow	16	259	0	385	136	5	3
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	521	0	188	-	0	615	260
Stage 1	-	-	-	-	-	453	-
Stage 2	-	-	-	-	-	162	-
Critical Hdwy	4.14	-	6.44	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	2.52	-	-	3.52	3.32
Pot Cap-1 Maneuver	1041	-	1089	-	-	423	739
Stage 1	-	-	-	-	-	607	-
Stage 2	-	-	-	-	-	850	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1041	-	1089	-	-	416	739
Mov Cap-2 Maneuver	-	-	-	-	-	416	-
Stage 1	-	-	-	-	-	607	-
Stage 2	-	-	-	-	-	837	-
Approach	EB		WB		SB		
HCM Control Delay, s	0.5		0		12.3		
HCM LOS					B		
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1041	-	1089	-	-	416	739
HCM Lane V/C Ratio	0.016	-	-	-	-	0.012	0.004
HCM Control Delay (s)	8.5	-	0	-	-	13.8	9.9
HCM Lane LOS	A	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	0	-	-	0	0

HCM 2010 Signalized Intersection Summary
5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	116	105	24	90	50	338	1027	156	129	1150	6
Future Volume (veh/h)	3	116	105	24	90	50	338	1027	156	129	1150	6
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1827	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	3	123	112	26	96	53	360	1093	0	137	1223	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	4	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	171	143	129	181	153	440	3371	0	427	3139	977
Arrive On Green	0.02	0.09	0.09	0.02	0.10	0.10	0.09	0.66	0.00	0.04	0.62	0.00
Sat Flow, veh/h	1774	1863	1553	1774	1863	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	3	123	112	26	96	53	360	1093	0	137	1223	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1553	1774	1863	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	0.2	8.3	9.2	1.7	6.4	4.1	9.2	12.0	0.0	3.7	15.8	0.0
Cycle Q Clear(g_c), s	0.2	8.3	9.2	1.7	6.4	4.1	9.2	12.0	0.0	3.7	15.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	171	143	129	181	153	440	3371	0	427	3139	977
V/C Ratio(X)	0.07	0.72	0.78	0.20	0.53	0.35	0.82	0.32	0.00	0.32	0.39	0.00
Avail Cap(c_a), veh/h	41	249	208	161	292	248	777	3371	0	531	3139	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.1	57.4	57.8	51.9	55.9	54.8	12.1	9.4	0.0	8.3	12.5	0.0
Incr Delay (d2), s/veh	0.3	4.2	9.4	0.3	1.8	1.0	1.5	0.3	0.0	0.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	8.0	7.7	1.5	6.1	3.3	13.0	9.5	0.0	3.2	11.9	0.0
LnGrp Delay(d),s/veh	62.4	61.5	67.2	52.2	57.7	55.8	13.6	9.7	0.0	8.4	12.9	0.0
LnGrp LOS	E	E	E	D	E	E	B	A		A	B	
Approach Vol, veh/h		238			175			1453			1360	
Approach Delay, s/veh		64.2			56.3			10.6			12.5	
Approach LOS		E			E			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.3	86.5	8.0	18.2	11.3	92.5	8.6	17.6				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	36.4	47.7	3.0	20.4	13.4	70.7	5.4	17.4				
Max Q Clear Time (g_c+I1), s	11.2	17.8	2.2	8.4	5.7	14.0	3.7	11.2				
Green Ext Time (p_c), s	0.5	26.7	0.0	1.1	0.1	46.5	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			17.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	1163	372	5	926	356	76		
Future Volume (veh/h)	1163	372	5	926	356	76		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1743	1863	1863		
Adj Flow Rate, veh/h	1251	0	5	996	383	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	9	2	2		
Cap, veh/h	2053	918	266	1921	815	375		
Arrive On Green	0.58	0.00	0.58	0.58	0.24	0.00		
Sat Flow, veh/h	3632	1583	442	3399	3442	1583		
Grp Volume(v), veh/h	1251	0	5	996	383	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	442	1656	1721	1583		
Q Serve(g_s), s	14.9	0.0	0.5	11.7	6.2	0.0		
Cycle Q Clear(g_c), s	14.9	0.0	15.4	11.7	6.2	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2053	918	266	1921	815	375		
V/C Ratio(X)	0.61	0.00	0.02	0.52	0.47	0.00		
Avail Cap(c_a), veh/h	2053	918	266	1921	815	375		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	8.9	0.0	13.9	8.2	21.3	0.0		
Incr Delay (d2), s/veh	1.4	0.0	0.1	1.0	1.9	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	12.0	0.0	0.1	9.4	5.7	0.0		
LnGrp Delay(d),s/veh	10.2	0.0	14.0	9.2	23.2	0.0		
LnGrp LOS	B		B	A	C			
Approach Vol, veh/h	1251			1001	383			
Approach Delay, s/veh	10.2			9.2	23.2			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		44.0		21.0		44.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		37.7		15.4		37.7		
Max Q Clear Time (g_c+I1), s		16.9		8.2		17.4		
Green Ext Time (p_c), s		19.2		1.0		18.8		
Intersection Summary								
HCM 2010 Ctrl Delay			11.7					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 1.5

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	45	73	0	338	2	3	525
Future Vol, veh/h	45	73	0	338	2	3	525
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	130	-	-	100	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	92	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	51	83	0	384	2	3	597

Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	690	193	435	0	0	386	0
Stage 1	385	-	-	-	-	-	-
Stage 2	305	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	379	816	761	-	-	1169	-
Stage 1	657	-	-	-	-	-	-
Stage 2	721	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	378	816	761	-	-	1169	-
Mov Cap-2 Maneuver	378	-	-	-	-	-	-
Stage 1	657	-	-	-	-	-	-
Stage 2	719	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	761	-	-	378 816	1169	-
HCM Lane V/C Ratio	-	-	-	0.135 0.102	0.003	-
HCM Control Delay (s)	0	-	-	16 9.9	8.1	-
HCM Lane LOS	A	-	-	C A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5 0.3	0	-

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	0	504	0	278	4	105	40
Future Vol, veh/h	0	504	0	278	4	105	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	130	-	60	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	85	85	92	85	85	85	85
Heavy Vehicles, %	0	2	2	2	2	2	2
Mvmt Flow	0	593	0	327	5	124	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	332	0	432	-	0	625
Stage 1	-	-	-	-	-	329
Stage 2	-	-	-	-	-	296
Critical Hdwy	4.1	-	6.44	-	-	6.84
Critical Hdwy Stg 1	-	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	-	5.84
Follow-up Hdwy	2.2	-	2.52	-	-	3.52
Pot Cap-1 Maneuver	1239	-	764	-	-	417
Stage 1	-	-	-	-	-	701
Stage 2	-	-	-	-	-	729
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1239	-	764	-	-	417
Mov Cap-2 Maneuver	-	-	-	-	-	417
Stage 1	-	-	-	-	-	701
Stage 2	-	-	-	-	-	729

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1239	-	764	-	-	417	849
HCM Lane V/C Ratio	-	-	-	-	-	0.296	0.055
HCM Control Delay (s)	0	-	0	-	-	17.2	9.5
HCM Lane LOS	A	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0	-	0	-	-	1.2	0.2

HCM 2010 Signalized Intersection Summary
 5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	67	508	270	164	107	136	1552	18	37	1249	6
Future Volume (veh/h)	19	67	508	270	164	107	136	1552	18	37	1249	6
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1845	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	21	73	552	293	178	116	148	1687	0	40	1358	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	3	2	2	2	2	2	2	2
Cap, veh/h	26	565	480	416	688	591	230	2084	0	142	1899	591
Arrive On Green	0.01	0.30	0.30	0.08	0.37	0.37	0.07	0.41	0.00	0.03	0.37	0.00
Sat Flow, veh/h	1774	1863	1583	1774	1845	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	21	73	552	293	178	116	148	1687	0	40	1358	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1845	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	1.5	3.7	39.4	10.4	8.7	6.4	6.5	38.1	0.0	1.8	29.7	0.0
Cycle Q Clear(g_c), s	1.5	3.7	39.4	10.4	8.7	6.4	6.5	38.1	0.0	1.8	29.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	26	565	480	416	688	591	230	2084	0	142	1899	591
V/C Ratio(X)	0.82	0.13	1.15	0.70	0.26	0.20	0.64	0.81	0.00	0.28	0.71	0.00
Avail Cap(c_a), veh/h	68	565	480	416	688	591	274	2084	0	158	1899	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.9	32.9	45.3	31.1	28.3	27.6	27.4	33.9	0.0	28.7	34.8	0.0
Incr Delay (d2), s/veh	20.4	0.1	89.4	4.5	0.1	0.1	2.1	3.5	0.0	0.4	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	3.5	52.3	12.1	7.9	5.1	5.9	25.5	0.0	1.6	20.4	0.0
LnGrp Delay(d),s/veh	84.2	32.9	134.7	35.7	28.4	27.7	29.5	37.4	0.0	29.1	37.1	0.0
LnGrp LOS	F	C	F	D	C	C	C	D		C	D	
Approach Vol, veh/h		646			587			1835			1398	
Approach Delay, s/veh		121.5			31.9			36.8			36.9	
Approach LOS		F			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	54.9	6.9	54.1	9.4	59.6	16.0	45.0				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	11.8	45.3	5.0	45.4	5.0	52.1	10.4	39.4				
Max Q Clear Time (g_c+I1), s	8.5	31.7	3.5	10.7	3.8	40.1	12.4	41.4				
Green Ext Time (p_c), s	0.1	13.4	0.0	3.3	0.0	11.8	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			48.4									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	758	360	69	1356	260	6		
Future Volume (veh/h)	758	360	69	1356	260	6		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	806	0	73	1443	277	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2325	1040	485	2325	551	253		
Arrive On Green	0.66	0.00	0.66	0.66	0.16	0.00		
Sat Flow, veh/h	3632	1583	673	3632	3442	1583		
Grp Volume(v), veh/h	806	0	73	1443	277	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	673	1770	1721	1583		
Q Serve(g_s), s	6.6	0.0	3.5	15.4	4.8	0.0		
Cycle Q Clear(g_c), s	6.6	0.0	10.1	15.4	4.8	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2325	1040	485	2325	551	253		
V/C Ratio(X)	0.35	0.00	0.15	0.62	0.50	0.00		
Avail Cap(c_a), veh/h	2325	1040	485	2325	551	253		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	5.0	0.0	7.2	6.5	24.9	0.0		
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.7	3.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	5.9	0.0	1.2	11.9	4.5	0.0		
LnGrp Delay(d),s/veh	5.4	0.0	7.5	7.2	28.2	0.0		
LnGrp LOS	A		A	A	C			
Approach Vol, veh/h	806			1516	277			
Approach Delay, s/veh	5.4			7.2	28.2			
Approach LOS	A			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		49.0		16.0		49.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		42.7		10.4		42.7		
Max Q Clear Time (g_c+1), s		8.6		6.8		17.4		
Green Ext Time (p_c), s		30.9		0.4		23.5		
Intersection Summary								
HCM 2010 Ctrl Delay			8.9					
HCM 2010 LOS			A					

Intersection

Int Delay, s/veh 0.6

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	0	5	0	330	36	47	281
Future Vol, veh/h	0	5	0	330	36	47	281
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	130	-	-	100	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	92	88	88	88	88
Heavy Vehicles, %	0	20	2	2	2	2	3
Mvmt Flow	0	6	0	375	41	53	319

Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	661	208	233	0	0	416	0
Stage 1	395	-	-	-	-	-	-
Stage 2	266	-	-	-	-	-	-
Critical Hdwy	6.8	7.3	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-	-
Follow-up Hdwy	3.5	3.5	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	400	745	1021	-	-	1139	-
Stage 1	656	-	-	-	-	-	-
Stage 2	760	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	381	745	1021	-	-	1139	-
Mov Cap-2 Maneuver	381	-	-	-	-	-	-
Stage 1	656	-	-	-	-	-	-
Stage 2	725	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	1021	-	-	745	1139
HCM Lane V/C Ratio	-	-	-	0.008	0.047
HCM Control Delay (s)	0	-	0	9.9	8.3
HCM Lane LOS	A	-	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.1

Intersection							
Int Delay, s/veh	0.3						
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	16	278	0	390	135	5	3
Future Vol, veh/h	16	278	0	390	135	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	130	-	60	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	97	97	92	97	97	97	97
Heavy Vehicles, %	2	5	2	2	2	2	2
Mvmt Flow	16	287	0	402	139	5	3
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	541	0	209	-	0	648	271
Stage 1	-	-	-	-	-	472	-
Stage 2	-	-	-	-	-	176	-
Critical Hdwy	4.14	-	6.44	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	2.52	-	-	3.52	3.32
Pot Cap-1 Maneuver	1024	-	1057	-	-	403	727
Stage 1	-	-	-	-	-	594	-
Stage 2	-	-	-	-	-	837	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	1024	-	1057	-	-	397	727
Mov Cap-2 Maneuver	-	-	-	-	-	397	-
Stage 1	-	-	-	-	-	594	-
Stage 2	-	-	-	-	-	824	-
Approach	EB		WB		SB		
HCM Control Delay, s	0.5		0		12.6		
HCM LOS					B		
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1024	-	1057	-	-	397	727
HCM Lane V/C Ratio	0.016	-	-	-	-	0.013	0.004
HCM Control Delay (s)	8.6	-	0	-	-	14.2	10
HCM Lane LOS	A	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0	-	0	-	-	0	0

HCM 2010 Signalized Intersection Summary
5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	133	114	38	97	61	349	1070	159	60	1298	6
Future Volume (veh/h)	3	133	114	38	97	61	349	1070	159	60	1298	6
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1827	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	3	141	121	40	103	65	371	1138	0	64	1381	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	4	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	182	152	134	203	172	401	3358	0	394	3048	949
Arrive On Green	0.02	0.10	0.10	0.03	0.11	0.11	0.10	0.66	0.00	0.03	0.60	0.00
Sat Flow, veh/h	1774	1863	1553	1774	1863	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	3	141	121	40	103	65	371	1138	0	64	1381	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1553	1774	1863	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	0.2	9.6	9.9	2.6	6.8	5.0	10.0	12.7	0.0	1.8	19.4	0.0
Cycle Q Clear(g_c), s	0.2	9.6	9.9	2.6	6.8	5.0	10.0	12.7	0.0	1.8	19.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	182	152	134	203	172	401	3358	0	394	3048	949
V/C Ratio(X)	0.07	0.77	0.80	0.30	0.51	0.38	0.93	0.34	0.00	0.16	0.45	0.00
Avail Cap(c_a), veh/h	41	249	208	156	292	248	728	3358	0	515	3048	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.1	57.2	57.4	51.0	54.6	53.8	17.6	9.7	0.0	9.1	14.3	0.0
Incr Delay (d2), s/veh	0.3	8.4	12.2	0.5	1.5	1.0	4.8	0.3	0.0	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	9.2	8.3	2.3	6.4	4.0	13.6	10.0	0.0	1.6	14.2	0.0
LnGrp Delay(d),s/veh	62.4	65.6	69.5	51.5	56.1	54.8	22.4	9.9	0.0	9.2	14.8	0.0
LnGrp LOS	E	E	E	D	E	D	C	A		A	B	
Approach Vol, veh/h		265			208			1509			1445	
Approach Delay, s/veh		67.4			54.8			13.0			14.6	
Approach LOS		E			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	84.2	8.0	19.7	10.1	92.1	9.4	18.3				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	36.4	47.7	3.0	20.4	13.4	70.7	5.4	17.4				
Max Q Clear Time (g_c+I1), s	12.0	21.4	2.2	8.8	3.8	14.7	4.6	11.9				
Green Ext Time (p_c), s	0.5	24.5	0.0	1.3	0.0	48.7	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				20.4								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	1201	385	5	985	390	78		
Future Volume (veh/h)	1201	385	5	985	390	78		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1743	1863	1863		
Adj Flow Rate, veh/h	1291	0	5	1059	419	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	9	2	2		
Cap, veh/h	2053	918	255	1921	815	375		
Arrive On Green	0.58	0.00	0.58	0.58	0.24	0.00		
Sat Flow, veh/h	3632	1583	426	3399	3442	1583		
Grp Volume(v), veh/h	1291	0	5	1059	419	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	426	1656	1721	1583		
Q Serve(g_s), s	15.7	0.0	0.5	12.8	6.9	0.0		
Cycle Q Clear(g_c), s	15.7	0.0	16.2	12.8	6.9	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2053	918	255	1921	815	375		
V/C Ratio(X)	0.63	0.00	0.02	0.55	0.51	0.00		
Avail Cap(c_a), veh/h	2053	918	255	1921	815	375		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	9.0	0.0	14.4	8.4	21.5	0.0		
Incr Delay (d2), s/veh	1.5	0.0	0.1	1.1	2.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	12.6	0.0	0.1	10.1	6.3	0.0		
LnGrp Delay(d),s/veh	10.5	0.0	14.5	9.6	23.9	0.0		
LnGrp LOS	B		B	A	C			
Approach Vol, veh/h	1291			1064	419			
Approach Delay, s/veh	10.5			9.6	23.9			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		44.0		21.0		44.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		37.7		15.4		37.7		
Max Q Clear Time (g_c+1), s		17.7		8.9		18.2		
Green Ext Time (p_c), s		18.8		1.1		18.4		
Intersection Summary								
HCM 2010 Ctrl Delay			12.2					
HCM 2010 LOS			B					

Intersection							
Int Delay, s/veh	1.5						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	46	74	0	372	2	3	542
Future Vol, veh/h	46	74	0	372	2	3	542
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	130	-	-	100	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	92	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	52	84	0	423	2	3	616
Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	739	213	449	0	0	425	0
Stage 1	424	-	-	-	-	-	-
Stage 2	315	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	353	792	746	-	-	1131	-
Stage 1	628	-	-	-	-	-	-
Stage 2	713	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	352	792	746	-	-	1131	-
Mov Cap-2 Maneuver	352	-	-	-	-	-	-
Stage 1	628	-	-	-	-	-	-
Stage 2	711	-	-	-	-	-	-
Approach	WB	NB		SB			
HCM Control Delay, s	12.7	0		0			
HCM LOS	B						
Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	746	-	- 352 792	1131	-		
HCM Lane V/C Ratio	-	-	- 0.149 0.106	0.003	-		
HCM Control Delay (s)	0	-	- 17 10.1	8.2	-		
HCM Lane LOS	A	-	- C B	A	-		
HCM 95th %tile Q(veh)	0	-	- 0.5 0.4	0	-		

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	0	520	0	311	4	107	41
Future Vol, veh/h	0	520	0	311	4	107	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	130	-	60	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	3	2	2	2
Mvmt Flow	0	565	0	338	4	116	45

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	342	0	412	-	0	623
Stage 1	-	-	-	-	-	340
Stage 2	-	-	-	-	-	283
Critical Hdwy	4.14	-	6.44	-	-	6.84
Critical Hdwy Stg 1	-	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	-	5.84
Follow-up Hdwy	2.22	-	2.52	-	-	3.52
Pot Cap-1 Maneuver	1214	-	787	-	-	418
Stage 1	-	-	-	-	-	692
Stage 2	-	-	-	-	-	740
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1214	-	787	-	-	418
Mov Cap-2 Maneuver	-	-	-	-	-	418
Stage 1	-	-	-	-	-	692
Stage 2	-	-	-	-	-	740

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1214	-	787	-	-	418	843
HCM Lane V/C Ratio	-	-	-	-	-	0.278	0.053
HCM Control Delay (s)	0	-	0	-	-	16.9	9.5
HCM Lane LOS	A	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0	-	0	-	-	1.1	0.2

HCM 2010 Signalized Intersection Summary
5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	72	521	347	184	165	149	1686	18	60	1298	6
Future Volume (veh/h)	19	72	521	347	184	165	149	1686	18	60	1298	6
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1845	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	21	78	566	377	200	179	162	1833	0	65	1411	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	3	2	2	2	2	2	2	2
Cap, veh/h	26	565	480	411	688	591	229	2057	0	134	1872	583
Arrive On Green	0.01	0.30	0.30	0.08	0.37	0.37	0.07	0.40	0.00	0.03	0.37	0.00
Sat Flow, veh/h	1774	1863	1583	1774	1845	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	21	78	566	377	200	179	162	1833	0	65	1411	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1845	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	1.5	4.0	39.4	10.4	9.9	10.4	7.2	43.6	0.0	3.0	31.5	0.0
Cycle Q Clear(g_c), s	1.5	4.0	39.4	10.4	9.9	10.4	7.2	43.6	0.0	3.0	31.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	26	565	480	411	688	591	229	2057	0	134	1872	583
V/C Ratio(X)	0.82	0.14	1.18	0.92	0.29	0.30	0.71	0.89	0.00	0.48	0.75	0.00
Avail Cap(c_a), veh/h	68	565	480	411	688	591	264	2057	0	141	1872	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.9	33.0	45.3	37.4	28.6	28.8	28.6	36.0	0.0	31.7	35.9	0.0
Incr Delay (d2), s/veh	20.4	0.1	100.6	24.9	0.2	0.2	5.3	6.3	0.0	1.0	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	3.7	55.0	17.6	8.8	8.1	6.8	29.2	0.0	2.7	21.7	0.0
LnGrp Delay(d),s/veh	84.2	33.0	145.9	62.3	28.8	29.0	33.9	42.4	0.0	32.7	38.8	0.0
LnGrp LOS	F	C	F	E	C	C	C	D		C	D	
Approach Vol, veh/h	665				756				1995			
Approach Delay, s/veh	130.7				45.6				41.7			
Approach LOS	F				D				D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.8	54.2	6.9	54.1	10.1	58.9	16.0	45.0				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	11.8	45.3	5.0	45.4	5.0	52.1	10.4	39.4				
Max Q Clear Time (g_c+I1), s	9.2	33.5	3.5	12.4	5.0	45.6	12.4	41.4				
Green Ext Time (p_c), s	0.0	11.6	0.0	3.7	0.0	6.4	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	53.4											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	758	500	142	1356	311	36		
Future Volume (veh/h)	758	500	142	1356	311	36		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	806	0	151	1443	331	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2325	1040	485	2325	551	253		
Arrive On Green	0.66	0.00	0.66	0.66	0.16	0.00		
Sat Flow, veh/h	3632	1583	673	3632	3442	1583		
Grp Volume(v), veh/h	806	0	151	1443	331	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	673	1770	1721	1583		
Q Serve(g_s), s	6.6	0.0	8.4	15.4	5.8	0.0		
Cycle Q Clear(g_c), s	6.6	0.0	14.9	15.4	5.8	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2325	1040	485	2325	551	253		
V/C Ratio(X)	0.35	0.00	0.31	0.62	0.60	0.00		
Avail Cap(c_a), veh/h	2325	1040	485	2325	551	253		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	5.0	0.0	8.3	6.5	25.4	0.0		
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.7	4.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	5.9	0.0	2.9	11.9	5.6	0.0		
LnGrp Delay(d),s/veh	5.4	0.0	9.0	7.2	30.2	0.0		
LnGrp LOS	A		A	A	C			
Approach Vol, veh/h	806			1594	331			
Approach Delay, s/veh	5.4			7.4	30.2			
Approach LOS	A			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		49.0		16.0		49.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		42.7		10.4		42.7		
Max Q Clear Time (g_c+I1), s		8.6		7.8		17.4		
Green Ext Time (p_c), s		31.3		0.4		23.7		
Intersection Summary								
HCM 2010 Ctrl Delay			9.5					
HCM 2010 LOS			A					

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	0	49	0	0	5	60	381	36	47	406	87
Future Vol, veh/h	30	0	49	0	0	5	60	381	36	47	406	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	20	0	2	2	2	3	0
Mvmt Flow	34	0	56	0	0	6	68	433	41	53	461	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	971	1228	280	928	-	237	560	0	0	474	0	0
Stage 1	618	618	-	590	-	-	-	-	-	-	-	-
Stage 2	353	610	-	338	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	-	7.3	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	-	3.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	210	180	723	226	0	712	1021	-	-	1084	-	-
Stage 1	448	484	-	466	0	-	-	-	-	-	-	-
Stage 2	642	488	-	656	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	190	160	723	191	-	712	1021	-	-	1084	-	-
Mov Cap-2 Maneuver	190	160	-	191	-	-	-	-	-	-	-	-
Stage 1	418	460	-	435	-	-	-	-	-	-	-	-
Stage 2	594	455	-	576	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.8	10.1	1.1	0.7
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1021	-	-	350	-	712	1084
HCM Lane V/C Ratio	0.067	-	-	0.256	-	0.008	0.049
HCM Control Delay (s)	8.8	-	-	18.8	0	10.1	8.5
HCM Lane LOS	A	-	-	C	A	B	A
HCM 95th %tile Q(veh)	0.2	-	-	1	-	0	0.2

Intersection

Int Delay, s/veh 12.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	368	93	449	439	51	130
Future Vol, veh/h	368	93	449	439	51	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	185	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	391	99	478	467	54	138

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1630
Stage 1	-	-	441
Stage 2	-	-	1189
Critical Hdwy	-	4.1	6.8
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	5.8
Follow-up Hdwy	-	2.2	3.5
Pot Cap-1 Maneuver	-	1084	94
Stage 1	-	-	622
Stage 2	-	-	256
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1084	~ 53
Mov Cap-2 Maneuver	-	-	~ 53
Stage 1	-	-	622
Stage 2	-	-	143

Approach	EB	WB	NB
HCM Control Delay, s	0	5.5	79.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	53	762	-	-	1084	-
HCM Lane V/C Ratio	1.024	0.181	-	-	0.441	-
HCM Control Delay (s)	255.2	10.8	-	-	10.9	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	4.6	0.7	-	-	2.3	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	16	458	31	0	0	900	135	0	0	34	5	0	3
Future Vol, veh/h	16	458	31	0	0	900	135	0	0	34	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	130	-	-	-	60	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	92	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	4	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	487	33	0	0	957	144	0	0	36	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	1101	0	0	379	-	-	0	-	-	260	1307	-	551
Stage 1	-	-	-	-	-	-	-	-	-	-	1029	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	278	-	-
Critical Hdwy	4.14	-	-	6.44	-	-	-	-	-	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	6.54	-	-
Follow-up Hdwy	2.22	-	-	2.52	-	-	-	-	-	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	630	-	-	826	0	-	-	0	0	739	117	0	478
Stage 1	-	-	-	-	0	-	-	0	0	-	250	0	-
Stage 2	-	-	-	-	0	-	-	0	0	-	705	0	-
Platoon blocked, %		-	-			-	-						
Mov Cap-1 Maneuver	630	-	-	788	-	-	-	-	-	739	109	-	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	109	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	243	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	652	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	10.1	29.5
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	739	630	-	-	788	-	-	109	478
HCM Lane V/C Ratio	0.049	0.027	-	-	-	-	-	0.049	0.007
HCM Control Delay (s)	10.1	10.9	-	-	0	-	-	39.7	12.6
HCM Lane LOS	B	B	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2	0

HCM 2010 Signalized Intersection Summary
5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	154	269	38	165	61	714	1070	159	216	1261	84
Future Volume (veh/h)	41	154	269	38	165	61	714	1070	159	216	1261	84
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1827	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	44	164	286	40	176	65	760	1138	0	230	1341	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	4	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	249	208	155	270	229	616	2873	0	409	1928	600
Arrive On Green	0.02	0.13	0.13	0.03	0.14	0.14	0.28	0.56	0.00	0.09	0.38	0.00
Sat Flow, veh/h	1774	1863	1553	1774	1863	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	44	164	286	40	176	65	760	1138	0	230	1341	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1553	1774	1863	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	3.0	10.9	17.4	2.5	11.6	4.8	36.4	16.3	0.0	10.2	28.9	0.0
Cycle Q Clear(g_c), s	3.0	10.9	17.4	2.5	11.6	4.8	36.4	16.3	0.0	10.2	28.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	249	208	155	270	229	616	2873	0	409	1928	600
V/C Ratio(X)	1.07	0.66	1.38	0.26	0.65	0.28	1.23	0.40	0.00	0.56	0.70	0.00
Avail Cap(c_a), veh/h	41	249	208	176	292	248	616	2873	0	425	1928	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.5	53.5	56.3	47.0	52.5	49.6	34.1	15.9	0.0	20.7	34.0	0.0
Incr Delay (d2), s/veh	163.6	5.7	196.5	0.3	4.1	0.5	119.1	0.4	0.0	0.9	2.1	0.0
Initial Q Delay(d3),s/veh	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	10.0	33.9	2.2	10.4	3.8	76.4	12.2	0.0	8.7	20.0	0.0
LnGrp Delay(d),s/veh	229.8	59.2	252.8	47.4	56.6	50.1	153.1	16.3	0.0	21.6	36.1	0.0
LnGrp LOS	F	E	F	D	E	D	F	B		C	D	
Approach Vol, veh/h		494			281			1898			1571	
Approach Delay, s/veh		186.5			53.7			71.1			34.0	
Approach LOS		F			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	42.0	55.6	8.0	24.4	17.8	79.7	9.4	23.0				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	36.4	47.7	3.0	20.4	13.4	70.7	5.4	17.4				
Max Q Clear Time (g_c+I1), s	38.4	30.9	5.0	13.6	12.2	18.3	4.5	19.4				
Green Ext Time (p_c), s	0.0	15.9	0.0	1.6	0.0	45.5	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			69.6									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↗	↖	↑↑	↖↗	↗		
Traffic Volume (veh/h)	1186	462	40	985	514	143		
Future Volume (veh/h)	1186	462	40	985	514	143		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1743	1863	1863		
Adj Flow Rate, veh/h	1275	0	43	1059	553	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	9	2	2		
Cap, veh/h	2053	918	259	1921	815	375		
Arrive On Green	0.58	0.00	0.58	0.58	0.24	0.00		
Sat Flow, veh/h	3632	1583	432	3399	3442	1583		
Grp Volume(v), veh/h	1275	0	43	1059	553	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	432	1656	1721	1583		
Q Serve(g_s), s	15.4	0.0	4.7	12.8	9.5	0.0		
Cycle Q Clear(g_c), s	15.4	0.0	20.1	12.8	9.5	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2053	918	259	1921	815	375		
V/C Ratio(X)	0.62	0.00	0.17	0.55	0.68	0.00		
Avail Cap(c_a), veh/h	2053	918	259	1921	815	375		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	9.0	0.0	15.6	8.4	22.5	0.0		
Incr Delay (d2), s/veh	1.4	0.0	1.4	1.1	4.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	12.4	0.0	1.2	10.1	8.6	0.0		
LnGrp Delay(d),s/veh	10.4	0.0	16.9	9.6	27.1	0.0		
LnGrp LOS	B		B	A	C			
Approach Vol, veh/h	1275			1102	553			
Approach Delay, s/veh	10.4			9.9	27.1			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		44.0		21.0		44.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		37.7		15.4		37.7		
Max Q Clear Time (g_c+I1), s		17.4		11.5		22.1		
Green Ext Time (p_c), s		19.2		1.0		14.9		
Intersection Summary								
HCM 2010 Ctrl Delay			13.3					
HCM 2010 LOS			B					

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔		↔	↔	↔		↔	↔	
Traffic Vol, veh/h	65	0	31	46	0	74	61	496	2	3	594	61
Future Vol, veh/h	65	0	31	46	0	74	61	496	2	3	594	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	2	2	0
Mvmt Flow	74	0	35	52	0	84	69	564	2	3	675	69
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1136	1421	372	1047	-	283	744	0	0	566	0	0
Stage 1	716	716	-	703	-	-	-	-	-	-	-	-
Stage 2	420	705	-	344	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.54	-	6.94	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.52	-	3.32	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	159	138	631	182	0	714	873	-	-	1002	-	-
Stage 1	392	437	-	394	0	-	-	-	-	-	-	-
Stage 2	587	442	-	645	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	131	127	631	161	-	714	873	-	-	1002	-	-
Mov Cap-2 Maneuver	131	127	-	161	-	-	-	-	-	-	-	-
Stage 1	361	436	-	363	-	-	-	-	-	-	-	-
Stage 2	477	407	-	607	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	54			21.1			1			0		
HCM LOS	F			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR			
Capacity (veh/h)	873	-	-	176	161	714	1002	-	-			
HCM Lane V/C Ratio	0.079	-	-	0.62	0.325	0.118	0.003	-	-			
HCM Control Delay (s)	9.5	-	-	54	37.8	10.7	8.6	-	-			
HCM Lane LOS	A	-	-	F	E	B	A	-	-			
HCM 95th %tile Q(veh)	0.3	-	-	3.5	1.3	0.4	0	-	-			

Intersection						
Int Delay, s/veh	24.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	600	38	226	424	124	331
Future Vol, veh/h	600	38	226	424	124	331
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	185	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	645	41	243	456	133	356
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	686	0	1380	343
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	714	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	917	-	138	659
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	452	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	917	-	~ 101	659
Mov Cap-2 Maneuver	-	-	-	-	~ 101	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	332	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.6		87.1	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	101	659	-	-	917	-
HCM Lane V/C Ratio	1.32	0.54	-	-	0.265	-
HCM Control Delay (s)	275	16.7	-	-	10.3	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	9.4	3.2	-	-	1.1	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Intersection															
Int Delay, s/veh		11.3													
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR		NBL	NBT	NBR		SBL	SBT	SBR
Lane Configurations															
Traffic Vol, veh/h	0	883	15	0	0	598	4		0	0	138		107	0	41
Future Vol, veh/h	0	883	15	0	0	598	4		0	0	138		107	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0		0	0	0		0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop		Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None		-	-	None		-	-	None
Storage Length	130	-	-	-	60	-	-		-	-	0		0	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-		-	0	-		-	0	-
Grade, %	-	0	-	-	-	0	-		-	0	-		-	0	-
Peak Hour Factor	92	92	92	92	92	92	92		92	92	92		92	92	92
Heavy Vehicles, %	2	2	2	2	2	3	2		2	2	2		2	2	2
Mvmt Flow	0	960	16	0	0	650	4		0	0	150		116	0	45
Major/Minor	Major1			Major2			Minor1			Minor2					
Conflicting Flow All	654	0	0	712	-	-	0		-	-	488		1132	-	327
Stage 1	-	-	-	-	-	-	-		-	-	-		652	-	-
Stage 2	-	-	-	-	-	-	-		-	-	-		480	-	-
Critical Hdwy	4.14	-	-	6.44	-	-	-		-	-	6.94		7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-		-	-	-		6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-		-	-	-		6.54	-	-
Follow-up Hdwy	2.22	-	-	2.52	-	-	-		-	-	3.32		3.52	-	3.32
Pot Cap-1 Maneuver	929	-	-	508	0	-	-		0	0	526		158	0	669
Stage 1	-	-	-	-	0	-	-		0	0	-		423	0	-
Stage 2	-	-	-	-	0	-	-		0	0	-		536	0	-
Platoon blocked, %		-	-		-	-									
Mov Cap-1 Maneuver	929	-	-	375	-	-	-		-	-	526		~ 113	-	669
Mov Cap-2 Maneuver	-	-	-	-	-	-	-		-	-	-		~ 113	-	-
Stage 1	-	-	-	-	-	-	-		-	-	-		423	-	-
Stage 2	-	-	-	-	-	-	-		-	-	-		383	-	-
Approach	EB			WB			NB			SB					
HCM Control Delay, s	0			0			14.6			122.4					
HCM LOS							B			F					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBU	WBT	WBR	SBLn1	SBLn2						
Capacity (veh/h)	526	929	-	-	375	-	-	113	669						
HCM Lane V/C Ratio	0.285	-	-	-	-	-	-	1.029	0.067						
HCM Control Delay (s)	14.6	0	-	-	0	-	-	165.1	10.8						
HCM Lane LOS	B	A	-	-	A	-	-	F	B						
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	6.8	0.2						
Notes															
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon							

HCM 2010 Signalized Intersection Summary
 5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	131	868	347	210	165	346	1676	18	60	1278	69
Future Volume (veh/h)	114	131	868	347	210	165	346	1676	18	60	1278	69
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1845	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	124	142	943	377	228	179	376	1822	0	65	1389	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	3	2	2	2	2	2	2	2
Cap, veh/h	68	565	480	324	644	553	257	2055	0	136	1772	552
Arrive On Green	0.04	0.30	0.30	0.08	0.35	0.35	0.09	0.40	0.00	0.04	0.35	0.00
Sat Flow, veh/h	1774	1863	1583	1774	1845	1583	1774	5253	0	1774	5085	1583
Grp Volume(v), veh/h	124	142	943	377	228	179	376	1822	0	65	1389	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1845	1583	1774	1695	0	1774	1695	1583
Q Serve(g_s), s	5.0	7.5	39.4	10.4	11.9	10.8	11.8	43.3	0.0	3.0	31.8	0.0
Cycle Q Clear(g_c), s	5.0	7.5	39.4	10.4	11.9	10.8	11.8	43.3	0.0	3.0	31.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	565	480	324	644	553	257	2055	0	136	1772	552
V/C Ratio(X)	1.82	0.25	1.97	1.16	0.35	0.32	1.47	0.89	0.00	0.48	0.78	0.00
Avail Cap(c_a), veh/h	68	565	480	324	644	553	257	2055	0	142	1772	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.5	34.2	45.3	38.4	31.4	31.0	30.6	36.0	0.0	32.2	38.0	0.0
Incr Delay (d2), s/veh	419.2	0.2	441.8	101.5	0.2	0.2	229.6	6.1	0.0	1.0	3.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	6.9	136.9	30.6	10.2	8.3	35.6	29.0	0.0	2.7	22.0	0.0
LnGrp Delay(d),s/veh	481.7	34.3	487.1	139.8	31.7	31.3	260.1	42.1	0.0	33.2	41.5	0.0
LnGrp LOS	F	C	F	F	C	C	F	D		C	D	
Approach Vol, veh/h	1209				784				2198			
Approach Delay, s/veh	433.4				83.6				79.4			
Approach LOS	F				F				E			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	51.6	10.0	51.0	10.2	58.8	16.0	45.0				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	11.8	45.3	5.0	45.4	5.0	52.1	10.4	39.4				
Max Q Clear Time (g_c+I1), s	13.8	33.8	7.0	13.9	5.0	45.3	12.4	41.4				
Green Ext Time (p_c), s	0.0	11.4	0.0	6.6	0.0	6.8	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	145.9											
HCM 2010 LOS	F											

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	758	500	142	1356	311	36		
Future Volume (veh/h)	758	500	142	1356	311	36		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	806	0	151	1443	331	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2053	918	418	2053	815	375		
Arrive On Green	0.58	0.00	0.58	0.58	0.24	0.00		
Sat Flow, veh/h	3632	1583	673	3632	3442	1583		
Grp Volume(v), veh/h	806	0	151	1443	331	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	673	1770	1721	1583		
Q Serve(g_s), s	8.1	0.0	10.2	18.8	5.3	0.0		
Cycle Q Clear(g_c), s	8.1	0.0	18.3	18.8	5.3	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2053	918	418	2053	815	375		
V/C Ratio(X)	0.39	0.00	0.36	0.70	0.41	0.00		
Avail Cap(c_a), veh/h	2053	918	418	2053	815	375		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	7.4	0.0	12.4	9.7	20.9	0.0		
Incr Delay (d2), s/veh	0.6	0.0	2.4	2.0	1.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	7.3	0.0	3.9	14.7	4.8	0.0		
LnGrp Delay(d),s/veh	8.0	0.0	14.8	11.7	22.4	0.0		
LnGrp LOS	A		B	B	C			
Approach Vol, veh/h	806			1594	331			
Approach Delay, s/veh	8.0			12.0	22.4			
Approach LOS	A			B	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		44.0		21.0		44.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		37.7		15.4		37.7		
Max Q Clear Time (g_c+I1), s		10.1		7.3		20.8		
Green Ext Time (p_c), s		25.7		0.9		16.1		
Intersection Summary								
HCM 2010 Ctrl Delay			12.1					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	0	49	0	0	5	60	381	36	47	406	87
Future Vol, veh/h	30	0	49	0	0	5	60	381	36	47	406	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	20	0	2	2	2	3	0
Mvmt Flow	34	0	56	0	0	6	68	433	41	53	461	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	971	1228	280	928	-	237	560	0	0	474	0	0
Stage 1	618	618	-	590	-	-	-	-	-	-	-	-
Stage 2	353	610	-	338	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	-	7.3	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	-	3.5	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	210	180	723	226	0	712	1021	-	-	1084	-	-
Stage 1	448	484	-	466	0	-	-	-	-	-	-	-
Stage 2	642	488	-	656	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	190	160	723	191	-	712	1021	-	-	1084	-	-
Mov Cap-2 Maneuver	190	160	-	191	-	-	-	-	-	-	-	-
Stage 1	418	460	-	435	-	-	-	-	-	-	-	-
Stage 2	594	455	-	576	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.8	10.1	1.1	0.7
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1021	-	-	350	-	712	1084
HCM Lane V/C Ratio	0.067	-	-	0.256	-	0.008	0.049
HCM Control Delay (s)	8.8	-	-	18.8	0	10.1	8.5
HCM Lane LOS	A	-	-	C	A	B	A
HCM 95th %tile Q(veh)	0.2	-	-	1	-	0	0.2

HCM 2010 Signalized Intersection Summary
3: Proposed Site Driveway 2 & Lakeview Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	368	93	449	439	51	130		
Future Volume (veh/h)	368	93	449	439	51	130		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1870	1900	1900	1863	1900	1900		
Adj Flow Rate, veh/h	391	99	478	467	54	0		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	0	2	0	0		
Cap, veh/h	2080	521	751	2614	139	124		
Arrive On Green	0.74	0.74	0.74	0.74	0.08	0.00		
Sat Flow, veh/h	2910	706	921	3632	1810	1615		
Grp Volume(v), veh/h	245	245	478	467	54	0		
Grp Sat Flow(s),veh/h/ln	1777	1746	921	1770	1810	1615		
Q Serve(g_s), s	2.7	2.8	21.3	2.6	1.8	0.0		
Cycle Q Clear(g_c), s	2.7	2.8	24.1	2.6	1.8	0.0		
Prop In Lane		0.40	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	1312	1289	751	2614	139	124		
V/C Ratio(X)	0.19	0.19	0.64	0.18	0.39	0.00		
Avail Cap(c_a), veh/h	1312	1289	751	2614	139	124		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	2.6	2.6	6.3	2.6	28.5	0.0		
Incr Delay (d2), s/veh	0.3	0.3	1.8	0.0	8.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	2.5	2.5	9.6	2.2	2.2	0.0		
LnGrp Delay(d),s/veh	2.9	2.9	8.0	2.6	36.5	0.0		
LnGrp LOS	A	A	A	A	D			
Approach Vol, veh/h	490			945	54			
Approach Delay, s/veh	2.9			5.3	36.5			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		54.0		11.0		54.0		
Change Period (Y+Rc), s		6.0		6.0		6.0		
Max Green Setting (Gmax), s		48.0		5.0		48.0		
Max Q Clear Time (g_c+I1), s		4.8		3.8		26.1		
Green Ext Time (p_c), s		13.2		0.0		10.2		
Intersection Summary								
HCM 2010 Ctrl Delay			5.7					
HCM 2010 LOS			A					

Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	16	458	31	0	0	900	135	0	0	34	5	0	3
Future Vol, veh/h	16	458	31	0	0	900	135	0	0	34	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	130	-	-	-	60	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	92	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	4	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	487	33	0	0	957	144	0	0	36	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	1101	0	0	379	-	-	0	-	-	260	1307	-	551
Stage 1	-	-	-	-	-	-	-	-	-	-	1029	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	278	-	-
Critical Hdwy	4.14	-	-	6.44	-	-	-	-	-	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	6.54	-	-
Follow-up Hdwy	2.22	-	-	2.52	-	-	-	-	-	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	630	-	-	826	0	-	-	0	0	739	117	0	478
Stage 1	-	-	-	-	0	-	-	0	0	-	250	0	-
Stage 2	-	-	-	-	0	-	-	0	0	-	705	0	-
Platoon blocked, %		-	-			-	-						
Mov Cap-1 Maneuver	630	-	-	788	-	-	-	-	-	739	109	-	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	109	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	243	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	652	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	10.1	29.5
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	739	630	-	-	788	-	-	109	478
HCM Lane V/C Ratio	0.049	0.027	-	-	-	-	-	0.049	0.007
HCM Control Delay (s)	10.1	10.9	-	-	0	-	-	39.7	12.6
HCM Lane LOS	B	B	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2	0

HCM 2010 Signalized Intersection Summary
 5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	154	269	38	165	61	714	1070	159	216	1261	84
Future Volume (veh/h)	41	154	269	38	165	61	714	1070	159	216	1261	84
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1827	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	44	164	286	40	176	65	760	1138	0	230	1341	0
Adj No. of Lanes	1	1	2	1	1	1	2	3	0	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	4	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	214	968	135	218	185	823	3004	0	427	2232	695
Arrive On Green	0.03	0.11	0.11	0.03	0.12	0.12	0.24	0.59	0.00	0.09	0.44	0.00
Sat Flow, veh/h	1774	1863	2733	1774	1863	1583	3442	5253	0	1774	5085	1583
Grp Volume(v), veh/h	44	164	286	40	176	65	760	1138	0	230	1341	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1367	1774	1863	1583	1721	1695	0	1774	1695	1583
Q Serve(g_s), s	3.2	11.1	9.8	2.6	12.0	4.9	28.0	15.3	0.0	9.2	26.1	0.0
Cycle Q Clear(g_c), s	3.2	11.1	9.8	2.6	12.0	4.9	28.0	15.3	0.0	9.2	26.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	214	968	135	218	185	823	3004	0	427	2232	695
V/C Ratio(X)	0.78	0.77	0.30	0.30	0.81	0.35	0.92	0.38	0.00	0.54	0.60	0.00
Avail Cap(c_a), veh/h	82	264	1041	157	264	224	990	3004	0	529	2232	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.5	55.8	30.3	49.2	56.0	52.9	48.3	14.0	0.0	16.8	27.8	0.0
Incr Delay (d2), s/veh	14.6	9.3	0.1	0.4	13.3	0.8	11.3	0.4	0.0	0.4	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	10.4	6.7	2.3	11.3	3.9	20.9	11.7	0.0	7.9	18.2	0.0
LnGrp Delay(d),s/veh	77.0	65.1	30.4	49.6	69.3	53.7	59.6	14.4	0.0	17.2	29.0	0.0
LnGrp LOS	E	E	C	D	E	D	E	B		B	C	
Approach Vol, veh/h		494			281			1898			1571	
Approach Delay, s/veh		46.1			62.9			32.5			27.3	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.7	63.4	9.1	20.8	17.0	83.1	9.4	20.5				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	37.4	45.7	6.0	18.4	18.9	64.2	5.4	18.4				
Max Q Clear Time (g_c+I1), s	30.0	28.1	5.2	14.0	11.2	17.3	4.6	13.1				
Green Ext Time (p_c), s	1.1	16.6	0.0	1.2	0.2	41.3	0.0	1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			34.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

1: Lakeview Pkwy & Morrison Pkwy

360 Tech Village
02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	1186	462	40	985	514	143		
Future Volume (veh/h)	1186	462	40	985	514	143		
Number	2	12	1	6	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1743	1863	1863		
Adj Flow Rate, veh/h	1275	0	43	1059	553	0		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	9	2	2		
Cap, veh/h	2053	918	259	1921	815	375		
Arrive On Green	0.58	0.00	0.58	0.58	0.24	0.00		
Sat Flow, veh/h	3632	1583	432	3399	3442	1583		
Grp Volume(v), veh/h	1275	0	43	1059	553	0		
Grp Sat Flow(s),veh/h/ln	1770	1583	432	1656	1721	1583		
Q Serve(g_s), s	15.4	0.0	4.7	12.8	9.5	0.0		
Cycle Q Clear(g_c), s	15.4	0.0	20.1	12.8	9.5	0.0		
Prop In Lane		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	2053	918	259	1921	815	375		
V/C Ratio(X)	0.62	0.00	0.17	0.55	0.68	0.00		
Avail Cap(c_a), veh/h	2053	918	259	1921	815	375		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	9.0	0.0	15.6	8.4	22.5	0.0		
Incr Delay (d2), s/veh	1.4	0.0	1.4	1.1	4.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	12.4	0.0	1.2	10.1	8.6	0.0		
LnGrp Delay(d),s/veh	10.4	0.0	16.9	9.6	27.1	0.0		
LnGrp LOS	B		B	A	C			
Approach Vol, veh/h	1275			1102	553			
Approach Delay, s/veh	10.4			9.9	27.1			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		44.0		21.0		44.0		
Change Period (Y+Rc), s		6.3		5.6		6.3		
Max Green Setting (Gmax), s		37.7		15.4		37.7		
Max Q Clear Time (g_c+I1), s		17.4		11.5		22.1		
Green Ext Time (p_c), s		19.2		1.0		14.9		
Intersection Summary								
HCM 2010 Ctrl Delay			13.3					
HCM 2010 LOS			B					

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔		↔	↔	↔		↔	↔	
Traffic Vol, veh/h	65	0	31	46	0	74	61	496	2	3	594	61
Future Vol, veh/h	65	0	31	46	0	74	61	496	2	3	594	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	2	2	0
Mvmt Flow	74	0	35	52	0	84	69	564	2	3	675	69
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1136	1421	372	1047	-	283	744	0	0	566	0	0
Stage 1	716	716	-	703	-	-	-	-	-	-	-	-
Stage 2	420	705	-	344	-	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.54	-	6.94	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.52	-	3.32	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	159	138	631	182	0	714	873	-	-	1002	-	-
Stage 1	392	437	-	394	0	-	-	-	-	-	-	-
Stage 2	587	442	-	645	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	131	127	631	161	-	714	873	-	-	1002	-	-
Mov Cap-2 Maneuver	131	127	-	161	-	-	-	-	-	-	-	-
Stage 1	361	436	-	363	-	-	-	-	-	-	-	-
Stage 2	477	407	-	607	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	54			21.1			1			0		
HCM LOS	F			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR			
Capacity (veh/h)	873	-	-	176	161	714	1002	-	-			
HCM Lane V/C Ratio	0.079	-	-	0.62	0.325	0.118	0.003	-	-			
HCM Control Delay (s)	9.5	-	-	54	37.8	10.7	8.6	-	-			
HCM Lane LOS	A	-	-	F	E	B	A	-	-			
HCM 95th %tile Q(veh)	0.3	-	-	3.5	1.3	0.4	0	-	-			

HCM 2010 Signalized Intersection Summary

3: Proposed Site Driveway 2 & Lakeview Pkwy

360 Tech Village

02/16/2017

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	600	38	226	424	124	331		
Future Volume (veh/h)	600	38	226	424	124	331		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1865	1900	1900	1863	1900	1900		
Adj Flow Rate, veh/h	645	41	243	456	133	0		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	0	2	0	0		
Cap, veh/h	1801	114	444	1883	484	432		
Arrive On Green	0.53	0.53	0.53	0.53	0.27	0.00		
Sat Flow, veh/h	3477	215	768	3632	1810	1615		
Grp Volume(v), veh/h	337	349	243	456	133	0		
Grp Sat Flow(s),veh/h/ln	1772	1827	768	1770	1810	1615		
Q Serve(g_s), s	6.6	6.6	16.0	4.1	3.5	0.0		
Cycle Q Clear(g_c), s	6.6	6.6	22.6	4.1	3.5	0.0		
Prop In Lane		0.12	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	943	972	444	1883	484	432		
V/C Ratio(X)	0.36	0.36	0.55	0.24	0.27	0.00		
Avail Cap(c_a), veh/h	1095	1129	510	2188	484	432		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	8.1	8.1	14.6	7.5	17.3	0.0		
Incr Delay (d2), s/veh	0.2	0.2	1.1	0.1	1.4	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	5.8	6.0	6.3	3.6	3.5	0.0		
LnGrp Delay(d),s/veh	8.3	8.3	15.7	7.6	18.7	0.0		
LnGrp LOS	A	A	B	A	B			
Approach Vol, veh/h	686			699	133			
Approach Delay, s/veh	8.3			10.4	18.7			
Approach LOS	A			B	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.0		37.8				37.8
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		16.0		37.0				37.0
Max Q Clear Time (g_c+I1), s		5.5		8.6				24.6
Green Ext Time (p_c), s		0.2		11.6				7.2
Intersection Summary								
HCM 2010 Ctrl Delay			10.2					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 11.3

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	883	15	0	0	598	4	0	0	138	107	0	41
Future Vol, veh/h	0	883	15	0	0	598	4	0	0	138	107	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	130	-	-	-	60	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	0	960	16	0	0	650	4	0	0	150	116	0	45

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	654	0	0	712	-	-	0	-	-	488	1132	-	327
Stage 1	-	-	-	-	-	-	-	-	-	-	652	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	480	-	-
Critical Hdwy	4.14	-	-	6.44	-	-	-	-	-	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	6.54	-	-
Follow-up Hdwy	2.22	-	-	2.52	-	-	-	-	-	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	929	-	-	508	0	-	-	0	0	526	158	0	669
Stage 1	-	-	-	-	0	-	-	0	0	-	423	0	-
Stage 2	-	-	-	-	0	-	-	0	0	-	536	0	-
Platoon blocked, %		-	-			-	-						
Mov Cap-1 Maneuver	929	-	-	375	-	-	-	-	-	526	~ 113	-	669
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	~ 113	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	423	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	383	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.6	122.4
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	526	929	-	-	375	-	-	113	669
HCM Lane V/C Ratio	0.285	-	-	-	-	-	-	1.029	0.067
HCM Control Delay (s)	14.6	0	-	-	0	-	-	165.1	10.8
HCM Lane LOS	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	6.8	0.2

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
5: Haynes Bridge Rd & Lakeview Pkwy/Northwinds Pkwy

360 Tech Village

02/16/2017

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	131	868	347	210	165	346	1676	18	60	1278	69
Future Volume (veh/h)	114	131	868	347	210	165	346	1676	18	60	1278	69
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1845	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	124	142	943	377	228	179	376	1822	0	65	1389	0
Adj No. of Lanes	1	1	2	1	1	1	2	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	3	2	2	2	2	2	2	2
Cap, veh/h	149	450	1017	358	518	445	424	2171	0	146	1724	537
Arrive On Green	0.08	0.24	0.24	0.12	0.28	0.28	0.12	0.43	0.00	0.04	0.34	0.00
Sat Flow, veh/h	1774	1863	2787	1774	1845	1583	3442	5253	0	1774	5085	1583
Grp Volume(v), veh/h	124	142	943	377	228	179	376	1822	0	65	1389	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1393	1774	1845	1583	1721	1695	0	1774	1695	1583
Q Serve(g_s), s	9.0	8.1	31.4	15.4	13.2	11.9	14.0	41.6	0.0	3.1	32.3	0.0
Cycle Q Clear(g_c), s	9.0	8.1	31.4	15.4	13.2	11.9	14.0	41.6	0.0	3.1	32.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	450	1017	358	518	445	424	2171	0	146	1724	537
V/C Ratio(X)	0.83	0.32	0.93	1.05	0.44	0.40	0.89	0.84	0.00	0.45	0.81	0.00
Avail Cap(c_a), veh/h	218	450	1017	358	518	445	434	2171	0	152	1724	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.7	40.5	39.6	38.2	38.4	37.9	56.1	33.3	0.0	31.1	39.1	0.0
Incr Delay (d2), s/veh	10.9	0.3	14.0	62.0	0.4	0.4	18.4	4.1	0.0	0.8	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.5	7.6	25.1	37.9	11.0	9.0	12.3	27.6	0.0	2.8	22.2	0.0
LnGrp Delay(d),s/veh	69.6	40.8	53.6	100.2	38.8	38.3	74.5	37.4	0.0	31.9	43.2	0.0
LnGrp LOS	E	D	D	F	D	D	E	D		C	D	
Approach Vol, veh/h	1209				784				2198			
Approach Delay, s/veh	53.7				68.2				43.7			
Approach LOS	D				E				D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.6	50.4	15.9	42.1	10.2	61.8	21.0	37.0				
Change Period (Y+Rc), s	5.6	6.3	5.0	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	16.4	43.7	16.0	31.4	5.1	55.0	15.4	31.4				
Max Q Clear Time (g_c+I1), s	16.0	34.3	11.0	15.2	5.1	43.6	17.4	33.4				
Green Ext Time (p_c), s	0.0	9.3	0.1	5.5	0.0	11.3	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	49.0											
HCM 2010 LOS	D											

Taylor, Elicia

From: Woodman, Michael
Sent: Thursday, October 27, 2016 2:54 PM
To: Taylor, Elicia
Subject: FW: I am opposed to the Peridot project!

This needs to go with PC packet for Met Life. Thanks.

From: Taylor, Elicia
Sent: Friday, September 23, 2016 10:54 AM
To: Pamela Reddeman <mochamepam@yahoo.com>
Cc: Woodman, Michael <mwoodman@alpharetta.ga.us>
Subject: Re: I am opposed to the Peridot project!

Ms. Reddeman,

I will forward this to the Planning Commission and City Council.

I want to make sure you are aware; This item has been deferred by Staff until November. It will not be heard in October.

Thank you.

From: Pamela Reddeman <mochamepam@yahoo.com>
Sent: Friday, September 23, 2016 10:23:54 AM
To: Taylor, Elicia
Subject: I am opposed to the Peridot project!

Dear Ms. Taylor:

I am hoping you can forward this to the planning commission and city council.

I have recently learned about a mixed use development planned for Haynes Bridge near the Quick Trip (Peridot).

I live off Mayfield Road, and am currently experiencing first hand the results of additional homes and traffic in a negative way, and I would like to voice my opposition in whatever way possible to the scope of this proposed project.

During the research and planning stages of the rezoning for the Sharp properties almost four years ago, existing residents were told there would be minimal impact on traffic from the 106 homes for the Hearthstone project. While the second phase of Hearthstone is nowhere near complete, and the third phase barely started, the impact on my morning commute down Mayfield Road has been quite substantial. At 8:45 am on a weekday morning, the drive down Mayfield Rd. from Colony Dr. to Main St. used to take less than 5 minutes; most mornings now it takes at least 15 minutes. There is only one alternate route, so there is not really anyway to avoid this congestion. Bottom line is that too many homes have been added, with no substantiating road infrastructure in place to offset the increase in traffic (mainly because a traffic study downplayed the impact, encouraging the higher

density development proposal to be passed). My fear is that the Peridot project will cause even worse traffic problems due to its size and the density proposed. Haynes Bridge Road already has enough congestion, and I didn't see plans to widen it included in the proposal.

Additionally, there are already too many rental units in this area of Alpharetta. Adding 430 apartments and 70 townhomes, in addition to the townhomes that are currently under construction in the same area, will make traffic on Haynes Bridge ridiculous, despite another (bogus) traffic study that might claim otherwise.

The continued increases in construction, rental units and its resultant traffic are all adversely impacting the quality of life for the current residents of Alpharetta. I am hoping that members of the planning commission and city council care enough about this city to not continue changing the quality of life for this city.

Sincerely,

Pam Reddeman
1081 Colony Drive, Alpharetta, GA 30009
mochamepam@yahoo.com

CITIZEN PARTICIPATION FORM - PART B

This form must be completed and submitted to the City of Alpharetta Community Development Department a minimum of twenty (20) working days prior to the scheduled Public Hearing. Failure to do so will result in cancellation of the scheduled hearing.

Public Hearing or Project Name: TPA/Fuqua Development/Periodot MP-16-13; Z-16-1; CU-16-19; V-16-25

Contact Name: Kathryn M. Zickert, ESq.

Telephone: 404-815-3500

Please describe comments and concerns provided by any and all individuals contacted as part of the the Citizen Participation Program. If any individuals provided written correspondence, please attach copies of same to this report.

Notice of filing of these Applications were mailed to all property owners within 500 feet on August 8, 2016. Copies are attached.

To date, we have not received any inquiries or comments in response to the notices. We will supplement if any inquiries are

received at a later date.

Method by which these individuals were contacted. Please mark all that apply. Please provide samples of any and all written communications used to provide notification.



Letter



Personal Visits



Telephone



Group Meeting



Email



Other (Please Specify) _____

Attach a list of people who have been notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified.

I, the undersigned, as an authorized representative of the applicant and Public Hearing item identified above, do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Citizen Participation Form - Part B and in any and all documents provided in support of this report are true and accurate. I further understand that any false statements provided by representatives of the applicant as part of this report may result in penalties up to and including denial of the subject application.

Signature of Authorized Agent: Kathryn M Zickert

Date: 9/15/14

Print Form

Promenade, Suite 3100
1230 Peachtree Street, N.E.
Atlanta, Georgia 30309-3592
Main: (404) 815-3500
www.sgrlaw.com

SMITH, GAMBRELL & RUSSELL LLP
Attorneys at Law

Kathryn M. Zickert
Direct Tel: (404) 815-3704
Direct Fax: (404) 685-7004
kmzickert@sgrlaw.com

August 8, 2016

American Honda Motor Company, Inc.
1500 Morrison Parkway
Alpharetta, Georgia 30009

This letter is to inform you that a Public Hearing Application has been submitted to the City of Alpharetta Community Development Department for property located at 2325 Lakeview Parkway, which adjoins your property.

Please be advised of the following information pertaining to the applications and public hearings:

CASE NUMBERS: PHA-16-0049	APPLICANT NAME: TPA Group and Fuqua Development Company
MASTER PLAN AMENDMENT: 62.47 acres REZONE REQUEST: From O-I to M-U (15.51 acres) VARIANCE REQUESTS: (1) allow for private roads; (2) waive prohibition upon liquor sales within certain distance of residential units; (3) eliminate requirement for retail under residential on part of two sides of the building; and (4) allow commercial component to constitute 23.1% of the use mix. CONDITIONAL USE PERMITS: (1) allow 430 "for rent" units in the Master Plan; (2) allow a bank or savings and loan; (3) allow private indoor recreational facilities; and (4) allow a spa facility.	PROPERTY SIZE: +/- 62.47 acres
STREET LOCATION: 2845 Old Milton Parkway	CONTACT PERSON: Kathryn M. Zickert TELEPHONE NUMBER: (404) 815-3500
PROPOSED DEVELOPMENT: Master Planned Community	

CITY COUNCIL HEARING October 24, 2016 at 6:30 P.M.	
PUBLIC HEARING LOCATION:	Alpharetta City Hall 2 Park Plaza, Council Chambers Alpharetta, Georgia



American Honda Motor Company, Inc.
August 8, 2016
Page 2

If you have any questions regarding this project or would like detailed information regarding this project, please feel free to contact me at the number listed above.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathryn Zickert", with a long horizontal flourish extending to the right.

Kathryn M. Zickert
Attorney

Enclosure: Application file 8/1/16

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Atlanta, Georgia 30309-3592
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SMITH, GAMBRELL & RUSSELL LLP
Attorneys at Law

Kathryn M. Zickert
Direct Tel: (404) 815-3704
Direct Fax: (404) 685-7004
kuzickert@sgrlaw.com

August 8, 2016

Fulton Science Academy, Inc.
3035 Fanfare Way
Alpharetta, Georgia 30009

This letter is to inform you that a Public Hearing Application has been submitted to the City of Alpharetta Community Development Department for property located at 2325 Lakeview Parkway, which adjoins your property.

Please be advised of the following information pertaining to the applications and public hearings:

CASE NUMBERS: PHA-16-0049	APPLICANT NAME: TPA Group and Fuqua Development Company
MASTER PLAN AMENDMENT: 62.47 acres REZONE REQUEST: From O-I to M-U (15.51 acres) VARIANCE REQUESTS: (1) allow for private roads; (2) waive prohibition upon liquor sales within certain distance of residential units; (3) eliminate requirement for retail under residential on part of two sides of the building; and (4) allow commercial component to constitute 23.1% of the use mix. CONDITIONAL USE PERMITS: (1) allow 430 "for rent" units in the Master Plan; (2) allow a bank or savings and loan; (3) allow private indoor recreational facilities; and (4) allow a spa facility.	PROPERTY SIZE: +/- 62.47 acres
STREET LOCATION: 2845 Old Milton Parkway	CONTACT PERSON: Kathryn M. Zickert TELEPHONE NUMBER: (404) 815-3500
PROPOSED DEVELOPMENT: Master Planned Community	

CITY COUNCIL HEARING
October 24, 2016 at 6:30 P.M.

PUBLIC HEARING LOCATION: Alpharetta City Hall
2 Park Plaza, Council Chambers
Alpharetta, Georgia



Fulton Science Academy, Inc.
August 8, 2016
Page 2

If you have any questions regarding this project or would like detailed information regarding this project, please feel free to contact me at the number listed above.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kathryn Zickert', written in a cursive style.

Kathryn M. Zickert
Attorney

Enclosure: Application file 8/1/16

CITY OF ALPHARETTA

PUBLIC HEARING APPLICATION AMENDED

FOR OFFICE USE ONLY

MP-16-13; Z-16-1

Case #: CU-16-19; V-16-25

☐ Fee Paid

Initial: _____

COMMUNITY DEVELOPMENT DEPARTMENT

2 PARK PLAZA

ALPHARETTA, GA 30009

1. This page should be the first page in each of your completed application packets.
2. It is preferred that all responses be typed. Illegible applications will not be accepted.
3. Prior to signing and submitting your application, please check all information supplied on the following pages to ensure that all responses are complete and accurate. Incomplete applications will not be accepted.
4. Payment of all applicable fees must be made at the time of application. Payment may be made via cash, credit card (American Express, Master Card or Visa), or check made payable to "City of Alpharetta."
5. Applications will be accepted only on the designated submittal dates between the hours of 8:30 AM and 3:30 PM.
6. If you have any questions regarding this form, please contact the Community Development Department by calling 678-297-6070.

Contact Information:

Contact Name: Kathryn M. Zickert

Telephone: 404-815-3704

Address: 1230 Peachtree St., NE

Suite: 3100

City Atlanta

State: GA

Zip: 30309

Fax: 404-685-7004

Mobile Tel: 404-906-2792

Email: kmzickert@sgrlaw.com

Subject Property Information:

Address: See Attachment A

Current Zoning: O-1 / MU

District: 1

Section: 2

Land Lot: See Att. A

Parcel ID: See Attachment A

Proposed Zoning: MU

Current Use: In use for three office buildings, mixed office/retail/residential use is already approved for this site

This Application For (Check All That Apply):

☒ Conditional Use

☒ Master Plan Amendment

☒ Rezoning

☐ Master Plan Review

☒ Variance

☒ Public Hearing

☐ Comprehensive Plan Amendment

☐ Other (Specify): _____

APPLICANT REQUEST AND INTENT

What is the proposed use(s) of the property?

Mixed use community, 62.47 acres, density is 8/units per acre

420 for rent units

70 for sale units

14,800 GSF retail

36,400 GSF restaurant

664,400 GSF office

Up to 200 room hotel

22.49 acres of green space

TOTAL LOT COVERAGE 40.4%

Applicant's Request (Please itemize the proposal):

To amend the Master Plan for 47.05 acre tract currently zoned MU. The specific conditions of master plan approval are listed on Attachment B

To rezone the 15.51 acre tract currently zoned O-I to M-U and to be attached to the 47.05 acre tract and subject it to the new Master Plan.

To secure variances: (1) to eliminate requirement for retail under residential on part of two sides of the residential buildings "for rent" as shown in Site Plan dated 9/28/16; and (2) to allow a minimum 3,000 square foot grocery store.

To secure three Conditional Use Permits: (1) to allow 430 "for rent" units in the Master Plan; (2) to allow a bank or savings and loan; and (3) to allow a hotel with up to 200 rooms.

Applicant's Intent (Please describe what the proposal would facilitate):

See attached Amended Letter of Intent

ALPHARETTA PLANNING COMMISSION REVIEW CRITERIA

How will this proposal be compatible with surrounding properties?

The property is already zoned for very similar uses and is surrounded by compatible non-residential property

How will this proposal affect the use and value of the surrounding properties?

This proposal will not have any negative impact upon the use and value of surrounding properties, to the contrary, their use and value should be improved

Can the property be developed for a reasonable economic use as currently zoned? Please explain why or why not.

The current number of "for sale" units in stacked flat format cannot be financed at this time in light of current market conditions

What would be the increase to population and traffic if the proposal were approved?

Traffic generation numbers are in the Letter of Intent. Kimley Horn is updating its 2015 study and it will be filed with the City. Projected for rent occupancy is set forth in the attached Amended Letter of Intent, projected for sale occupancy is 140.

What would be the impact to schools and utilities if the proposal were approved?

There are fewer residential units in the requested project than is currently zoned. Additionally, the price points and bedroom mixes are such that school age child generation should be normal

How is the proposal consistent with the Alpharetta Comprehensive Plan; particularly the Future Land Use Map?

The project is fully compliant with the Comprehensive Plan and FLUM which is mixed use. The project is also fully compliant with the North Point Activity Center LCI Study (2008).

Are there existing or changing conditions which affect the development of the property and support the proposed request?

Yes. The recent additional "for rent" approval of 276 residential rental units in Avalon, as well as those in City Center, signifies the appropriateness of rental product in a mixed use community. Additionally, the MU regulations expressly contemplate this type of planned community. This project is consistent with the May 22, 2015 City of Alpharetta Rental Housing Study.

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

See Amended Letter of Intent

Promenade, Suite 3100
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SMITH, GAMBRELL & RUSSELL, LLP
Attorneys at Law

Kathryn M. Zickert
Direct Tel: 404-815-3704
Direct Fax: 404-685-7004
kzickert@sgrlaw.com

October 3, 2016



Ms. Kathi Cook, Director
Community Development
City of Alpharetta, Georgia
287 South Main Street
Alpharetta, Georgia 30004

Re: Amended Application of Fuqua Development Company ("Fuqua") and the TPA Group ("TPA") to rezone 15.51 acres of property from O-I to MU and to Subject it to a Master Plan; to Amend a Master Plan and Change Zoning Conditions for 47.05 acres of land zoned MU; to Obtain Four Conditional Use Permit(s) and to Obtain Four Concurrent Variances; all in the Northwest Quadrant of Georgia 400 and Haynes Bridge Road, Land Lots 698, 699, 744, 745, 752, 753, 1st District, 2nd Section, Fulton County, Georgia

Dear Ms. Cook:

Please accept this letter as the Amended Letter of Intent for the above-referenced Applications. As you know I represent Fuqua and TPA in their efforts to rezone certain property from O-I to MU, to subject what was the O-I tract to a new Mixed Use Master Plan, and to modify a Master Plan and certain conditions of zoning relative to the mixed use development formerly known as "Peridot". Additionally, the Applicants need three Conditional Use Permits for (1) "for rent" units; (2) a full service hotel with up to 200 rooms; and (3) a bank. Fuqua and TPA also require two variances. Given the technology and office focus of the present plan, we have revised multiple aspects of the prior Master Plan. The project will blend office, retail, restaurant and residential uses into a development that will stand out from all other current mixed use developments in the City. The first phase of the project will set the tone for the entire project and will feature buildings that reference the classic architecture found in the early 1900s. The distinctive structures will blend with more modern steel and glass buildings in a second phase that will speak to the project's desire to bring people together to think creatively and to create a youthful and energetic environment that advances excellence.

The former Peridot plan for a mixed use, Master Planned Community was approved on the 47.05 acre tract in 2012. The O-I tract is part of a contiguous site zoned in 1988 and which contains 406,853 square feet of office space in three mid-rise buildings (6 to 7 stories). This



application adds an additional 15.51 acres zoned O-I to the site which includes the lake and the O-I land surrounding it. Rather than seeking to build this property as a typical office park of the type which abounded in the 80's and 90's, this tract has been held in stewardship in the hopes that ultimately it could be developed in a manner which focused upon its natural beauty. Prime among these features is the 10.16 acre lake which exists in the southwest corner of the site, and which will be one of its primary focal points. Also prime among these features is the Developers' commitment to incorporate a segment of the City's Outer Trail Loop. The third focal point is both park space at the front of the development where Haynes Bridge intersects with Lakeview Parkway (37,600 square feet), as well as the 33,506 square foot park space intended to help activate the existing lake on the property.

This project is intended to be a community in and of itself, complete with multiple dining options, office space, grocery, retail uses and residences. But it will also be a community which invites others into its center with a particular focus on the lake and multiple parks throughout the development. Most parking has been neatly tucked behind buildings and effectively screened. The project includes a roundabout, on-street parking, and linear parks as inherent traffic calming and pedestrian-friendly measures. This project, unlike some of the other mixed use developments in Atlanta, is not trying to be a huge traffic/customer draw. Instead it is intended to create a district with a full interrelationship between its residents and these nonresidential uses.

Please accept this correspondence as our Amended Letter of Intent for this Application.

I. Project Description

A. **Summary**

The Subject Property contains 62.47 acres presently zoned MU-10 (47.05 acres) and O-I (15.51 acres). It is bounded by Haynes Bridge Road on its northeastern border; the interchange and on ramp of Haynes Bridge and GA 400 and GA 400 itself to the southeast, property zoned Light Industrial and developed for the America Honda Motor facility to the west; and Westside/Morrison Parkway to the north. To the north of Westside/Morrison Parkway is property zoned office institutional and currently in use by Federal Express. East of Haynes Bridge Road are a number of tracts zoned office and a number of nonresidential uses including hotels, restaurants, an office and a bank. South of Georgia 400 is North Point Mall. The overall site is bisected by a four lane internal boulevard known as Lakeview Parkway, which serves as a connection between Northwinds Parkway and Westside Parkway. The general nature of the area as a whole is nonresidential, with a heavy emphasis upon office development with commercial outparcels.

At present three six- or seven-story office buildings have been constructed on TPA's adjacent property. They total 406,853 square feet of office space. Two are to the north of Lakeview Parkway; the third is on part of the O-I land to be rezoned to Mixed Use as proposed herein. Occupancy of these buildings is very high, with a census of 93.6%. The existing offices

alone are capable of accommodating 2,034 employees. This project contains 150% more office space, and translates into 3,322 new employees. It is these total employees who will eat, shop, and even live here.

The proposed 37,600± square foot park which fronts Lakeview Parkway, and which echoes the large green lawn that many Alpharetta residents equate to this property, is the focal point of Phase I. It will be rimmed with ground floor retail and restaurant uses, as well as a four-story office building. Restaurants will have sidewalk seating opportunities, and the park will provide further opportunities for passive and recreational uses and to enjoy food purchased from the surrounding providers. It will become a public gathering opportunity for such things as arts and crafts fairs, concerts, yoga classes, and impromptu athletic events with many programmed events each year. Parking will be allowed on the streets which surround it to afford easy access, and 10-foot sidewalks and bicycle lanes will surround it as well. Essentially it will emulate Bryant Park in New York City: a 40,000 square foot public space that has been revitalized and is considered one of the greatest public spaces in the country.

The boutique office space which faces the Park is intended to accommodate a 60,000 square foot, technology-oriented, co-working environment which will become the seed from which the project's other office developments will likely grow. Alpharetta has advertised its desire to be "The Technology City of the South" and Fuqua/TPA will seek to draw these users into a location that will provide world class technological infrastructure upon which the project's live, work and play elements will be built. This building contains flexible office space. The roof of the building could provide an opportunity for networking, social and business activities as well.

Of the total 121,400 square feet of retail space, it is anticipated that approximately 36,400 square feet will be restaurant space. The balance of the retail space will include a neighborhood grocery store per the Unified Development Ordinance, as an amenity for our proposed residences and office employees, as well as guests to the development. The hotel comprises the rest of the retail space and will be full-service.

The proposed development is not intended to create a new Alpharetta skyscraper. The tallest office building, at 12-stories, is tucked in the center of Phase II of the mixed use component adjacent to the lake on some of the lowest property of the development in terms of elevation. The development recognizes its own step down pattern: 12 stories, to 4 to 5 stories, to 2 story and one-story uses up at Lakeview Parkway. This office building, along with adjacent park and townhome community, is focused upon the existing lake and the amenities it will offer. Those include creation of a segment of Alpharetta's "Out Loop" project, as well as improvement of existing trails which encircle the lake. These will have scattered fire pits, picnic tables, and dog walking areas; as well as a new dock which would accommodate fishing and even boating in the lake itself. Finally, there is a stepped park space adjacent to that dock which would accommodate outdoor entertainment.

The larger of the two apartment buildings will offer 250 apartment homes in a four- and five-story building with a mix of studio, one-bedroom, and two-bedroom units. The one-bedrooms will include studio units at 540 to 610 square feet and will cost \$1,145 in rent. Regular one-bedroom units which will range in size from 700 square feet to 800 square feet with rents starting at \$1,400 up to \$1,500. The two bedroom units will contain 1,048 square feet up to 1,175 square feet with rents starting at \$2,000 and ranging upwards to \$2,250. These apartment homes will feature modern floorplans, quartz countertops with designer backsplashes, stainless steel appliances, 42-inch hardwood cabinetry, nine-foot ceilings, eight-foot entry doors, oversized bathtubs with tile surrounds and full-size washers and dryers. Both Studio and 1 Bedroom units will provide function and design catering towards a younger demographic working within the Alpharetta community.

The smaller of the two apartment buildings will offer 200 apartment homes on 4 levels (JDA has not site planned for P2, this is merely an estimate) above the ground floor. These units will be a mix of one and two bedrooms. The rent on the one-bedrooms will start at \$1,400 and ranging up to \$1,500. Two-bedroom apartment homes, 1,048 square feet up to 1,175 square feet with rents starting at \$2,000 and ranging upwards to \$2,250. Along with the aforementioned interior features, these apartment homes will be loft-style with open floor plans and ten-foot ceilings. Residents will have access to parking and amenity offerings by way of a bridge connecting the two apartment buildings.

In addition to the community amenities mentioned above, the apartment residents will have access to a state-of-the-art fitness center, cyber café, dog park, business center, game room, and controlled-access parking.

When the Fuqua/TPA mixed-use development project is completed, the project will offer a total of 500 “for rent” residential units: 70 luxury “for sale” townhomes and 430 luxury apartment homes in two buildings. Residents will enjoy a 24-hour live/work environment in an urban setting with outstanding amenities including multiple parks, a lake amenity with a landscaped walking path, a resort-style swimming pool, convenient street-level retail, and a neighborhood grocery as defined in Alpharetta’s Unified Development Ordinance.

A chart which summarizes the changes from the original 2010 Master Plan is as follows:

<u>Prior Plan</u>	<u>Current Proposal</u>	<u>Changes</u>
47 ± acres	62.47 acres	+ 15.51 acres
Retail: 110,035 square feet	Retail: 121,400 square feet	+ 11,365 square feet
Hotel (211 keys) 123,000 square feet	Hotel (200 Keys), 106,280 square feet	- 16,720 square feet
Office: 447,200 square feet	Office: 664,400 square feet	+ 217,200 square feet
Single family townhomes: 35 units	Townhome units “for sale”: 70 units	+ 35 units
Single family stacked flats: 470 units	Multi-Family over nonresidential/retail on	
Residential over retail 41 units	at least two sides: 430 units	
Density = 9.17 u/a 546 units	Density = 8 u/a, 500 total units	- 46 units

B. Mixture of Uses

The project as a whole meets or exceeds the new MU requirements regarding a mixture of uses. The regulation (§ 2.02.20(b)) states that at least 25% of every mixed-use development must be commercial, office and residential space. At least 10% must be public space. The breakdown is as follows:

	<u>Square Footage</u>
TOTAL SIZE	2,983,810
Office	1,019,100
Commercial	795,160
Residential	828,290 (27.7%)
Public Space	341,260

These numbers reflect a mix which is 34.2% office, 26.6% commercial, 27.7% residential and 11.5% public space. Additionally the new regulations require the provision of park space at 1 acre per 100 likely residents. Assuming occupancy at census rates of 2.2 persons per unit, 11 acres would be required. This project actually supplies 12.94 acres of park space and 5.05 acres of other public space, exclusive of the multi-family amenity package.

C. Area of Influence Analysis

An Area of Influence analysis is no longer required by ARC or GRTA. However, Alpharetta has requested one, which follows.

Employee Recapture is a function of the type of employment (occupation), how many of the future employees are likely to be employed in those occupations, the average monthly income likely to be paid to employees in each household, and the monthly rent. The land uses here and number of employees generated are as follows.

<u>Land Use</u>	<u>Size</u>	<u>*Employees</u>
<u>Retail Space</u>		
Restaurant	36,400 SF	1/300 SF / 121
Specialty Sales	14,800 SF	1/560 SF / 26
<u>Office</u>	664,400 SF	1/200 SF / 3,322
<u>Residential</u>	470 units	<u>57</u>
<u>Hotel</u>	200 rooms .9/180	
TOTAL:		<u>3,589</u>

*Ratios are from GRTA's AOI Guidebook, April 2003.

This total number of employees is the basis upon which to calculate the number of persons likely to be employed in a particular type of occupation. Regrettably, the US

Department of Labor does not “copy” the occupancy in general land use terms. Instead, it uses defined Occupations. Based upon the 2015 Metropolitan Area Occupational Employment and Wage Estimates – Atlanta – Sandy Springs- Marietta, Georgia, the following general codes to be used are:

11.000	Management Occupations
13.000	Business and Financial Operations
15.000	Computer Operations
17.000	Architecture and Engineering
35.000	Food Preparation and Serving
35-2012	Supervisory
35-3021	Staff
37.000	Maintenance and Repair, General
37-2012	Maids and Housekeeping
39-6011	Baggage Porters and Bellhops
41.000	Retail Sales
41-1011	Management
41-2031	Sales Persons
43.000	Office and Administrative Support
43-4081	Hotel Desk

These occupational codes are then analyzed by the DOL to see how many employees are likely to be found in that occupation, and further breaks that down by annual mean/monthly income.

The percentages to be used in an analysis of Area of Influence, within the potential 3,589 employees, is as follows:

Land Use	Occupation	Employees by Percentage	Monthly Employee Salary	Housing Affordability
General Office	Management Occupations	5.9	9763.33	3254.44
	Architecture and Engineering	19.8	6544.16	2181.38
	Office and Administrative Support	7.9	2979.16	993.00
	Computer Operations	15.9	6544.16	2181.38
	Business and Financial Operations	19.9	6153.33	2051.10
Hotel	Baggage Porters and Bellhops	.3	1839.00	613.00
	Maids and Housekeeping Cleaners	1.8	1600.83	633.60
	Hotel, Motel, and Resort Desk Clerks	1.8	1679.16	559.72
	Maintenance and Repair, General	.3	2098.33	699.44
	Food Preparation and Serving	1.1	1693.33	564.44
Specialty Retail	Manager of Retail Sales	1.9	3554.00	1184.72
	Retail Salesperson	7.7	2115.00	705.00
Restaurant	Restaurant Manager	.6	2477.50	824.16

Restaurant Staff	2.6	1495.83	498.00
Other:	11.1%	N/A	N/A

Whether an employee can afford to live in these units is a function of rent vs. monthly income. GRTA's previous Area of Influence guidelines state that rents should be no more than 30% of monthly income. Additionally, GRTA required a demonstration that the proposed project be "reasonably anticipated to contribute to the balance of uses within the Area of Influence, such that "25% of the people that are reasonably anticipated to be employed in the proposed project, have an opportunity to live in the Area of Influence". In this instance, employees in five of the total occupation categories would be able to afford a dwelling unit in this project: Management Occupations, Architecture and Engineering Occupations, Computer Operations, Business and Financial Operations, and Retail Sales Manager. These five categories contain 63.4% of all of the employees anticipated to work in this property at build out, well in excess of the 25% goal.

D. Phasing

The project will consist of two distinct phases. Phase I will include: 60,000 square feet of office space, 70 townhome units and 230 multifamily for rent units. It will also include the 33,000 square foot park on Lakeside, and the road system (including sidewalks and linear parks); the addition to the Outer Loop trail and the lake area improvements. Phase II will contain: 200 "for rent" apartments and the remaining office buildings. Phase II will be built when the market dictates.

II. Zoning History

The zoning history for the Subject Property reveals that this 55.09 acre tract was a part of a larger 81 acre Master Plan zoned O-I in 1988. That 1988 plan contemplated the development of 1,015,520 square feet of office space in a campus like setting; 17,700 square feet of restaurant space; 119,700 square feet of retail space; and a 200 room (102,000 square feet) hotel. No residential component(s) was/were contemplated when it was first zoned. Subsequently the three existing office buildings were built on the site. The total amount of office space today on site is 406,853 square feet.

In 2011, a Master Plan amendment and variances were sought relative to the original tract. The City Council allowed a reduction in retail use to 110,035 square feet (15,100 restaurant); an increase in hotel space to 211 rooms; a reduction in office space to 447,200 square feet; and the addition of 546 "for sale" residential units.

A comparison of the ultimate development at build out, under each Master Plan, is as follow:

Summary of Plan Differences

	<u>1988</u>	<u>2012 Peridot</u>	<u>2016 Proposal</u>
Office	1,015,520 square feet	854,053 square feet	1,071,253 square feet
Retail	118,700 square feet	110,035 square feet	51,200 square feet
Hotel	200 rooms	211 rooms	200 rooms
Residential	0	546 units (505 “for sale”)	500 (70 “for sale”)

III. Analysis of Proposed Uses

A. Factors

The City’s new MU ordinance also sets forth sixteen review factors to be considered in evaluating an MU application, as follows:

1. Retail at ground level.
2. Pedestrian connectivity to all uses.
3. Large parking areas below grade, in decks or screened. Design efforts to provide shared parking will also be considered.
4. Accommodations for public transportation.
5. Buildings that face or appear to face public roadways.
6. Appearance standards for buildings and structured parking.
7. Limitations on uninterrupted building elevations.
8. Creation of vistas and view corridors within development.
9. Focal point features at prominent locations and ends of vistas.
10. Incorporation of natural site features
11. Block lengths conducive to pedestrian traffic.
12. Detention and retention facilities designed to be aesthetically pleasing.
13. Creative methods for storm water management to provide additional open space.
14. Attractive and usable street furniture in public spaces.
15. Emphasis on a high quality landscape plan.
16. Number of office jobs internally captured on-site.

Fuqua/TPA address these factors. It has 51,200 square feet of ground floor retail space. 36,400 square feet of this retail space is restaurant space. Pedestrian connectivity via an extensive sidewalk grid system exists in reference to all uses, and the block lengths do not exceed 300 feet in length, making them conducive to pedestrian use. All large parking areas are in decks or screened areas. Public transportation can be accommodated on site should MARTA desire. All buildings face the roadways, and the architectural standards for them are high quality. All elevations contain architectural devices which break up the massing.

The extensive park system creates focal points in both the retail area and at the lake. This site feature has been fully incorporated into the project, and will, as it currently does,

double as the detention feature for the site. Use of the lake for storm water control allows open space to be maximized, and it exceeds 11 acres in size.

Street furniture will exist on all sidewalks, as well as in all park spaces. A high quality landscape plan is contemplated for the site. A current arborist report is being filed contemporaneously.

Finally, as per the analysis in Section B below, recapture of employees from jobs on site is highly likely. This recapture means that employees are likely to live at the Project and eat/shop and work there. It reduces automobile dependency.

B. Rental Product

Per the approved Avalon apartments, there are several factors to be considered when evaluating requests for new apartments. These include design, long term viability, impacts to Parks and other City services, as well as traffic and school impacts. Units which are vertically integrated with nonresidential uses, for example, are preferred to garden apartments. Projects which include services such as a private fitness facility, resort-style pools with cabanas, a full time concierge, a common great room with kitchen, and a fireside retreat with grills; as well as upgrades within units such as granite or marble countertops, 10-foot ceilings, fireplaces, and laundry rooms within units are also preferred as these amenities relate to long term viability, value, and rental rates. The project will have these amenities. A favorable comparison between square footage of the rental product versus nonresidential uses, (with the latter higher in size), is also a factor. Finally, the amount of office space is relevant, since the offices are likely to generate demand for the rental units. This Applicant has committed to the same vertical integration and the amenities and upgrades noted by Staff relative to Avalon.

Perception suggests that dense multi-family housing brings in too many school children without a concomitant increase in taxes to offset the financial burden occasioned by same. In actuality, however, that conclusion is unwarranted; especially in relation to new luxury apartments with only one or two-bedroom units. According to a 2012 Study of this issue in Montgomery County, Pennsylvania, .21 students between the ages of 5 and 17 are generated by new single family attached homes. By way of contrast, .06 students come from new "for rent" product in this price range. The approved 505 single family "for sale" condominiums and townhomes, with the 41 stacked flat "for rent" units now allowed, would generate 109 school age children. The proposed 430 "for rent" units and 70 condominiums will generate only 31 school aged children: three-quarters less than what was approved in 2012.

The staff analysis of the City Center project stated that as of May of 2015, Alpharetta was home to 6,012 "for rent" residential dwelling units and 18,232 "for sale" residential dwelling units. An additional 1,192 "for sale" units currently are under construction or have been approved. Thus the anticipated ratio of "for sale" to "for rent" units at that point was 20,071 to 6,012, or 77% to 23%. Current rental units in Alpharetta are 96% to 100% leased.

The proposed new non-residential spaces also will generate a certain amount of recapture, i.e. use of the residential units and retail space by the employees who work there. The proposed office buildings themselves, at 664,400 square feet, will generate 3,320 potential residents and shoppers (assuming 1 employee per 200 square feet as was assumed vis-à-vis Avalon). And, of course, if the existing 406,853 square feet of office space is added to the equation, it generates 2,034 employees. The total of 5,354 retail users and potential residents is an excellent resource for this Plan. Retail space generates a smaller number of on-site employees, but is anticipated to add jobs to the ultimate number. The multifamily component will create 41 likely jobs. Potentially, the residential units could capture a substantial number of all onsite jobs.

The value of these apartments is substantial and they have a positive economic impact:

C. Transportation Impacts

GROSS TRIP GENERATION

Land Use (intensity)	ITE CODE	DAILY TRAFFIC		AM PEAK HOUR		PM PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT	ENTER	EXIT
Apartment (430 units)	220	1367	1367	46	172	163	86
Townhomes (70 units)	230	407	407	3	15	14	8
Office Building (664,400)	710	3664	3664	912	124	168	822
Retail (14,800)	820	316	316	9	5	26	29
Sit Down Restaurants (36,400)	932	2314	2314	257	228	363	310
TOTAL GROSS TRIPS:		8068	8068	1227	544	734	1255

However, ARC and GRTA both recognize that gross trip generation is to be adjusted for the mixed use nature of the project, use of alternative modes of transportation, and the “pass-by” phenomena. The adjusted numbers are being studied by Kimley-Horn and will be filed shortly.

IV. Approvals Required

The Applicant seeks the following changes to the Peridot Master Plan:

- Amend Condition 1 to substitute the plan and architectural renderings designed by Wakefield Beasley and Associates, dated 9/28/16.
- Amend Condition 2(a) to increase office space to a maximum of 664,400 square feet. Amend it further to limit building heights to those reflected on the site plan dated 9/28/16.
- Amend Condition 2(b) to allow 70 “for sale” townhome units and located per the site plan dated 8/1/16.
- Amend Condition 2(c) to increase retail uses to a maximum of 121,400 square feet and as per the building heights reflected on the site plan dated 9/28/16. Further amend it to allow seven free-standing retail buildings.
- Eliminate Condition 2(d).
- Amend Condition 2(e) to allow a maximum of six free-standing restaurants. No individual restaurant shall exceed 10,000 square feet in size.
- Amend Condition 2(e) to allow 430 multi-family “for rent” units over office or retail uses on two sides of each building.
- Amend Condition 4 to add “Above sixty feet in height, a 10’ setback shall be provided from back of curb”.
- Revise Condition 5 to reflect that Phase I shall consist of the 70 townhomes, 230 “for rent” units, the 60,000 square foot office, a grocery store, and a bank. Building permits must be secured concurrently for all of these elements. At the applicants option, Phase I also may include the hotel. No more than 225 “for rent” units may be granted a Certificate of Occupancy in any given calendar year.
- Amend Condition 7 to delete the last sentence and allow for recompense if specimen trees are removed.
- Amend Condition 10 to add the following at the beginning: “Parking decks and retaining walls shall receive architectural façade treatment or”.
- Amend Conditions 13 and 23 to change the name to Fuqua/TPA and to reference this Amendment once filed.
- Amend Condition 15 to add that “awnings shall be provided on buildings at street level “in commercial areas””.

- Amend Condition 16 to add at the beginning “other than parallel on-street parking”.
- Amend Condition 27 to eliminate the deck shading requirement.

This application also requires approval of four Conditional Uses, i.e. the rental units, the bank, and the hotel. The following factors are to be considered in evaluating a conditional use:

1. The conditional use will not be injurious to the use and enjoyment of the environment or of other property values within the surrounding neighborhood;

There should be no injury to the environment or surrounding property values.

2. The proposed conditional use will not increase local or state expenditures in relation to cost of servicing or maintaining neighboring properties;

All surrounding properties are nonresidential. No increased expenditures will be required.

3. The establishment of the conditional use will not impede the normal and orderly development of surrounding property for uses predominant in the area; and

All surrounding properties are already developed.

4. The location and character of the proposed conditional use is considered to be consistent with a desirable pattern of development for the City, in general.

The land use plan designates this area as appropriate for a mixed-use.

Fuqua and TPA also require two variances:

- (1) to eliminate requirement for retail under residential on part of two sides of the residential building “for rent” as shown in Site Plan dated 9/28/16; and
- (2) to allow a minimum 3,00 square foot grocery store.

V. Notice of Constitutional Challenge and Preservation of Rights

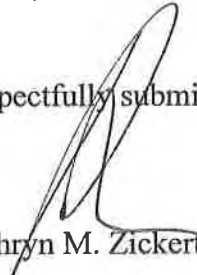
It is the position of the Applicant that the Alpharetta Zoning Ordinance, in zoning the property MU and O&I as it currently exists and with existing conditions, is unconstitutional in that it destroys the marketability of the property and renders the property exceptionally less valuable, and such zoning therefore constitutes a taking of property without just and adequate compensation and without due process of law in violation of the Fifth and Fourteenth

Amendments to the Constitution of the United States, as well as Article 1, Section 1, Paragraph 1; Article 1, Section 3, Paragraph 1(a); and Article 3, Section 6, Paragraph 2 of the Constitution of the State of Georgia (1983). To zone this property to any intervening category which is less than requested is unconstitutional, renders the property unusable and constitutes the taking of Applicant's property without just and adequate compensation and without due process of law in violation of the provisions of the United States and Georgia Constitutions cited in this paragraph. The same effect would be had by imposing conditions in restraint of trade, or onerous, burdensome, unconstitutional, or unnecessary conditions on the property. The denial of this request would bear no reasonable relation to the health, safety, morals or welfare of the citizens.

The Applicant has tried very hard to work within the confines of the recently-enacted MU ordinance. We have had many meetings with your staff, and we have tried to be responsive to their comments and observations. We pledge to continue to work with the City to deliver a mutually-acceptable final plan.

The Applicant respectfully requests that the Alpharetta City Council grant the requested rezoning, the change of Master Plan conditions, the Conditional Use Permit, and the two variances as submitted.

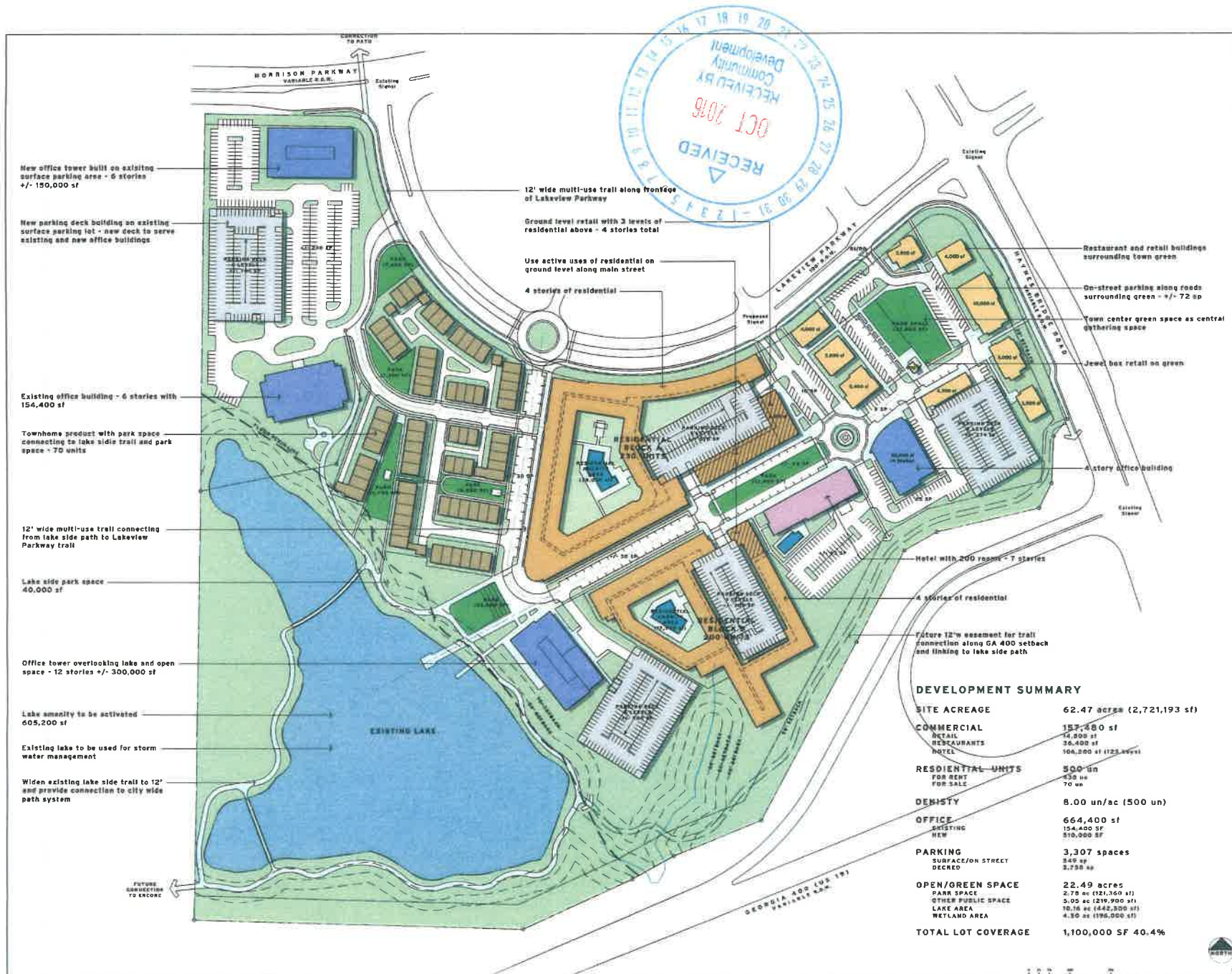
Respectfully submitted,



Kathryn M. Zickert

KMZ/tcr

cc: Mr. Brad Smith
Mr. Chris Hayes
Mr. Jeff Fuqua
Ms. Heather Correa
Mr. Lamar Wakefield
Mr. John Walker



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HAYNES BRIDGE MIXED-USE

Alpharetta, Georgia

TPA Group/
Fuqua Development

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Atlanta, GA 30339
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This is a conceptual site plan for informational purposes only. It is not intended to be used for any purpose other than informational.
No warranty is made by the architect for the accuracy of the information shown on this plan.

REVISIONS

01 AUGUST 2016 - HANDED FOR ZONING
25 AUGUST 2016 - REVISED SITE PLAN
08 SEPTEMBER 2016 - REVISED SITE PLAN

REVISIONS

01 AUGUST 2016
25 AUGUST 2016
08 SEPTEMBER 2016

08 SEPTEMBER 2016 1506064.00
(Drawing Title)

CONCEPTUAL SITE PLAN

© Wakefield Beasley & Associates

SP-2

SUBMITTED FOR ZONING

16-07-29-01 GA 400
Haynes Bridge Arborist
Report Alpharetta
Arborist Report

Reference UDC
Alpharetta, Georgia



Location Map



All of the following information is based upon visual field observations and 25 years of practical horticultural experience. No scientific or lab tests have been performed. I certify that all information in this report is true and inclusive to the best of my knowledge and is prepared in good faith.

Outdoor Spaces, LLC

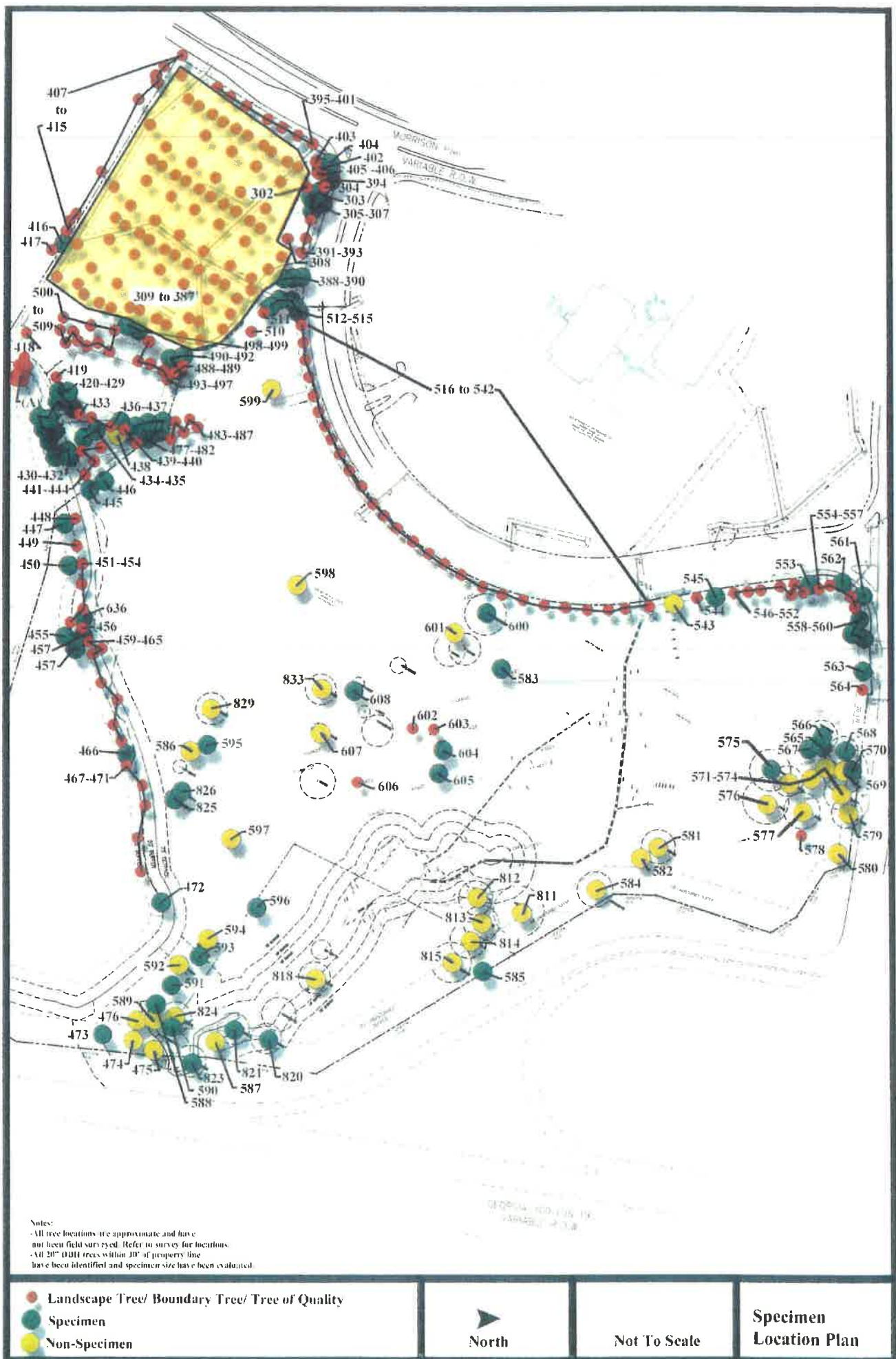
By Scott Hall, Owner



On Site Specimen Evaluation Date: August 8, 10, 11, 16, 2016
Report Date: August 17, 2016
Revised Date:



Outdoor Spaces, LLC
Scott Hall, Owner
RLA, Certified Arborist
Certificate Number: SO-5434A
404-328-6561 Cell
678-965-4784 Fax
scottandcyrena@bellsouth.net



Warranty Disclaimer:

Although, this report will determine whether or not a tree is a specimen or "Tree of Quality"; it is provided as best judgment opinion. Ultimately, the governing body's (City of Alpharetta) arborist or representative shall determine whether a tree is classified as a specimen/"Tree of Quality" or not.

All specimen/"Tree of Quality" tree locations shall be approximate. The provided tree locations shall NOT be GPS located and in no manner shall the provided tree location plan be used or represented as a tree survey. It is the sole responsibility of the OWNER to have all tagged specimen/"Tree of Quality" trees located by a Certified Land Surveyor.

No warranties express or implied are made with respect to the report of aforementioned specimen trees. It is understood the OWNER makes use of this report by the ARBORIST at OWNER's sole risk and that the report is provided as best judgment opinion. In no manner does this report guarantee the life or imply any length of life span of the trees that are determined to be specimens.

Arborist Note:

Due to certain species and undesirable traits, some trees shall be considered in poor condition if the following is true. Numerous trees grown in a native setting may appear to grow as multi-trunk; however this is not desirable in most trees. Most trees that have multi-trunks at the base are usually created when two separate trees grow together or the tree branches off at an early age and they become Co-Dominate Leaders. Either scenario is an undesirable condition for most trees because they both create weak crotches, included bark and/or a prime place for debris and water to get trapped that will always cause decay. In this case these trees become a life safety issue and can not be considered specimen trees.

Some trees are an exception to this rule, such as, but not limited to:

Crape Myrtles, Birches, Wax Myrtles, Red Buds, Fringe Trees, Dogwoods, Hollies, Cedars, Sourwoods, Sweet Bay Magnolias, Red Bays and Live Oaks.

These are an exception because they naturally create sucker growth from the roots and/or trunk or do not typically have the life safety issues because they are not large growing trees.

Reference: Sinclair, Wayne A., 1936. Diseases of Trees and Shrubs / Wayne A. Sinclair and Howard H. Lyon.-2nd ed. Published 2005

ARTICLE III. LAND DEVELOPMENT ACTIVITIES

SECTION 3.2 TREE PROTECTION

3.2.1 DEFINITIONS

Caliper. A standard of trunk measurement for understory or replacement trees. Caliper inches are measured at the height of 6 inches above the ground for trees up to and including 4 inch caliper and 12 inches above the ground for trees larger than 4 inch caliper.

Diameter Breast-Height (DBH). The standard measure of overstory tree size (for trees existing on a site). The tree trunk is measured at a height of 4 ½ feet above the ground. If a tree splits into multiple trunks below 4 ½ feet, measure the trunk at its most narrow point beneath the split.

Hardwood Tree. Any tree that is not coniferous (cone bearing). This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Softwood Tree. Any coniferous (cone bearing) tree. This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Specimen Tree. Any tree which qualifies for special consideration for preservation due to its size, type, condition, location or historical significance. See additional requirements for Specimen Trees in Appendix B.

Tree. Any living, self-supporting woody or fibrous plant which normally obtains a diameter breast height of at least three (3) inches, and typically has one (1) main stem or trunk and many branches.

Understory. Those trees that grow beneath the overstory, and will generally reach a mature height of under 40 feet.

APPENDIX A

SPECIMEN TREES

Some trees on a site warrant special consideration and encouragement for conservation. These trees are referred to as Specimen Trees.

The following criteria are used by the Director to identify specimen trees.

A Specimen Tree is any tree which qualifies for special consideration for preservation due to its size, type, condition, location, or historical significance and is determined by the City Arborist, prior to development, to be in overall good health without the aid of a specialized care plan according to accepted ISA practices, and which also meets the minimum size criteria set forth below.

Size Criteria

Pine Trees: 30-inch (30") diameter or larger Overstory Trees: 24-inch (24") diameter or larger Understory Trees: 8-inch (8") diameter or larger

In order to encourage the conservation of Specimen Trees and the incorporation of these trees into the design of projects, additional density credit will be given for Specimen Trees, which are successfully saved by a design feature specifically designated for such purpose. Credit for any Specimen Tree thus saved would be two (2) times the assigned unit value shown in Table 3.4. The Critical Root Zone of Specimen Trees will be protected with hog-back/wire-back tree save fencing with metal support poles.

If a Specimen Tree is to be removed, a plan or written document indicating the reason for the removal must be submitted to the Director.

Specimen Trees that cannot be saved (see Section 3.2.13) must be replaced with trees having three (3) times the unit value of the tree removed with a minimum four-inch (4") tree caliper by species with potentials for comparable size and quality.

Any Specimen Tree which is removed without the appropriate review and approval of the Director must be replaced by trees with a total density equal to eight (8) times the unit value of the tree removed with a minimum four-inch (4") tree caliper. Size alone will determine whether a tree was a specimen quality if the tree is removed without approval and there is no evidence of its condition. Violations will be subject to the applicable penalties as described in Section 3.2.19.

Specimen Analysis
(General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
302	11" Red Maple	Good	Good	No	Landscape Tree		No
303	19" Crape Myrtle	Good	Good	Yes			Yes
304	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
305	18" Crape Myrtle	Good	Good	Yes			Yes
306	18" Crape Myrtle	Good	Good	Yes			Yes
307	15" Crape Myrtle	Good	Good	Yes			Yes
308	3" Red Maple	Good	Good	No	Landscape Tree		No
309	8" Red Maple	Good	Good	No	Landscape Tree		No
310	8" Red Maple	Good	Good	No	Landscape Tree		No
311	8" Red Maple	Good	Good	No	Landscape Tree		No
312	8" Red Maple	Good	Good	No	Landscape Tree		No
313	8" Red Maple	Good	Good	No	Landscape Tree		No
314	8" Red Maple	Good	Good	No	Landscape Tree		No
315	8" Red Maple	Good	Good	No	Landscape Tree		No
316	8" Red Maple	Good	Good	No	Landscape Tree		No
317	8" Red Maple	Good	Good	No	Landscape Tree		No
318	8" Red Maple	Good	Good	No	Landscape Tree		No
319	11" Red Maple	Good	Good	No	Landscape Tree		No
320	11" Red Maple	Good	Good	No	Landscape Tree		No
321	5" Zelkova	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
322	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Cavity at base of tree. Lichen on trunk, an indication of poor growth.	1	No
323	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	2	No
324	4" Red Maple	Good	Good	No	Landscape Tree		No
325	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	3	No
326	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	4	No
327	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	5	No
328	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Split in trunk.	6-7	No
329	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	8	No

Specimen Analysis							(General)
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
330	10" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
331	10" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
332	13" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
333	12" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
334	10" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
335	11" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
336	11" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
337	9" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
338	10" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
339	10" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
340	4" Trident Maple	Poor	Poor	No	Landscape Tree. Several cavities. Tree staking strap grown into trunk. Severe tip die back. Tree has out grown landscape island.	9-11	No
341	4" Trident Maple	Poor	Poor	No	Landscape Tree. Tree has out grown landscape island.		No
342	4" Trident Maple	Fair	Fair	No	Landscape Tree. Several cavities. Severe tip die back. Tree has out grown landscape island.	12-13	No
343	4" Trident Maple	Poor	Poor	No	Landscape Tree. Early change of leaf color, an indication of stress. Tree has out grown landscape island.		No
344	4" Trident Maple	Poor	Poor	No	Landscape Tree. Tree has out grown landscape island.		No
345	6" Red Maple	Fair	Fair	No	Landscape Tree. Tree has out grown landscape island.		No

Specimen Analysis							(General)
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
346	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Split in trunk. Lichen on trunk, an indication of poor growth.	14-15	No
347	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	16	No
348	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Split in trunk. Lichen on trunk, an indication of poor growth.	17-18	No
349	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Cavity exposing heartwood. Severe tip die back. Lichen on trunk, an indication of poor growth.	19-20	No
350	7" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Cavity with decay. Severe tip die back. Lichen on trunk, an indication of poor growth.	21-22	No
351	16" Willow Oak	Good	Good	No	Landscape Tree		No
352	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
353	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
354	13" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
355	13" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
356	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
357	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
358	12" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
359	11" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No

Specimen Analysis (General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
360	14" Willow Oak	Good	Good	No	Landscape Tree.		No
361	10" Red Maple	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
362	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	23	No
363	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	24	No
364	9" Red Maple	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
365	8" Red Maple	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.		No
366	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	25	No
367	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	26	No
368	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.		No
369	5" Zelkova	Poor	Poor	No	Landscape Tree. Cavity exposing heartwood. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	27-28	No
370	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.		No
371	14" Red Maple	Good	Good	No	Landscape Tree.		No
372	9" Red Maple	Good	Good	No	Landscape Tree.		No

(General

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
373	9" Red Maple	Good	Good	No	Landscape Tree.		No
374	10" Red Maple	Good	Good	No	Landscape Tree. Small Trunk gall.		No
375	10" Red Maple	Good	Good	No	Landscape Tree. Small Trunk gall.		No
376	8" Red Maple	Good	Good	No	Landscape Tree.		No
377	9" Red Maple	Good	Good	No	Landscape Tree.		No
378	8" Red Maple	Good	Good	No	Landscape Tree.		No
379	8" Red Maple	Good	Good	No	Landscape Tree.		No
380	14" Willow Oak	Good	Good	No	Landscape Tree.		No
381	14" Willow Oak	Good	Good	No	Landscape Tree.		No
382	19" Willow Oak	Good	Good	No	Landscape Tree.		No
383	19" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	29	No
384	16" Willow Oak	Good	Good	No	Landscape Tree.		No
385	20" Willow Oak	Good	Good	No	Landscape Tree.		No
386	17" Willow Oak	Good	Good	No	Landscape Tree.		No
387	22" Willow Oak	Good	Good	No	Landscape Tree.		No
388	15" Crape Myrtle	Good	Good	Yes			Yes
389	16" Crape Myrtle	Good	Good	Yes			Yes
390	19" Crape Myrtle	Good	Good	Yes			Yes
391	19" Willow Oak	Good	Good	No	Landscape Tree.		No
392	17" Willow Oak	Good	Good	No	Landscape Tree.		No
393	17" Willow Oak	Good	Poor	No	Landscape Tree. Several trunk galls. Circling roots impacting structural system of tree.	30-32	No
394	21" Crape Myrtle	Good	Good	Yes			Yes
395	19" Willow Oak	Good	Good	No	Landscape Tree.		Yes
396	19" Willow Oak	Good	Good	No	Landscape Tree.		Yes
397	19" Willow Oak	Good	Good	No	Landscape Tree.		Yes
398	21" Willow Oak	Good	Good	No	Landscape Tree.		Yes
399	17" Willow Oak	Good	Good	No	Landscape Tree.		Yes
400	19" Willow Oak	Good	Good	No	Landscape Tree.		Yes
401	16" Willow Oak	Good	Good	No	Landscape Tree.		Yes
402	9" Fosterii Holly	Good	Good	Yes			Yes
403	7" Fosterii Holly	Good	Good	No	Landscape Tree.		No
404	9" Fosterii Holly	Good	Good	Yes			Yes
405	6" Fosterii Holly	Good	Good	No	Landscape Tree.		No
406	6" Fosterii Holly	Good	Good	No	Landscape Tree.		No
407	21" Red Maple	Fair	Fair	No	Boundary Tree.		No
408	21" Sweet Gum	Fair	Poor	No	Boundary Tree. 2 Co-Dominate Leaders with included bark 20' high. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	33	No
409	22" Red Maple	Fair	Poor	No	Boundary Tree. 2 Trees grown together creating 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	34	No
410	20" Red Maple						

[illegible]

Specimen Analysis

(General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
411	29" Pine	Good	Good	No	Boundary Tree.		Yes
412	20" Red Maple	Fair	Fair	No	Boundary Tree.		No
413	25" Pine	Good	Good	No	Boundary Tree.		Yes
414	28" Pine	Good	Good	No	Boundary Tree.		Yes
415	28" Pine	Good	Good	No	Boundary Tree.		Yes
416	30" Pine	Good	Good	Yes			Yes
417	22" Pine	Good	Good	No	Boundary Tree.		Yes
418	11" Red Maple	Good	Good	No	Landscape Tree.		No
(A)	9"-20" Bald Cypress	Good	Good	No	8 Trees of Quality		Yes
419	22" River Birch	Good	Good	No	Tree of Quality		Yes
420	16" Crape Myrtle	Good	Good	Yes			Yes
421	13" Crape Myrtle	Good	Good	Yes			Yes
422	17" Crape Myrtle	Good	Good	Yes			Yes
423	17" Crape Myrtle	Good	Good	Yes			Yes
424	17" Crape Myrtle	Good	Good	Yes			Yes
425	9" Crape Myrtle	Good	Good	Yes			Yes
426	9" Crape Myrtle	Good	Good	Yes			Yes
427	9" Crape Myrtle	Good	Good	Yes			Yes
428	9" Crape Myrtle	Good	Good	Yes			Yes
429	9" Crape Myrtle	Good	Good	Yes			Yes
430	9" Crape Myrtle	Good	Good	Yes			Yes
431	13" Crape Myrtle	Good	Good	Yes			Yes
432	12" Crape Myrtle	Good	Good	Yes			Yes
433	9" Red Maple	Good	Good	No	Landscape Tree		Yes
434	8" Dogwood	Fair	Fair	Yes	Some dieback		Yes
435	9" Japanese Maple	Good	Good	Yes			Yes
436	12" Red Maple	Good	Good	No	Landscape Tree		Yes
437	19" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	35	No
438	9" Dogwood	Poor	Poor	No	Hollow cavity and dieback.	36	No
439	14" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	37	No
440	10" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	38	No
441	14" Chinese Elm	Poor	Poor	No	Landscape Tree. Severe cankers on trunk.	39	No
442	14" Willow Oak	Good	Good	No	Landscape Tree		Yes
443	11" Red Maple	Poor	Poor	No	Landscape Tree. Main Trunk has Phytophthora. Fruiting bodies on root system. Circling roots impacting structural system of tree.	40-41	No
444	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
445	20" Crape Myrtle	Good	Good	Yes			Yes
446	8" East Palatka Holly	Good	Good	Yes			Yes
447	13" Crape Myrtle	Good	Good	Yes			Yes
448	15" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
449	12" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
450	13" Crape Myrtle	Good	Good	Yes			Yes

Specimen Analysis
(General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
451	16" Water Oak	Good	Good	No	Tree of Quality		Yes
452	11" Red Maple	Good	Good	No	Tree of Quality		Yes
453	14" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
454	16" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
455	11" Crape Myrtle	Good	Good	Yes			Yes
636	13" Crape Myrtle	Good	Good	Yes			Yes
456	13" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
457	12" Crape Myrtle	Good	Good	Yes			Yes
458	16" Crape Myrtle	Good	Good	Yes			Yes
459	9" Red Maple	Good	Good	No	Tree of Quality		Yes
460	9" Red Maple	Good	Good	No	Tree of Quality		Yes
461	7" Red Maple	Good	Good	No	Tree of Quality		Yes
462	15" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
463	13" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
464	7" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
465	7" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
466	14" Crape Myrtle	Good	Good	Yes			Yes
467	8" Red Maple	Good	Good	No	Tree of Quality		Yes
468	20" White Oak	Good	Good	No	Tree of Quality		Yes
469	22" White Oak	Good	Good	No	Tree of Quality		Yes
825	16" Sourwood	Good	Good	Yes			Yes
826	11" Sourwood	Good	Good	Yes			Yes
470	12" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
471	17" Riverbirch	Good	Good	No	Tree of Quality		Yes
472	14" Crape Myrtle	Good	Good	Yes			Yes
473	28" Scarlett Oak	Good	Good	Yes			Yes
474	28" Tulip Poplar	Poor	Poor	No	Large cavity with decay.	42	No
475	38" Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue. Trunk gall. Trunk sound hollow.	43-44	No
476	38" Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	45	No
477	9" Dogwood	Good	Good	Yes			Yes
478	19" Crape Myrtle	Good	Good	Yes			Yes
479	14" Crape Myrtle	Good	Good	Yes			Yes
480	14" Crape Myrtle	Good	Good	Yes			Yes
481	15" Crape Myrtle	Good	Good	Yes			Yes
482	15" Crape Myrtle	Good	Good	Yes			Yes
483	3" Dogwood	Good	Good	No	Landscape Tree		Yes
484	4" Red Bud	Good	Good	No	Landscape Tree		Yes
485	7" Crape Myrtle	Good	Good	No	Landscape Tree		Yes
486	4" Dogwood	Good	Good	No	Landscape Tree		Yes
487	4" Red Bud	Good	Good	No	Landscape Tree		Yes
488	6" Red Maple	Good	Good	No	Landscape Tree		Yes

Specimen Analysis (General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
489	8" Red Maple	Good	Good	No	Landscape Tree		Yes
490	16" Crape Myrtle	Good	Good	Yes			Yes
491	16" Crape Myrtle	Good	Good	Yes			Yes
492	16" Crape Myrtle	Good	Good	Yes			Yes
493	12" Red Maple	Good	Good	No	Landscape Tree		Yes
494	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
495	4" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
496	6" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
497	17" Willow Oak	Good	Good	No	Landscape Tree		Yes
498	16" Crape Myrtle	Good	Good	Yes			Yes
499	13" Crape Myrtle	Good	Good	Yes			Yes
500	20" Willow Oak	Good	Good	No	Landscape Tree		Yes
501	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
502	5" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
503	6" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
504	20" Southern Magnolia	Good	Good	No	Landscape Tree		Yes
505	15" Red Maple	Good	Good	No	Landscape Tree		Yes
506	13" Willow Oak	Good	Good	No	Landscape Tree		Yes
507	8" Red Maple	Good	Good	No	Landscape Tree		Yes
508	16" Willow Oak	Good	Good	No	Landscape Tree		Yes
509	11" Red Maple	Good	Good	No	Landscape Tree		Yes
510	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
511	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
512	24" Willow Oak	Good	Good	Yes			Yes
513	20" Crape Myrtle	Good	Good	Yes			Yes
514	18" Crape Myrtle	Good	Good	Yes			Yes
515	22" Crape Myrtle	Good	Good	Yes			Yes
516	19" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	46	No
517	22" Willow Oak	Poor	Poor	No	Landscape Tree. Fruiting Bodies on root system. Circling roots impacting structural system of tree.	47-48	No
518	22" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.	49	Yes
519	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
520	20" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.	50	Yes
521	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
522	22" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.		Yes
523	20" Willow Oak	Good	Good	No	Landscape Tree		Yes
524	20" Willow Oak	Poor	Poor	No	Landscape Tree. Numerous trunk galls.	51	No
525	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
526	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
527	20" Willow Oak	Good	Good	No	Landscape Tree		Yes

Specimen Analysis

(General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
528	16" Willow Oak	Poor	Poor	No	Landscape Tree. Fruiting Bodies on root system. Circling roots impacting structural system of tree.	52-53	No
529	19" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	54	No
530	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
531	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
532	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
533	19" Willow Oak	Poor	Poor	No	Landscape Tree. Numerous trunk galls.	55	No
534	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
535	17" Willow Oak	Poor	Fair	No	Landscape Tree. Numerous Trunk galls. Circling roots should be cut before impacting structural system of tree.	56-57	No
536	16" Willow Oak	Poor	Fair	No	Landscape Tree. Numerous Trunk galls. Circling roots should be cut before impacting structural system of tree.	56-58	No
537	17" Willow Oak	Good	Good	No	Landscape Tree		Yes
538	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
539	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
540	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
541	23" Willow Oak	Good	Good	No	Landscape Tree		Yes
542	20" Willow Oak	Good	Good	No	Landscape Tree		Yes
543	25" Willow Oak	Poor	Poor	No	Cavity with decay.	59	No
544	23" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.		Yes
545	24" Willow Oak	Good	Good	Yes			Yes
546	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
547	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
548	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
549	15" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	61-62	No
550	17" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	63	No
551	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
552	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
553	9" Fosterii Holly	Good	Good	Yes			Yes
554	18" Red Maple	Good	Good	No	Landscape Tree		Yes
555	18" Red Maple	Good	Good	No	Landscape Tree		Yes
556	17" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	64	No
557	19" Red Maple	Good	Good	No	Landscape Tree		Yes
558	8" Fosterii Holly	Good	Good	Yes			Yes
559	8" Fosterii Holly	Good	Good	Yes			Yes
560	10" Fosterii Holly	Good	Good	Yes			Yes
561	21" Crape Myrtle	Good	Good	Yes			Yes
562	23" Crape Myrtle	Good	Good	Yes			Yes

Specimen Analysis (General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
563	25" Willow Oak	Good	Good	Yes			Yes
564	23" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	65	No
565	9" Sourwood	Fair	Fair	Yes			No
566	28" White Oak	Good	Good	Yes			Yes
567	10" Sourwood	Good	Good	Yes			Yes
568	25" White Oak	Good	Good	Yes			Yes
569	40" (23"-21") White Oak	Fair	Poor	No	Tree is being undermined from erosion. 2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	66-67	No
570	8" Sourwood	Good	Good	Yes			Yes
571	31" Southern Red Oak	Poor	Poor	No	Fruiting bodies at base of trunk indicating Butt/trunk rot.	68-70	No
572	11" Sourwood	Poor	Poor	No	Cavity with decay.	71	No
573	11" Sourwood	Poor	Poor	No	Trunk grown into boulder impacting structural system of tree.	72	No
574	27" Southern Red Oak	Poor	Poor	No	Large cavity with decay.	73	No
575	41" White Oak	Good	Good	Yes			Yes
576	42" Southern Red Oak	Poor	Poor	No	Fruiting bodies at base of trunk indicating Butt/trunk rot. Severe dieback.	74	No
577	31" Southern Red Oak	Poor	Poor	No	Several main limbs dead with symptoms of Hypoxylon Canker.	75-76	No
578	20" Southern Magnolia	Good	Good	No	Tree of Quality		Yes
579	26" Southern Red Oak	Poor	Poor	No	Severe trunk gall. Several main limbs dead with symptoms of Hypoxylon Canker.	77-78	No
580	17" Dogwood	Poor	Poor	No	Severe dieback.		No
581	27" Red Maple	Poor	Poor	No	Cavities with decay.	79-80	No
582	24" Red Maple	Poor	Poor	No	2 Co-Dominate Leaders with weak crotches and included bark 1 Dead causing severe decay in trunk. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	81	No
583	25" White Oak	Good	Good	Yes			Yes
584	33"(23"-14") Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.		No

Specimen Analysis

(General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

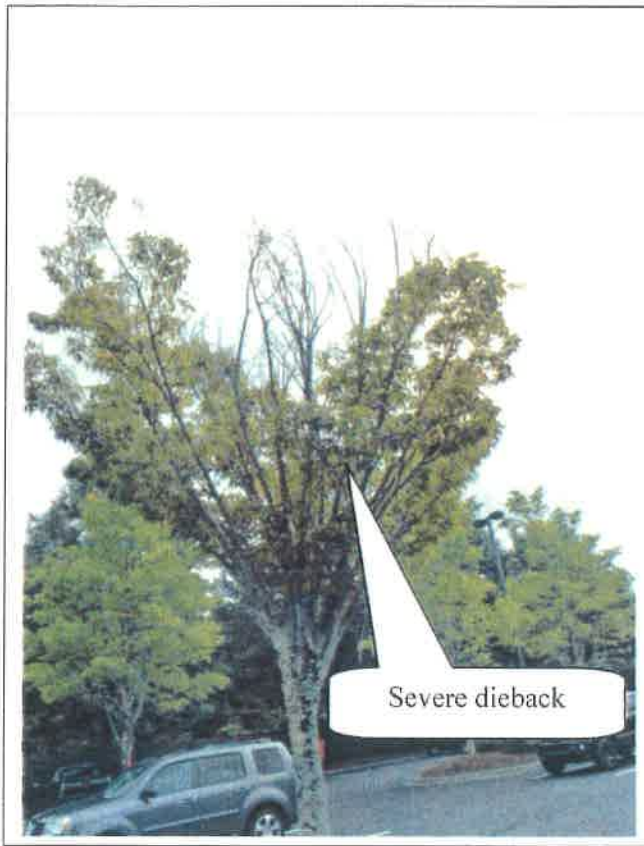
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
811	43" Tulip Poplar	Poor	Poor	No	3 Co-Dominate Leaders with decay in crotch and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	83	No
812	28" Tulip Poplar	Poor	Poor	No	Several main limbs dead/gone.		No
813	29" Tulip Poplar	Poor	Poor	No	Several main limbs dead/gone. Barbwire in trunk	85	No
814	31" Southern Red Oak	Poor	Poor	No	2 Co-Dominate Leaders with decay in crotch and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	84	No
815	34" White Oak	Poor	Poor	No	3 Co-Dominate Leaders with weak crotches and included bark Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.		No
585	24" Tulip Poplar	Fair	Fair	Yes			No
818	41"(27"-14") Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with decay in crotch and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.		No
820	26" Tulip Poplar	Fair	Fair	Yes			No
821	29" White Oak	Good	Good	Yes			Yes
823	26" Tulip Poplar	Good	Good	Yes			Yes
824	27" Red Maple	Poor	Poor	No	Main Trunk has Phytophthora.	88	No
829	41"(27"-22") Sweet Gum	Poor	Poor	No	Cavity at base and fruiting bodies on trunk. 2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	92-93	No
586	8" Sourwood	Fair	Poor	No	45* lean in trunk.	91	No
587	34" Tulip Poplar	Fair	Poor	No	2 Co-Dominate Leaders 20' high with included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	86	No
588	25" Sweet Gum	Fair	Fair	Yes			No
589	27" Tulip Poplar	Fair	Poor	No	Severe lean in Trunk	87	No
590	25" Tulip Poplar	Good	Good	Yes			Yes
591	24" Water Oak	Fair	Fair	Yes			No
592	24" Southern Red Oak	Poor	Poor	No	Several main limbs dead with symptoms of Hypoxylon Canker.	89	No
593	26" Southern Red Oak	Fair	Fair	Yes			No
594	28" White Oak	Poor	Poor	No	Large cavity with decay.	90	No

Specimen Analysis

(General)

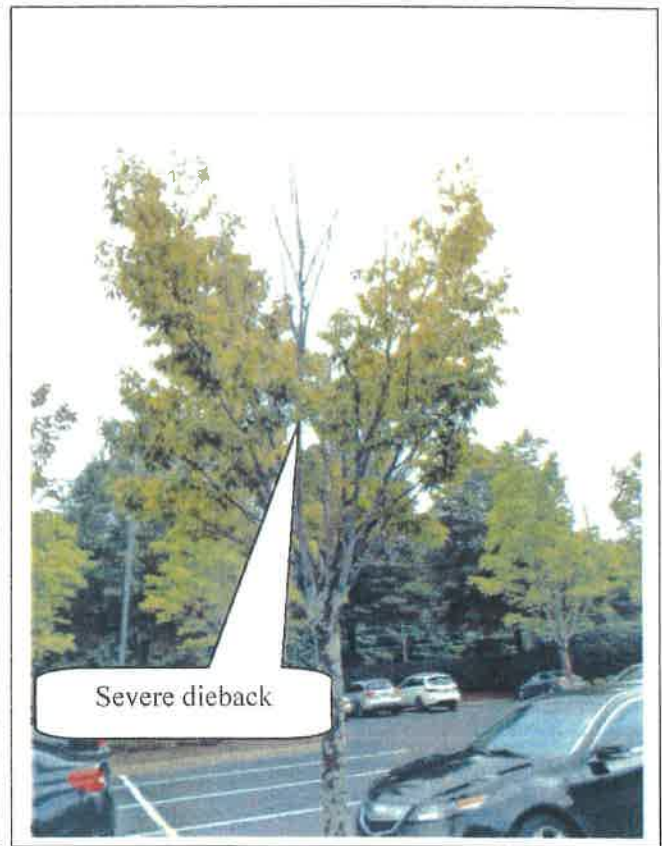
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
595	9" Sourwood	Good	Good	Yes			Yes
596	25" Southern Red Oak	Fair	Fair	Yes			No
597	24"(12"-12") White Oak	Poor	Poor	No	Cavity at base with decay. Root Damage. 2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	94-95	No
598	26" Tulip Poplar	Poor	Poor	No	3 Co-Dominate Leaders with included bark and trunk gall in the inclusion. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	96	No
599	26"(17"-12") Tulip Poplar	Poor	Poor	No	2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	97	No
600	27" Southern Red Oak	Good	Good	Yes			Yes
601	27" Southern Red Oak	Poor	Poor	No	Large cavity at base with decay.	98	No
602	22" White Oak	Good	Good	No	Tree of Quality		Yes
603	20" White Oak	Good	Good	No	Tree of Quality		Yes
604	25" White Oak	Good	Good	Yes			Yes
605	25" White Oak	Good	Good	Yes			Yes
606	20" White Oak	Good	Good	No	Tree of Quality		Yes
607	12" Sourwood	Poor	Poor	No	Several cavities with decay.	99	No
608	24" White Oak	Good	Good	Yes			Yes
833	27" Sweet Gum	Poor	Poor	No	2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	100	No



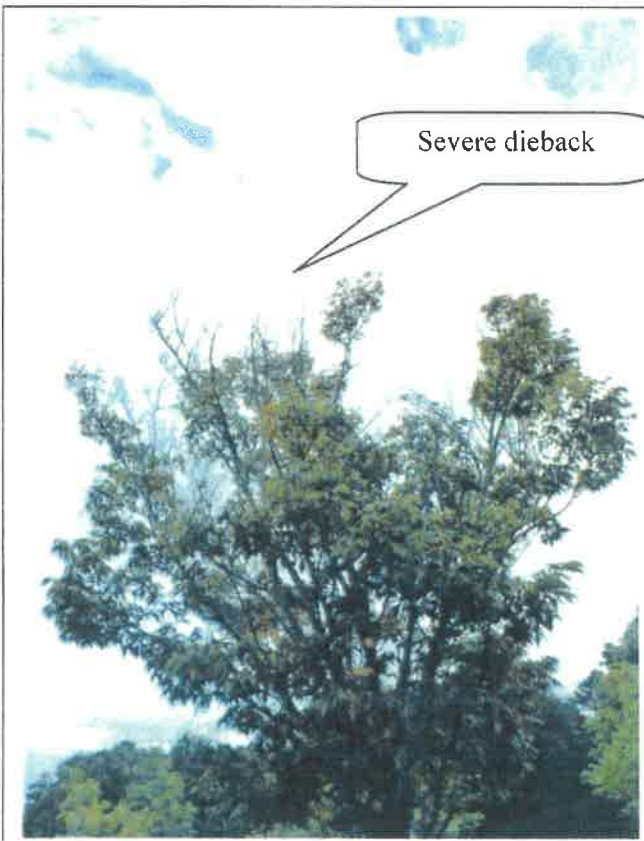
Severe dieback

Photo 1



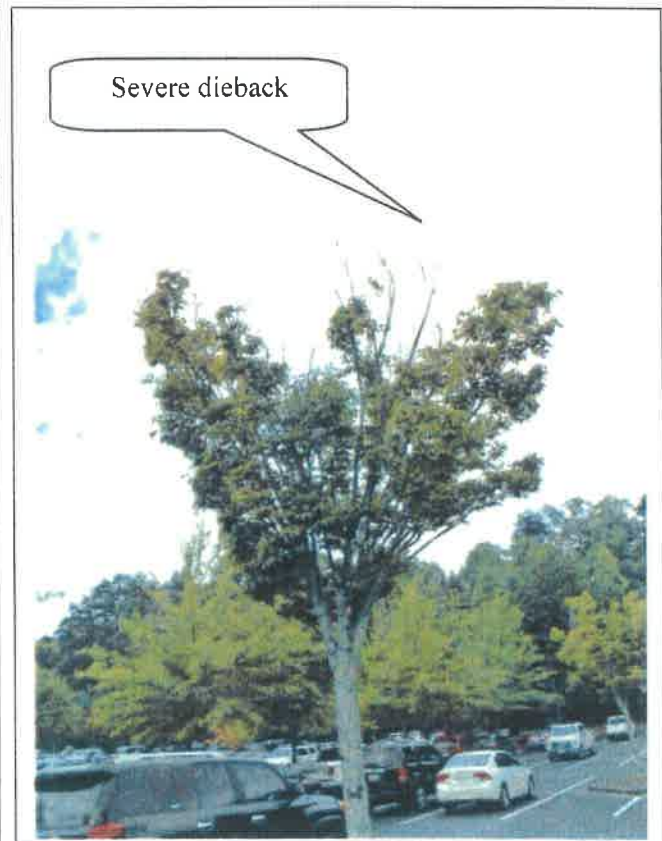
Severe dieback

Photo 2



Severe dieback

Photo 3



Severe dieback

Photo 4

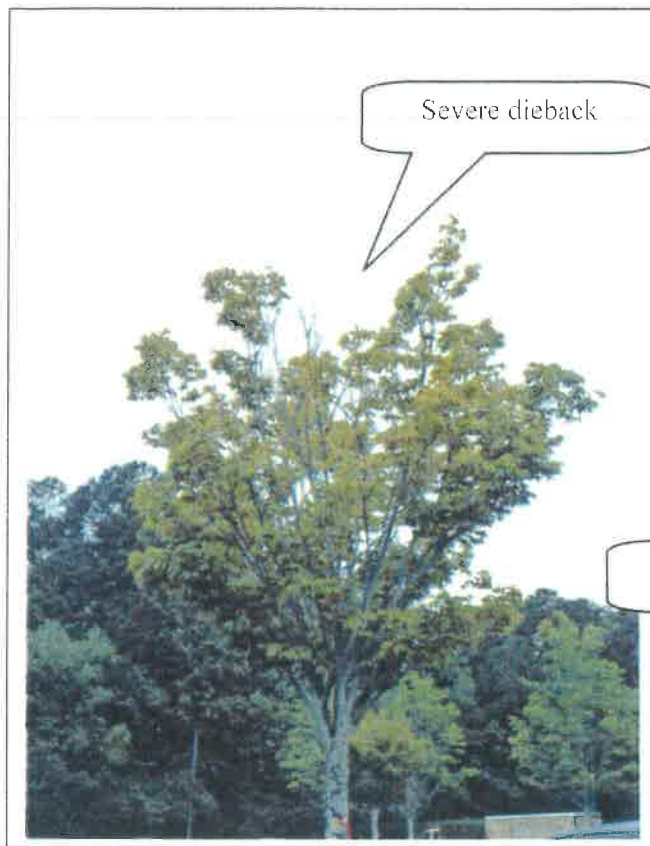


Photo 5

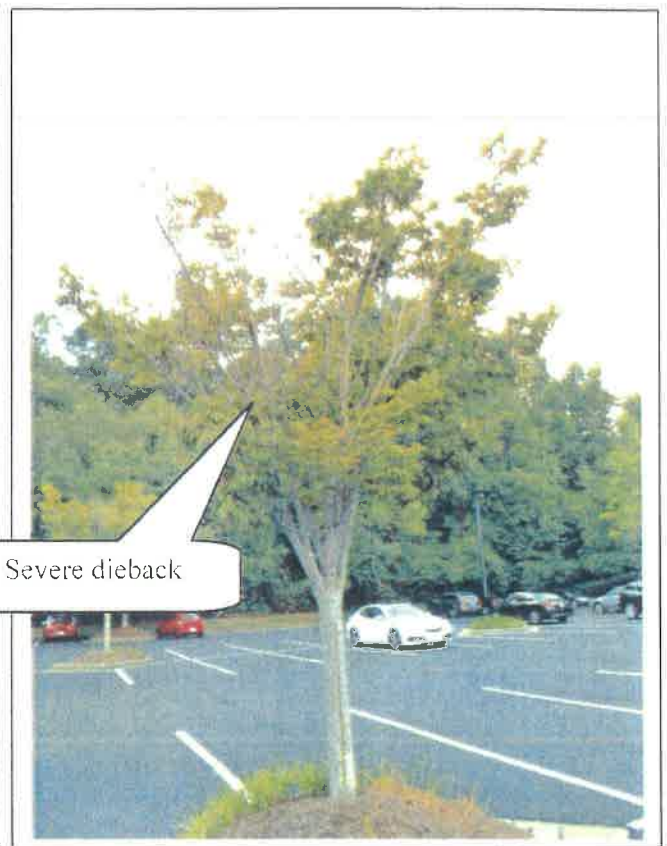


Photo 6

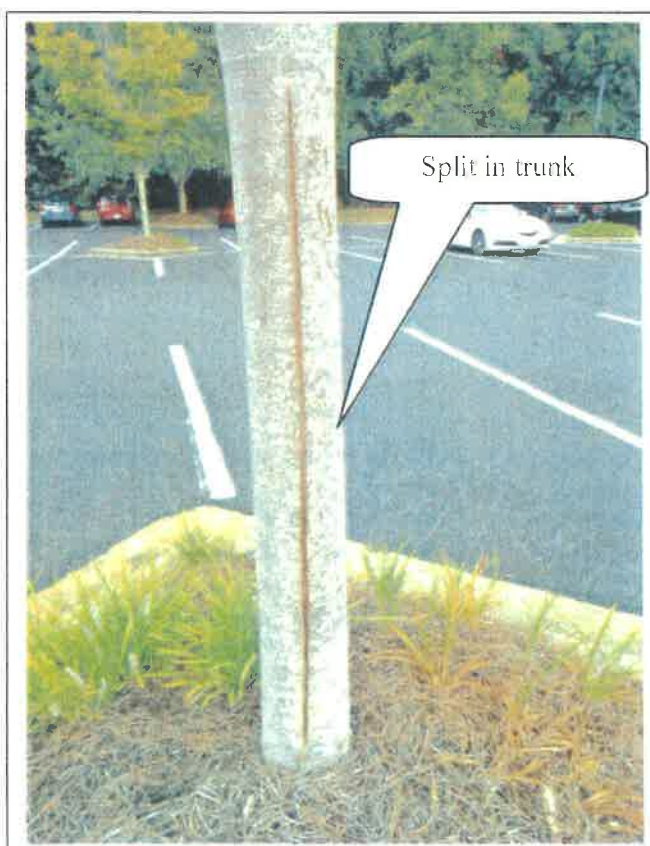


Photo 7

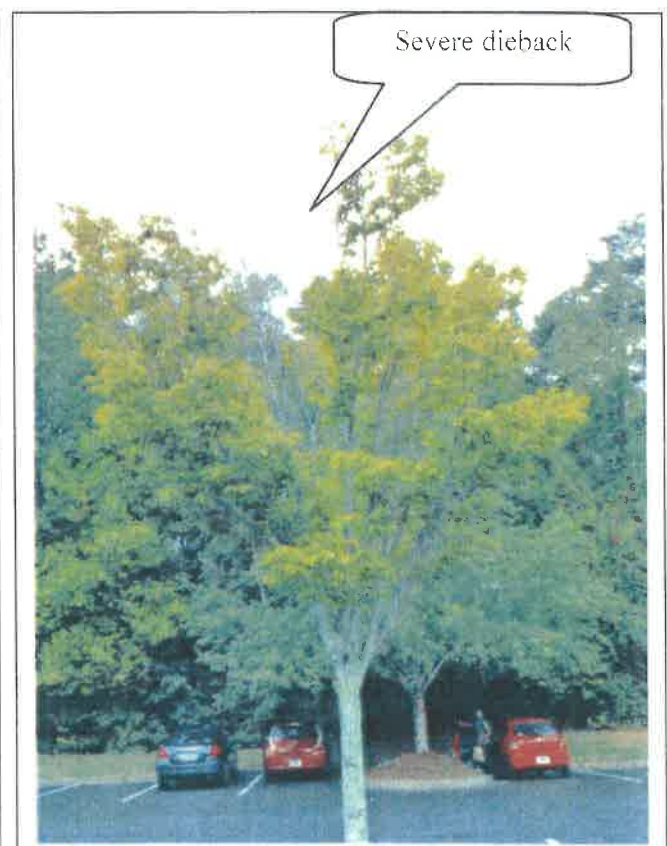
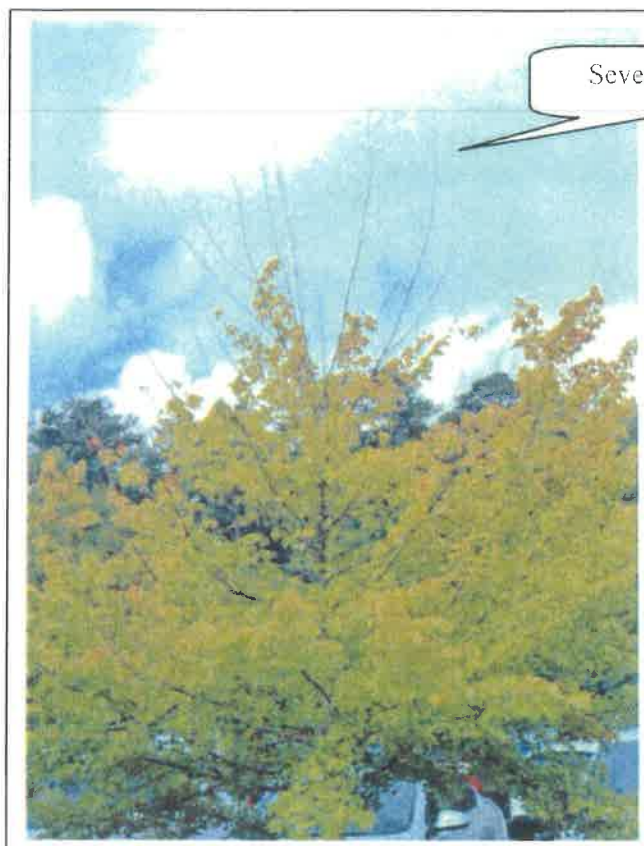


Photo 8



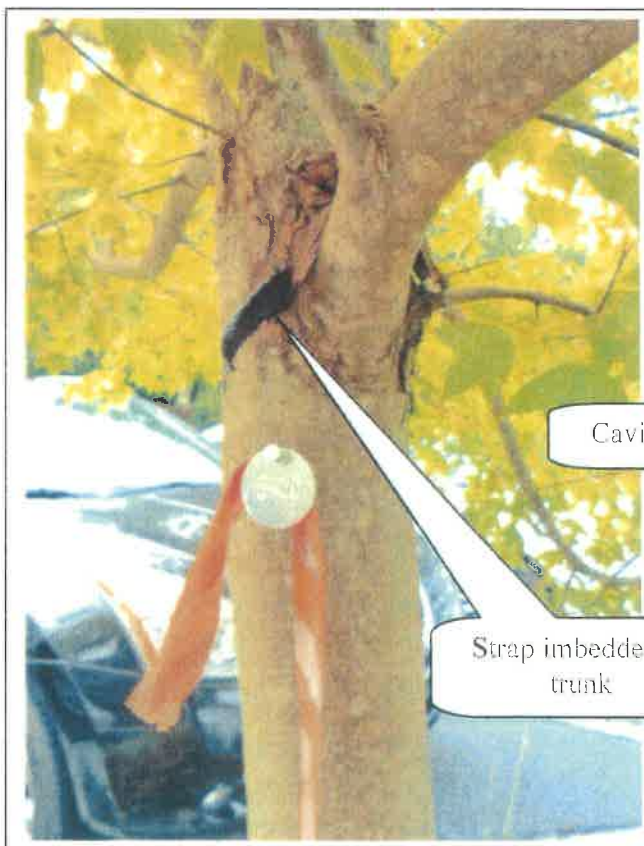
Severe dieback

Photo 9



Cavity with decay

Photo 10



Cavity with decay

Strap imbedded in trunk

Photo 11



Photo 12

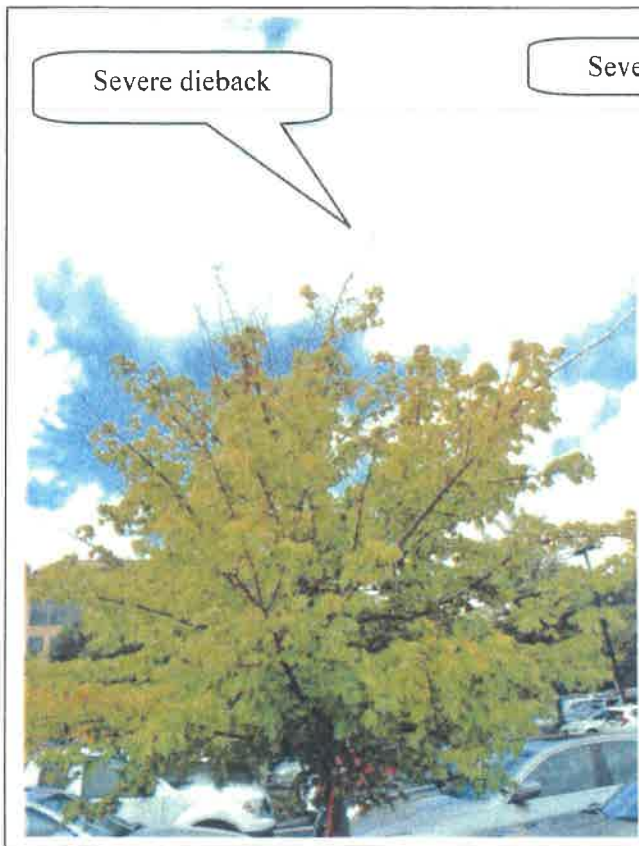


Photo 13



Photo 14



Photo 15

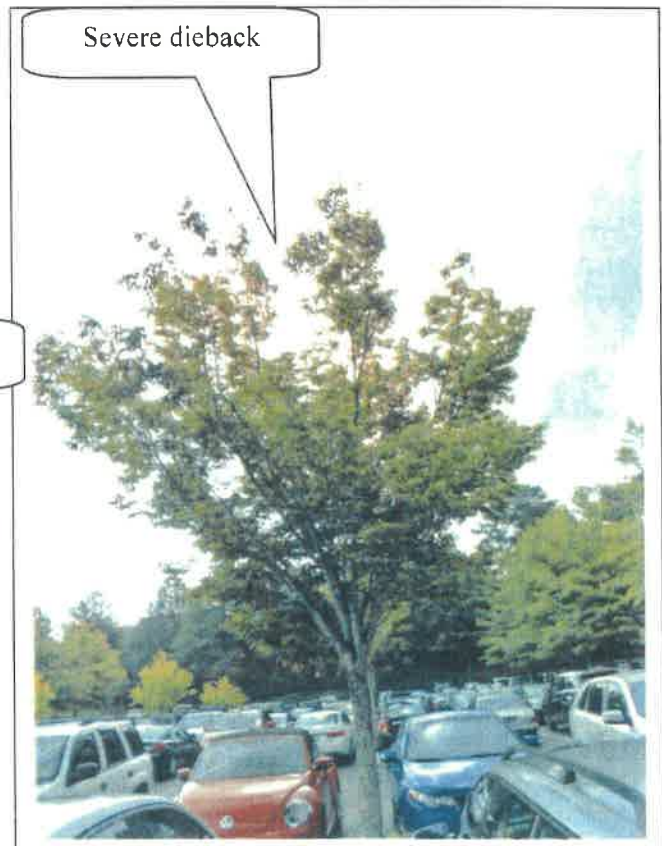


Photo 16



Severe dieback

Photo 17



Split in trunk

Photo 18



Severe dieback

Photo 19



Cavity with decay

Photo 20



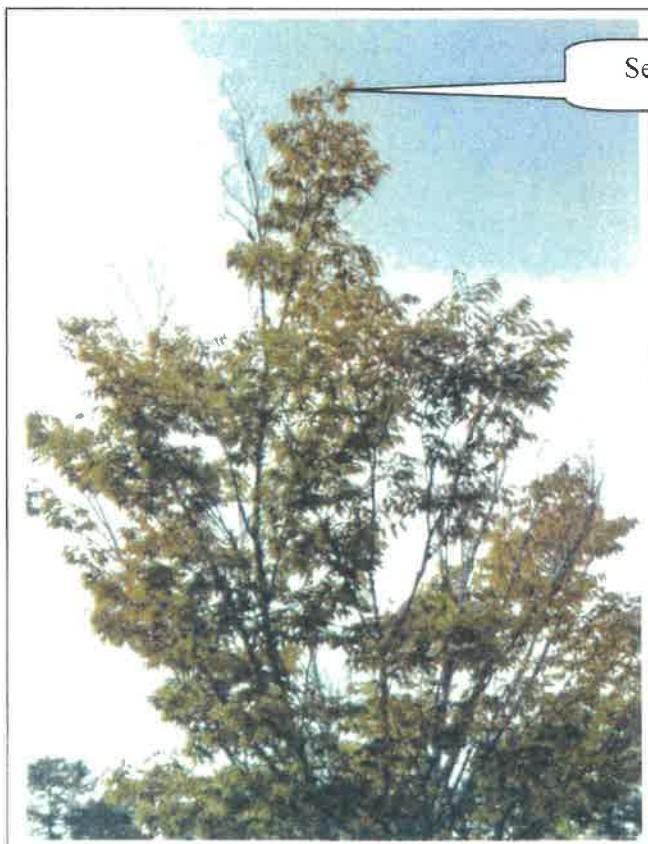
Severe dieback

Photo 21



Cavity with decay

Photo 22



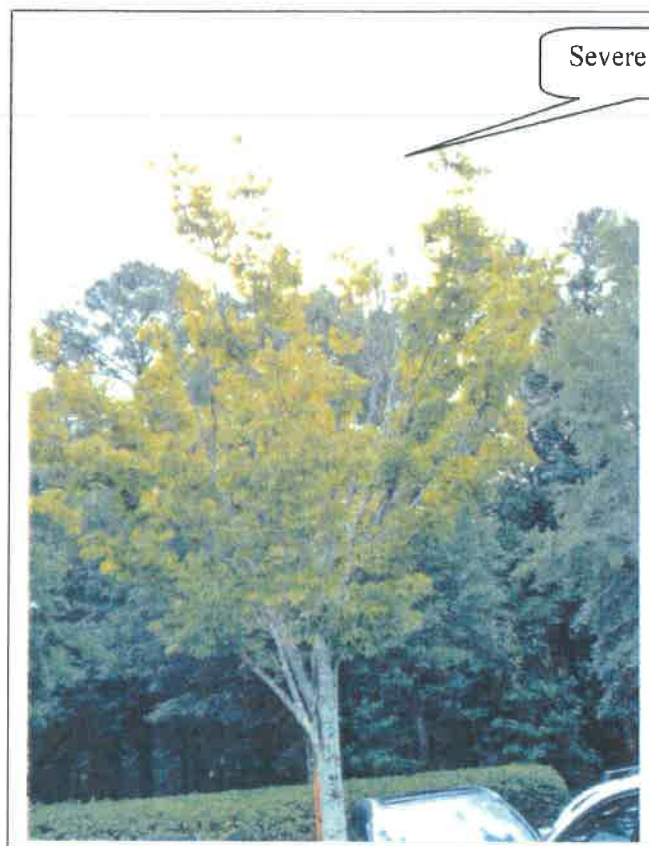
Severe dieback

Photo 23



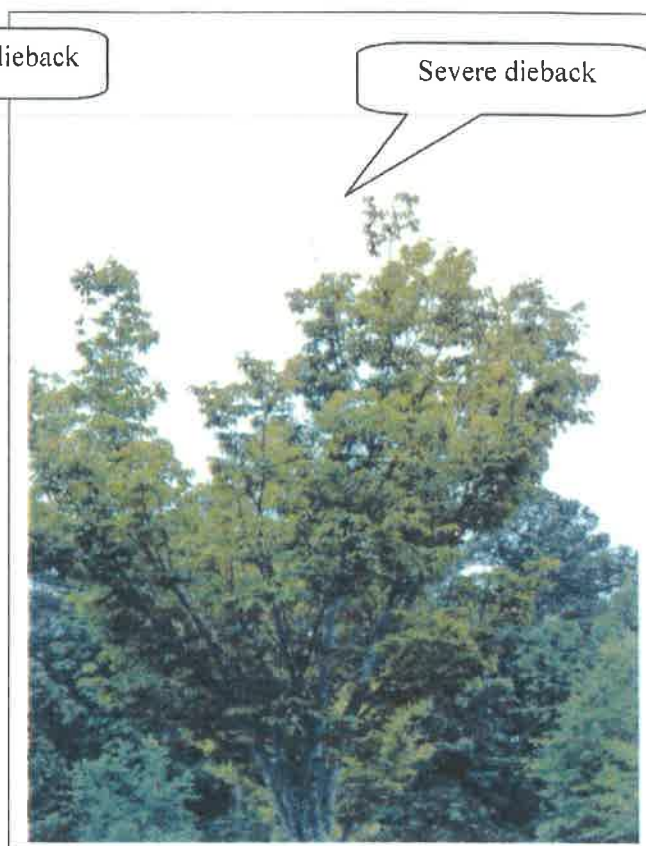
Severe dieback

Photo 24



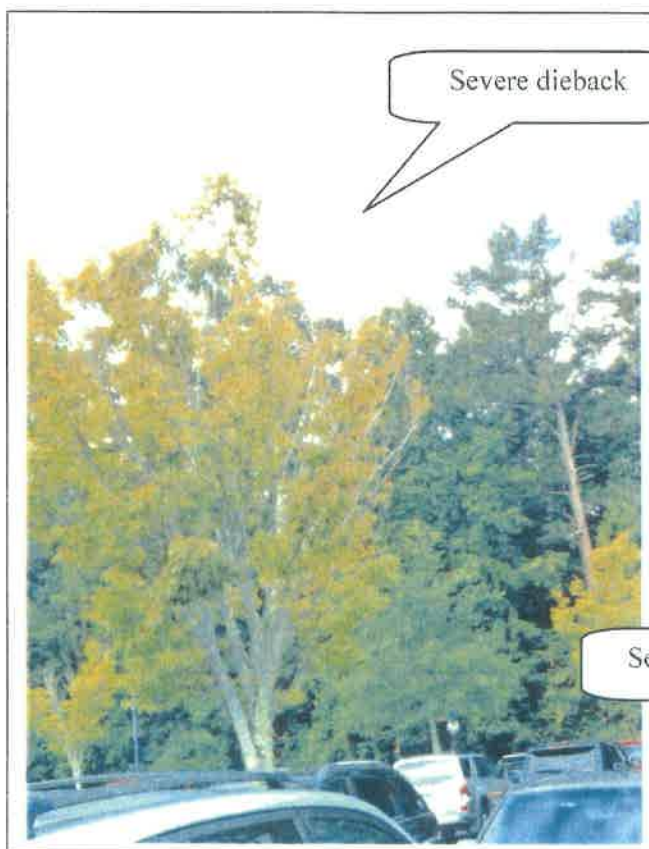
Severe dieback

Photo 25



Severe dieback

Photo 26



Severe dieback

Photo 27



Severe dieback

Photo 28



Photo 29



Photo 30

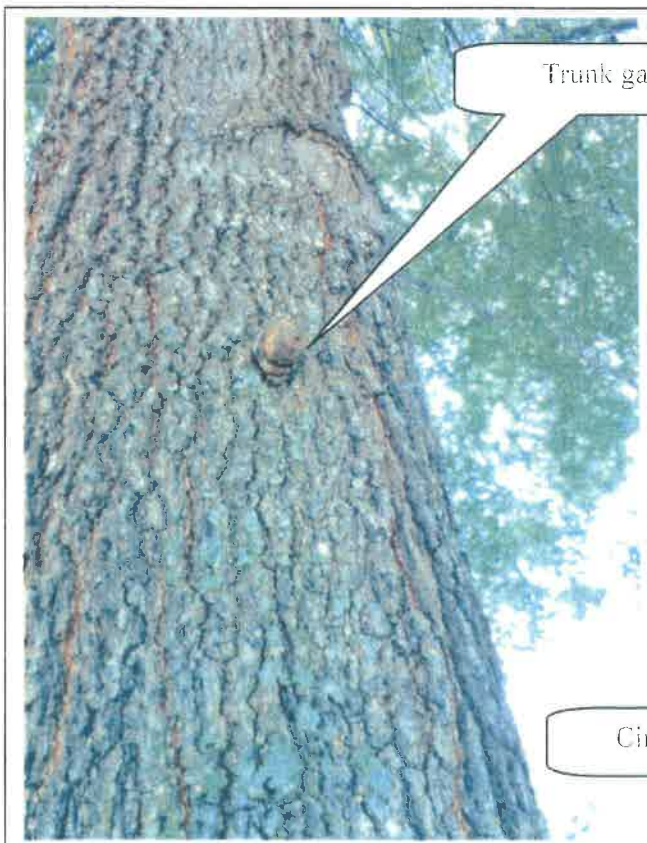
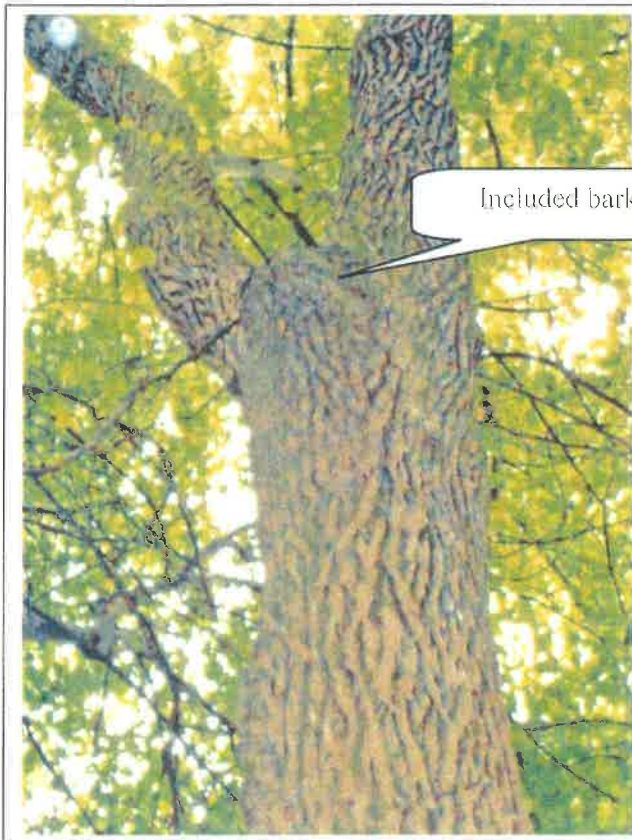


Photo 31

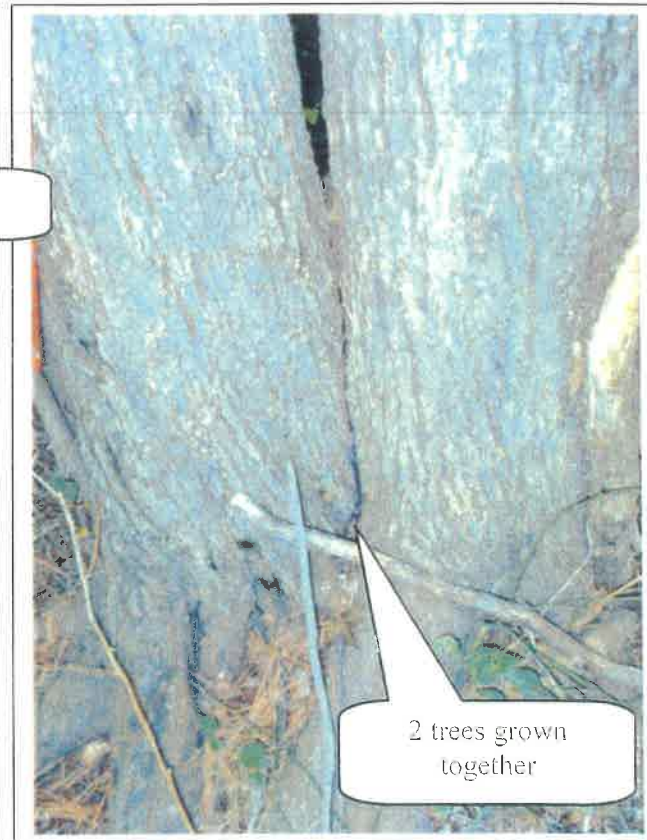


Photo 32



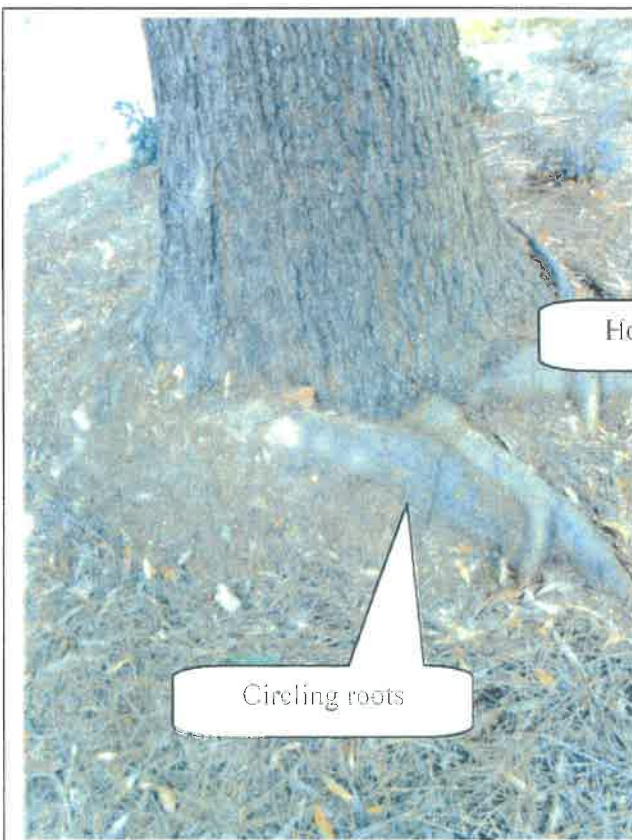
Included bark

Photo 33



2 trees grown together

Photo 34



Circling roots

Photo 35



Hollow cavity

Photo 36

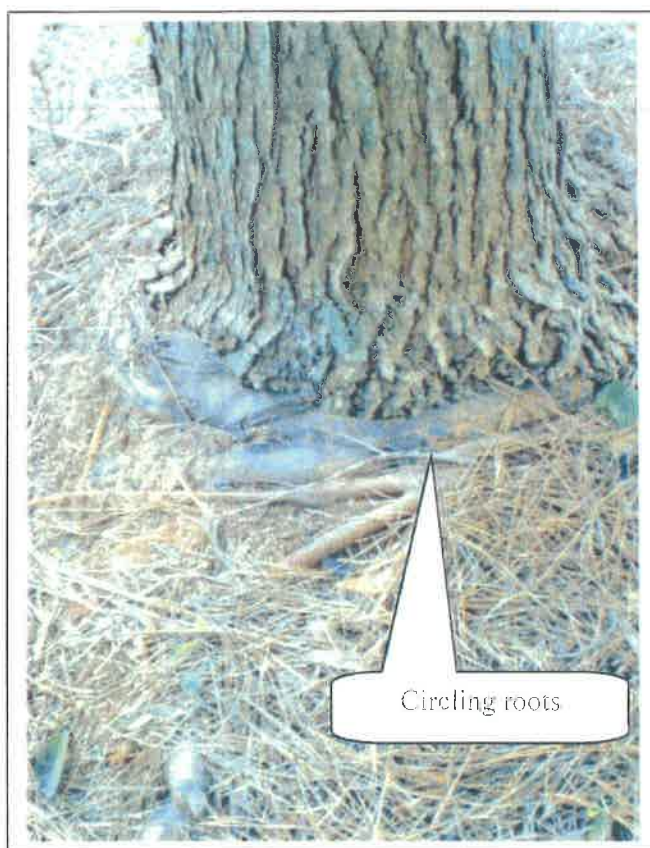


Photo 37

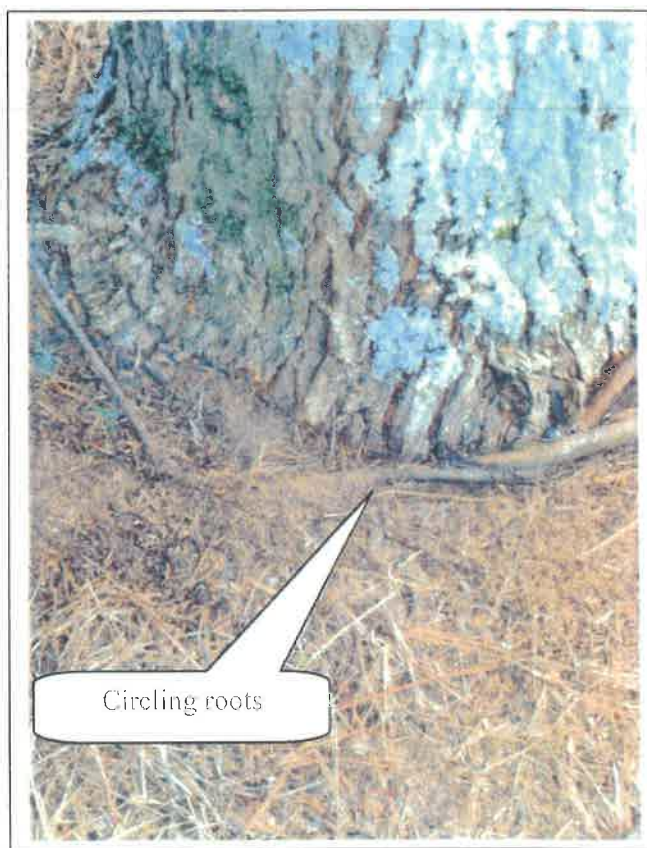


Photo 38

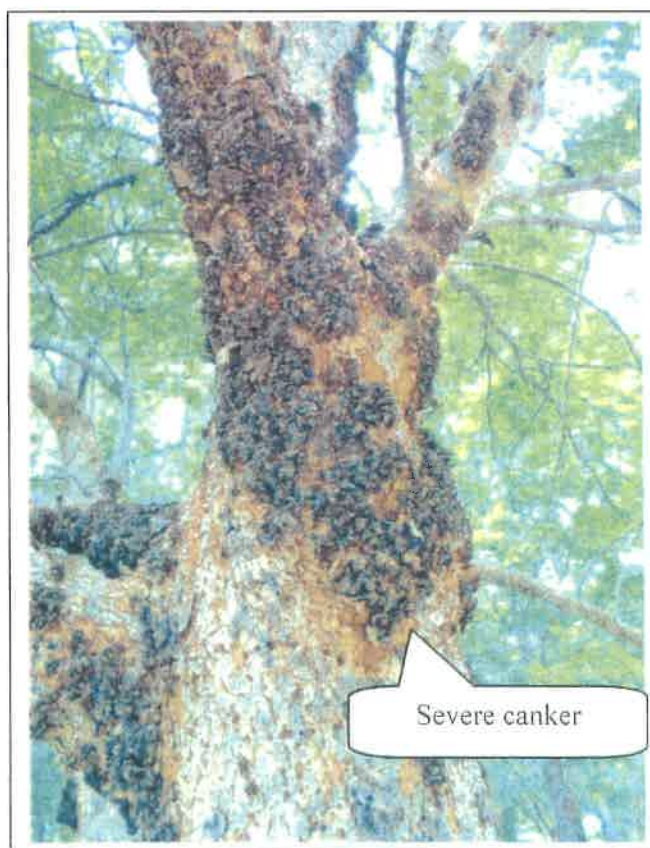
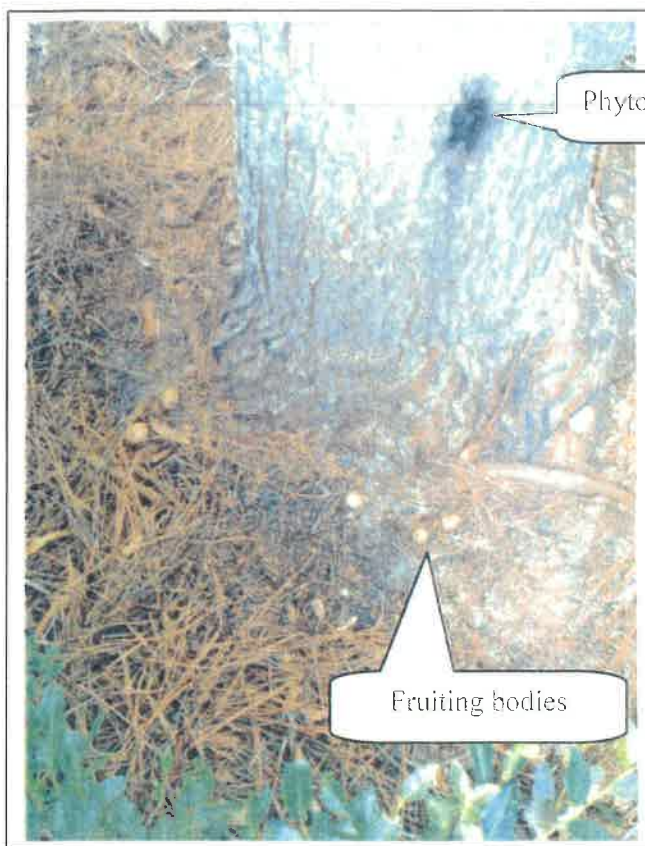


Photo 39



Photo 40



Phytophthora

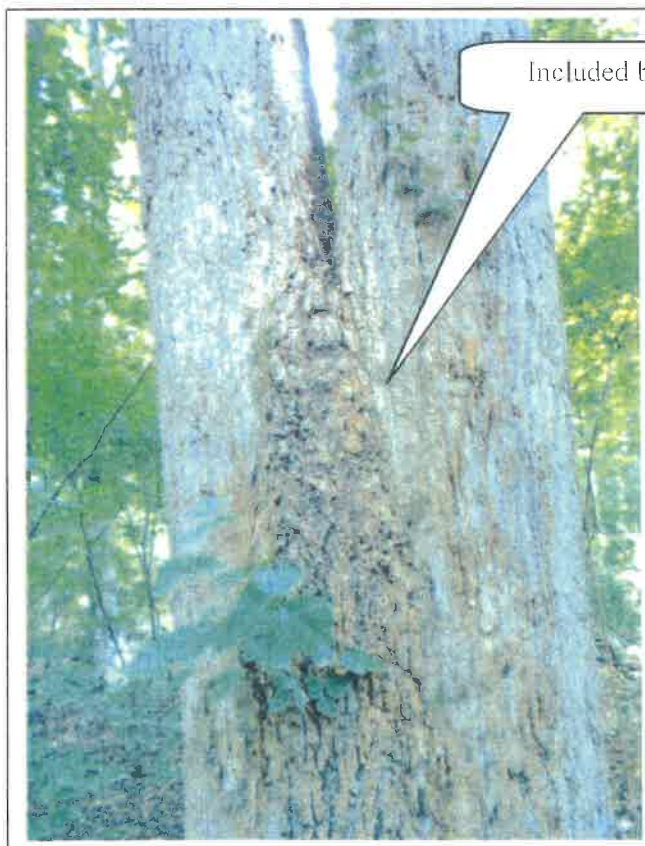
Fruiting bodies

Photo 41



Cavity with decay

Photo 42



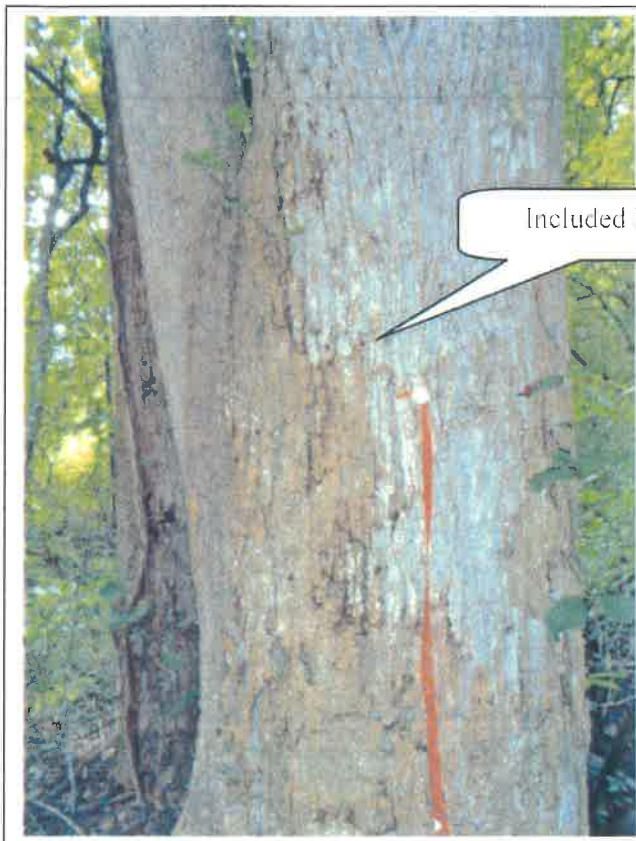
Included bark

Photo 43



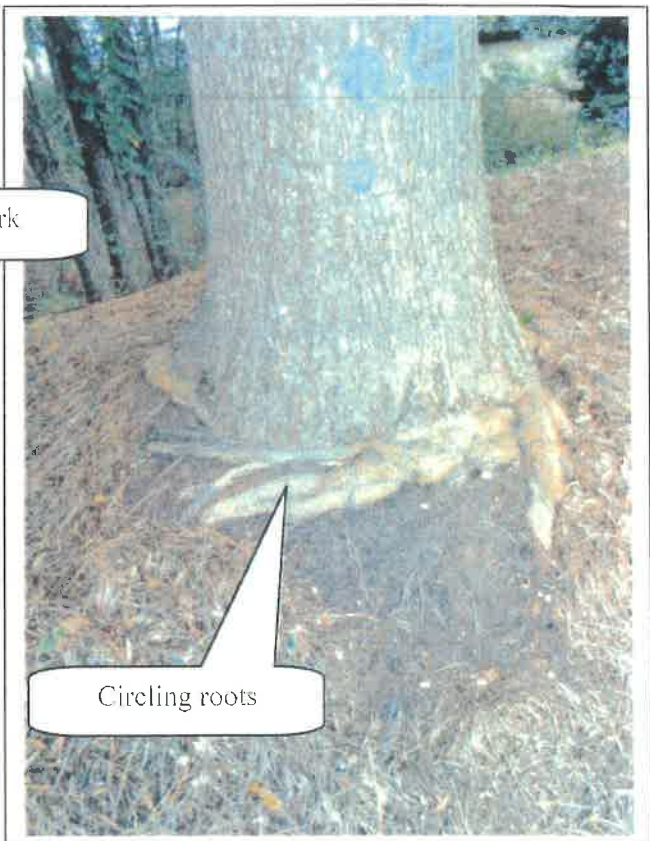
Trunk gall

Photo 44



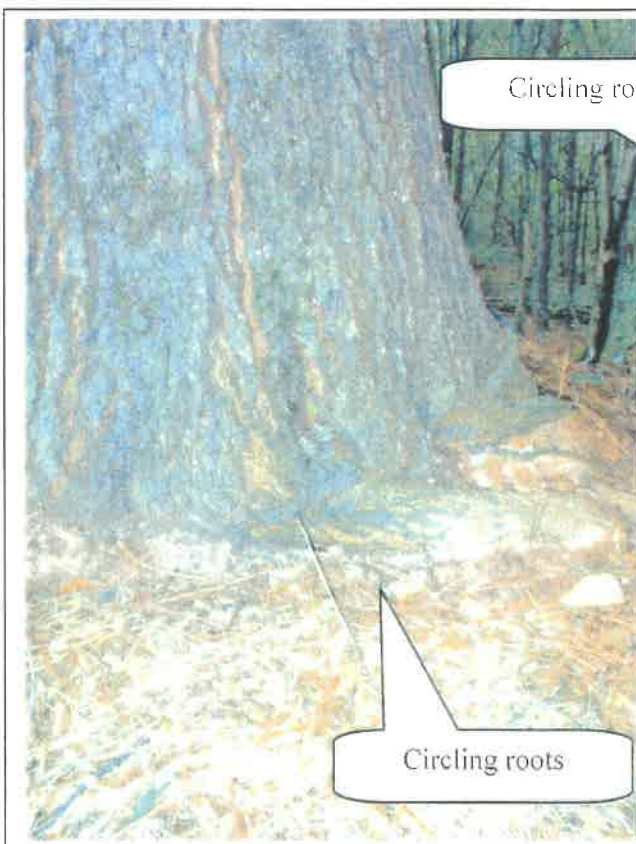
Included bark

Photo 45



Circling roots

Photo 46



Circling roots

Circling roots

Photo 47



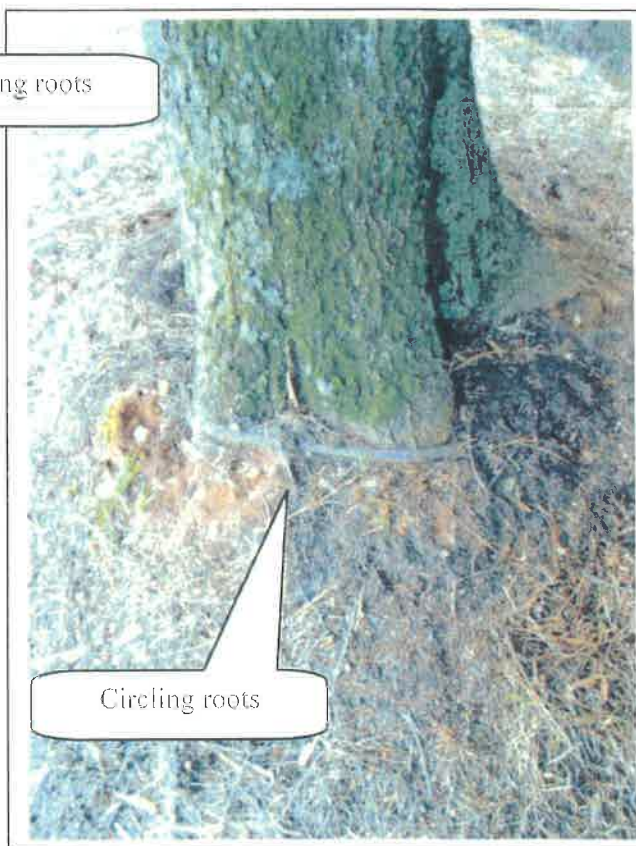
Fruiting bodies

Photo 48



Circling roots

Photo 49



Circling roots

Photo 50



Numerous trunk
galls

Photo 51



Fruiting bodies

Photo 52



Photo 53

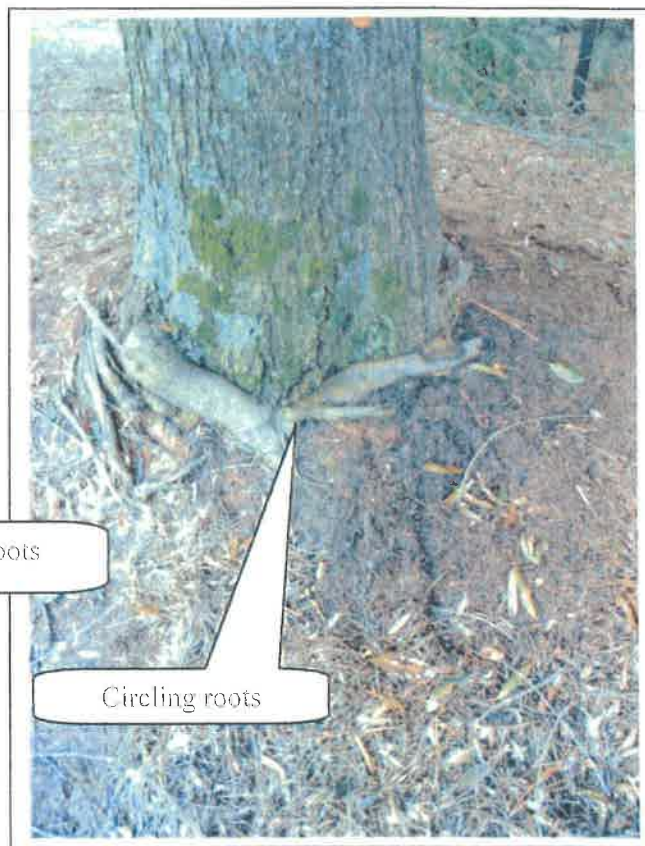


Photo 54



Photo 55

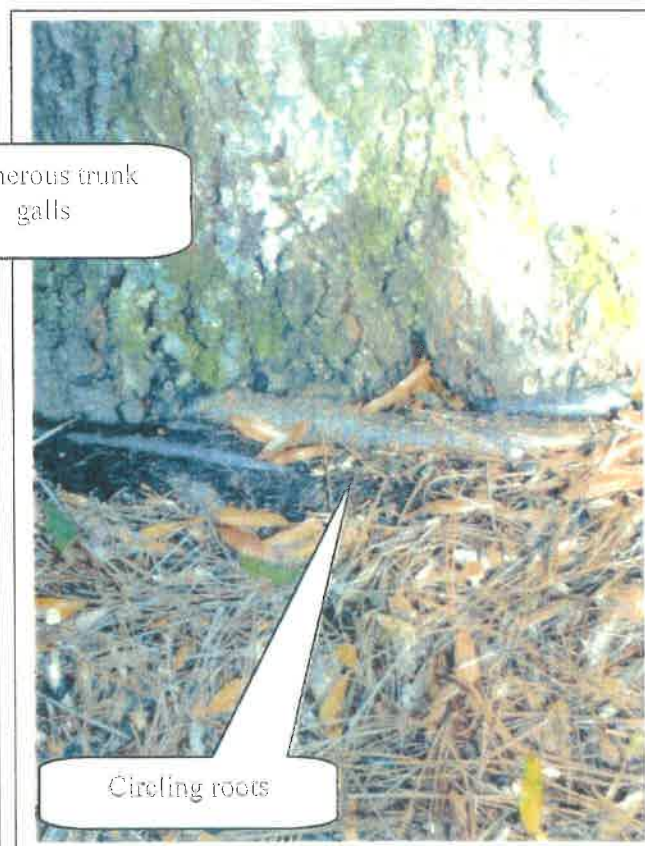
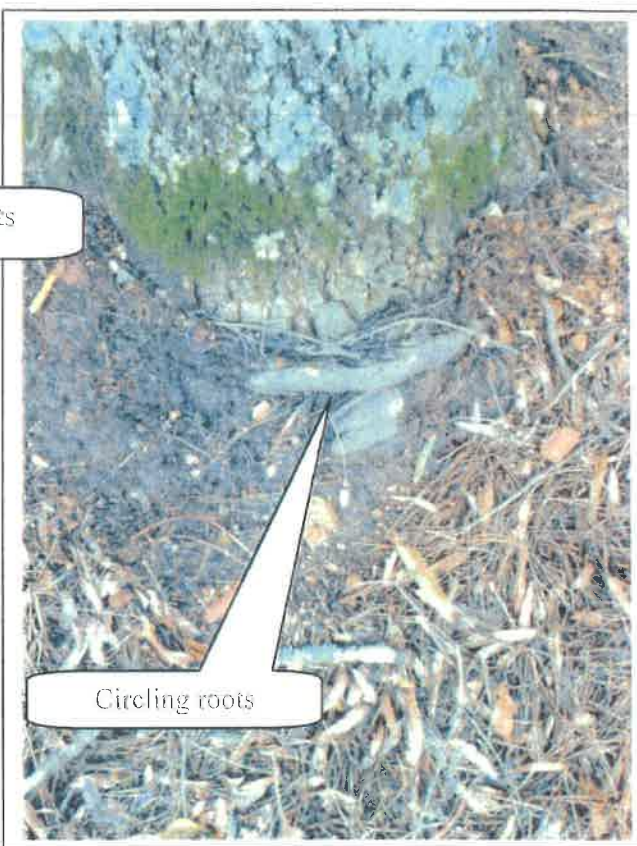


Photo 56



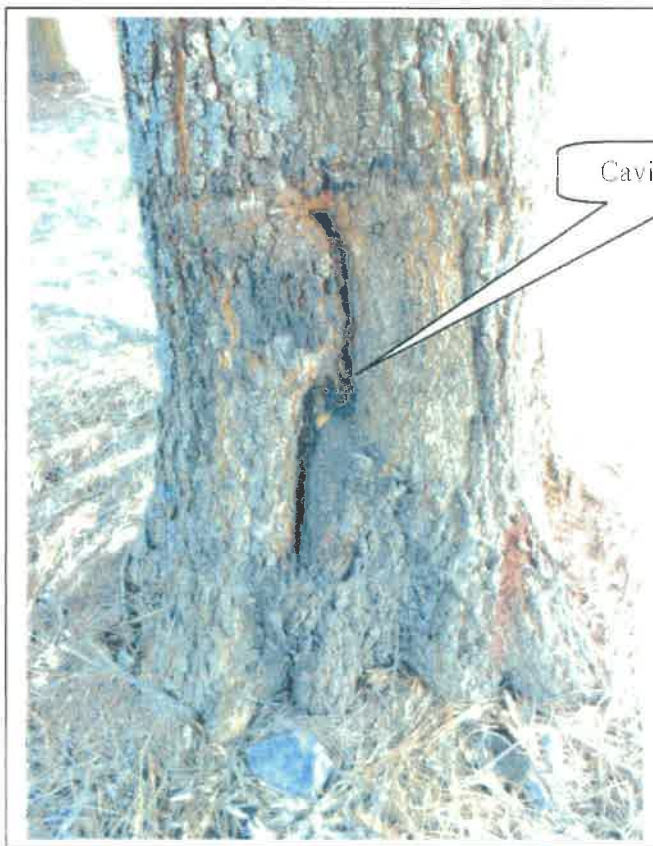
Circling roots

Photo 57



Circling roots

Photo 58



Cavity with decay

Photo 59



Circling roots

Photo 60



Photo 61

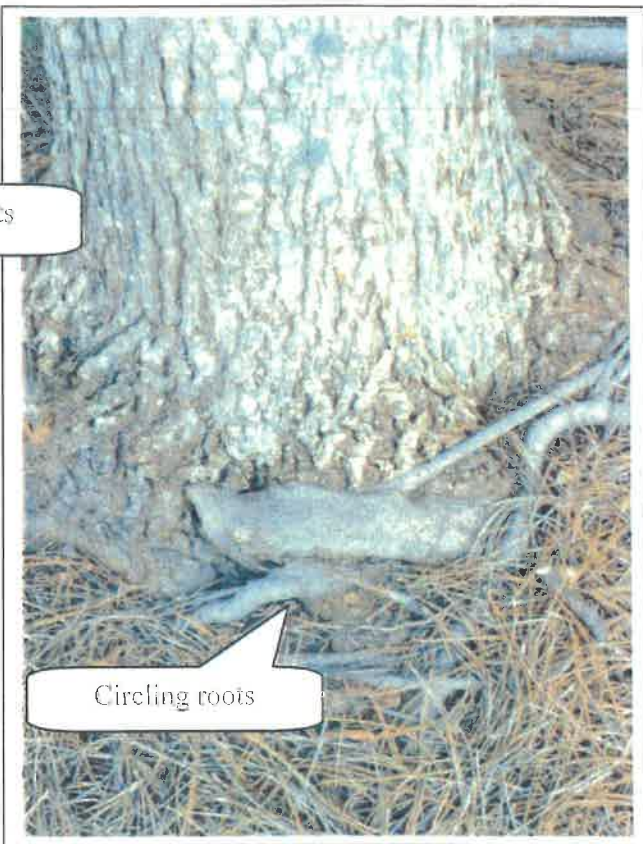


Photo 62



Photo 63



Photo 64



Circling roots

2 Trees grown together

Photo 65

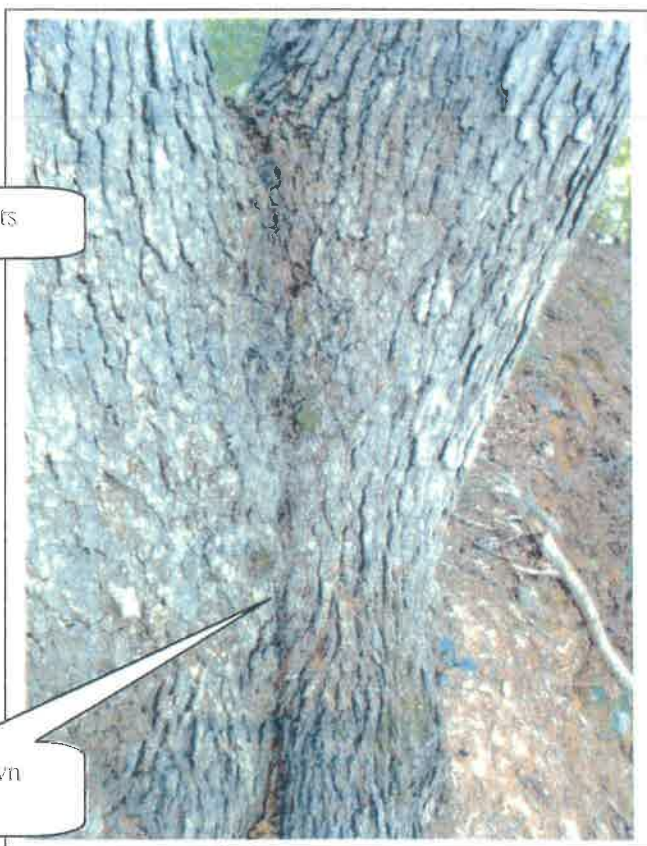


Photo 66



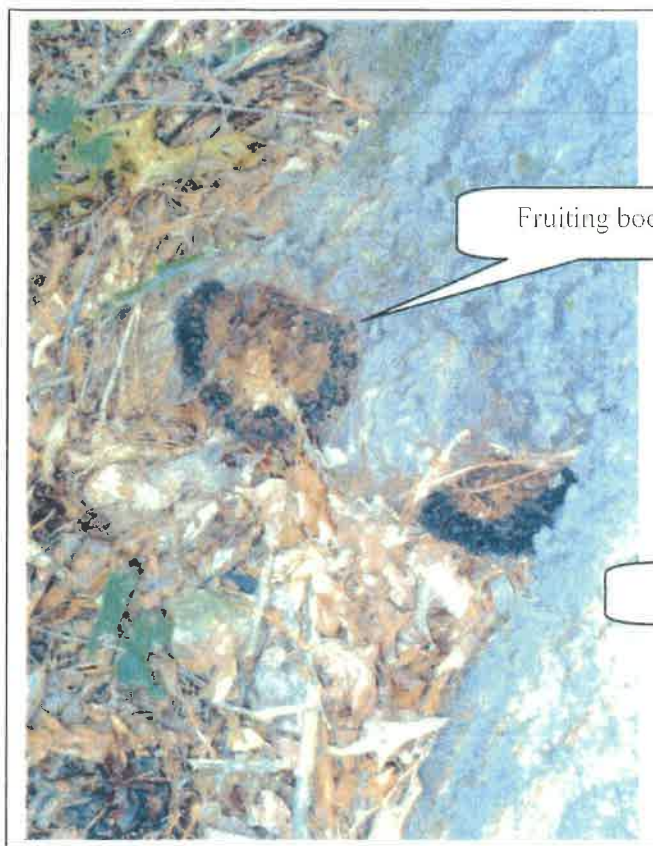
Severe undermining of tree

Photo 67



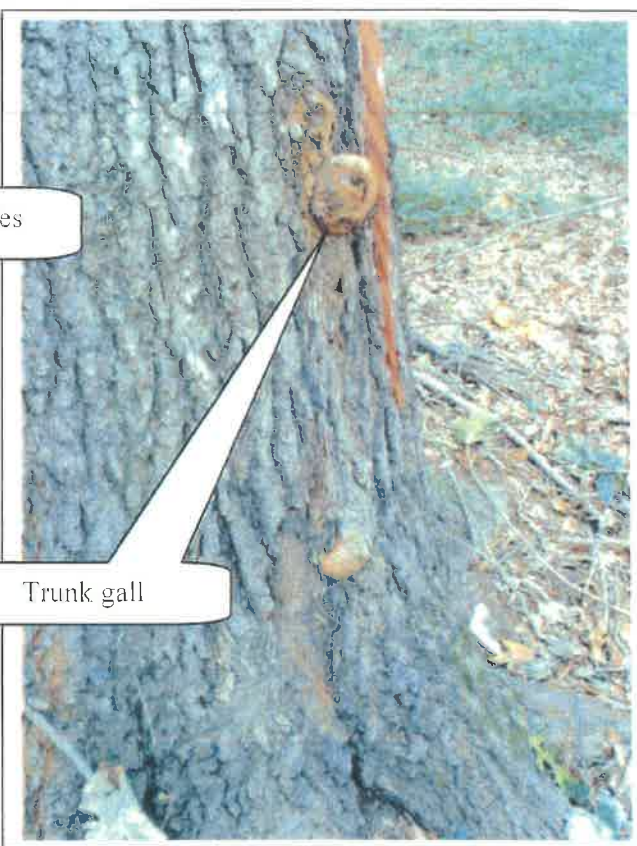
Fruiting body

Photo 68



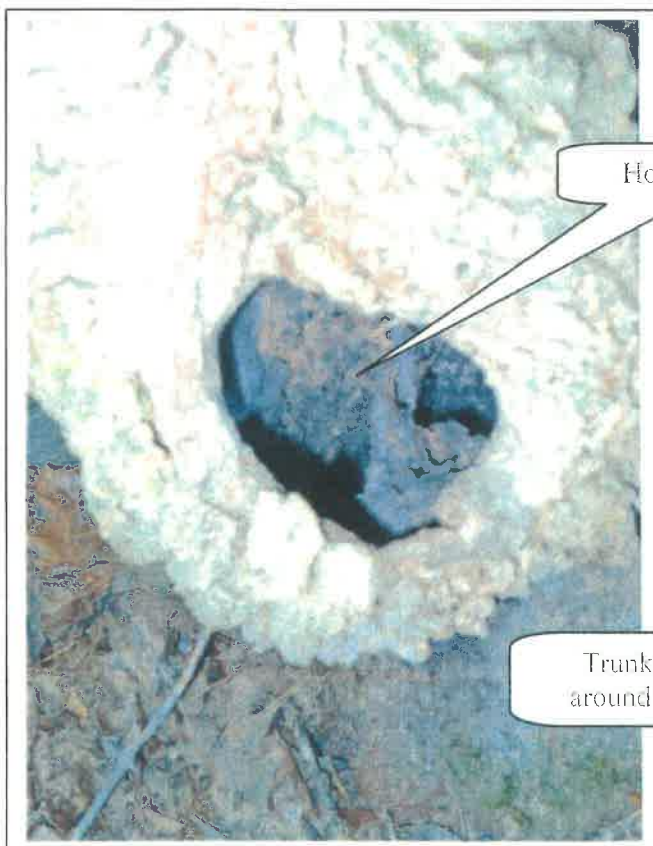
Fruiting bodies

Photo 69



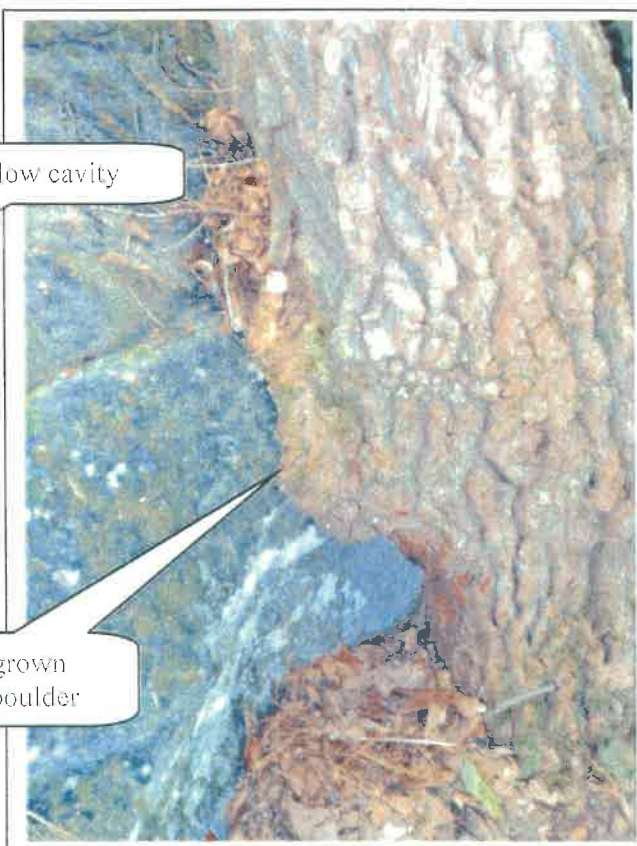
Trunk gall

Photo 70



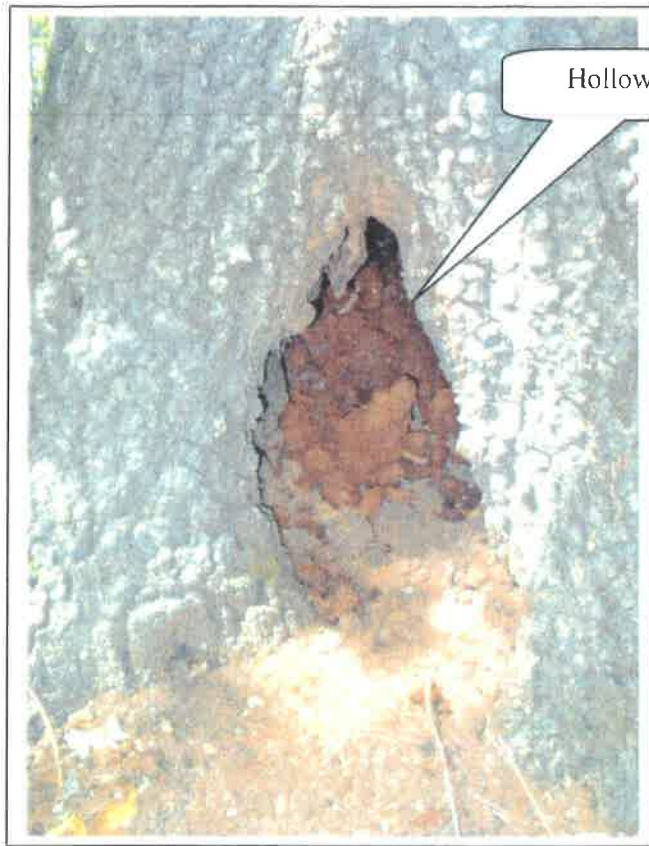
Hollow cavity

Photo 71



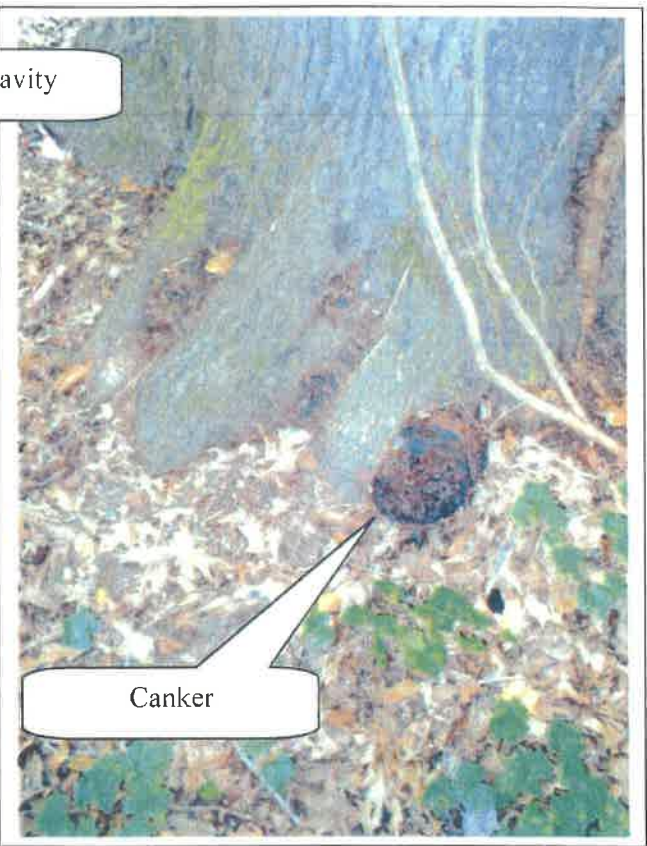
Trunk grown
around boulder

Photo 72



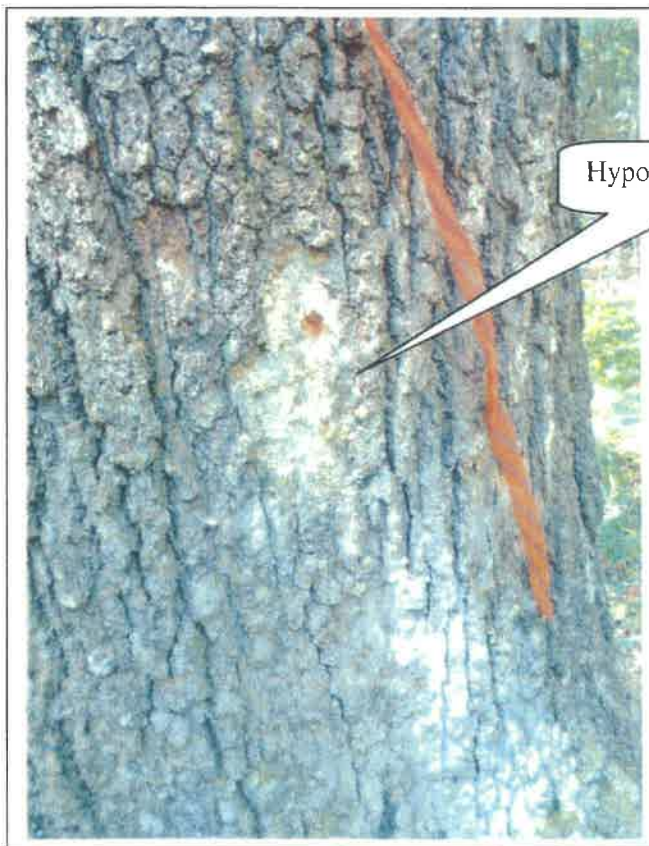
Hollow cavity

Photo 73



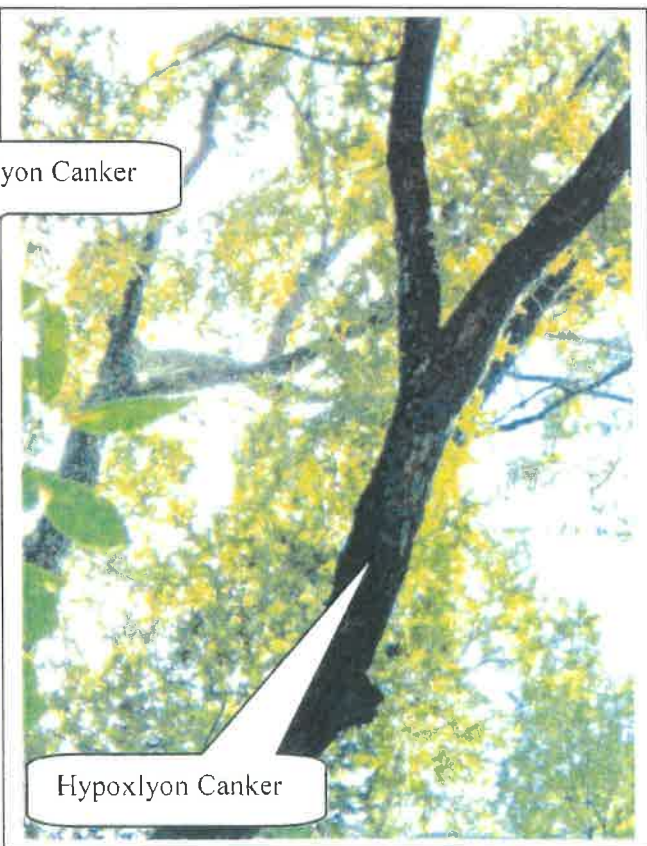
Canker

Photo 74



Hypoxylon Canker

Photo 75



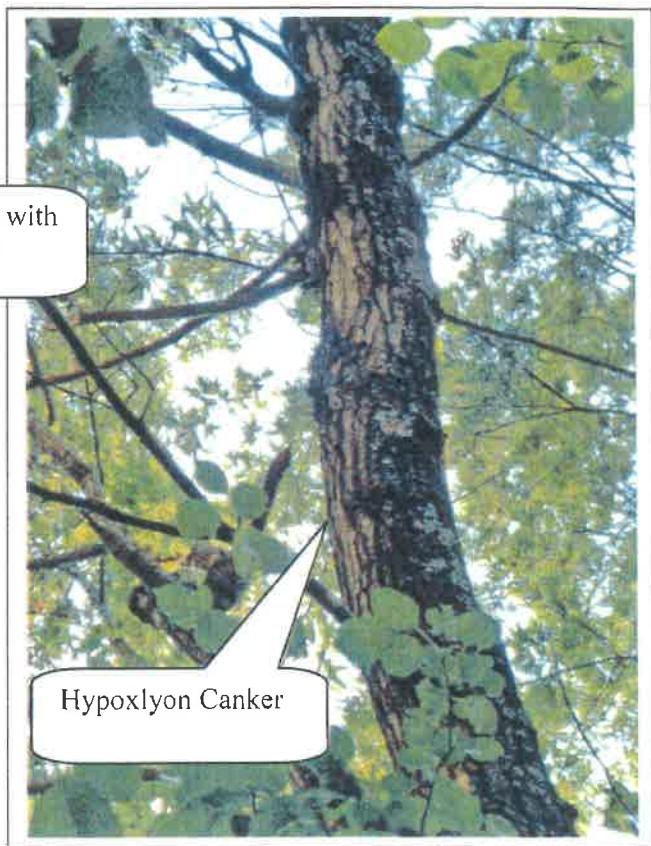
Hypoxylon Canker

Photo 76



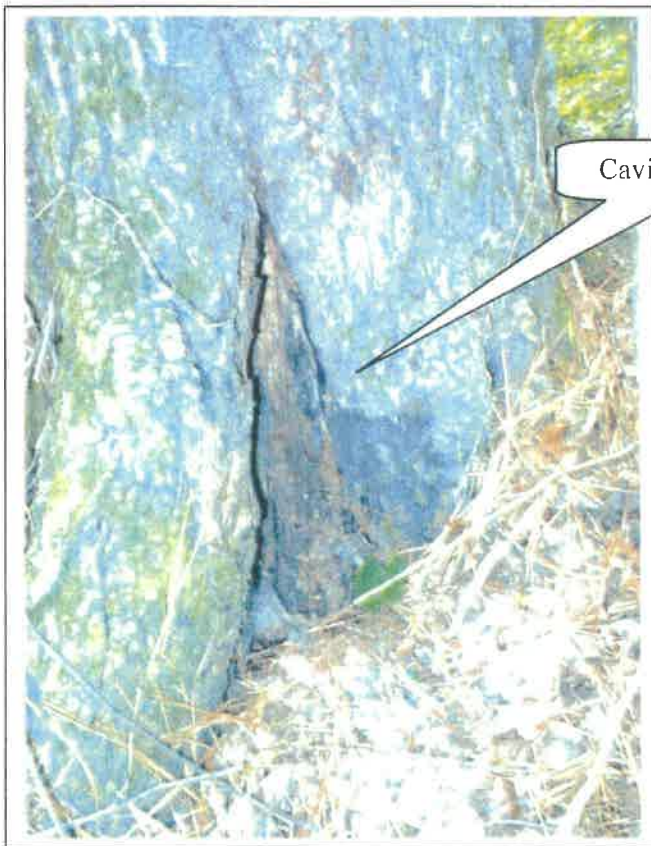
Distorted trunk with
trunk gall

Photo 77



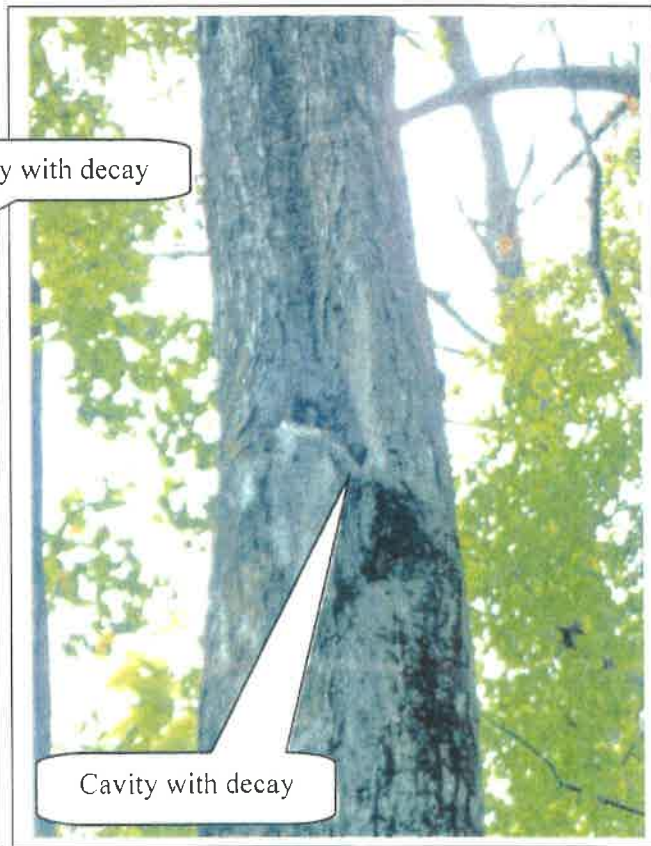
Hypoxylon Canker

Photo 78



Cavity with decay

Photo 79



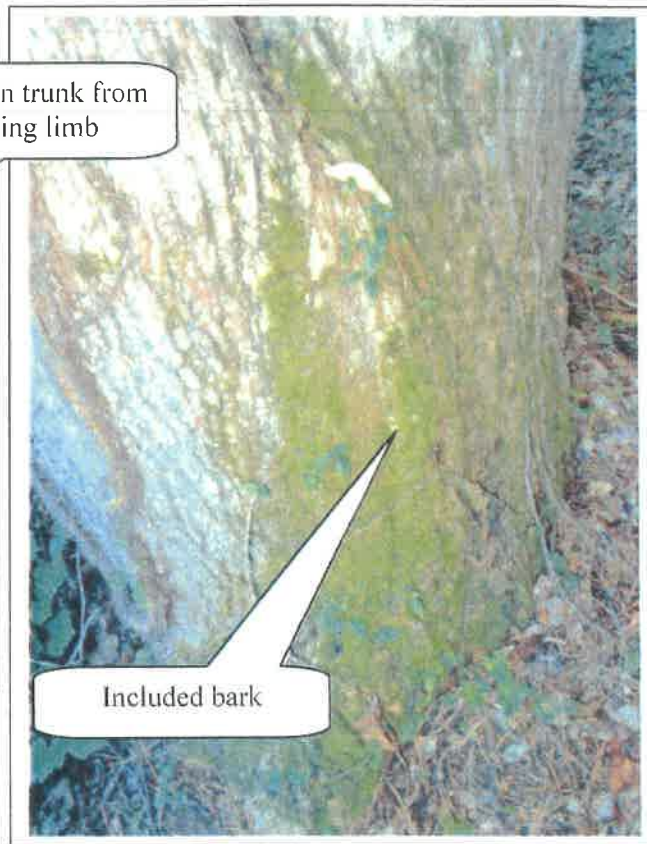
Cavity with decay

Photo 80



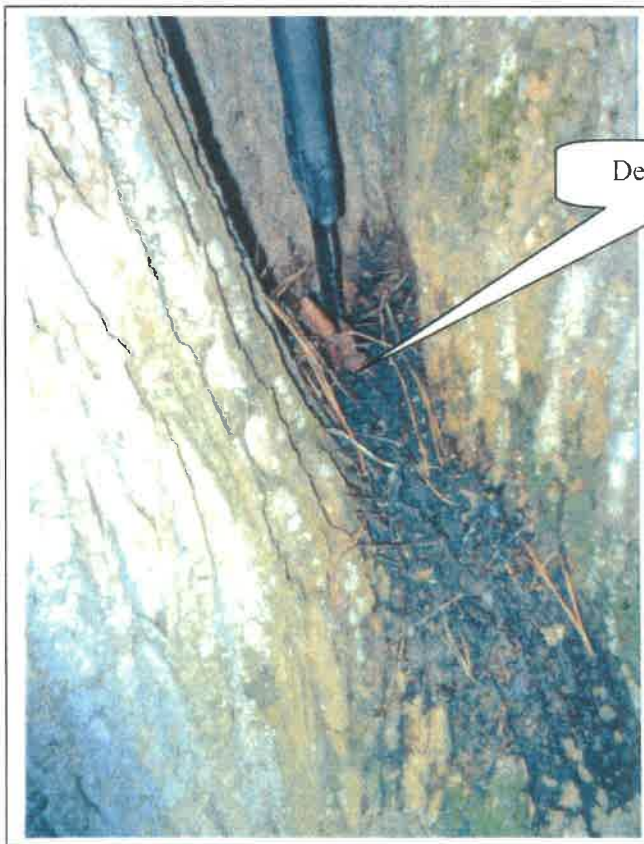
Decay in trunk from
rotting limb

Photo 81



Included bark

Photo 82



Decay in crotch

Photo 83



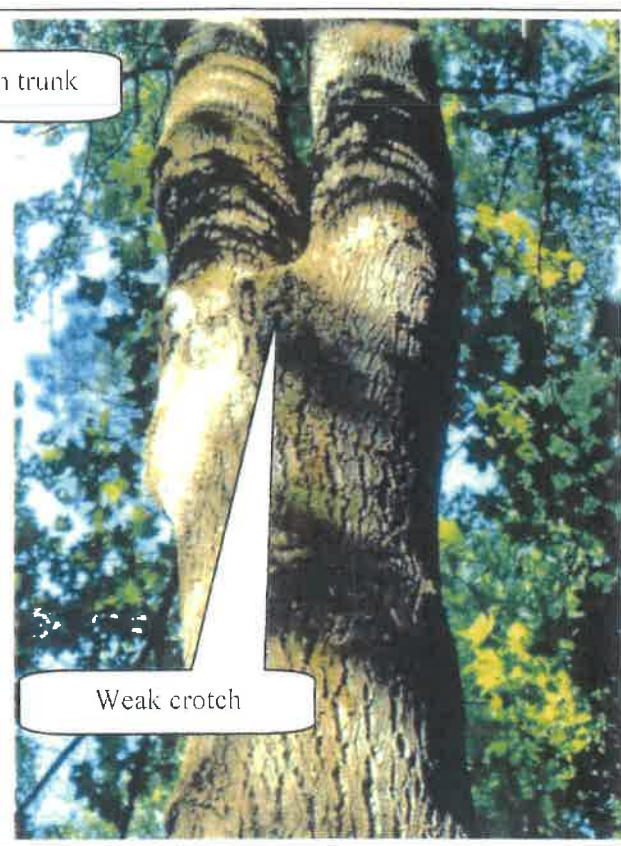
Decay in crotch

Photo 84



Barbwire in trunk

Photo 85



Weak crotch

Photo 86



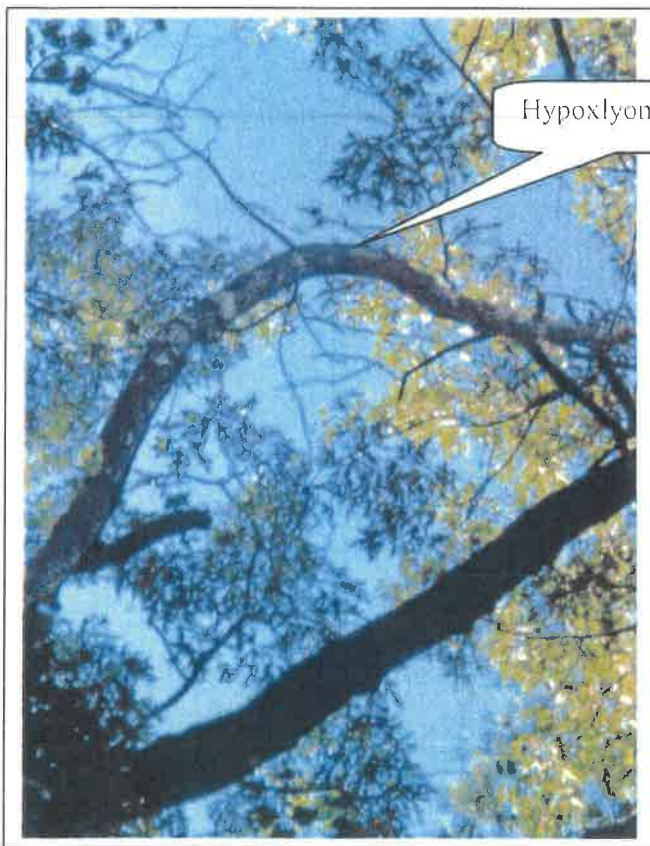
Severe lean

Photo 87



Phytophthora

Photo 88



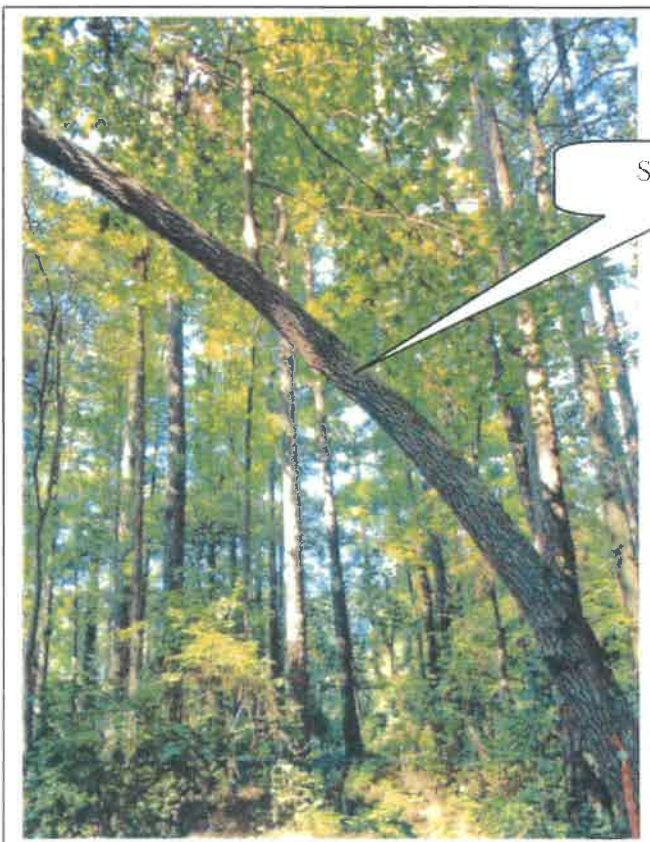
Hypoxylon Canker

Photo 89



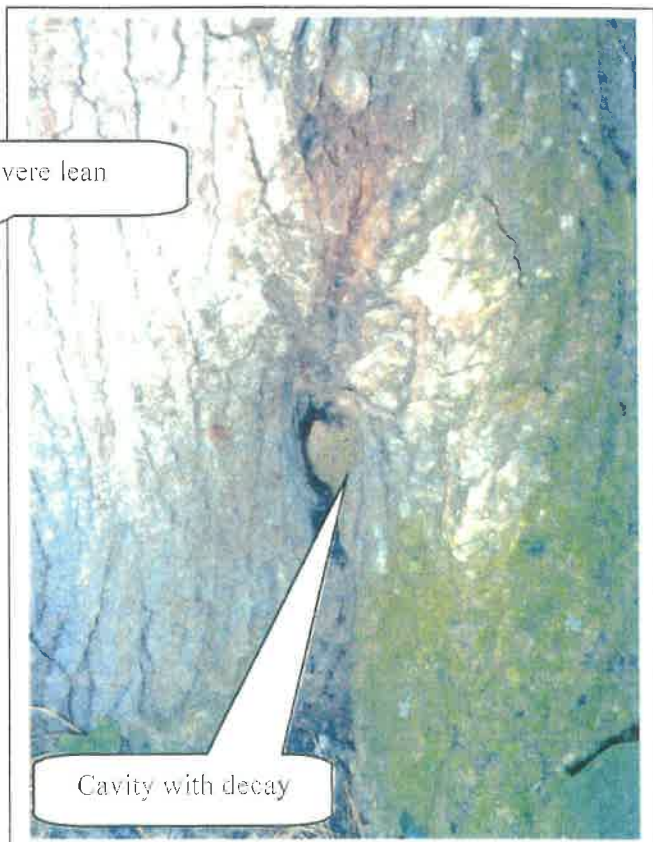
Cavity with decay

Photo 90



Severe lean

Photo 91



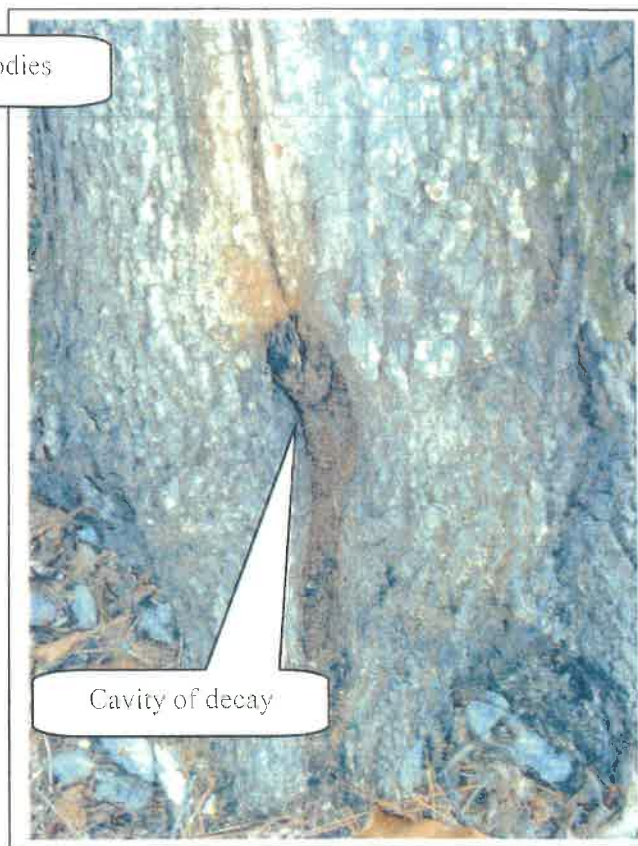
Cavity with decay

Photo 92



Fruiting bodies

Photo 93



Cavity of decay

Photo 94



Root damage

Photo 95



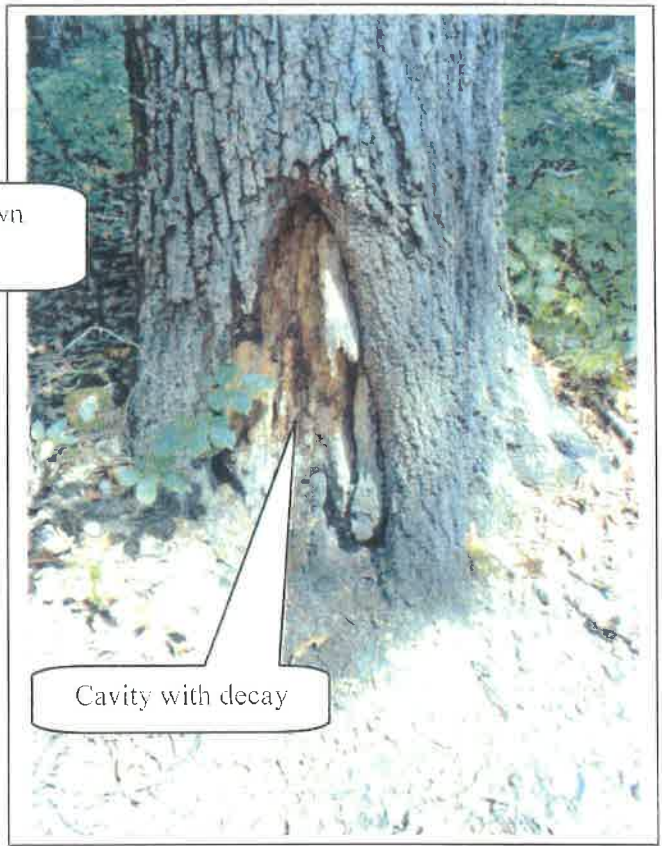
Included bark with
trunk gall in the
inclusion

Photo 96



2 Trees grown together

Photo 97



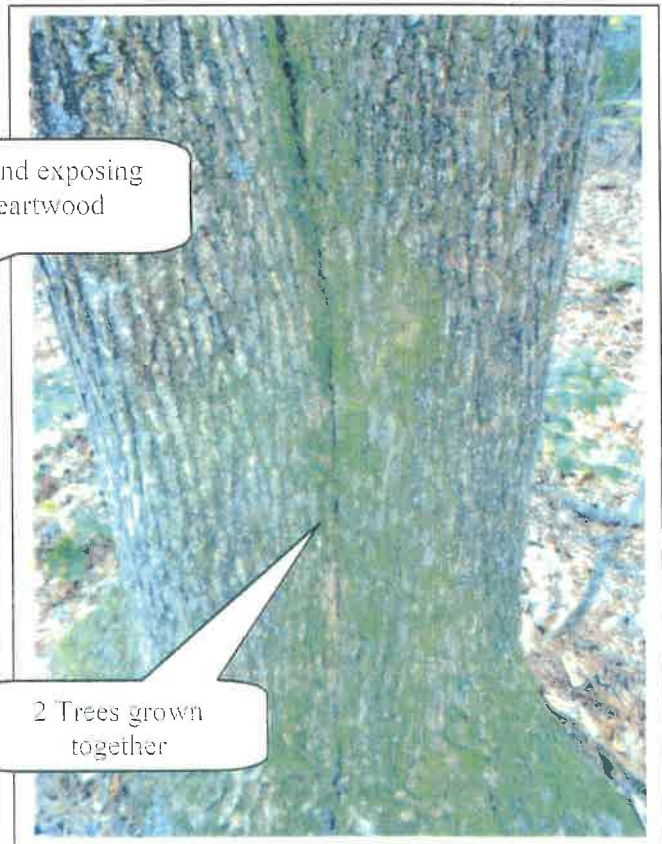
Cavity with decay

Photo 98



Wound exposing heartwood

Photo 99



2 Trees grown together

Photo 100

16-07-29-01 GA 400
Haynes Bridge Arborist
Report Alpharetta
Arborist Report

Reference UDC
Alpharetta, Georgia



Location Map



All of the following information is based upon visual field observations and 25 years of practical horticultural experience. No scientific or lab tests have been performed. I certify that all information in this report is true and inclusive to the best of my knowledge and is prepared in good faith.

Outdoor Spaces, LLC

By Scott Hall, Owner

On Site Specimen Evaluation Date: August 8, 10, 11, 16, 2016

Report Date: August 17, 2016

Revised Date:



Outdoor Spaces, LLC
Scott Hall, Owner
RLA, Certified Arborist
Certificate Number: SO-5434A
404-328-6561 Cell
678-965-4784 Fax
scottandcyrena@bellsouth.net

Warranty Disclaimer:

Although, this report will determine whether or not a tree is a specimen or "Tree of Quality"; it is provided as best judgment opinion. Ultimately, the governing body's (City of Alpharetta) arborist or representative shall determine whether a tree is classified as a specimen/"Tree of Quality" or not.

All specimen/"Tree of Quality" tree locations shall be approximate. The provided tree locations shall NOT be GPS located and in no manner shall the provided tree location plan be used or represented as a tree survey. It is the sole responsibility of the OWNER to have all tagged specimen/"Tree of Quality" trees located by a Certified Land Surveyor.

No warranties express or implied are made with respect to the report of aforementioned specimen trees. It is understood the OWNER makes use of this report by the ARBORIST at OWNER's sole risk and that the report is provided as best judgment opinion. In no manner does this report guarantee the life or imply any length of life span of the trees that are determined to be specimens.

Arborist Note:

Due to certain species and undesirable traits, some trees shall be considered in poor condition if the following is true. Numerous trees grown in a native setting may appear to grow as multi-trunk; however this is not desirable in most trees. Most trees that have multi-trunks at the base are usually created when two separate trees grow together or the tree branches off at an early age and they become Co-Dominate Leaders. Either scenario is an undesirable condition for most trees because they both create weak crotches, included bark and/or a prime place for debris and water to get trapped that will always cause decay. In this case these trees become a life safety issue and can not be considered specimen trees.

Some trees are an exception to this rule, such as, but not limited to:

Crape Myrtles, Birches, Wax Myrtles, Red Buds, Fringe Trees, Dogwoods, Hollies, Cedars, Sourwoods, Sweet Bay Magnolias, Red Bays and Live Oaks.

These are an exception because they naturally create sucker growth from the roots and/or trunk or do not typically have the life safety issues because they are not large growing trees.

Reference: Sinclair, Wayne A., 1936. Diseases of Trees and Shrubs / Wayne A. Sinclair and Howard H. Lyon.-2nd ed. Published 2005

ARTICLE III. LAND DEVELOPMENT ACTIVITIES

SECTION 3.2 TREE PROTECTION

3.2.1 DEFINITIONS

Caliper. A standard of trunk measurement for understory or replacement trees. Caliper inches are measured at the height of 6 inches above the ground for trees up to and including 4 inch caliper and 12 inches above the ground for trees larger than 4 inch caliper.

Diameter Breast-Height (DBH). The standard measure of overstory tree size (for trees existing on a site). The tree trunk is measured at a height of 4 ½ feet above the ground. If a tree splits into multiple trunks below 4 ½ feet, measure the trunk at its most narrow point beneath the split.

Hardwood Tree. Any tree that is not coniferous (cone bearing). This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Softwood Tree. Any coniferous (cone bearing) tree. This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Specimen Tree. Any tree which qualifies for special consideration for preservation due to its size, type, condition, location or historical significance. See additional requirements for Specimen Trees in Appendix B.

Tree. Any living, self-supporting woody or fibrous plant which normally obtains a diameter breast height of at least three (3) inches, and typically has one (1) main stem or trunk and many branches.

Understory. Those trees that grow beneath the overstory, and will generally reach a mature height of under 40 feet.

APPENDIX A

SPECIMEN TREES

Some trees on a site warrant special consideration and encouragement for conservation. These trees are referred to as Specimen Trees.

The following criteria are used by the Director to identify specimen trees.

A Specimen Tree is any tree which qualifies for special consideration for preservation due to its size, type, condition, location, or historical significance and is determined by the City Arborist, prior to development, to be in overall good health without the aid of a specialized care plan according to accepted ISA practices, and which also meets the minimum size criteria set forth below.

Size Criteria

Pine Trees: 30-inch (30") diameter or larger Overstory Trees: 24-inch (24") diameter or larger Understory Trees: 8-inch (8") diameter or larger

In order to encourage the conservation of Specimen Trees and the incorporation of these trees into the design of projects, additional density credit will be given for Specimen Trees, which are successfully saved by a design feature specifically designated for such purpose. Credit for any Specimen Tree thus saved would be two (2) times the assigned unit value shown in Table 3.4. The Critical Root Zone of Specimen Trees will be protected with hog-back/wire-back tree save fencing with metal support poles.

If a Specimen Tree is to be removed, a plan or written document indicating the reason for the removal must be submitted to the Director.

Specimen Trees that cannot be saved (see Section 3.2.13) must be replaced with trees having three (3) times the unit value of the tree removed with a minimum four-inch (4") tree caliper by species with potentials for comparable size and quality.

Any Specimen Tree which is removed without the appropriate review and approval of the Director must be replaced by trees with a total density equal to eight (8) times the unit value of the tree removed with a minimum four-inch (4") tree caliper. Size alone will determine whether a tree was a specimen quality if the tree is removed without approval and there is no evidence of its condition. Violations will be subject to the applicable penalties as described in Section 3.2.19.

Specimen Analysis							(General
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
302	11" Red Maple	Good	Good	No	Landscape Tree		No
303	19" Crape Myrtle	Good	Good	Yes			Yes
304	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
305	18" Crape Myrtle	Good	Good	Yes			Yes
306	18" Crape Myrtle	Good	Good	Yes			Yes
307	15" Crape Myrtle	Good	Good	Yes			Yes
308	3" Red Maple	Good	Good	No	Landscape Tree		No
309	8" Red Maple	Good	Good	No	Landscape Tree		No
310	8" Red Maple	Good	Good	No	Landscape Tree		No
311	8" Red Maple	Good	Good	No	Landscape Tree		No
312	8" Red Maple	Good	Good	No	Landscape Tree		No
313	8" Red Maple	Good	Good	No	Landscape Tree		No
314	8" Red Maple	Good	Good	No	Landscape Tree		No
315	8" Red Maple	Good	Good	No	Landscape Tree		No
316	8" Red Maple	Good	Good	No	Landscape Tree		No
317	8" Red Maple	Good	Good	No	Landscape Tree		No
318	8" Red Maple	Good	Good	No	Landscape Tree		No
319	11" Red Maple	Good	Good	No	Landscape Tree		No
320	11" Red Maple	Good	Good	No	Landscape Tree		No
321	5" Zelkova	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
322	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Cavity at base of tree. Lichen on trunk, an indication of poor growth.	1	No
323	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	2	No
324	4" Red Maple	Good	Good	No	Landscape Tree		No
325	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	3	No
326	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	4	No
327	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	5	No
328	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Split in trunk.	6-7	No
329	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	8	No

Specimen Analysis							(General
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
330	10" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
331	10" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
332	13" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
333	12" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
334	10" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
335	11" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
336	11" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
337	9" Willow Oak	Fair	Fair	No	Landscape Tree. Thin canopy an indication tree has out grown landscape island.		No
338	10" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
339	10" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Thin canopy an indication tree has out grown landscape island.		No
340	4" Trident Maple	Poor	Poor	No	Landscape Tree. Several cavities. Tree staking strap grown into trunk. Severe tip die back. Tree has out grown landscape island.	9-11	No
341	4" Trident Maple	Poor	Poor	No	Landscape Tree. Tree has out grown landscape island.		No
342	4" Trident Maple	Fair	Fair	No	Landscape Tree. Several cavities. Severe tip die back. Tree has out grown landscape island.	12-13	No
343	4" Trident Maple	Poor	Poor	No	Landscape Tree. Early change of leaf color, an indication of stress. Tree has out grown landscape island.		No
344	4" Trident Maple	Poor	Poor	No	Landscape Tree. Tree has out grown landscape island.		No
345	6" Red Maple	Fair	Fair	No	Landscape Tree. Tree has out grown landscape island.		No

Specimen Analysis							(General)
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
346	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Split in trunk. Lichen on trunk, an indication of poor growth.	14-15	No
347	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	16	No
348	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Split in trunk. Lichen on trunk, an indication of poor growth.	17-18	No
349	6" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Cavity exposing heartwood. Severe tip die back. Lichen on trunk, an indication of poor growth.	19-20	No
350	7" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Cavity with decay. Severe tip die back. Lichen on trunk, an indication of poor growth.	21-22	No
351	16" Willow Oak	Good	Good	No	Landscape Tree.		No
352	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
353	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
354	13" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
355	13" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
356	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
357	11" Willow Oak	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
358	12" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
359	11" Willow Oak	Fair	Fair	No	Landscape Tree. Improper pruning for parking lights. Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No

Specimen Analysis							(General
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
360	14" Willow Oak	Good	Good	No	Landscape Tree.		No
361	10" Red Maple	Fair	Fair	No	Landscape Tree.Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
362	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	23	No
363	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	24	No
364	9" Red Maple	Fair	Fair	No	Landscape Tree.Has out grown landscape island. Lichen on trunk, an indication of poor growth.		No
365	8" Red Maple	Fair	Fair	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.		No
366	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	25	No
367	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	26	No
368	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.		No
369	5" Zelkova	Poor	Poor	No	Landscape Tree. Cavity exposing heartwood. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.	27-28	No
370	5" Zelkova	Poor	Poor	No	Landscape Tree. Has out grown landscape island. Severe tip die back. Lichen on trunk, an indication of poor growth.		No
371	14" Red Maple	Good	Good	No	Landscape Tree.		No
372	9" Red Maple	Good	Good	No	Landscape Tree.		No

(General

[illegible]

Specimen Analysis (General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
411	29" Pine	Good	Good	No	Boundary Tree.		Yes
412	20" Red Maple	Fair	Fair	No	Boundary Tree.		No
413	25" Pine	Good	Good	No	Boundary Tree.		Yes
414	28" Pine	Good	Good	No	Boundary Tree.		Yes
415	28" Pine	Good	Good	No	Boundary Tree.		Yes
416	30" Pine	Good	Good	Yes			Yes
417	22" Pine	Good	Good	No	Boundary Tree.		Yes
418	11" Red Maple	Good	Good	No	Landscape Tree.		No
(A)	9"-20" Bald Cypress	Good	Good	No	8 Trees of Quality		Yes
419	22" River Birch	Good	Good	No	Tree of Quality		Yes
420	16" Crape Myrtle	Good	Good	Yes			Yes
421	13" Crape Myrtle	Good	Good	Yes			Yes
422	17" Crape Myrtle	Good	Good	Yes			Yes
423	17" Crape Myrtle	Good	Good	Yes			Yes
424	17" Crape Myrtle	Good	Good	Yes			Yes
425	9" Crape Myrtle	Good	Good	Yes			Yes
426	9" Crape Myrtle	Good	Good	Yes			Yes
427	9" Crape Myrtle	Good	Good	Yes			Yes
428	9" Crape Myrtle	Good	Good	Yes			Yes
429	9" Crape Myrtle	Good	Good	Yes			Yes
430	9" Crape Myrtle	Good	Good	Yes			Yes
431	13" Crape Myrtle	Good	Good	Yes			Yes
432	12" Crape Myrtle	Good	Good	Yes			Yes
433	9" Red Maple	Good	Good	No	Landscape Tree		Yes
434	8" Dogwood	Fair	Fair	Yes	Some dieback		Yes
435	9" Japanese Maple	Good	Good	Yes			Yes
436	12" Red Maple	Good	Good	No	Landscape Tree		Yes
437	19" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	35	No
438	9" Dogwood	Poor	Poor	No	Hollow cavity and dieback.	36	No
439	14" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	37	No
440	10" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	38	No
441	14" Chinese Elm	Poor	Poor	No	Landscape Tree. Severe cankers on trunk.	39	No
442	14" Willow Oak	Good	Good	No	Landscape Tree		Yes
443	11" Red Maple	Poor	Poor	No	Landscape Tree. Main Trunk has Phytophthora. Fruiting bodies on root system. Circling roots impacting structural system of tree.	40-41	No
444	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
445	20" Crape Myrtle	Good	Good	Yes			Yes
446	8" East Palatka Holly	Good	Good	Yes			Yes
447	13" Crape Myrtle	Good	Good	Yes			Yes
448	15" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
449	12" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
450	13" Crape Myrtle	Good	Good	Yes			Yes

Specimen Analysis

(General

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
451	16" Water Oak	Good	Good	No	Tree of Quality		Yes
452	11" Red Maple	Good	Good	No	Tree of Quality		Yes
453	14" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
454	16" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
455	11" Crape Myrtle	Good	Good	Yes			Yes
636	13" Crape Myrtle	Good	Good	Yes			Yes
456	13" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
457	12" Crape Myrtle	Good	Good	Yes			Yes
458	16" Crape Myrtle	Good	Good	Yes			Yes
459	9" Red Maple	Good	Good	No	Tree of Quality		Yes
460	9" Red Maple	Good	Good	No	Tree of Quality		Yes
461	7" Red Maple	Good	Good	No	Tree of Quality		Yes
462	15" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
463	13" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
464	7" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
465	7" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
466	14" Crape Myrtle	Good	Good	Yes			Yes
467	8" Red Maple	Good	Good	No	Tree of Quality		Yes
468	20" White Oak	Good	Good	No	Tree of Quality		Yes
469	22" White Oak	Good	Good	No	Tree of Quality		Yes
825	16" Sourwood	Good	Good	Yes			Yes
826	11" Sourwood	Good	Good	Yes			Yes
470	12" Nuttall Oak	Good	Good	No	Tree of Quality		Yes
471	17" Riverbirch	Good	Good	No	Tree of Quality		Yes
472	14" Crape Myrtle	Good	Good	Yes			Yes
473	28" Scarlett Oak	Good	Good	Yes			Yes
474	28" Tulip Poplar	Poor	Poor	No	Large cavity with decay.	42	No
475	38" Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue. Trunk gall. Trunk sound hollow.	43-44	No
476	38" Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	45	No
477	9" Dogwood	Good	Good	Yes			Yes
478	19" Crape Myrtle	Good	Good	Yes			Yes
479	14" Crape Myrtle	Good	Good	Yes			Yes
480	14" Crape Myrtle	Good	Good	Yes			Yes
481	15" Crape Myrtle	Good	Good	Yes			Yes
482	15" Crape Myrtle	Good	Good	Yes			Yes
483	3" Dogwood	Good	Good	No	Landscape Tree		Yes
484	4" Red Bud	Good	Good	No	Landscape Tree		Yes
485	7" Crape Myrtle	Good	Good	No	Landscape Tree		Yes
486	4" Dogwood	Good	Good	No	Landscape Tree		Yes
487	4" Red Bud	Good	Good	No	Landscape Tree		Yes
488	6" Red Maple	Good	Good	No	Landscape Tree		Yes

Specimen Analysis

(General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as an office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
489	8" Red Maple	Good	Good	No	Landscape Tree		Yes
490	16" Crape Myrtle	Good	Good	Yes			Yes
491	16" Crape Myrtle	Good	Good	Yes			Yes
492	16" Crape Myrtle	Good	Good	Yes			Yes
493	12" Red Maple	Good	Good	No	Landscape Tree		Yes
494	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
495	4" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
496	6" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
497	17" Willow Oak	Good	Good	No	Landscape Tree		Yes
498	16" Crape Myrtle	Good	Good	Yes			Yes
499	13" Crape Myrtle	Good	Good	Yes			Yes
500	20" Willow Oak	Good	Good	No	Landscape Tree		Yes
501	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
502	5" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
503	6" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
504	20" Southern Magnolia	Good	Good	No	Landscape Tree		Yes
505	15" Red Maple	Good	Good	No	Landscape Tree		Yes
506	13" Willow Oak	Good	Good	No	Landscape Tree		Yes
507	8" Red Maple	Good	Good	No	Landscape Tree		Yes
508	16" Willow Oak	Good	Good	No	Landscape Tree		Yes
509	11" Red Maple	Good	Good	No	Landscape Tree		Yes
510	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
511	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
512	24" Willow Oak	Good	Good	Yes			Yes
513	20" Crape Myrtle	Good	Good	Yes			Yes
514	18" Crape Myrtle	Good	Good	Yes			Yes
515	22" Crape Myrtle	Good	Good	Yes			Yes
516	19" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	46	No
517	22" Willow Oak	Poor	Poor	No	Landscape Tree. Fruiting Bodies on root system. Circling roots impacting structural system of tree.	47-48	No
518	22" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.	49	Yes
519	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
520	20" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.	50	Yes
521	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
522	22" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.		Yes
523	20" Willow Oak	Good	Good	No	Landscape Tree		Yes
524	20" Willow Oak	Poor	Poor	No	Landscape Tree. Numerous trunk galls.	51	No
525	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
526	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
527	20" Willow Oak	Good	Good	No	Landscape Tree		Yes

Specimen Analysis							(General)
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
528	16" Willow Oak	Poor	Poor	No	Landscape Tree. Fruiting Bodies on root system. Circling roots impacting structural system of tree.	52-53	No
529	19" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	54	No
530	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
531	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
532	19" Willow Oak	Good	Good	No	Landscape Tree		Yes
533	19" Willow Oak	Poor	Poor	No	Landscape Tree. Numerous trunk galls.	55	No
534	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
535	17" Willow Oak	Poor	Fair	No	Landscape Tree. Numerous Trunk galls. Circling roots should be cut before impacting structural system of tree.	56-57	No
536	16" Willow Oak	Poor	Fair	No	Landscape Tree. Numerous Trunk galls. Circling roots should be cut before impacting structural system of tree.	56-58	No
537	17" Willow Oak	Good	Good	No	Landscape Tree		Yes
538	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
539	21" Willow Oak	Good	Good	No	Landscape Tree		Yes
540	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
541	23" Willow Oak	Good	Good	No	Landscape Tree		Yes
542	20" Willow Oak	Good	Good	No	Landscape Tree		Yes
543	25" Willow Oak	Poor	Poor	No	Cavity with decay.	59	No
544	23" Willow Oak	Good	Fair	No	Landscape Tree. Circling roots should be cut before impacting structural system of tree.		Yes
545	24" Willow Oak	Good	Good	Yes			Yes
546	22" Willow Oak	Good	Good	No	Landscape Tree		Yes
547	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
548	18" Willow Oak	Good	Good	No	Landscape Tree		Yes
549	15" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	61-62	No
550	17" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	63	No
551	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
552	7" Fosterii Holly	Good	Good	No	Landscape Tree		Yes
553	9" Fosterii Holly	Good	Good	Yes			Yes
554	18" Red Maple	Good	Good	No	Landscape Tree		Yes
555	18" Red Maple	Good	Good	No	Landscape Tree		Yes
556	17" Red Maple	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	64	No
557	19" Red Maple	Good	Good	No	Landscape Tree		Yes
558	8" Fosterii Holly	Good	Good	Yes			Yes
559	8" Fosterii Holly	Good	Good	Yes			Yes
560	10" Fosterii Holly	Good	Good	Yes			Yes
561	21" Crape Myrtle	Good	Good	Yes			Yes
562	23" Crape Myrtle	Good	Good	Yes			Yes

Specimen Analysis
(General

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
563	25" Willow Oak	Good	Good	Yes			Yes
564	23" Willow Oak	Good	Poor	No	Landscape Tree. Circling roots impacting structural system of tree.	65	No
565	9" Sourwood	Fair	Fair	Yes			No
566	28" White Oak	Good	Good	Yes			Yes
567	10" Sourwood	Good	Good	Yes			Yes
568	25" White Oak	Good	Good	Yes			Yes
569	40" (23"-21") White Oak	Fair	Poor	No	Tree is being undermined from erosion. 2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	66-67	No
570	8" Sourwood	Good	Good	Yes			Yes
571	31" Southern Red Oak	Poor	Poor	No	Fruiting bodies at base of trunk indicating Butt/trunk rot.	68-70	No
572	11" Sourwood	Poor	Poor	No	Cavity with decay.	71	No
573	11" Sourwood	Poor	Poor	No	Trunk grown into boulder impacting structural system of tree.	72	No
574	27" Southern Red Oak	Poor	Poor	No	Large cavity with decay.	73	No
575	41" White Oak	Good	Good	Yes			Yes
576	42" Southern Red Oak	Poor	Poor	No	Fruiting bodies at base of trunk indicating Butt/trunk rot. Severe dieback.	74	No
577	31" Southern Red Oak	Poor	Poor	No	Several main limbs dead with symptoms of Hypoxylon Canker.	75-76	No
578	20" Southern Magnolia	Good	Good	No	Tree of Quality		Yes
579	26" Southern Red Oak	Poor	Poor	No	Severe trunk gall. Several main limbs dead with symptoms of Hypoxylon Canker.	77-78	No
580	17" Dogwood	Poor	Poor	No	Severe dieback.		No
581	27" Red Maple	Poor	Poor	No	Cavities with decay.	79-80	No
582	24" Red Maple	Poor	Poor	No	2 Co-Dominate Leaders with weak crotches and included bark. 1 Dead causing severe decay in trunk. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	81	No
583	25" White Oak	Good	Good	Yes			Yes
584	33"(23"-14") Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.		No

Specimen Analysis

(General)

Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. There are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)

Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
811	43" Tulip Poplar	Poor	Poor	No	3 Co-Dominate Leaders with decay in crotch and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	83	No
812	28" Tulip Poplar	Poor	Poor	No	Several main limbs dead/gone.		No
813	29" Tulip Poplar	Poor	Poor	No	Several main limbs dead/gone. Barbwire in trunk	85	No
814	31" Southern Red Oak	Poor	Poor	No	2 Co-Dominate Leaders with decay in crotch and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	84	No
815	34" White Oak	Poor	Poor	No	3 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.		No
585	24" Tulip Poplar	Fair	Fair	Yes			No
818	41"(27"-14") Tulip Poplar	Poor	Poor	No	2 Co-Dominate Leaders with decay in crotch and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.		No
820	26" Tulip Poplar	Fair	Fair	Yes			No
821	29" White Oak	Good	Good	Yes			Yes
823	26" Tulip Poplar	Good	Good	Yes			Yes
824	27" Red Maple	Poor	Poor	No	Main Trunk has Phytophthora.	88	No
829	41"(27"-22") Sweet Gum	Poor	Poor	No	Cavity at base and fruiting bodies on trunk. 2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	92-93	No
586	8" Sourwood	Fair	Poor	No	45* lean in trunk.	91	No
587	34" Tulip Poplar	Fair	Poor	No	2 Co-Dominate Leaders 20' high with included bark. Due the species, a multi stem tree at or near the base of the tree is undesirable and a life safety issue.	86	No
588	25" Sweet Gum	Fair	Fair	Yes			No
589	27" Tulip Poplar	Fair	Poor	No	Severe lean in Trunk	87	No
590	25" Tulip Poplar	Good	Good	Yes			Yes
591	24" Water Oak	Fair	Fair	Yes			No
592	24" Southern Red Oak	Poor	Poor	No	Several main limbs dead with symptoms of Hypoxylon Canker.	89	No
593	26" Southern Red Oak	Fair	Fair	Yes			No
594	28" White Oak	Poor	Poor	No	Large cavity with decay.	90	No

Specimen Analysis							(General
Observations: The site is broken into 3 zones. The wooded zone appears to be in between Pioneer and Climax phase of succession. The site is dominated with Overstory Oaks, Hickories and Pines. Numerous understory trees such as; Sourwoods, Dogwoods and Black Cherries are throughout the zone. The are numerous Oak species with age that are standing dead, a strong indication of some sort of disease or blight impacting this site. There are several of these trees alive and dead with symptoms of Hypoxylon Canker. One zone has been cleared and is just underbrush. The last zone has been developed as and office building with parking. The zone has numerous landscape trees with the trees on the edge of this zone are of good quality and the parking tree are sadly in decline.)							
Tree #	Size/ Species	Health Condition	Structural Condition	Specimen	Comments	Photo # (See Attached)	Is tree a design consideration
595	9" Sourwood	Good	Good	Yes			Yes
596	25" Southern Red Oak	Fair	Fair	Yes			No
597	24"(12"-12") White Oak	Poor	Poor	No	Cavity at base with decay. Root Damage. 2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	94-95	No
598	26" Tulip Poplar	Poor	Poor	No	3 Co-Dominate Leaders with included bark and trunk gall in the inclusion. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	96	No
599	26"(17"-12") Tulip Poplar	Poor	Poor	No	2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	97	No
600	27" Southern Red Oak	Good	Good	Yes			Yes
601	27" Southern Red Oak	Poor	Poor	No	Large cavity at base with decay.	98	No
602	22" White Oak	Good	Good	No	Tree of Quality		Yes
603	20" White Oak	Good	Good	No	Tree of Quality		Yes
604	25" White Oak	Good	Good	Yes			Yes
605	25" White Oak	Good	Good	Yes			Yes
606	20" White Oak	Good	Good	No	Tree of Quality		Yes
607	12" Sourwood	Poor	Poor	No	Several cavities with decay.	99	No
608	24" White Oak	Good	Good	Yes			Yes
833	27" Sweet Gum	Poor	Poor	No	2 Trees grown together to create 2 Co-Dominate Leaders with weak crotches and included bark. Due the species, a multi-stem tree at or near the base of the tree is undesirable and a life safety issue.	100	No

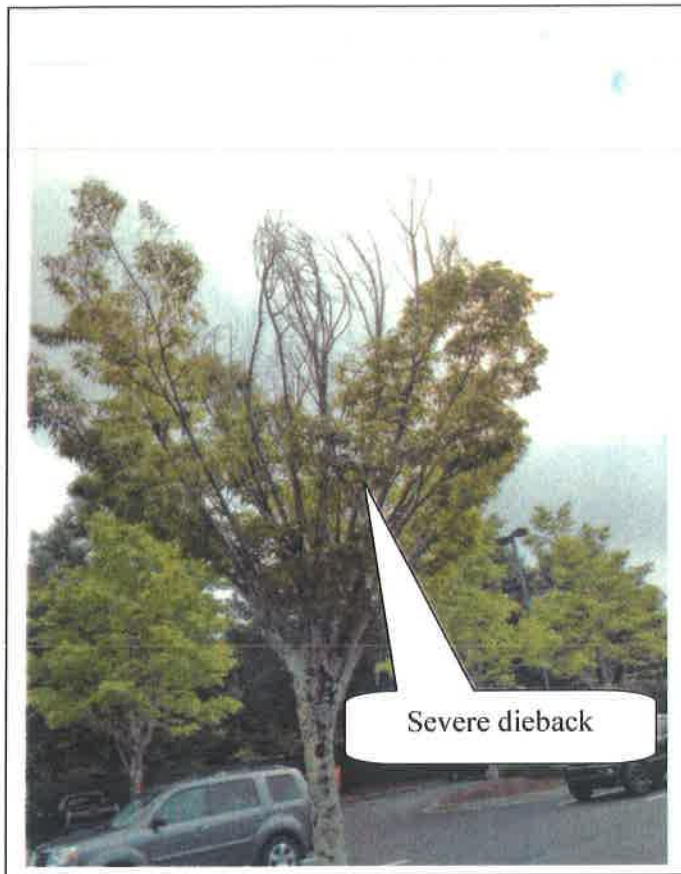


Photo 1

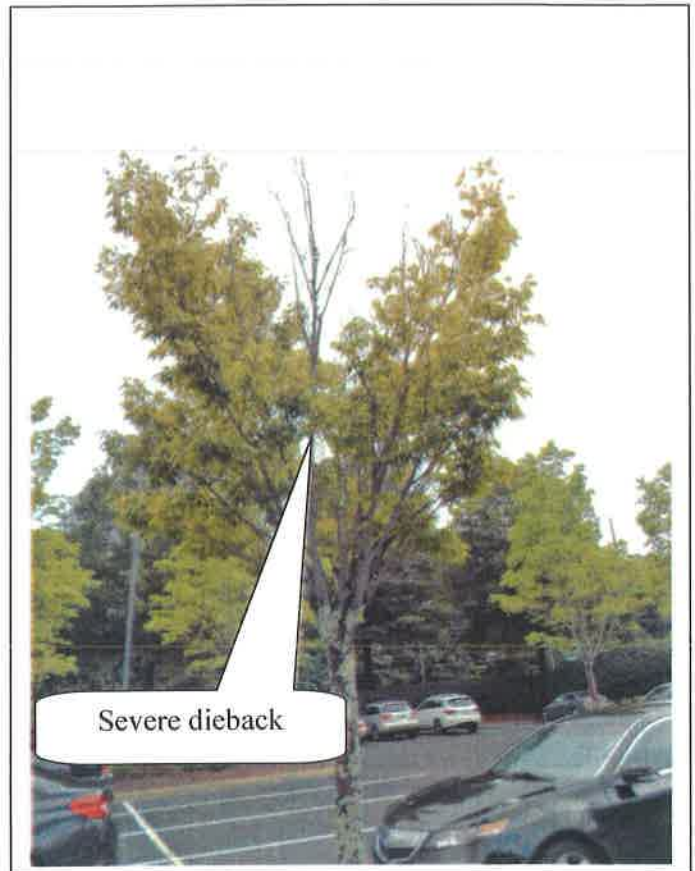


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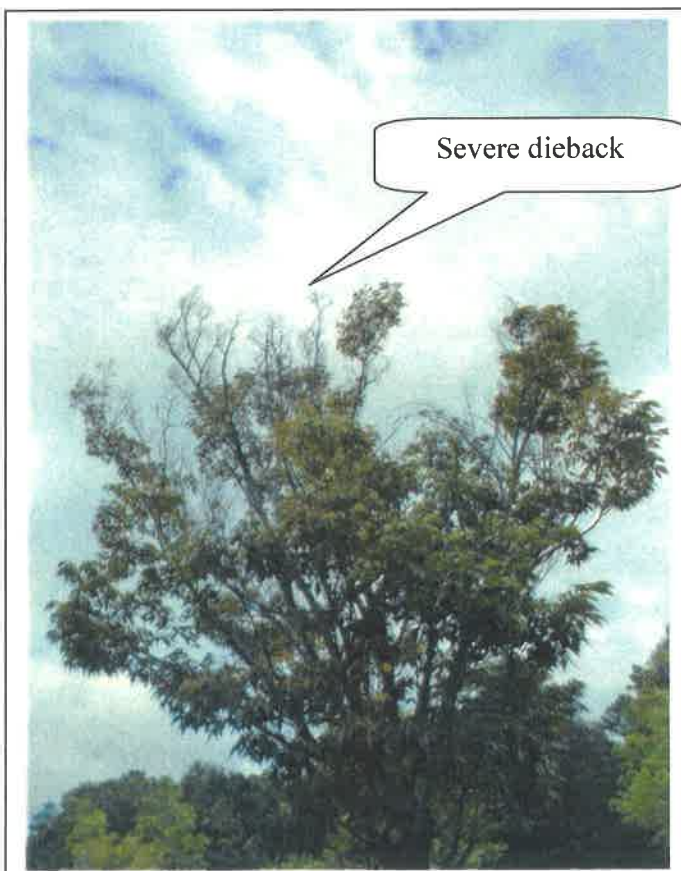


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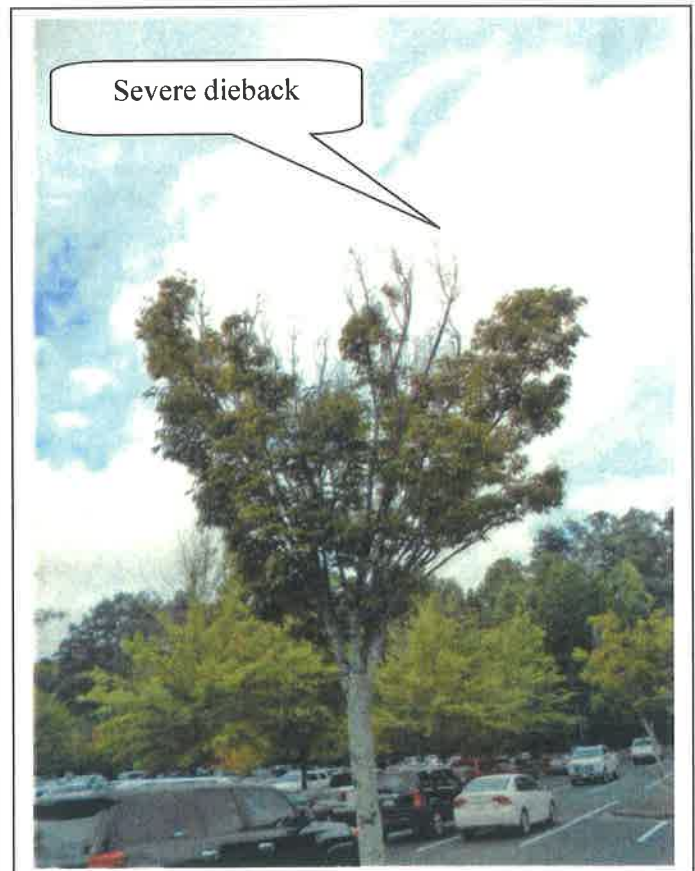


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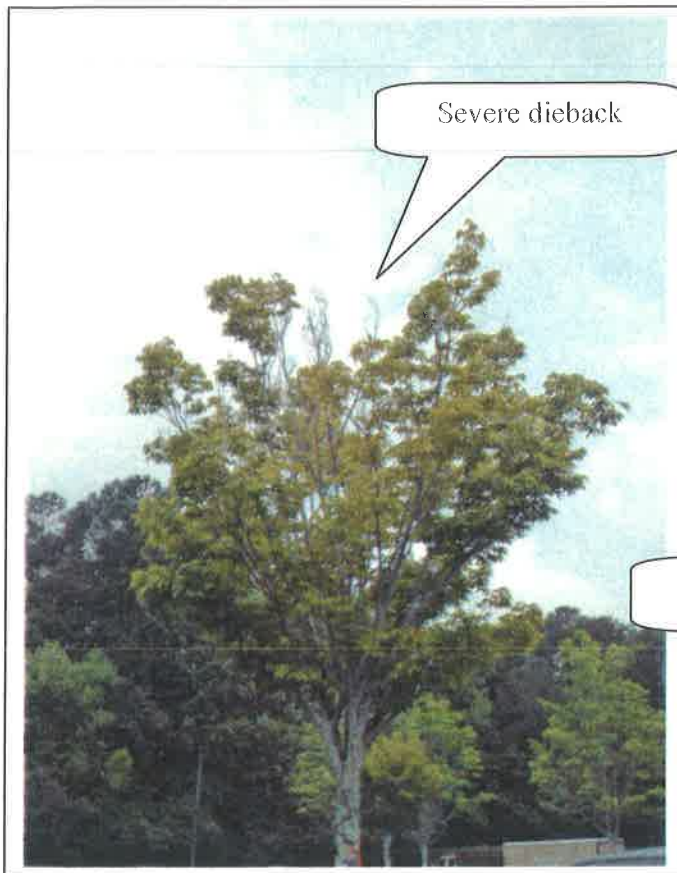


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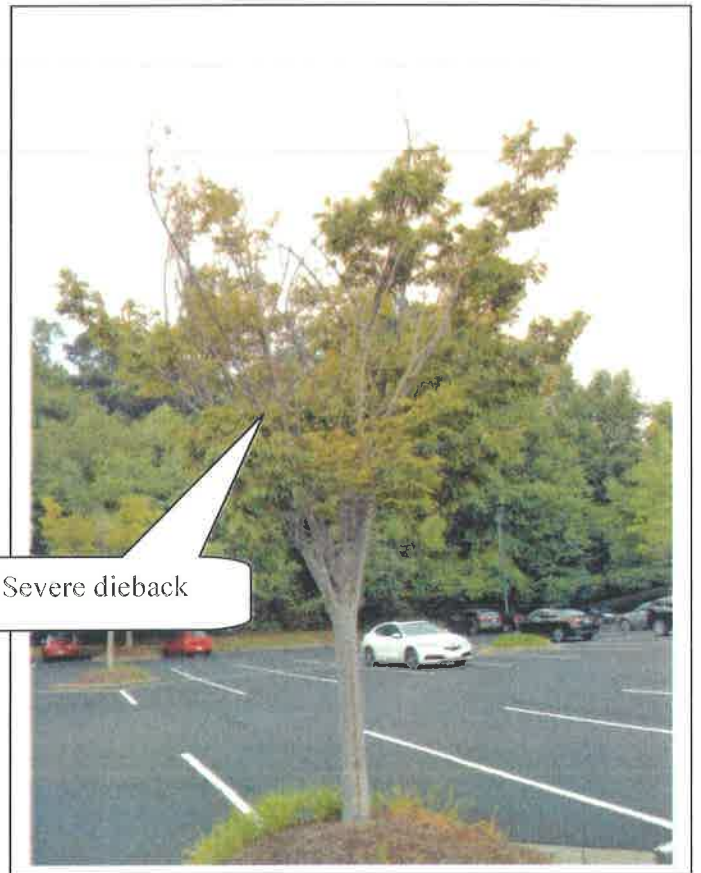


Photo 6



Photo 7

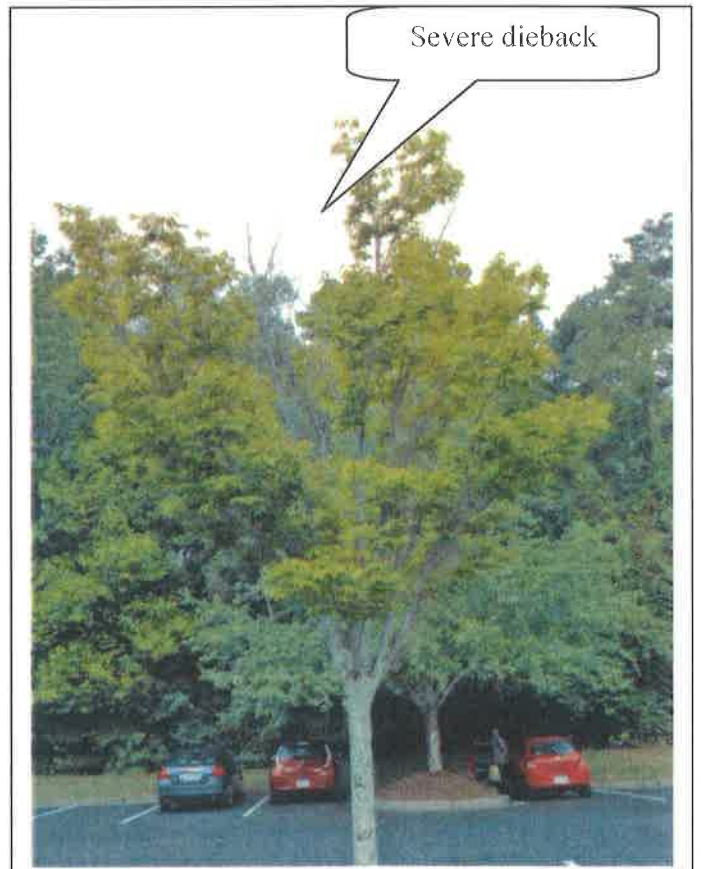


Photo 8



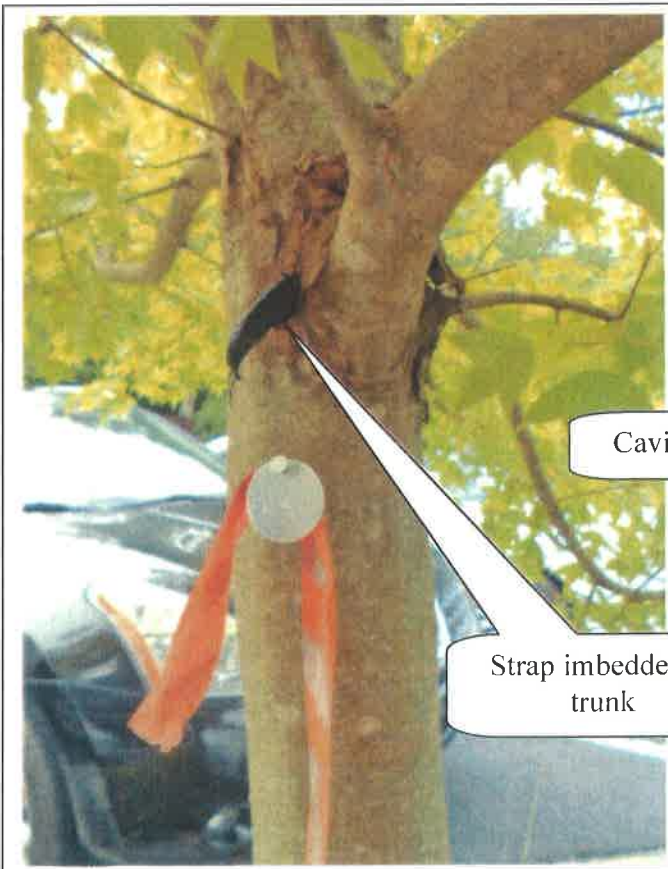
Severe dieback

Photo 9



Cavity with decay

Photo 10



Cavity with decay

Strap imbedded in trunk

Photo 11



Photo 12



Photo 13



Photo 14



Photo 15

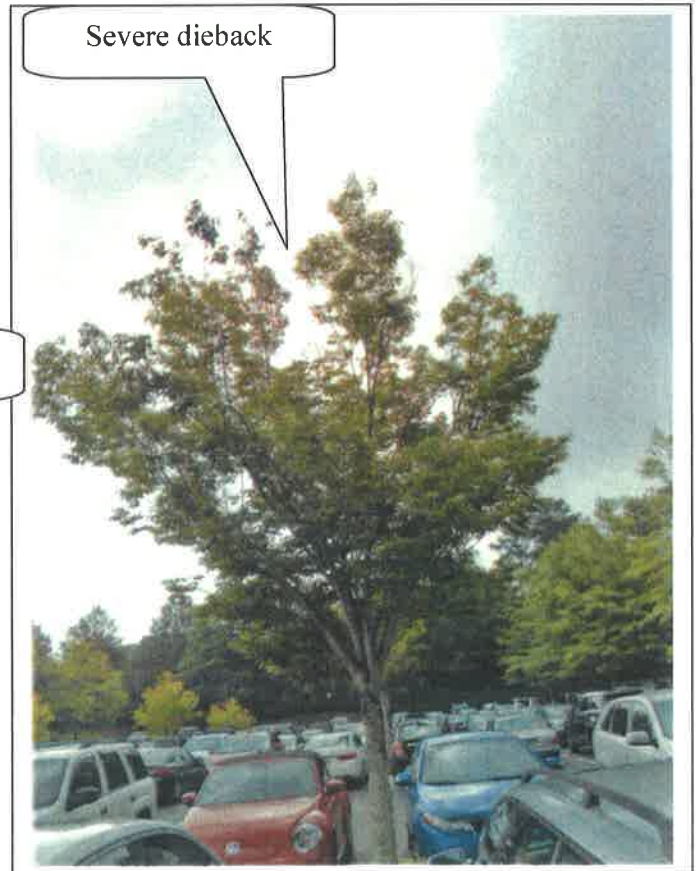
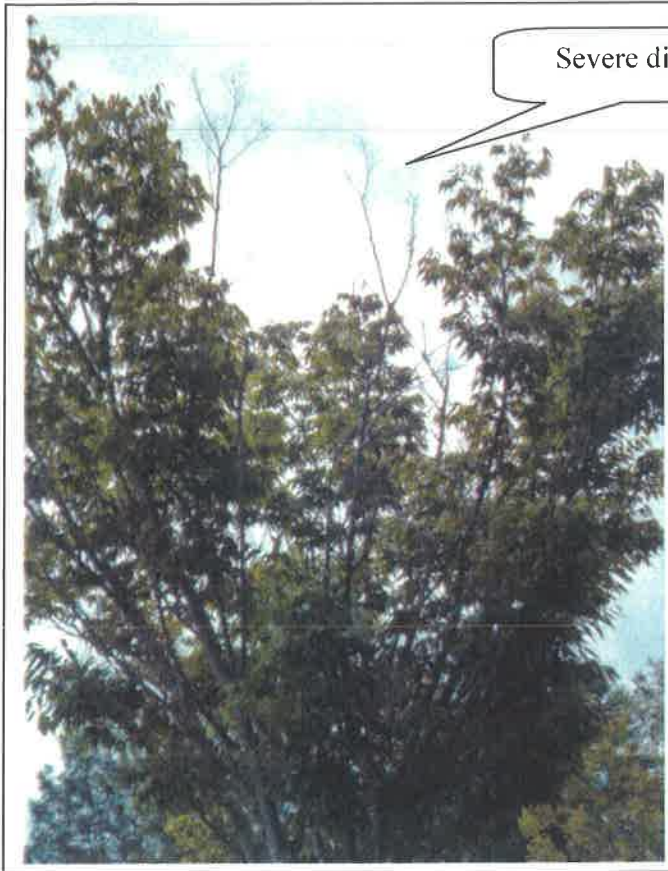


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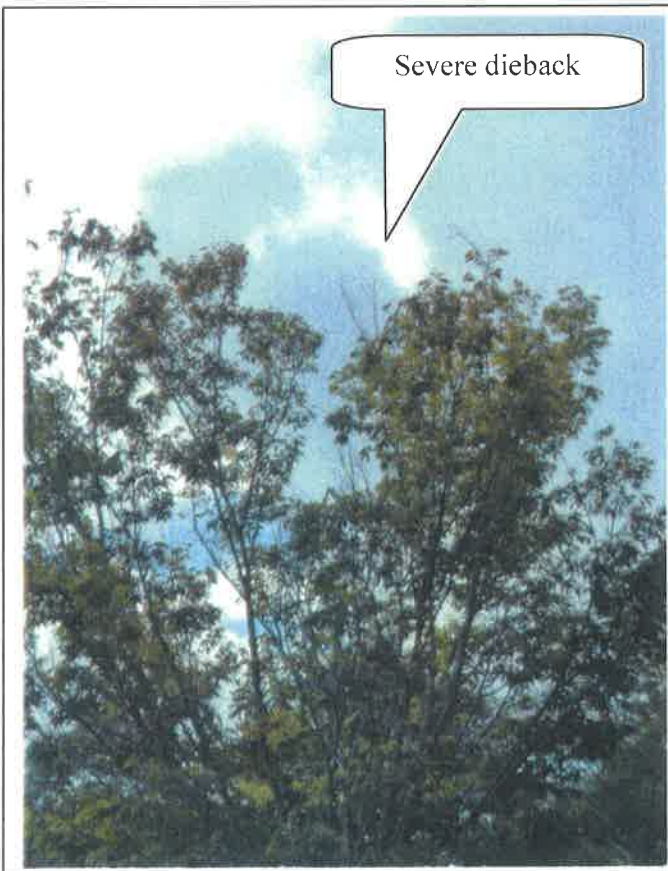
Severe dieback

Photo 17



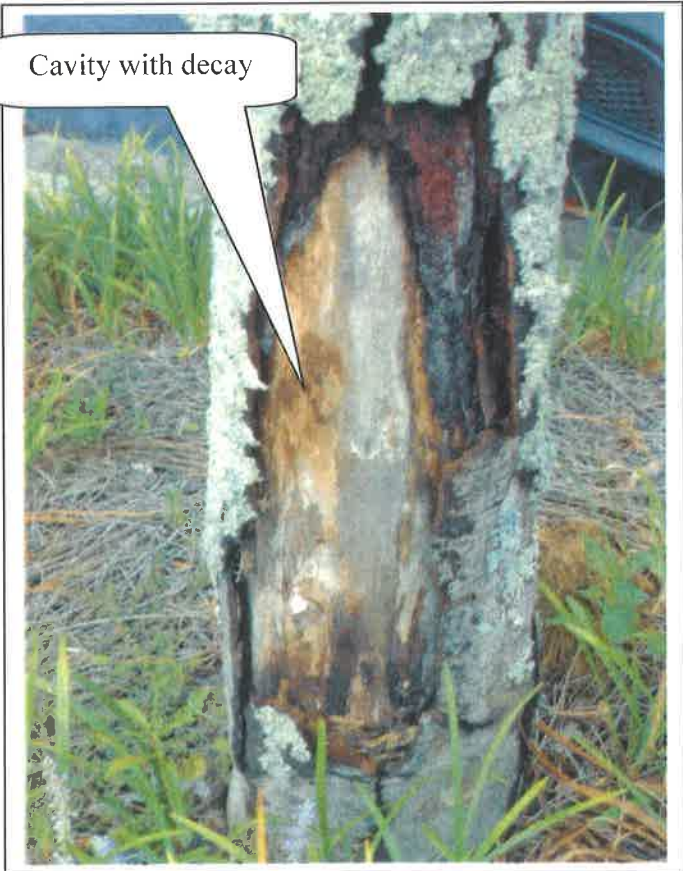
Split in trunk

Photo 18



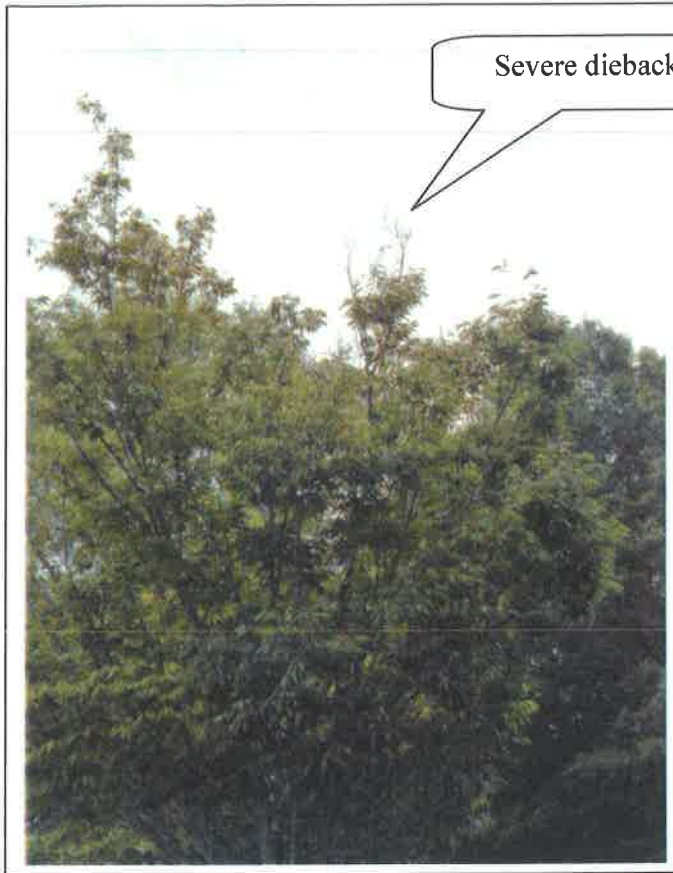
Severe dieback

Photo 19



Cavity with decay

Photo 20



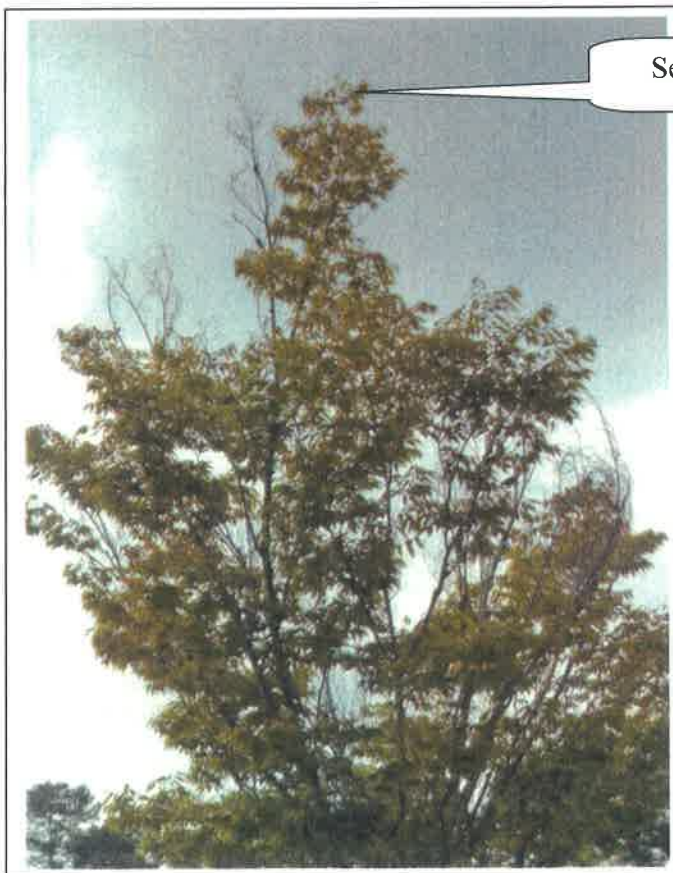
Severe dieback

Photo 21



Cavity with decay

Photo 22



Severe dieback

Photo 23



Severe dieback

Photo 24



Photo 25

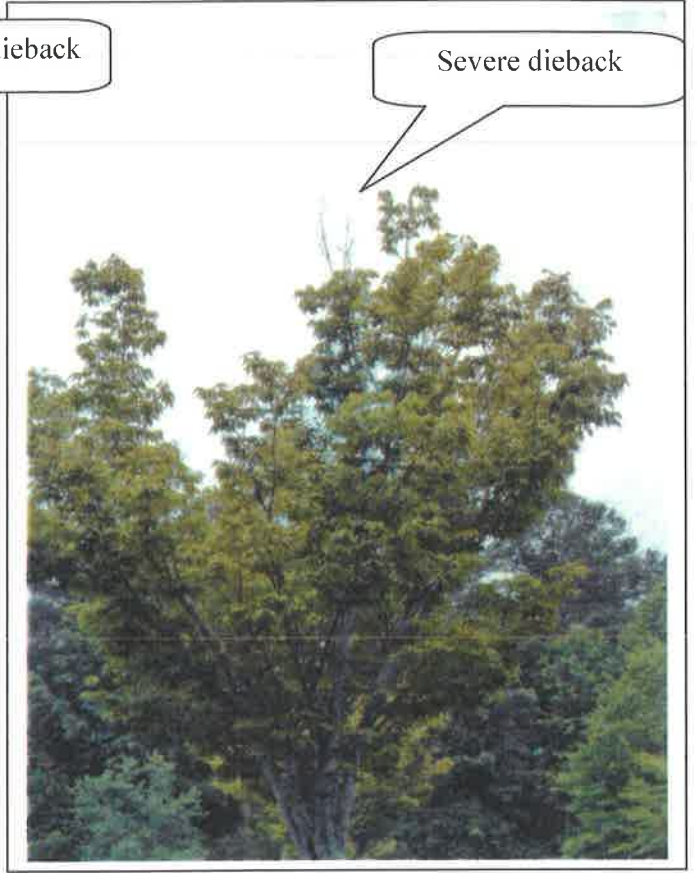


Photo 26



Photo 27



Photo 28



Photo 29

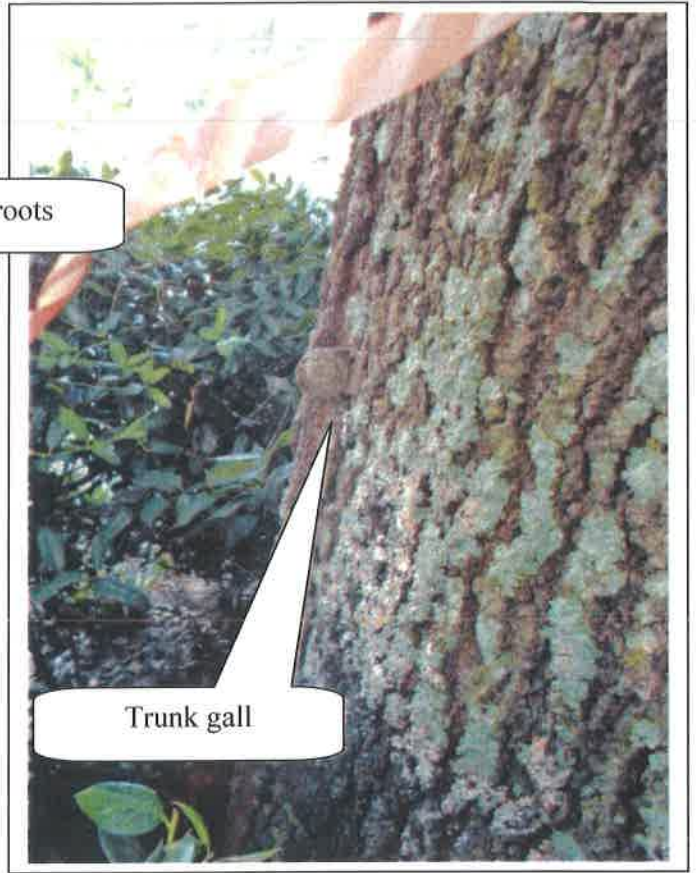


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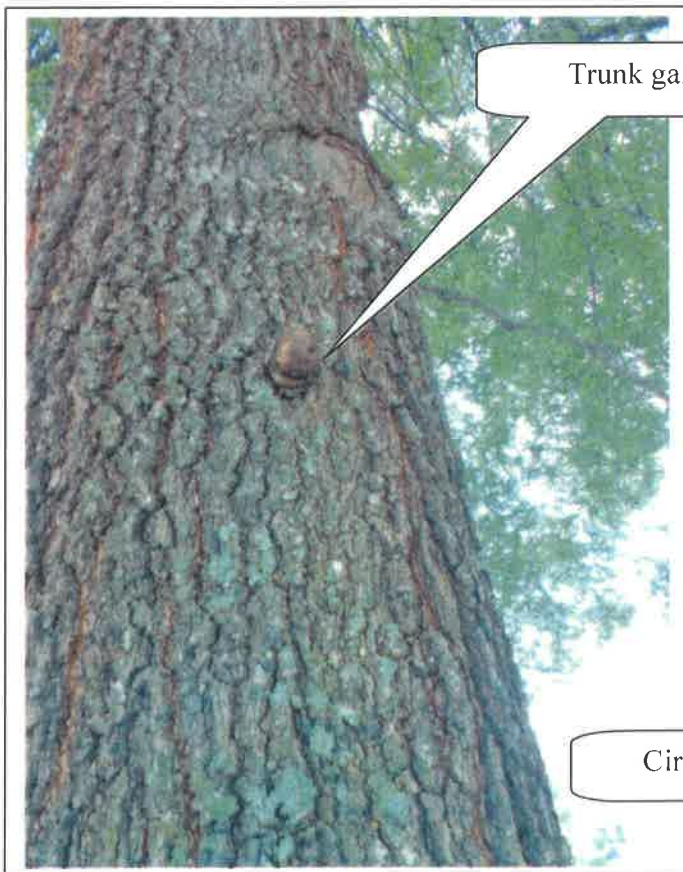
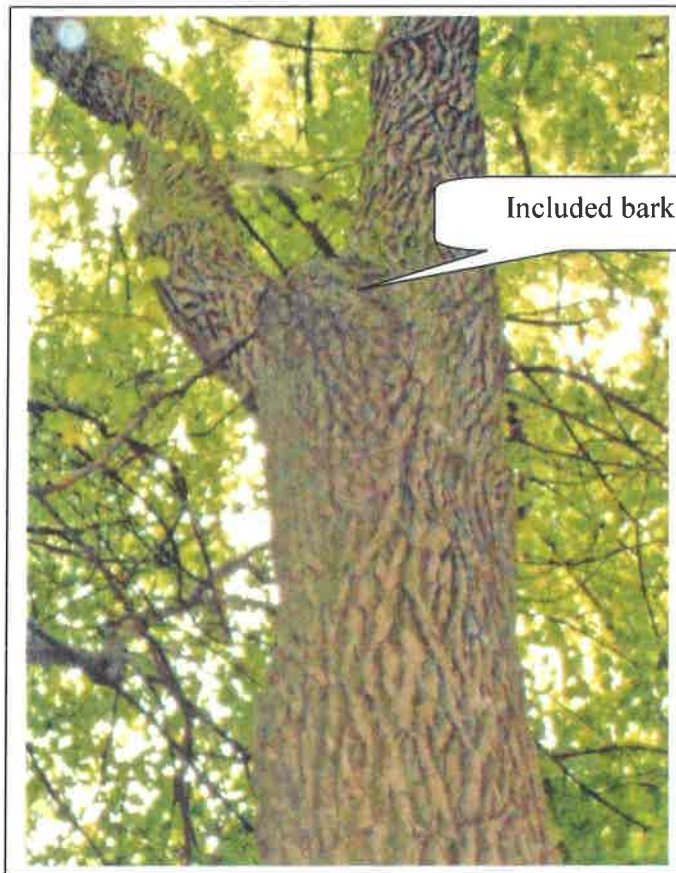


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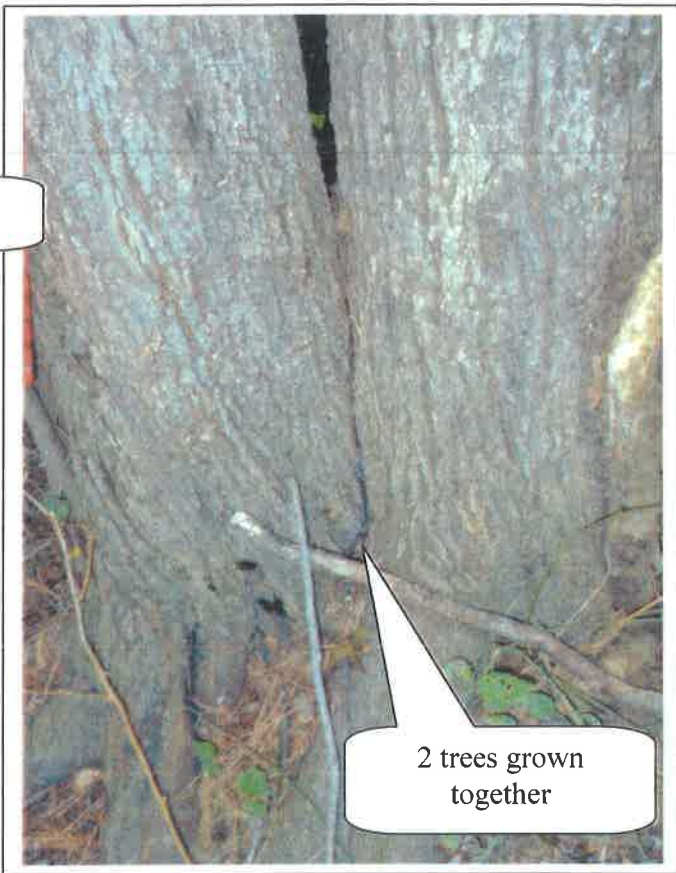


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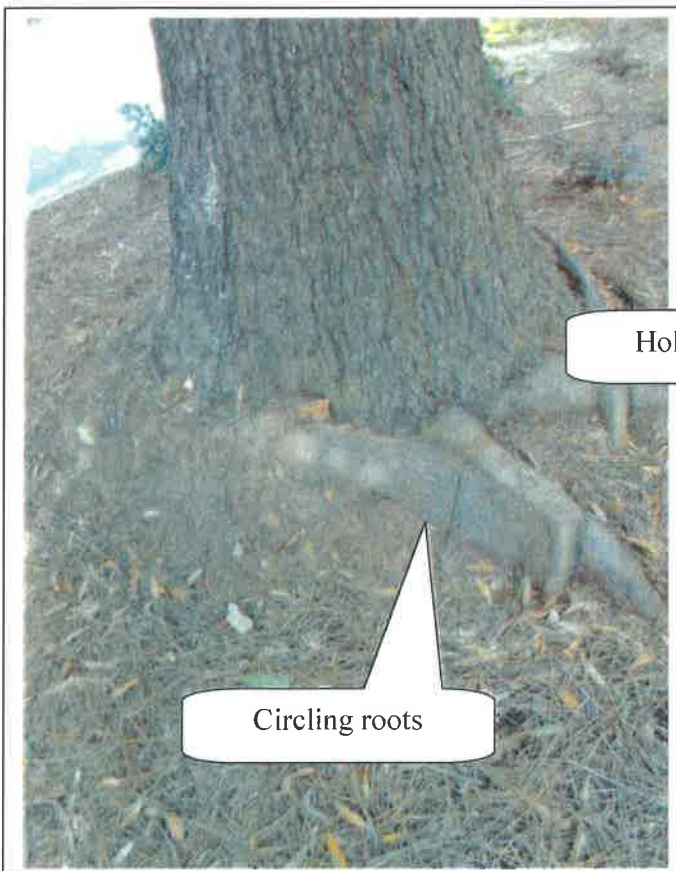
Included bark

Photo 33



2 trees grown together

Photo 34



Circling roots

Photo 35



Hollow cavity

Photo 36



Photo 37

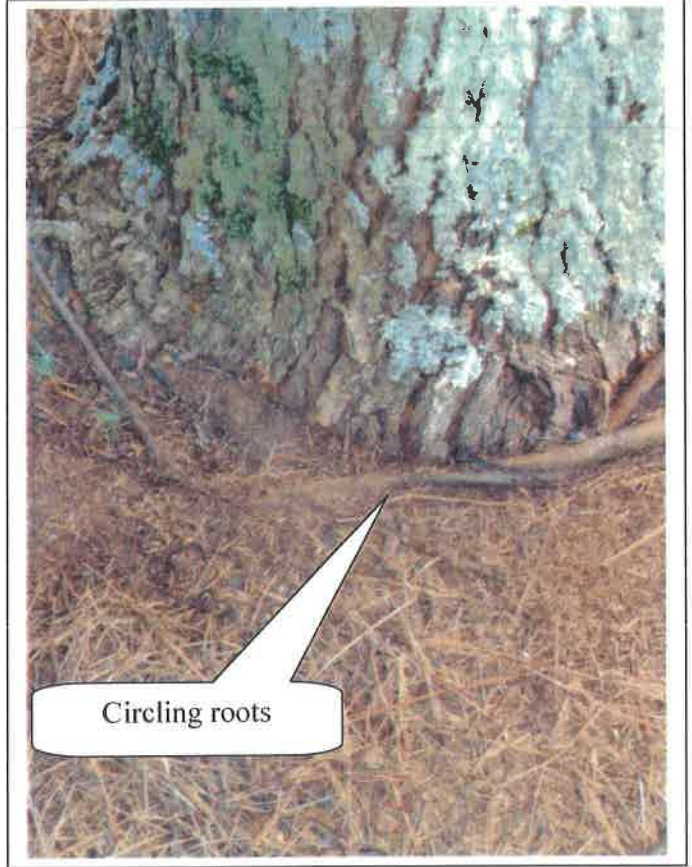


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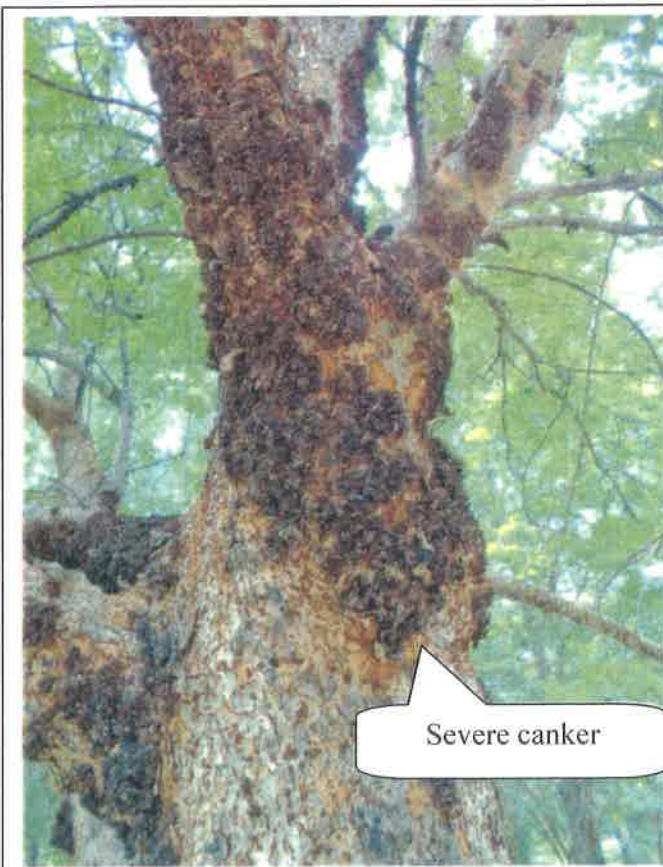


Photo 39



Photo 40

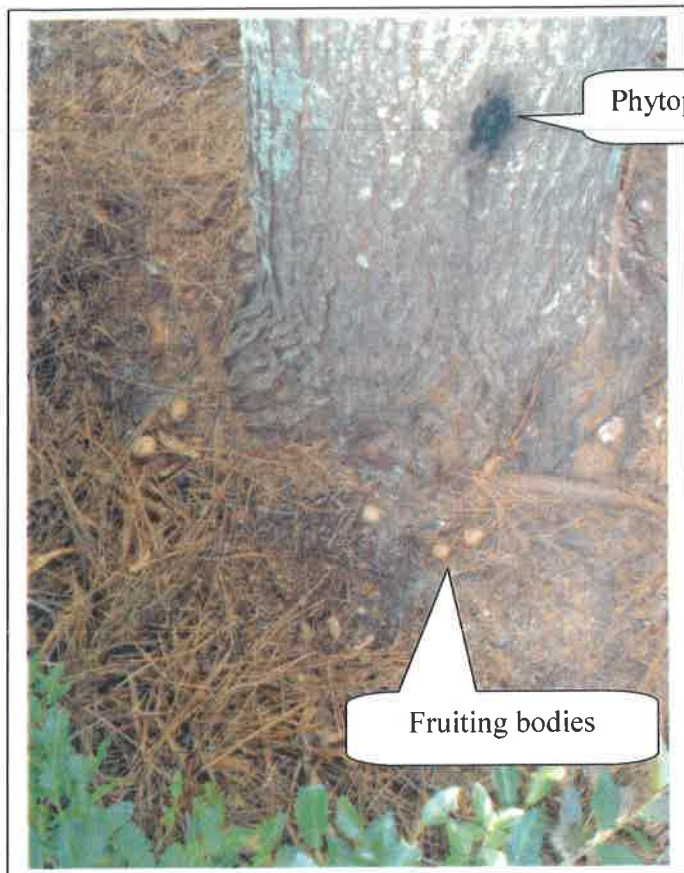


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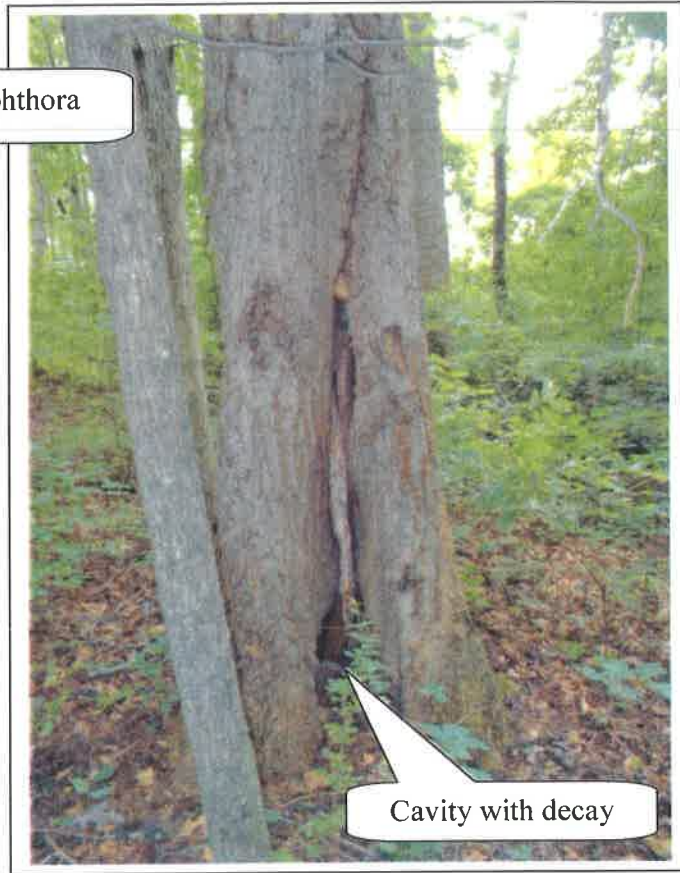


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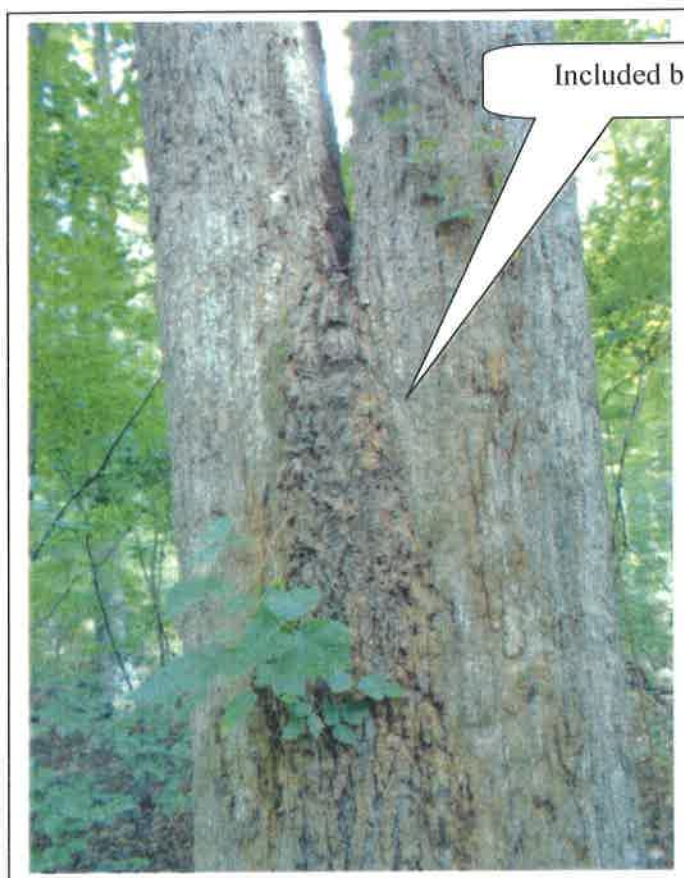
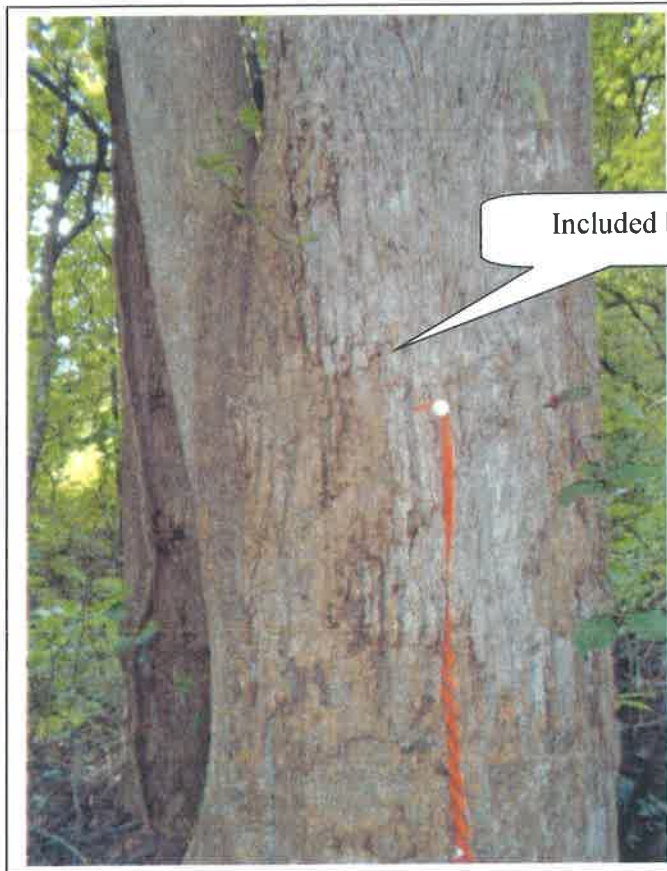


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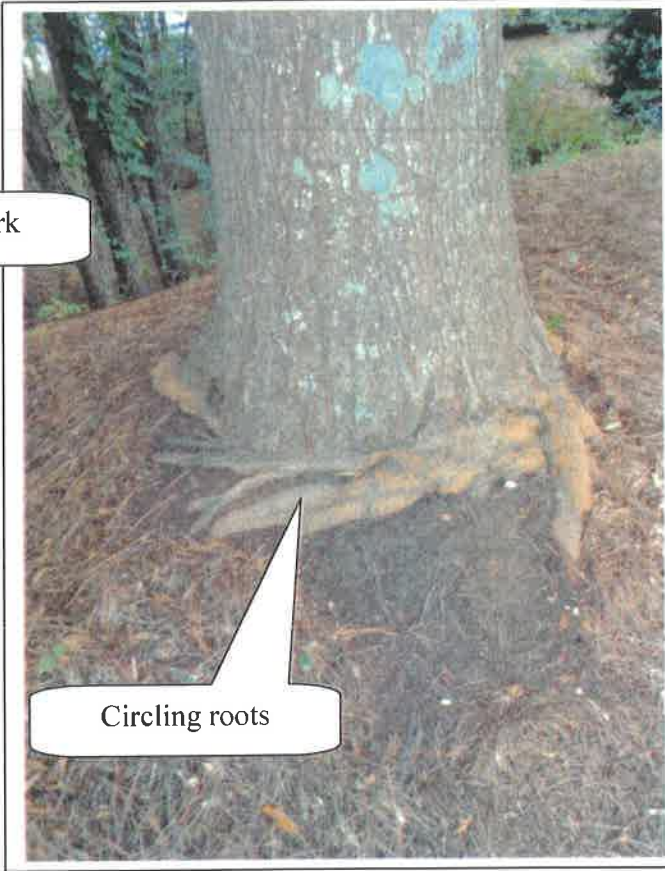


Photo 44



Included bark

Photo 45



Circling roots

Photo 46



Circling roots

Circling roots

Photo 47



Fruiting bodies

Photo 48



Photo 49

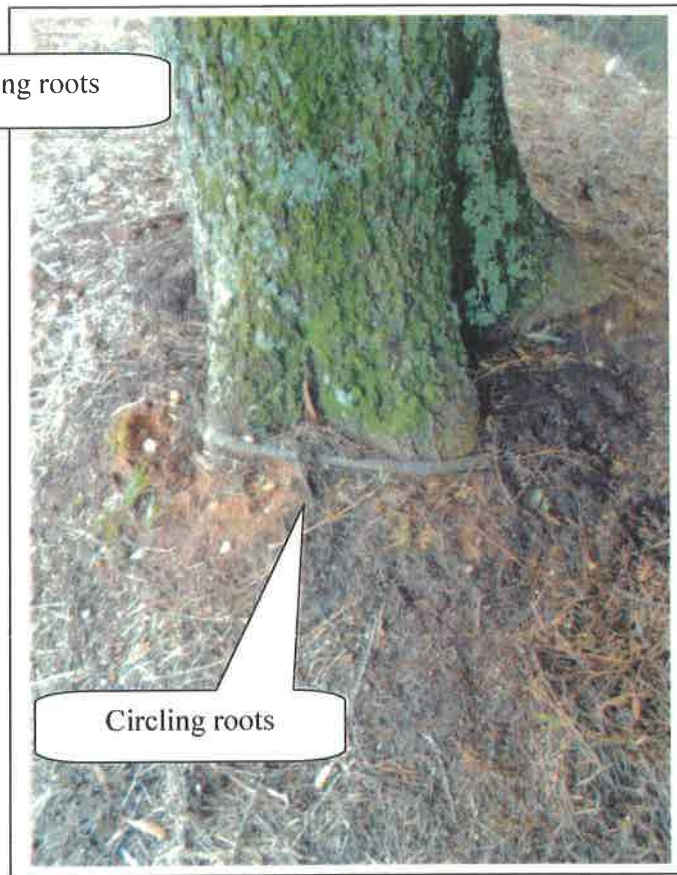


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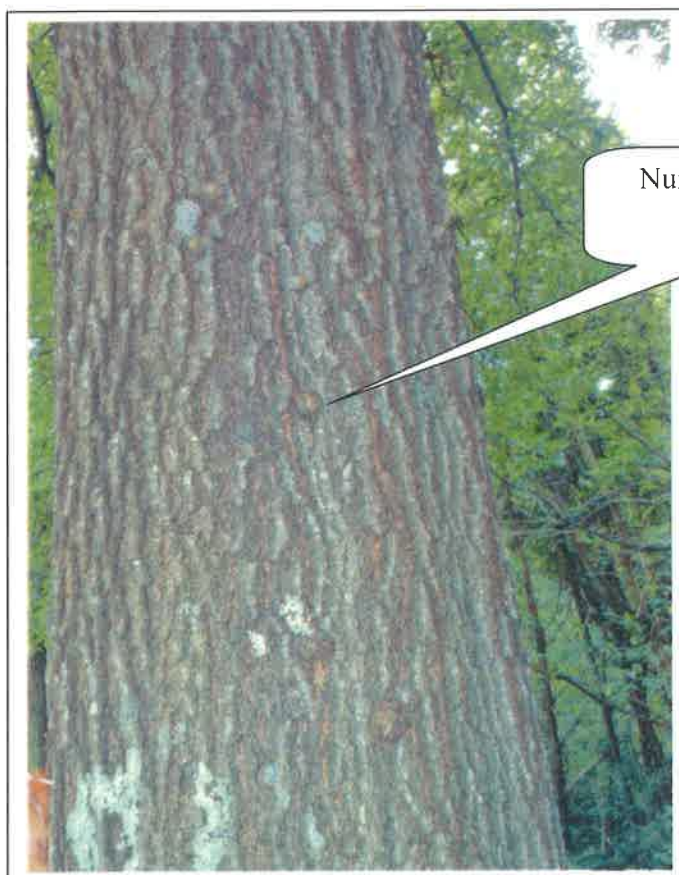


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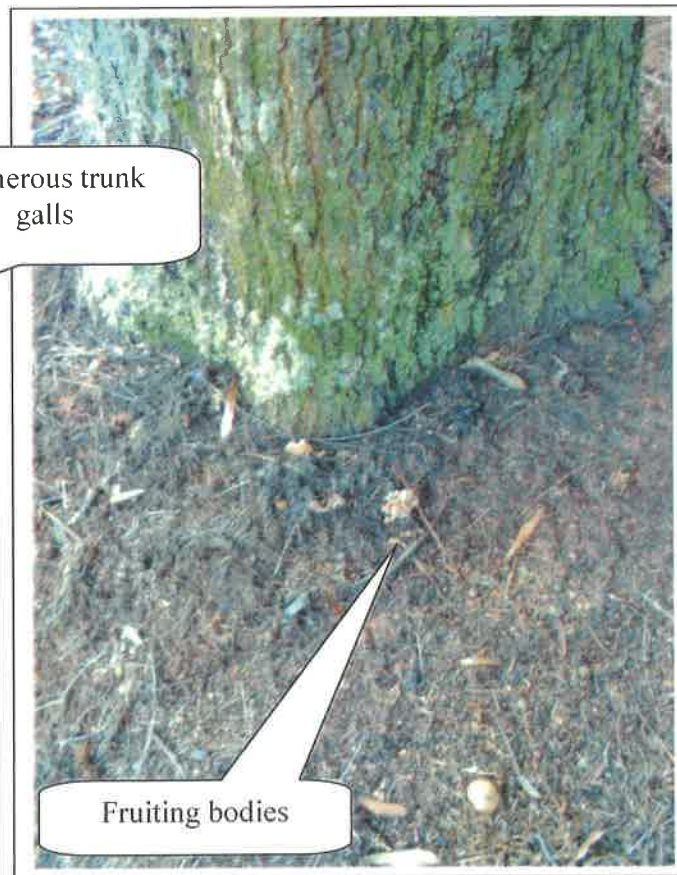
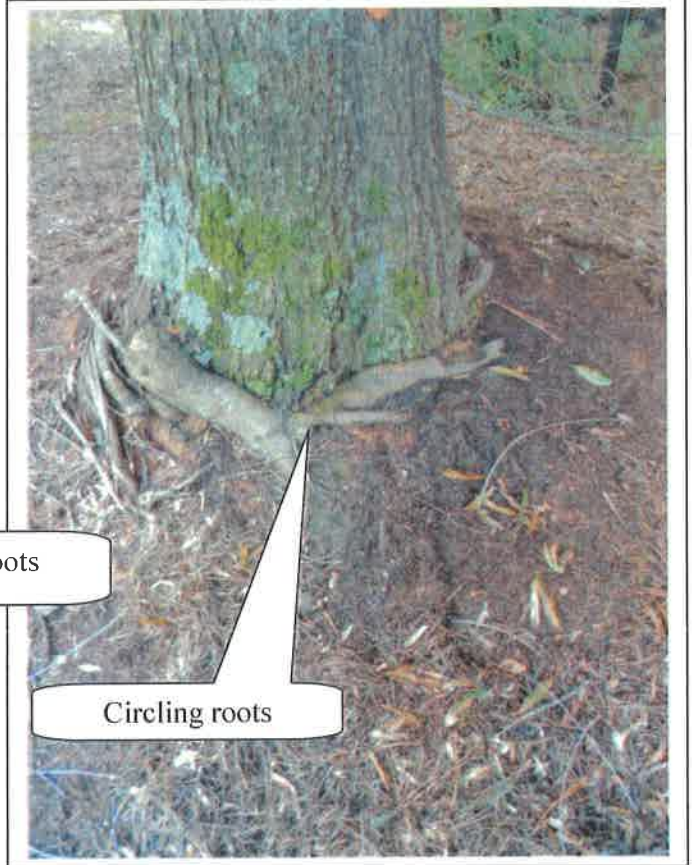


Photo 52



Circling roots

Photo 53



Circling roots

Photo 54



Numerous trunk galls

Photo 55



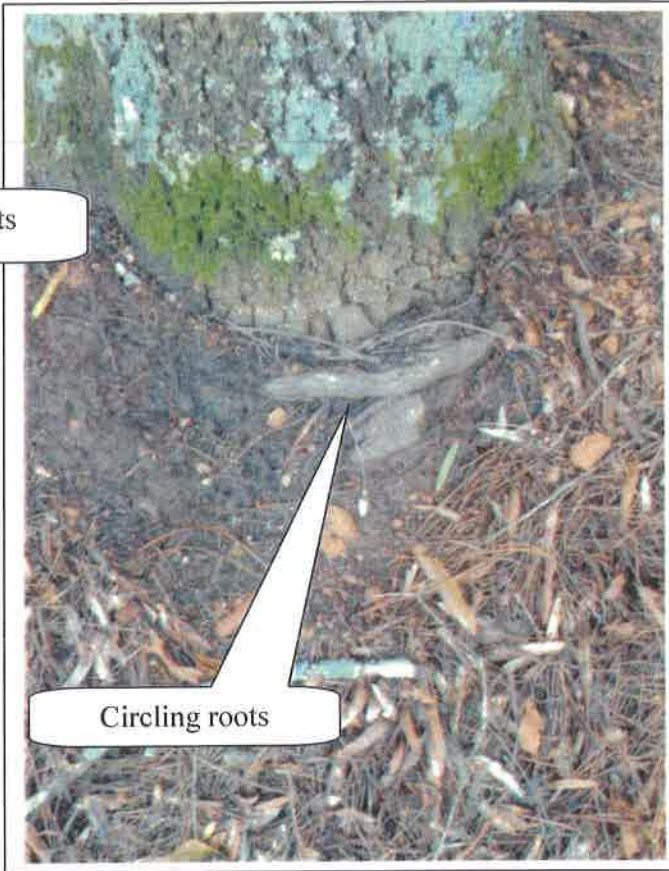
Circling roots

Photo 56



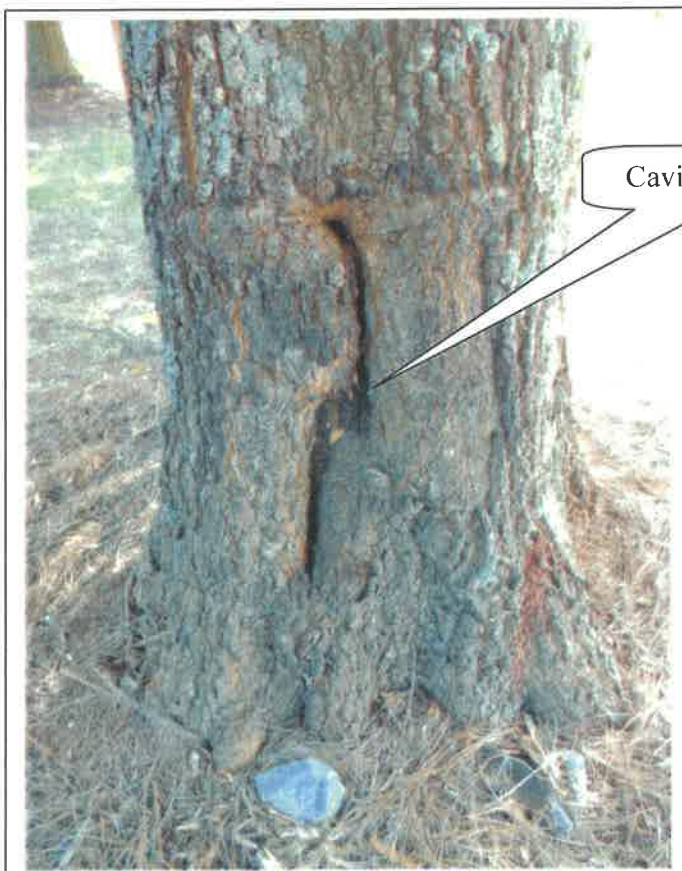
Circling roots

Photo 57



Circling roots

Photo 58



Cavity with decay

Photo 59



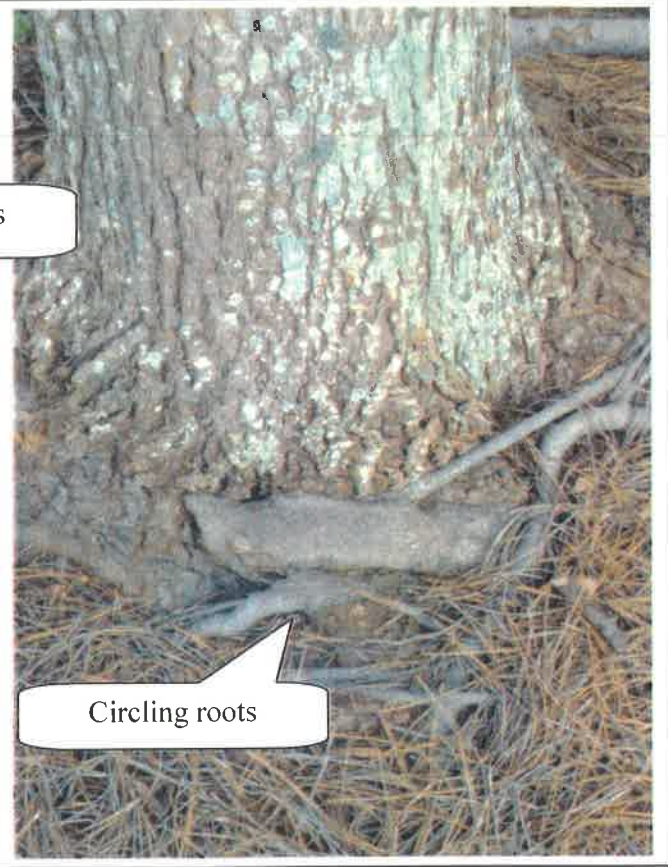
Circling roots

Photo 60



Circling roots

Photo 61



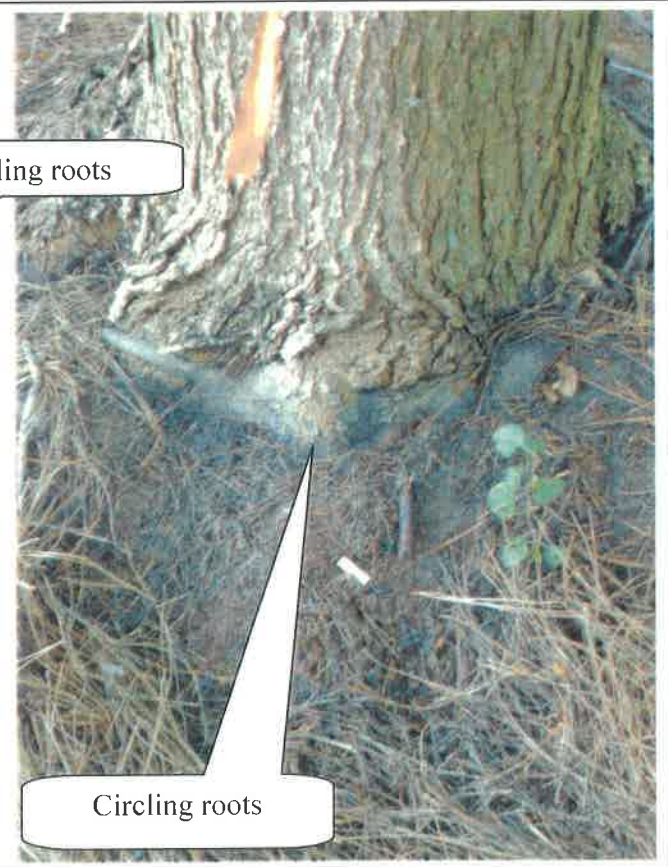
Circling roots

Photo 62



Circling roots

Photo 63



Circling roots

Photo 64



Photo 65

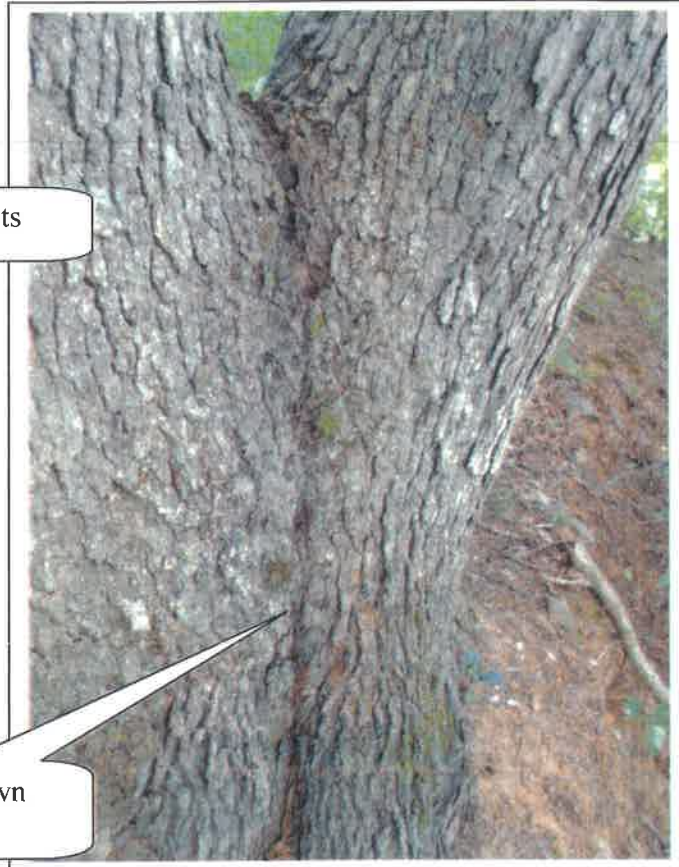


Photo 66



Photo 67



Photo 68



Photo 69



Photo 70



Photo 71



Photo 72

Fruiting bodies

Trunk gall

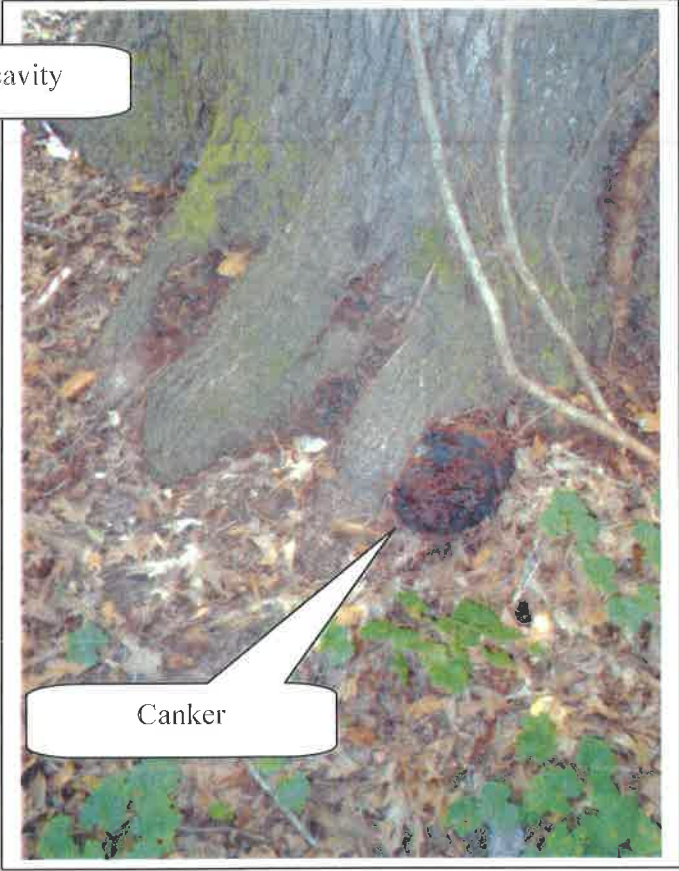
Hollow cavity

Trunk grown
around boulder



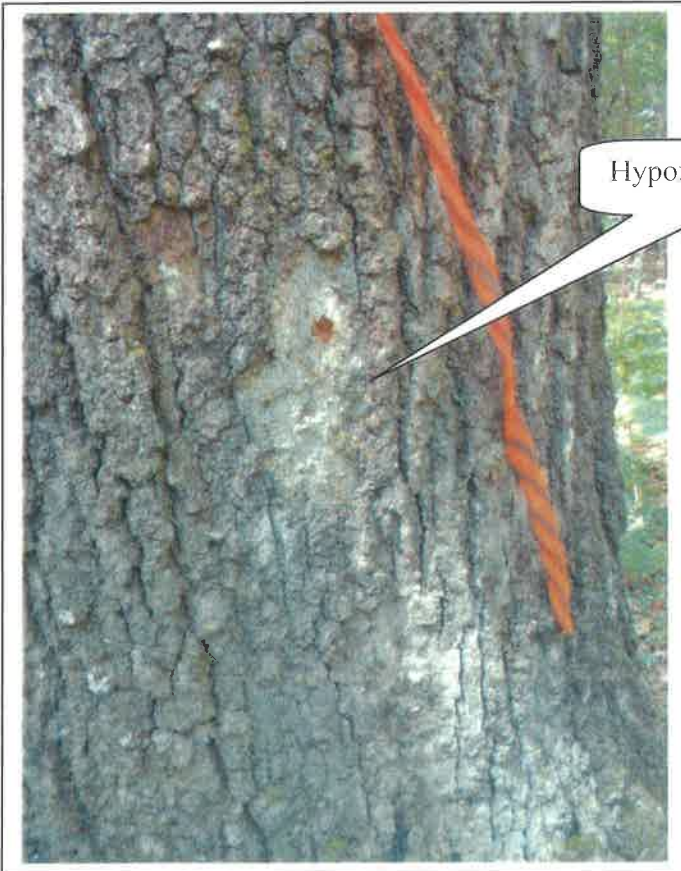
Hollow cavity

Photo 73



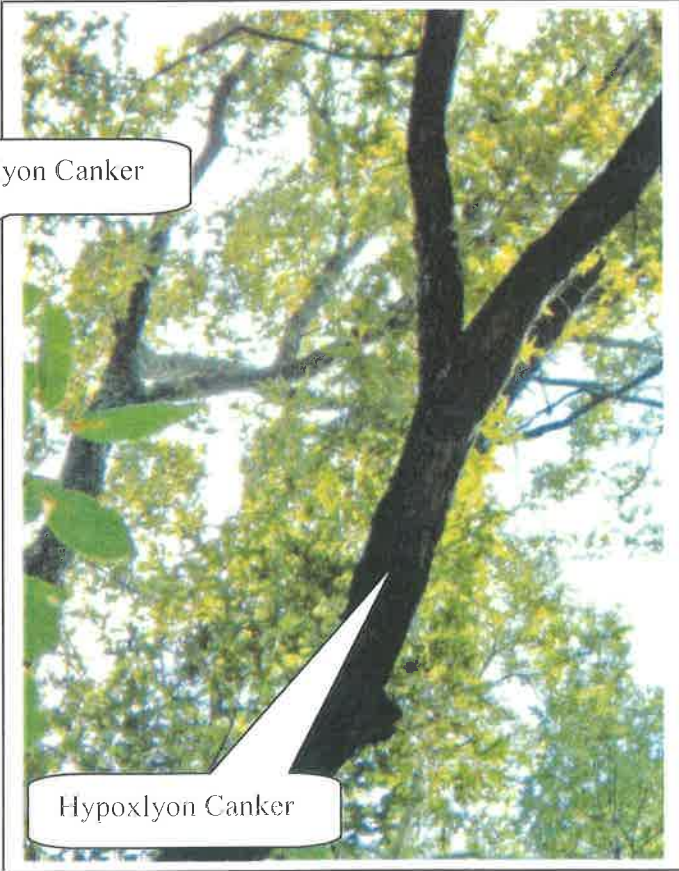
Canker

Photo 74



Hypoxylon Canker

Photo 75



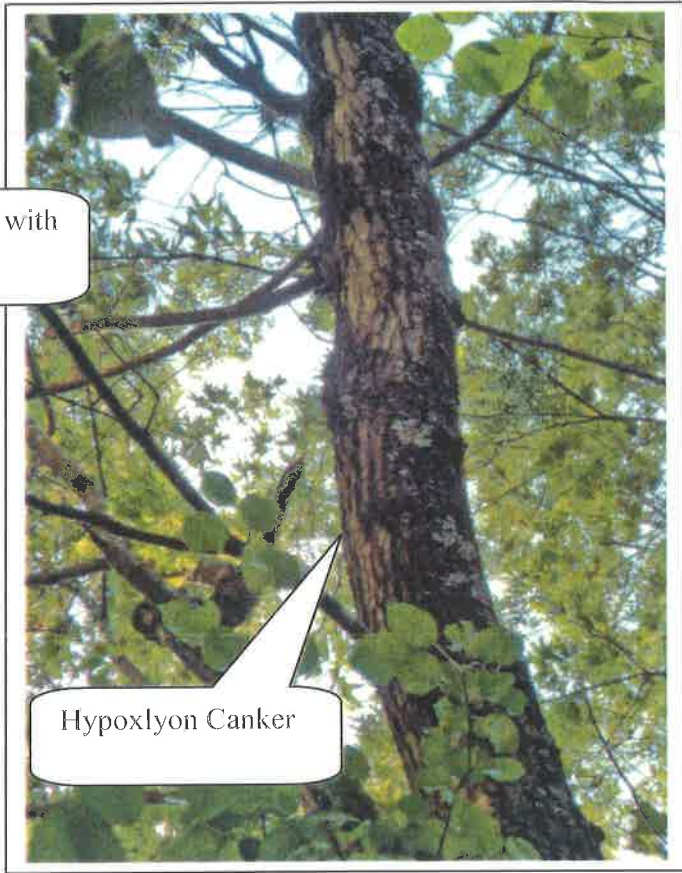
Hypoxylon Canker

Photo 76



Distorted trunk with
trunk gall

Photo 77



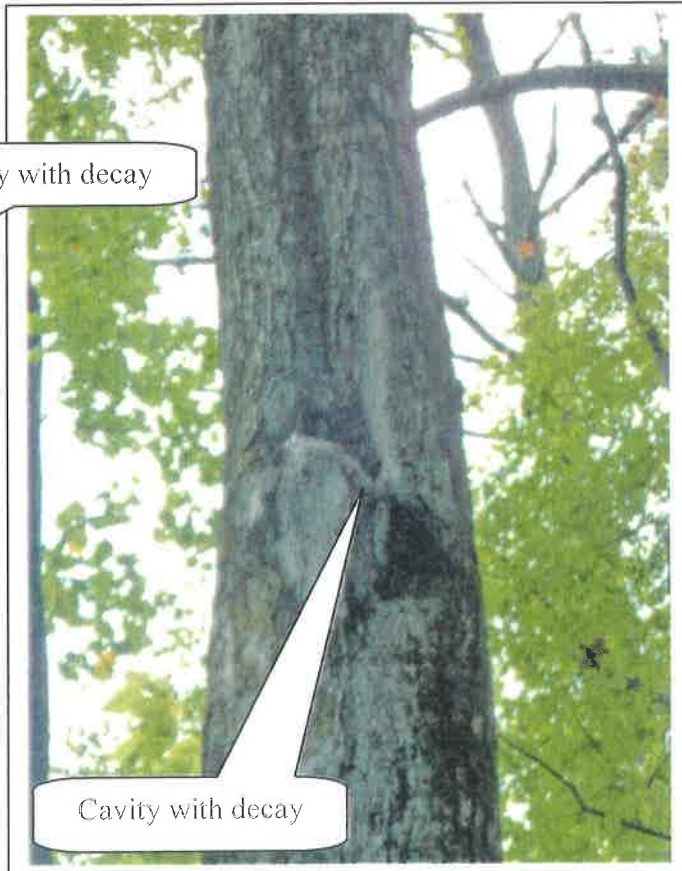
Hypoxylon Canker

Photo 78



Cavity with decay

Photo 79



Cavity with decay

Photo 80



Photo 81

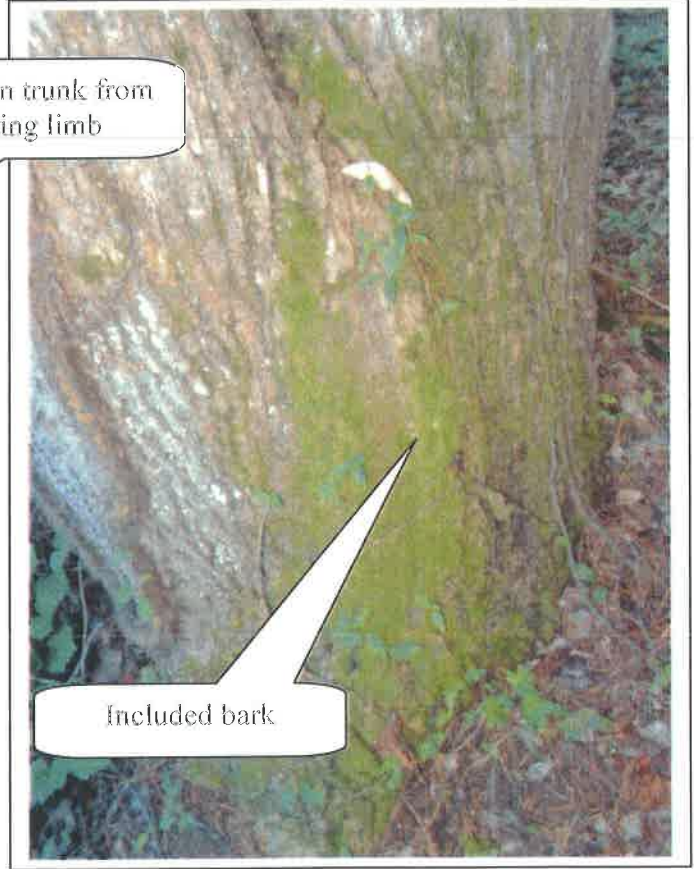


Photo 82



Photo 83

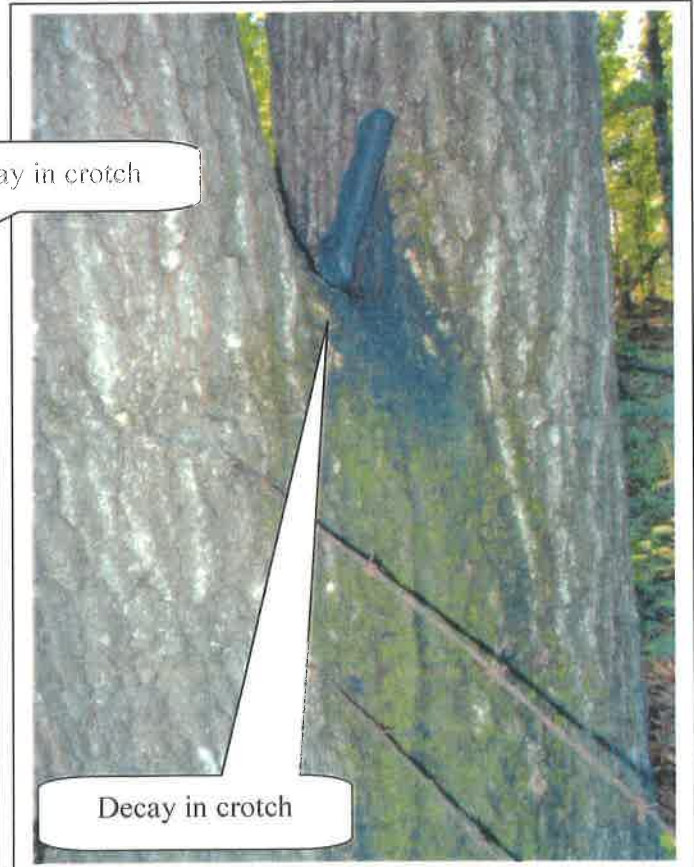
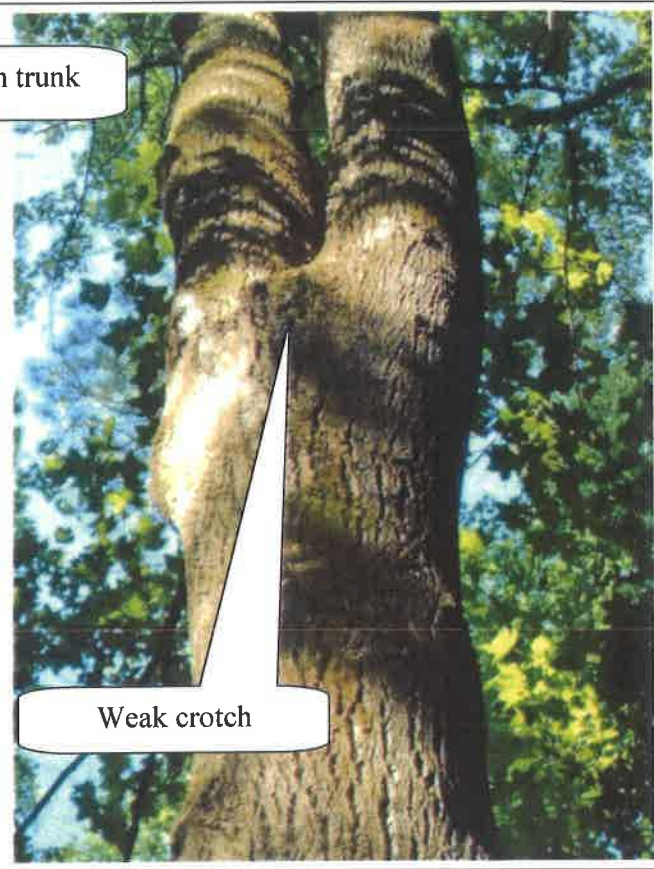


Photo 84



Barbwire in trunk

Photo 85



Weak crotch

Photo 86



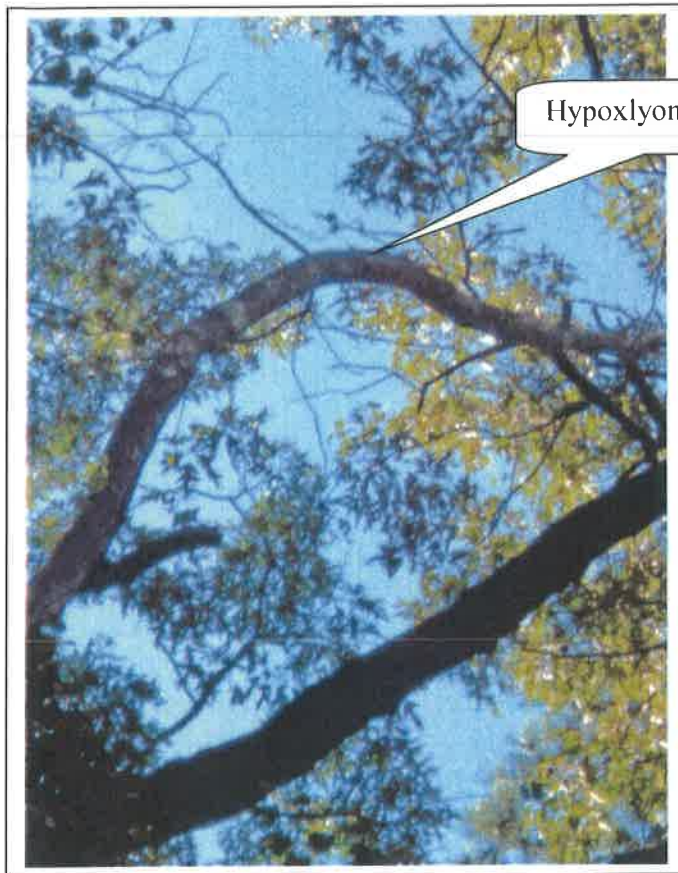
Severe lean

Photo 87



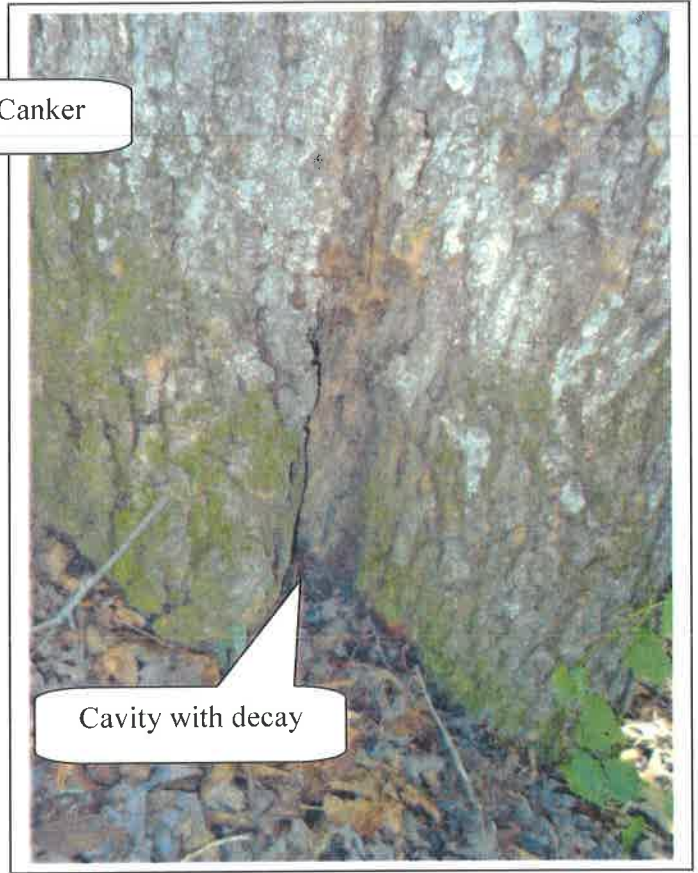
Phytophthora

Photo 88



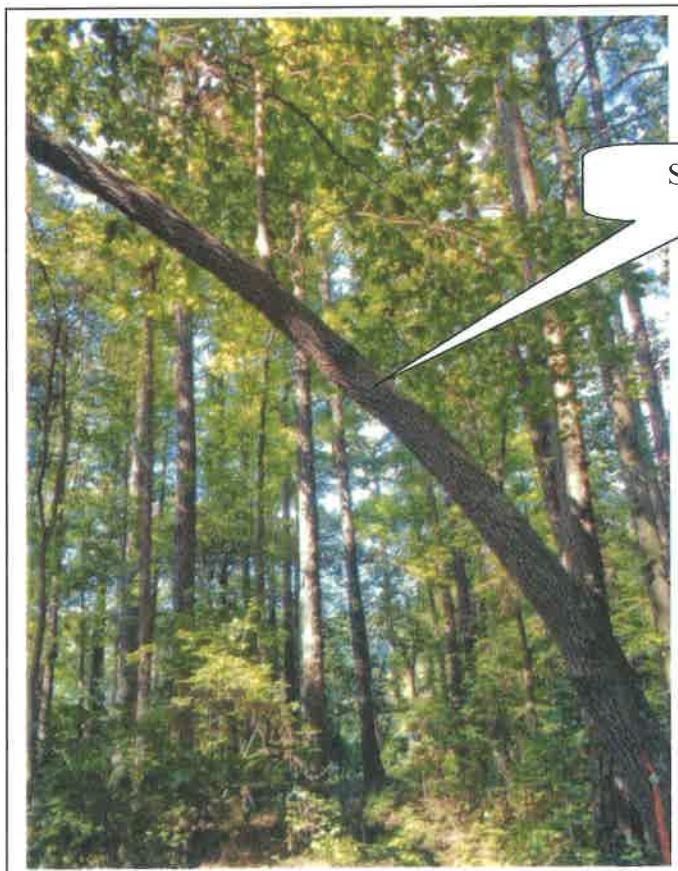
Hypoxylon Canker

Photo 89



Cavity with decay

Photo 90



Severe lean

Photo 91



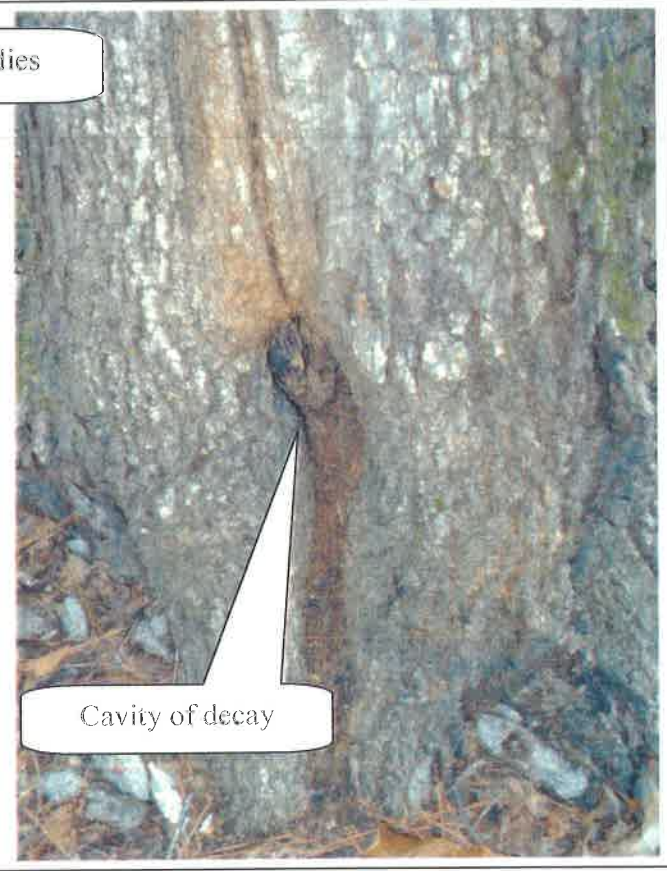
Cavity with decay

Photo 92



Fruiting bodies

Photo 93



Cavity of decay

Photo 94



Root damage

Photo 95



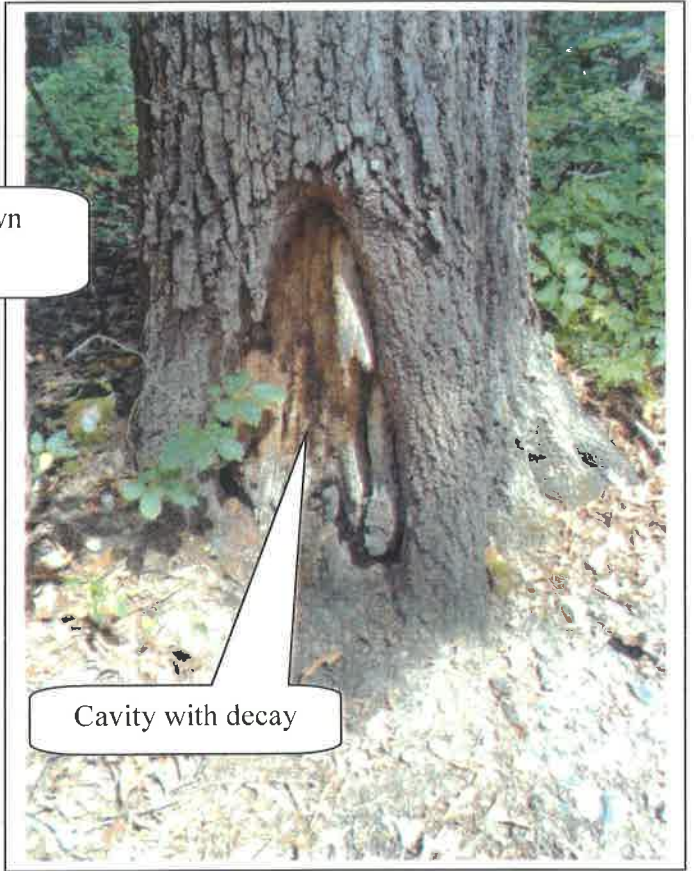
Included bark with trunk gall in the inclusion

Photo 96



2 Trees grown together

Photo 97



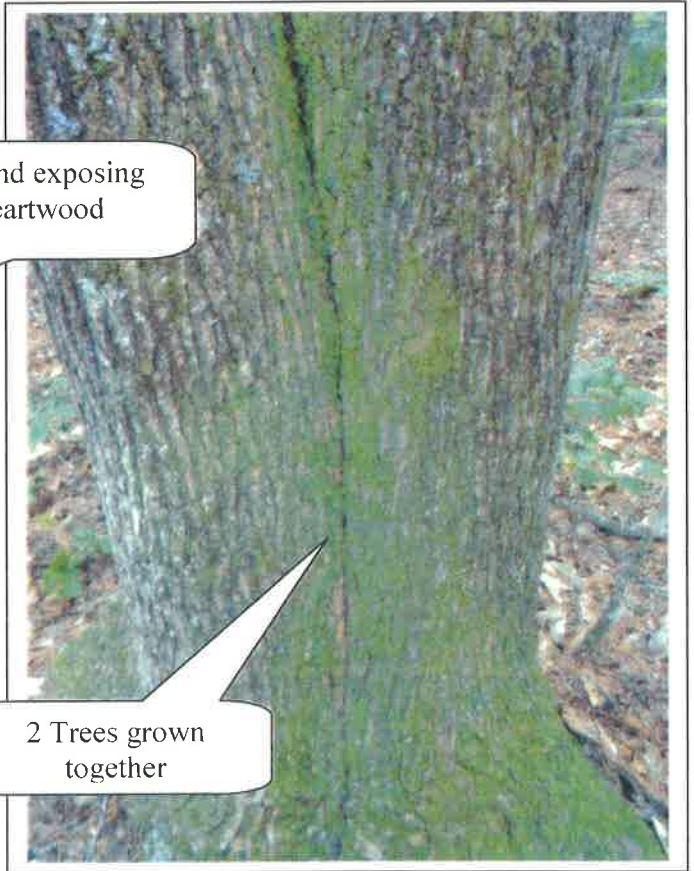
Cavity with decay

Photo 98



Wound exposing heartwood

Photo 99



2 Trees grown together

Photo 100



CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT
SUBMITTED BY: KATHI COOK
DRAFTED BY: ERIC GRAVES

I. PH-16-12 Tree and Landscape Ordinance Amendments:

Consideration of text amendments to the UDC to consolidate landscape and tree requirements into one location within section 3.2 of the UDC; clarify and simplify certain requirements to provide for ease of use and implementation; and, increase incentives and options to save trees during land development.

PLANNING COMMISSION: NOVEMBER 3, 2016

CITY COUNCIL: NOVEMBER 14, 2016 APRIL 17, 2017 (2ND READING)

II. RECOMMENDATION:

Adopt Proposed text amendments consolidating landscape and tree requirements into section 3.2 of the UDC.

III. Report In Brief:

City Codes, Ordinances, and portions of the Unified Development Code (UDC) pertaining to tree protection, landscaping, and buffer plantings have been reviewed for consistency, simplicity and relevance. Landscape Architects from Kimley-Horn and Associates were commissioned with reviewing our current ordinances, organizing pertinent information from the City's Code and sections throughout the UDC into one section of the UDC, and adding current best-practices as well as additional guidance where necessary.

Staff has incorporated input from the consultants and have produced a strikethrough version of the UDC Update. Modifications to the Unified Development Code are being proposed in order to achieve the following:

- Consolidate the various planting, landscape, and tree requirements in one location within the Alpharetta Unified Development Code;
- Clarify the City's requirements with simpler language;
- Make the ordinance easier to understand and implement (for both applicants and staff); and,
- Provide more incentives and options to save existing trees during land development.
- Some of the specific items identified for significant change include:
 - Changing "Density Units" to "Inches" of tree caliper;
 - Provide additional differentiation of Specimen Trees to recognize quick growing species;
 - Provide better incentives for preservation of significant clusters of trees (other than specimen trees); and,
 - Not require a tree removal permit for dead trees.

In addition to the UDC Code Revisions, Staff has proposed additional measures to assist the development community and City's residents in the form of administrative initiatives:

- Development of a "guidance document" (included in packet) that contains specific tree information such as appropriate locations for types of trees that may need to be updated from time and time.
- Development of a "Preferred Vender List" for residential tree removal that would allow the resident to contract with a preferred vendor and not have to submit for a tree removal permit. The vendor would be allowed to perform the work, but would also be required to input the application for the City records.

IV. ATTACHMENTS:

UDC Section 3.2: Tree Protection, Landscape, and Buffer Requirements

Guidance Document

SECTION 3.2 - ~~TREE PROTECTION~~ TREE PROTECTION CONSERVATION, LANDSCAPE, AND BUFFER REQUIREMENTS

3.2.1 General.

In order to maintain and promote the public health, safety and welfare, the City has established regulations governing the conservation, planting, and replacement of trees. The importance of trees is recognized for their contribution toward quality of life, visual quality of the city, and improved property values. It is the City's intent to prevent the indiscriminate removal of trees without denying the reasonable use and enjoyment of real property. ~~The importance of trees is recognized for their contribution toward quality of life.~~ It is also the intent of these regulations that all applicable sites within the City maintain or obtain minimum tree density, as defined herein. Consistent with the expressed purpose of these regulations, all persons shall make reasonable efforts to ~~preserve~~ protect and retain certain existing, self-supporting trees as defined herein. Each person shall be responsible for the normal care of trees located on its premises.

~~The importance of trees is recognized for their contribution toward quality of life.~~

- A. Willful injury or disfigurement of any tree growing within the City shall be a violation of this Ordinance.
- B. No person shall:
 1. Attach any sign, notice or other object to any tree or fasten wires, cables, nails or screws to any tree in a manner that could prove harmful to the tree, ~~except as necessary in conjunction with activities in the public interest.~~
 2. Pour any material on any tree or on nearby ground which could be harmful to the tree.
 3. Cause or encourage any unnecessary fire or burning near or around any tree.
 4. Construct a concrete, asphalt, brick or gravel sidewalk, significantly compact the soil, place fill material, or create other impervious or semi-impervious surfaces around any tree so as to cut off air, light or water from the roots of the tree so as to adversely impact the tree's root system.
 5. Pile building material or equipment around any tree so as to cause injury thereto.
 6. Deny routine maintenance, watering and reasonable arboricultural care to existing and newly established trees as may be required as a result of activities taking place under this Section.
 7. Remove any tree without ~~an Approval Letter (Permit)~~ Permit from the Director.
 8. Remove or prune a tree on commercial property during non-development activity unless they follow ISA industry standard protocols ~~from~~ for pruning or have written approval from the Director.
 9. Park any vehicle on the unpaved area underneath existing tree canopies.

3.2.2 Definitions.

For the purposes of this Section, unless the context indicates otherwise, the following terms shall have the meaning set forth below:

Boundary Tree: Any tree located on adjacent property with a critical root zone that will be impacted by proposed land disturbance activity.

~~Basal Area:~~ The cross-sectional area expressed in square inches, of a tree trunk at diameter breast-height (DBH) expressed herein in terms of "units" per acre.

Buffer. An area required to remain undisturbed or replanted where existing vegetation is sparse, as determined by the director. ~~pursuant to the Subdivision Regulations, the Zoning Ordinance, a condition of Zoning or this section.~~

Caliper. A standard of trunk measurement for ~~understory or~~ replacement trees. Caliper inches are measured at the height of 6 inches above the ground for trees up to and including 4 inch caliper and 12 inches above the ground for trees larger than 4 inch caliper.

~~Certified Professional. An International Society of Arboriculture (ISA) Certified Arborist, an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist, or a Registered Forester.~~

Conifer Tree. Any tree with needle leaves and a woody cone fruit including, but not limited to, pine, juniper and cedar species.

Critical Root Zone (CRZ). The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The Critical Root Zone will typically be represented by a concentric circle centering on the tree's trunk with a radius equal in feet to one and three-tenths times the number of inches of the trunk diameter. EXAMPLE: The CRZ radius of a twenty (20) inch diameter tree is twenty-six (26) feet.

~~Density Factor. A unit of measure used to prescribe the calculated tree coverage on a site.~~

Dead Tree: Any standing tree which is no longer alive or has the ability to sustain itself through natural processes as determined by a qualified professional.

Development Activity. Any alteration of the natural environment, which requires the approval of a development or site plan and issuance of a Land Disturbance Permit. ~~By way of illustration but not limitation,~~ Development Activity shall also include the "thinning" or removal of trees from land in conjunction with a forest management program, the removal or destruction of trees incidental to the development of land or to the marketing of land for development, the removal or destruction of trees in conjunction with any grading activity, including the removal or filling (stockpiling) of soil, and logging or the removal of trees not in conjunction with an ongoing forest management program. Nothing in this definition shall be deemed to require or authorize the issuance of a permit for any activity described herein.

Diameter Breast-Height (DBH). The standard measure of ~~overstory~~ tree size (for trees existing on a site). The tree trunk is measured at a height of ~~4 and half~~ 4 1/2; feet above the ground. If a tree splits into multiple trunks below ~~4 and half~~ 4 1/2; feet, ~~measure~~ the trunk is measured at its most narrow point beneath the split.

Director. The Director of Community Development or designee shall administer and enforce the provisions of this Ordinance; provided, however, that a designee shall have no authority to revoke permits.

Georgia 400 Tree Protection Zone. All property within a horizontal distance of 120 feet of the right-of-way of Georgia 400. At major intersections on Georgia 400 having exit and/or entrance ramps the protection zone shall be reduced to 60 feet. The reduction shall apply for the length of each such ramp. The Georgia 400 Tree Protection Zone is a Buffer ~~Area~~.

Grading Activity. Altering ground surfaces to specified elevations, dimensions and/or slopes; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the land in its cut or filled condition.

Guidance Document: A document maintained by the City of Alpharetta Arborist that includes recommendations clarifications to requirements with examples and additional technical standards about tree protection, tree planting, species selection, and other information relevant to the protection and replanting of trees in the City of Alpharetta. The document may be revised by the City Arborist as conditions and technical standards evolve.

Hardwood Tree. Any tree that is not coniferous (cone bearing). This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

International Society of Arboriculture (ISA): A professional organization that promotes the professional practice of arboriculture, sets standards for obtaining professional credentials for arborist, and establishes best practices for tree care, pruning, and protection.

Land Disturbance Permit. A permit issued by the City that authorizes Development Activity and includes, but is not limited to, Soil Erosion Protection, clearing and grubbing, land disturbance and building construction.

Landscape Strip: A portion of a lot required to be reserved for, installed with, and maintained with vegetation. Such a strip may or may not be required to be of a linear form. No parking will be allowed within a required landscape strip.

Landscape Tree: A tree or trees that were planted or retained on a developed or previously developed site.

Lot Building Area. The area of a lot encompassed by front sides and rear yard setbacks or ~~buildup~~ building line as required by City Ordinance and Subdivision Regulations.

Mulch: An organic material spread around the base of a plant or on a plant bed to enrich and insulate the soil. Types of mulch include Pine Straw, Shredded Hardwood, Wood Chips, and Bark Chips. Mulch should be free of disease and pests. Synthetic or artificial mulches are not acceptable for use in the City of Alpharetta.

Non-Development Activity. Any alteration of the natural environment which does not require development or site plan approval, but which would include the proposed removal or destruction of any tree(s). Any removal of trees that constitutes Development Activity as that term is herein defined shall not constitute non-development activity.

Ornamental Tree: A tree that provides a visual impact in the landscape. The impact may be provided through form, bark, branching structure, leaf color, and / or flower color. Typically a small or medium size tree.

Overstory Tree. Those trees that compose the top layer or canopy of vegetation and will generally reach a mature height ~~of~~ greater than 40 feet and typically have a spreading canopy.

Permit (Tree Removal Permit). An official Permit for tree removal issued by the City of Alpharetta.

Pervious Surface. All that area of land that can be landscaped or planted, allows natural passage through by water, and is not covered by man-made materials or structures such as buildings or paving.

Pine Tree: An evergreen coniferous tree that has clusters of needle-shaped leaves.

Plantable Area. The pervious surface area available for the preservation or planting of trees. Plantable Area shall not include that portion of the lot that is covered by buildings and structures permitted pursuant to the maximum lot coverage standards of this Ordinance.

Planted Area: An area of living plant material created for the purpose of establishing open space and consisting of a minimum of 50% of the area devoted to trees and shrubs.

Pruning (Tree Pruning): To cut away dead, overgrown, or undesirable branches or stems. Pruning of trees to be done in compliance with standard arboricultural practices as outlined in ANSI A300 and shall maintain the trees natural form and structure.

~~Certified~~ Qualified Professional. An International Society of Arboriculture (ISA) Certified Arborist, an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist, or a Registered Forester.

Recompense: Replacement of trees or payment into the City held tree fund for the removal of Specimen Trees. ~~Recompense cannot count towards any other tree related requirements.~~

Plantable Area. The pervious surface area (expressed in square footage) available for the preservation or planting of trees on a 'For-Sale' residential subdivision lot. Plantable Area shall not include that portion of the lot that is covered by buildings and structures permitted pursuant to the maximum lot coverage standards of this Ordinance.

Replacement Planting. The planting of trees on a site that before development had more trees, and after development shall have less trees per acre.

Responsible Party. Any individual, firm, principal, or other entity who is a signatory to a Tree Removal Permit Application or Land Disturbance Permit for Development Activity or any person or company caught in the act of tree removal without a City-issued permit, or who violates any other provision of this Ordinance.

Shade Tree: Any tree that has a spreading canopy that provides partial to full shade to the ground with a minimum height of 20 feet.

Semi-Pervious. Hardscape, aggregate or porous paver that allows at least fifty percent (50%) of surface water to pass through the man-made material and into the underlying soil.

Softwood Tree. Any coniferous (cone bearing) tree. This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Specimen Tree. Any tree which qualifies for special consideration for preservation due to its size, type, condition, location or historical significance and which also meets the minimum size criteria set forth below.

Size Criteria:

Pine Trees: 30-inch diameter or larger for trees in the *Pinus* (Pine) genus.

Coniferous Trees: 20" diameter or larger for trees in the *cedrus* (deodar cedar), *Thuja* (Arborvitae), or other ecologically similar trees.

Overstory Trees: 30-inch diameter or larger for trees in the *Liquidambar* (Sweetgum) or *Liriodendron* (Tulip poplar) genus

20-inch diameter or larger for trees in the *Fagus* (Beech), *Nyssa* (Tupelo), *Diospyros* (Persimmon), *Sassafras* (Sassafras), or other ecologically similar trees,

20-inch diameter or larger for *Magnolia grandiflora* (Southern magnolia) and those cultivars that generally reach a mature height over 40'

24-inch (24") diameter or larger for trees in all other genera

Understory Trees: 8-inch (8") diameter or larger.

10-inch (10") diameter or larger for *Oxydendron arboretum* (Sourwood).

–See additional requirements for Specimen Trees in Appendix A The Guidance Document

Street/Streetscape Tree: Any tree located or proposed to be located ~~within the public right of way~~ along a public or private street. The actual location will be determined by the specific zoning district or overlay. In situations where there is limited planting space in the right of way and or safety concerns, street trees may be located at the back of the sidewalk or within the landscape strip on private property and the discretion of the Director.

Structural Root Plate: The zone of rapid root taper that provides the tree stability against wind throw. The radius of the structural root plate is equal to 0.5 feet per inch of DBH.

Timber Harvest. Harvesting of timber from sites as a timber management activity as part of a demonstrated ongoing agricultural land use.

Tree. Any living, self-supporting woody or fibrous plant which normally obtains a diameter breast height of at least three (3) inches, and typically has one (1) main stem or trunk and many branches.

Tree Care Plan: A plan developed to provide an impacted tree the best possible chance of survival. A tree care plan should be prepared by a qualified professional ~~an ISA-certified arborist~~ and conform to the requirements of ANSI A300 and the Guidance Document

Tree Density: A measurement of trees on a property, expressed as inches per acre. For existing trees density is calculated based on DBH. For proposed trees tree density is calculated based on the caliper.

Tree Grouping: A community of trees as determined by the Director sufficiently uniform in composition, structure, age, and condition to merit special consideration as and an ecological feature based upon species composition, form, structure, age, and condition. Specimen trees and trees of quality may be included in tree groupings and every alternative should be evaluated to save these trees. Except as otherwise provided in Section 3.2., Tree Groupings will be treated as specimen trees for both preservation credits and recompense, and every alternative should be evaluated to save these trees.

Tree of Quality: A tree that merits special consideration due to historical significance, ideal shape and structure, or uniqueness of the species as determined by the Director. Except as otherwise provided in Section 3.2., Trees of Quality will be treated as specimen trees for both preservation credits and recompense, and every alternative should be evaluated to save these trees.

Tree Removal or Removal of Trees. Removal of trees through an act of cutting down a tree or aAny act which causes a tree to die within 2 years after commission of the act or impedes the ability of the tree to sustain itself, including but not limited to damage inflicted upon the root system ~~or~~ trunk, or canopy as a result of:

1. The improper use of machinery on the trees;
2. The storage of materials in or around the trees;
3. Soil compaction;
4. Altering the natural grade to expose the roots or to cover the tree's root system with more than 4 inches of soil;
5. Causing the infection or infestation of the tree by pests, fungus or harmful bacteria;
6. Pruning judged to be excessive by the Director or not in accordance with the standard set forth by the International Society of Arboriculture (ISA);
7. Paving with concrete, asphalt or other impervious surface within such proximity as to be harmful to the tree or its root system; and
8. Application of herbicides or defoliants to any tree without first obtaining a permit.

Tree Planting List. ~~Guidance document provided by City with suggested plantings for the City.~~ List of preferred tree species for use in the City of Alpharetta. Species not included on this list may be approved at the discretion of the Director. The Tree Planting List is included in the Arborist Guidance Document.

Tree Protection Area. An area encompassing the critical root zone of a tree that shall remain in an a pervious state.

Tree Save Area. An area designated for the purpose of meeting tree density requirements, saving natural trees, and/or preserving natural buffers that shall remain in a pervious state.

Understory Trees. Those trees that grow beneath the overstory, and will generally reach a mature height ~~of under less than 40 feet.~~ feet. Understory trees may include coniferous trees that meet these same height characteristics.

Zoning Districts. Those areas as defined in the Zoning Ordinance and shown on the Zoning Map.

~~(Ord. No. 685, 1-6-2013)~~

3.2.3 Exemptions.

A. The following shall be exempt from the provisions of this section:

1. The removal of trees with a Permit. ~~n approval letter other than specimen trees from an owner-occupied, residential lot, provided that the removal does not reduce the tree density of the lot below the minimum specified in this section; an approval letter~~ permit will not be granted for the removal of specimen trees, buffer trees, or street / landscape strip trees unless the tree(s) are in declining health, as determined by a qualified professional.

2. The removal of trees from horticultural properties such as farms, nurseries or orchards. This exception shall not be interpreted to include timber harvesting incidental to development of the land;
3. The necessary removal of trees by a utility company within dedicated utility easements;
4. The removal of trees on public rights-of-way conducted by, on behalf of, or any activity pursuant to work to be dedicated to, a federal, state, county, municipal or other governmental agency in pursuance of its lawful activities or functions in the construction or improvement of public rights-of-way;
5. The removal of trees from lakes and detention ponds, and drainage easements, unless specifically planted to be part of the stormwater system; or
6. The removal of any tree which is dead or has become or threatens to become a danger to human life or property;

B. ~~a.~~ Notwithstanding the foregoing, all reasonable efforts shall be made to save specimen trees and trees of quality, and tree groupings.

C. ~~b.~~ Nothing in this section shall be deemed to authorize, directly or indirectly, the removal of a tree from the Georgia 400 Tree Protection Zone or any buffer ~~area~~.

3.2.4 ~~Approval letter or Permit~~ required for non-development activity (activity which does not require a building permit, etc.).

A. Except for routine or seasonal pruning or transplanting of trees, and except as exempted, no person shall engage in any Non-Development Activity as defined without first obtaining a permit ~~an approval letter~~. The request for ~~an approval letter~~ a permit shall be submitted to the Director in the form of a tree removal permit application through the City process ~~and shall be, unless waived submitted to the Director, in the form of a brief written narrative stating; and should~~ shall include

1. ~~The~~ The reason for the proposed work ~~and~~
2. ~~Either~~ Either a site sketch or photograph of the tree(s) proposed to be removed, identifying such tree(s) by size and species.
3. Specimen Trees shall only be approved for removal if they are in declining health or as approved by the Director. If a request includes a Specimen Tree, the applicant shall provide a risk assessment or similar report, following currently accepted industry standards and protocols, prepared by a qualified professional outlining the condition of the trees and associated risks.

If the ~~request for an approval letter~~ a permit application is complete, complies with the Ordinance, and requests tree removal for one of the purposes identified in Paragraph B- below, ~~the~~ the Director shall issue ~~an approval letter~~ a permit not later than ten (10) working days from receipt ~~of a complete request~~, and shall inform applicant if replanting will be required. If ~~the request~~ the request application is incomplete or denied, the Director shall notify applicant in writing regarding the specific reason for denial.

B. The Director shall issue ~~an approval letter~~ a permit for the following:

1. The removal of dead, substantially injured, damaged or diseased trees;
2. The removal of any non-specimen tree, provided the tree is not a required landscape strip tree, buffer tree, or other code required trees etc. and that the applicable minimum tree density requirement is maintained.
3. The removal of any specimen tree, landscape strip tree, buffer tree or other code required tree with a replanting agreement approved by the director.

3.2.5 Land disturbance permit for development activity.

- A. No person shall engage in a Development Activity and no Land Disturbance Permit shall be issued without first obtaining an approved site plan stamped and signed by the Director.
- B. Except as provided in [Section 3.2.4 and](#) Paragraph (c) of this subsection, no tree removal shall be approved for any site not under active development. For the purposes of this Ordinance, a site is not under active development unless there exists an approved development plan delineating the improvements to be constructed on the site consistent with the use for which the site is zoned, and there is a reasonable certainty that construction is imminent.
- C. A Land Disturbance Permit may be issued for Grading Activity on a site not under active development provided that:
 - 1. The sole purpose of the Grading Activity is for the storage, removal or altering of soil for fill balancing on another site under active development;
 - 2. The site not under active development must be under common ownership or common development control with the site that is under active development;
 - 3. The site not under active development must be contiguous to, or located within one (1) mile of, the site under active development. For the purposes of this Section, the measurement of distances shall be from property line to property line along the most direct route of travel on a public road;
 - 4. The proposed Grading Activity shall not result in the damage or removal of more than ten percent (10%) of the total tree density ([inches per acre](#)) ~~units (as defined in Tables 3-1 and 3-2, Minimum Tree Density Requirements)~~ on the site not under active development;
 - 5. The proposed Grading Activity shall not decrease the tree density below the minimum ~~tree density~~ [inches per acre required](#) for the site. For the purposes of this Section, trees in Buffers that will be required shall be excluded from minimum density calculations;
 - 6. The area to be disturbed within the site shall be the area that will have the least adverse impact on existing trees, [Specimen Trees, Trees of Quality, and Groupings of Trees](#) as determined by the Director. In addition, the area must be visually screened from public [or private roads and drives](#), developed residential and commercial properties, by a one hundred foot (100') buffer or a buffer of sufficient depth to provide reasonable visual screening. In order to provide reasonable visual screening, it may be necessary to locate access roads to the impacted area in a winding manner to prevent a straight line of site to the impacted area; and
 - 7. The disturbed area within the site shall be replanted with trees to a tree density of [130 inches](#) ~~twenty (20) units~~ per acre no later than eighteen (18) months from the issuance of the Land Disturbance Permit authorizing the Grading Activities. A tree replacement plan and a bond shall be submitted and approved by the Director prior to the issuance of the permit authorizing the Grading Activities. The [completion](#) bond shall be held [until the planting is complete and at that time transfer to an eighteen \(18\) month maintenance bond](#) ~~for one (1) year and to the end of the succeeding Planting Season~~ to ensure survival of the replacement trees. The applicant shall be responsible for the irrigation (watering) of trees during the period of the bond^s. The replanting requirements of this Section shall not apply, and the [initial](#) bond shall be released, if, on or before fifteen (15) months from the issuance of the permit authorizing the Grading Activity, the site becomes under active development pursuant to the issuance of a Land Disturbance Permit and the approval of development plans in compliance with the provisions of this Ordinance.
- D. Nothing in this Section shall be deemed to authorize any Grading Activity or similar activity not otherwise in compliance with the Land Subdivision Regulations of the City of Alpharetta, including, the Soil and Sedimentation Control Ordinance. Further, nothing in this Section shall be deemed to eliminate the requirement that all reasonable efforts must be taken to save and not adversely impact the Critical Root Zones of Specimen Trees, [trees of quality, and tree groupings](#) and that all applicable sites from the City shall maintain or obtain the minimum tree density required by this Ordinance.

3.2.6 Application requirements.

- A. When a person applies for a Land Disturbance Permit as defined herein, such person shall ~~also file an application providing~~ provide the following information:
1. A complete tree survey and inventory, which shall contain the following information; ~~as described in subsection 3.2.8;~~
 - ~~a. The location of all trees within the area to be modified from its natural state and to a minimum of 30 feet beyond in each direction;~~
 - a. ~~b.~~ All Specimen Trees, Trees of Quality, Tree Groupings, Landscape Trees, and Boundary Trees on the site and within 30 feet of the limits of disturbance; with an indication whether they are to be retained or removed;
 - b. ~~c.~~ All trees that are to be counted toward the tree density requirement greater than 2" DBH, including size (Caliper or DBH) and species. Sampling methods may be used to determine tree densities for forested areas (over 5 acres); that are to be preserved. Sampling methods must conform to industry standards and protocols and be no less than a 10% sample;
 - c. ~~d.~~ Tree Protection Zones and Tree Save Areas must be delineated on the plan;
 - d. ~~e.~~ All buffers with existing trees to be delineated on plans as Tree Save Areas. Land Disturbance within any Buffer is subject to ~~Planning Department~~ Director approval.
 - ~~a.e.f.~~ The tree survey and inventory shall be a to-scale map or a site plan prepared and sealed by a registered surveyor ~~or registered engineer.~~
 2. An integrated site plan showing Specimen Trees, Trees of Quality, Tree Groupings, Boundary Trees, the trees to be saved and those to be removed, existing utilities and those to be installed, grading, the approximate location of all structures, driveways and curb cuts and all proposed tree plantings and other landscaping. It is required that all reasonable efforts be made to save Specimen trees, Trees of Quality, Tree Groupings. (Reasonable efforts shall include, but not be limited to, alternate building design, building location, parking area layout, parking area location, water retention stormwater BMP locations and the like).
 - a. ~~a.~~ If a Specimen Tree, Tree of Quality, or Tree Grouping cannot be saved a hardship justification in the form of a letter shall be submitted to the Director for review and approval and be included within the plan set;
 - ~~a.b.~~ ~~b.~~ If a Boundary Tree cannot be saved or results in an encroachment into the Critical Root Zone of greater than 10%, evidence of notification to the owner of the tree will be required to be provided to the Director. This notification shall generally include the current condition of the tree, % encroachment, potential outcomes of the encroachment, and proposed tree care to offset the encroachment. In no way does this authorize any encroachment into the Structural Root Plate of a Boundary Tree.
 3. A detailed plan to protect and preserve landscaping and trees before, during and for a period of two (2) years after construction, which ~~plan~~ shall contain the following information:
 - a. All items found on the Arborist Checklist, Section B, located ~~Checklist located in the Arborist Guidance Document; the Erosion and Sedimentation Control Submittal checklist pertinent to normal plan review;~~
 - b. Existing roads, utility lines, drainage and detention facilities, and other pertinent items in the vicinity of the site. Site area (roads, utility lines, detention ponds, etc.);
 - c. The locations of existing and proposed structures, paving, driveways, cut and fill areas, detention areas, etc.
 - d. Phase lines or limits of construction;
 - e. A delineation of all protected zones with any required dimensions;

- f. Calculations showing compliance with the required [Tree Density and Recompense per section 3.2.7—Site Density Factor using existing trees, replacement trees, and/or contributions to the City of Alpharetta Tree Replacement Fund \(see Density Factor Analysis, Appendix A and Table 3.2\);](#)
- g. Locations of all existing and proposed utility lines and easements;
- h. Locations of any boring sites for underground utilities;
- i. Locations of all Specimen Trees, [Trees of Quality, Groupings of Trees, Landscape Trees and Boundary Trees](#) and indications whether they are to be removed or preserved;
- j. Locations of all tree protection devices, materials to be used in each location and details;
- k. A delineation of tree save areas in which trees have been inventoried for density calculations;
- l. If applicable, locations and details of all permanent tree protection measures (tree wells, aeration systems, permeable paving, retaining walls, bollards, etc.); and
- m. [A tree care plan developed by a Qualified Professional designed specifically for each tree to be saved that warrants care due to the changes in site conditions or as approved by the Director. The tree care plan shall be prepaid prior to issuance of the land disturbance permit and a paid invoice provided to the City. In the event of a change in ownership, arrangements must be made to allow access for the tree care to continue throughout the required timeframe.](#)
- n. [A full landscape plan meeting all of the requirements of this Section including tree density, recompense, landscape strip, parking lot tree coverage and screening, groundcover, hardscapes, etc. The landscape plan submitted shall be the one that is expected to be planted. Permit only plans will not be accepted by the Director.](#)
- n. Additional information as required on a case-by-case basis.

~~ADD NOTES, TREE CARE PLAN (MUST BE PREPAID PRIOR ISSUANCE OF LDP, INVOICE TO BE PROVIDED)~~

The above items may be integrated into the normal application requirements and submittals.

B. Minor additions to existing development require only a sketch showing changes to be submitted to the Director for review and approval.

3.2.7 Minimum tree density [and recompense](#) requirements.

[The intent and goal of these regulations is to insure that a minimum density of trees is maintained on all developed sites and that a significant amount of tree canopy coverage and pervious soil area is maintained throughout the City. The density requirement must be met whether or not a property or site had trees prior to development or any tree removal. The density may be achieved by counting existing trees 2" in diameter or greater to be preserved, planting new trees in accordance with the minimum standards of this Section, or some combination of the two. Vegetated runoff reduction measures which include trees also count toward the tree density requirement. Minimum tree density shall be calculated and established pursuant to the formula and analysis set forth in the Guidance Document.](#)

- A. ~~The intent of these regulations is to insure that a minimum density of trees is maintained on all developed sites.~~ All sites within the City other than 'For-Sale' residential lots shall maintain [or achieve](#) a Minimum Tree Density of [130 inches](#) ~~twenty (20) units~~ per acre. ~~All sites within the City other than 'For-Sale' residential lots shall maintain a minimum tree density of 20 units per acre. The term "unit" is~~

~~an expression of basal area as defined herein, and is not synonymous with "tree". The density requirement must be met whether or not a site had trees prior to development. The density may be achieved by counting existing trees to be preserved, planting new trees in accordance with the minimum standards of this Section Ordinance, or some combination of the two. Minimum tree density shall be calculated and established pursuant to the formula and analysis set forth in the Arborist Guidance Document, Appendix A to this Ordinance. The developer-owner shall be subject to the minimum tree density requirement set forth in this paragraph, but the developer-owner shall base its the density calculations on the net site area excluding the acreage required for Buffers and infrastructure improvements (roads, utility lines, detention ponds, etc.). In no event shall a parking lot be considered an infrastructure improvement.~~

- B. All ~~newly constructed~~ 'For-Sale' residential lots in the City shall maintain a minimum tree density of 130 inches per acre or provide a calculation as described in the Guidance Document that shows the lot meets or exceeds a 30% canopy coverage based upon trees growing within the property lines. For new construction or new plantings this calculation may be based upon the mature spread of the newly planted trees at 20 years after planting. ~~based upon the maximum number of trees that can be maintained within thirty percent (30%) of the lot's plantable area, taking into consideration the standards established in this Section Ordinance for tree size and separation. The density requirement must be met whether or not the individual lot had trees prior to development. The density requirement is calculated by determining lot size and deducting the impervious area, assigning the necessary root zone for trees (400 sq. ft. for Overstory trees and 200 sq. ft. for Understory trees). All 'For-Sale' residential lots constructed prior to the effective date of this Ordinance are required to maintain the requirements of this Section at a twenty percent (20%) level, rather than the thirty percent (30%) requirement used for new construction. If replacement planting is required on a 'For-Sale' residential lot, replacement planting shall be provided through 5" caliper trees planted in the front yard. The required trees may be used as street trees or landscape strip trees if space allows.~~

~~—If replacement planting is required on a 'For-Sale' residential lot, it is encouraged to provide at a minimum a two-inch (2") caliper tree or larger in the lawn area in the front yard. replacement planting shall be provided through 5" caliper trees planted in the front yard. The required trees may be used as street trees or landscape strip trees if space allows.~~

- C. ~~The density may be achieved by counting existing trees to be preserved, planting new trees according to the minimum standards of this Section Ordinance, or some combination of the two. In addition, replanting on such lots shall be at a ratio of not less than one (1) Overstory tree (minimum two-inch (2") caliper) for every three (3) Understory trees (minimum one-inch (1") caliper). No more than thirty percent (30%) of any one genus may be included in any replanting plan.~~

- ~~DC.~~ Notwithstanding the foregoing, it is required that all reasonable efforts be made to save Specimen trees. (Reasonable efforts shall include, but not be limited to, alternate building design, building location, parking area layout, parking area location, water retention location and the like). Owners ~~Developers-Owners~~ shall receive a density credit of two (2) times the inches assigned unit value for each Specimen Tree saved by utilizing an alternate design during development. Specimen trees that cannot be saved must be replaced with recompense plantings trees having a total density equal to three (3) times the DBH unit value of the tree(s) removed. ~~Recompense trees shall have be with a minimum of four-inch (4") tree caliper at time of planting. Trees of Quality or Tree Groupings shall receive a density credit of one (1) times the inches for each tree saved.~~ Specimen Trees removed without prior approval shall be subject to the recompense replanting requirements as described in section 3.2.10 Tree Damage replaced with recompense planting trees equal to eight (8) times the unit valueDBH of the trees removed with a minimum four-inch (4") tree caliper and and subject to the applicable penalties as described in Section 3.2.~~17~~ 19.

- D. An owner may request a reduction in recompense plantings, which may be granted at the discretion of the Director. The maximum reduction shall be calculated using considering the total DBH inches of Specimen Trees, Trees of Quality or Tree Groupings and other landscape amenities that are incorporated into the site plan utilizing an approved alternative design. In no way shall trees on the periphery of the site or in required buffers or that would have been saved due to topography or other reasons that deem an area undevelopable be allowed to count for a reduction in recompense.

~~However, as many trees as can reasonably be expected to survive and thrive must be planted on the subject property.~~

- E. ~~The intent of these Regulations is to insure that a minimum density of trees is maintained on all developed sites. Occasionally, this intent cannot be met because a project site will not bear the required density of trees. In the event that Specimen Tree Recompense cannot be achieved through planting on the subject property, To provide some alternatives in such cases,~~ two alternative methods of compliance may, at the discretion of the Director, be approved: planting at a location remote from the project site; or, ~~a recompense payment to contributing to~~ the City of Alpharetta Tree Replacement Fund. ~~The following standards have been established for administering these alternative recompense methods.~~
- ~~The following standards have been established for administering these alternative compliance methods.~~ The director must review and approve all requests for alternative recompense compliance. In no instance shall 100% of the required site density recompense be met through ~~these~~ alternative methods recompense compliance. As many trees as can reasonably be expected to survive and thrive must be planted on the subject property ~~ite in question~~. No permit shall be issued until the Director has approved the request and received the necessary documentation and/or funds.
 - ~~No permit shall be issued until the Director has approved the request and received the necessary documentation and/or funds.~~ If trees are to be planted at another location, the off-site location should be in the same area of the City as the project site and a tree replacement plan meeting all applicable standards must be provided by the owner and reviewed and approved by the City Arborist. If tree planting is proposed on City property all specifications for such planting shall be met as determined by the Director of Public Works or the Director of Recreation and Parks. A completion bond in the amount of 100% of the installation and materials cost shall be provided prior to issuance of any land disturbance permit.
 - If a recompense payment donation to the City of Alpharetta Tree Replacement Fund is approved, the amount of the donation shall be established by the Director. ~~The amount of the donation shall be based upon the number, size and type of trees that cannot be planted at the site. The Director shall estimate the cost to the City for the materials, labor and 18 months maintenance requirements associated with the trees.~~ The amount of the recompense payment donation shall be 100% of the estimated costs of the average 3 2 bids from reputable landscape contractors, licensed to do business in the City, for the materials, installation, and care during the trees establishment period (18 months) provided by the owner and reviewed and approved by the City. ~~and labor. The funds shall be used by the City for the sole purpose of planting and maintaining trees on public property.~~

~~3.2.8 Tree survey plan and inventory.~~

- A. ~~A tree survey shall be provided in the form of a to-scale map or a site plan prepared and sealed by a registered surveyor or registered engineer, noting the location of all trees within the area to be modified from its natural state and twenty-five feet (25') beyond in each direction.~~
- B. ~~All Specimen Trees and all trees that are to be counted toward meeting density requirements must be shown on the survey and inventoried by size (Caliper or DBH, whichever is applicable) and species. sampling methods may be used to determine tree densities for forested areas (over five (5) acres). Specimen Trees must be shown on the plan with an indication whether they are to be retained or removed. All Tree Protection Zones and Tree Save Areas must be delineated on the plan. All Buffers with existing trees must be delineated on plans as Tree Save Areas. Land disturbance within any Buffer is subject to Planning Department approval.~~

3.2.8 ~~14~~ Tree Replanting, Buffer, and Landscape replanting standards.

A. Tree Replanting

1. Unless otherwise approved by the Director, it is recommended that trees selected for replanting ~~must~~ be on the Recommended Tree ~~Planting~~-List. Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor and form in order to assure a reasonable expectation of survivability. Standards for transplanting shall be in keeping with those established in the International Society of Arboriculture publication Tree and Shrub Transplanting Manual or similar publication. Reference the American Association of Nurserymen publication American Standard for Nursery Stock (ANSI Z60.~~1-2014, 1973~~) for plant material quality specifications. Reference the Manual of Woody Landscape Plants (Michael Dirr, ~~1983~~2009, ~~Castle Books~~Stipes Pub Llc.) or similar publication for information on tree species and site requirements.
- ~~B2.~~ It is desirable that replanted trees be ecologically compatible with the site and neighboring sites. Accordingly, the replanted trees shall be of the same or similar species as those removed when practical.
- C. All replanted overstory trees shall be at least six (6) feet tall and have a trunk of not less than two (2) caliper inches. All replanted understory trees shall be at least four (4) feet tall or have a trunk not less than one (1) caliper inch. In order to provide sufficient growing area for planted trees, the following minimum criteria must be observed unless otherwise approved by the Director.
 - ~~1a. Overstory trees — 200 square feet of pervious root zone.~~
 - ~~2b. Understory trees — 75 square feet of pervious root zone. (However, up to 30% of root zone may be impervious area.)~~
 - a. No more than 25% of any one genus may be included in any replanting plan.
 - b. A minimum of 40% of the required tree density on a site ~~shall~~ is recommended to be met through overstory tree planting.
 - c. Greater than 50% of the trees shall be natives.

B. Buffer Requirements

1. A lot zoned or used for a rental dwelling, office, institutional, commercial, industrial uses or occupied by a non 'For-Sale' residential use shall provide a fifty foot wide undisturbed buffer along all property lines adjoining property zoned for or used by 'For-Sale' residential purposes. Where commercial or industrial districts or developments abut R-10M zoning districts, the same buffer requirements apply. The ~~undisturbed~~ buffer shall be in addition to the required building setback line.
 - a. When a new, 'For-Sale' development is proposed adjacent to an existing, non-residential use with no buffer present, the 50' buffer must be provided by the residential development.
 - b. If a 50' buffer has been provided on the property adjacent to a proposed, non-residential development, the buffer requirement may be waived with the approval of the Director.
2. Except as otherwise provided, herein, buffer strips shall be preserved in their natural undisturbed state, except that sparsely planted buffers shall be enhanced with additional plant material. Enhancement plants must provide an opaque screen within two (2) years of planting and must consist of trees, shrubs, and groundcover plants meeting the ~~(OR MUST BE PLANTED PER BUFFER PLANTING STANDARDS AS OUTLINED IN THE ARBORIST GUIDANCE DOCUMENT)~~ must meet the following standards:
 - a. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
 - b. ~~Plants~~Deciduous trees must be a minimum of 2 inch caliper ~~five (5) feet in height~~ at time of installation;

- c. Evergreen trees must be a minimum of ~~9-10 feet~~ 9 feet tall at time of installation;
 - d. Shrubs must be a minimum of 3 ~~feet~~ feet tall at time of installation;
 - ~~a. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;~~
 - e. Plants will be spaced a maximum of eight (~~8~~) feet on center or as approved by the Director.;
 - f. Plantings shall be designed with plant ~~pallet~~ palette containing a mixture of colors, textures, and heights.
3. Undisturbed buffers shall not contain any surface parking or storm water, detention facilities, or any structures except that the Director may approve underground facilities within the buffer or the crossing of the buffer for the purpose of extending utilities.
 4. The Director may approve vegetated runoff reduction measures within the buffer. The planting requirements above may be varied to accommodate vegetated runoff reduction measures as part of an approved stormwater management plan, if properly designed to provide stormwater management and screening functions.
 45. Stream buffers must be replanted where disturbed for approved access, ~~detention~~ and utility crossing. Replacement plantings must be native and be arranged to have a natural appearance and approved by the ~~a~~Arborist.
 56. All buffer plantings are subject to the approval of the Director.

C. Parking Lot Landscaping ~~Screening~~

1. Surface parking lots shall provide a minimum 200 square foot wide landscape island at the end of each parking bay, and a 200 square foot island located each 72 feet of single parking length. Each landscape island shall be planted with one shade tree. ~~Islands shall be excavated FIND TEXT FROM DETAIL AND INSERT HERE.~~ Islands shall be excavated to 3 feet deep or to a depth 6 inches greater than the height of the root ball and backfilled with a minimum of 600 cubic feet of friable soil. Islands that are 400 square feet or larger and corner islands shall be planted with a large overstory tree~~have 2 required trees.~~ Parking lot trees must be 2" caliper minimum at time of planting and have a clear trunk to a minimum height of 6 feet. The remainder of a landscape island shall be planted with shrubs, ornamental grasses, and ground covers; and mulch shall be applied. Turf grass will not be accepted. Utilities and lighting shall not be allowed within required parking lot landscape islands. ~~ADD TEXT ABOUT VISIBILITY CLEARANCE FOR SAFETY~~
2. Alternate landscape configurations may be approved if the ~~Community Development~~ Director determines that the alternate design exceeds the standards above and/or is part of a smart stormwater design for the site that includes multi-functional, vegetated runoff reduction measures. An alternate configuration could also include a stormwater component or the preservation and enhancement of existing trees which are provided above and beyond other tree preservation requirements; which are deemed of community value by the Director; and ~~which would~~ shall result in a minimum of 50% parking lot canopy coverage within 15 years.
3. The required tree area shall be protected against compaction and shall provide sufficient area for tree growth. Utilities are not allowed within the minimum area. The trees shall be maintained in accordance with best management practices as defined by the International Society of Arboriculture guidelines, and shall not be removed or pruned without permission from the ~~e~~City ~~a~~Arborists.
4. Shrubs shall be provided to screen paved areas and parking lots from the public right of way, private drives and adjacent property year round. Shrubs shall be 2 feet tall at time of planting, 2 rows deep and shall provide a screen within 3 years of planting. Alternate screening methods such as fencing may be approved by the Director.

D. Landscape Strips

1. The City wants to promote tree lined streets therefore, a minimum of ten (10) feet wide landscape strip shall be provided along all public -right-of-ways and private roads. Main streets which are listed below shall have twenty (20) foot landscape strips, except those located within the Downtown Overlay District. ~~Historic Business District~~ which shall have ten (10) feet wide landscape strips or landscaping as approved by the Director.

MAIN STREETS:

Highway 9

Mansell Road

Windward Parkway

Northpoint Parkway

Westside Parkway

Old Milton Parkway

Haynes Bridge Road

Kimball Bridge Road

2. No permanent structures other than signage are permitted within the landscape strip. This includes pavement, retaining walls, drainage structures, detention ponds, flumes, curbing, etc.etc. unless approved by the Director.

- a. Retaining walls built with decorative masonry and designed as a landscape feature may be located within the landscape strip subject to approval by the Director. All required plantings must be installed so as not to interfere with the structural integrity of the wall.

3. ~~One (1) shade tree with a minimum 4 inch caliper shall be provided for every twenty-five (25) linear feet of landscape strip.~~ —Actual spacing of street trees is based on the average canopy spread of the species selected as outlined in the Arborist Guidance document. If the spacing of shade trees exceeds 25 feet on center understory trees shall be required to fill in the gaps between each shade tree. Spacing of shade trees shall not exceed 40 feet on center. ~~The use of a combination of shade trees and ornamental trees is recommended.~~ Shade trees shall be a minimum 4" caliper; ornamental trees shall be a minimum 3" caliper. The use of a combination of shade trees and ornamental trees is recommended.

~~Shrubs and trees in quantities as specified above, shall be provided to screen all parking lots, utility areas, dumpsters and detention ponds.~~

4. For commercial development and for master plan subdivisions, a minimum of five (5) foot landscape strip shall be provided along all property lines which do not adjoin a public right-of-way or private road. One (1) shade tree, minimum 4" caliper, shall be provided for every fifty (50) linear feet of landscape strip. For master plan subdivisions, this requirement is only required along the external property line of the overall project.

5. Shrubs shall be provided in all landscape strips. Shrubs shall be a minimum of 2 feet tall at time of planting, ~~2 rows deep and shall provide a screen within 3 years of planting.~~ Shrubs located in landscape strips may be used to meet the parking lot screening requirement.

- E. Additional screening shall be provided around all utility areas, detention facilities, ~~and~~ dumpster / refuse areas, drive through areas, loading and unloading zones, etc. to screen views from the public right of way, private roads, drives, and adjacent properties year round. Screening shall be provided in any combination of the standards below or as approved by the Director. ~~Screening shall be provided through a double row of evergreen shrubs, 2 feet tall at planting.~~

1. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
2. Deciduous trees must be a minimum of 2 inch caliper at time of installation;
3. Evergreen trees must be a minimum of 6 foot tall at time of installation;
4. Shrubs must be a minimum of 4 foot tall at time of installation;
- ~~5. A combination of decorative walls, fences, and landscape material may be used with the approval of the Director.~~
5. Screening for detention facilities must incorporate an alternating double row of evergreen shrubs 4 foot tall at time of planting.
6. ~~A combination of decorative walls, fences, and landscape material may be used with the approval of the Director.~~
~~combination of decorative walls, fences, and landscape material may be used with the approval of the Director.~~
- F. Lighting Fixtures shall be arranged so that the source of any light is screened from residential views and located as to not interfere with the tree canopy at time of planting or in the future.
- G. All required landscape areas shall be provided with a minimum of 1 water spigot or other water source within 150 feet.
- H. A bond shall be required for a minimum of 18 months to ensure the maintenance and irrigation of the landscaping materials.
- I. All landscape plans and tree planting plans for non "For Sale" residential properties shall be prepared as a to-scale map or a site plan prepared and sealed by a Registered Landscape Architect in the State of Georgia. Tree only plans may be prepared by a Qualified Professional.

3.2.9 Tree survey inspection.

~~Following the receipt of the completed tree removal application and supporting data, the Director shall schedule and conduct an inspection of the proposed development site. The applicant or his designee shall be advised as to the date and time of the inspection and given an opportunity to participate. Following inspection, the Director shall advise the applicant of any recommended changes in the applicant's proposed tree removal, protection or replanting plans necessary to make the plans comply with the provisions of this Ordinance.~~

3.2.10 Tree removal approval applications, approval and expiration.

- ~~A. The Director shall review all applications and supporting data and take one (1) of the following actions: approve, approve with conditions or disapprove. Applications, which meet the requirements of this Ordinance, shall be approved.~~
- ~~B. Development Activity will not be authorized until such time as appropriate Land Disturbance Permits have been issued and approval granted.~~
- ~~C. Tree removal and replacement shall begin no later than one hundred eighty (180) days after issuance of the permit and shall be completed no later than two (2) years after the issuance of the permit. Except as provided in these regulations authorizing certain cut and fill activities. The Director may refuse to issue any permit for tree removal until the submission of all development plans and receipt of other evidence satisfactory to the Director that there is a reasonable certainty that the Development is imminent.~~

3.2.9 11 Tree Protection and Conservation sStandards.

Prior to commencement of any grading, construction, or tree removal authorized through the issuance of a land disturbance permit ~~any tree removal or commencement of construction on a site~~ and continuing until a final subdivision plat has been recorded or a certificate of occupancy has been issued, the following system shall be used:

A. A tree protection area shall be required for any tree located within 25-30 feet of any proposed grading, construction or tree removal; and shall be established by physical barriers and maintained until such work is complete.

B.A. Location and Types of Tree Protection Devices.

1. Tree protection devices are to be installed as shown on the plan or otherwise completely surrounding the Critical Root Zone of all trees to be preserved.
2. The plan shall indicate which types of tree protection are to be installed and where they are to be installed. The types identified on the plan shall be consistent with the City's Tree Protection Details, available in the Arborist Guidance Document. ~~whether the tree protection device is to be active or passive.~~
- ~~3. Active protection (see Materials subsection) is required where Tree Save Areas are located in proximity to construction activity.~~
- ~~4. Passive protection (see Materials subsection) may be used in more remote locations and in all protected zones not designated as Tree Save Areas.~~
35. The locations of all tree protection devices will be verified by the City prior to the issuance of the construction permit for clearing and/or grading.
46. Once Protected Zones are established and approved, any changes are subject to Development and Inspections Department review.

C. ~~B. Materials.~~ Tree Protection measures are to be installed as shown on the City's Tree Protection Details, available in the Arborist Guidance Document.

- ~~1. Active tree protection shall consist of chain link, orange laminated plastic, wooden post and rail fencing or other equivalent restraining material. In addition to fencing, where tree trunks are in jeopardy of being damaged by equipment, the Director shall require 2 inch by 4 inch boards to be strapped around the trunks of trees. In addition, where active tree protection is required, each tree to be saved shall be marked at the base of the trunk with blue colored water-based paint.~~
- ~~2. Passive protection shall consist of heavy mil. Plastic flagging, a minimum of 4 inches wide with dark letters on a bright background reading "Tree Protection Area - Do Not Enter" or equivalent signage on a continuous, durable restraint.~~

D.E. Sequence of Installation and Removal. All tree protection devices shall be installed prior to any land disturbance permit authorizing tree removal. ~~The Engineering~~Community Development Department must inspect the installation of tree protection and erosion and sedimentation control devices prior to the issuance of the land disturbance permit. Tree protection must remain in functioning condition until the certificate of occupancy is issued.

E. The cleaning of equipment, storage of materials or dirt, disposal of waste materials such as paint, oil, solvents or other harmful substances, or any other such act which may be harmful to the continued vitality of the tree(s) within the tree protection area, is prohibited.

~~3.2.12 Tree protection.~~

~~A. The cleaning of equipment, storage of materials or dirt, disposal of waste material such as paint, oil solvents or other harmful substances, or any other such act which may be harmful to the continued vitality of the tree(s) within the tree protection area, is prohibited.~~

~~B. Prior to commencement of any grading, construction or tree removal authorized through the issuance of a land disturbance permit, a Tree Protection Area for any tree located within 25 feet of any proposed grading, construction or tree removal must be established by physical barriers and maintained until such work is completed.~~

3.2.10 13 Tree damage.

Any tree designated in the plan to be saved, Including Trees of Quality and Tree Groupings, that is damaged during construction or grading, or as a result of such ~~activities~~construction, shall be treated according to accepted International Society of Arboriculture Standards ~~National Arborists Association Standards~~, or replaced with a tree(s) equal to the ~~unit value~~DBH of the tree removed. However, any Specimen Tree damaged as described above shall be replaced with a tree(s) eight (8) times the ~~unit value~~DBH of the tree removed with a minimum four-inch (4") tree Caliper. In the event that a damaged specimen tree must be removed, the location occupied by the tree's Critical Root Zone must remain in a pervious state with no structures or buildings placed in this area and violations shall be subject to the applicable penalties as described herein. Any specimen tree damaged on "For-Sale" residential lots as the result of failure to receive tree removal approval for non-construction tree removal or as a result of failure to protect a specimen tree during non-construction tree removal will result in up to three (3) times recompense ~~planting~~.

~~3.2.14 Tree replanting standards.~~

- ~~A. Unless otherwise approved by the Director, trees selected for replanting must be on the Tree Planting List. Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor in order to assure a reasonable expectation of survivability. Standards for transplanting shall be in keeping with those established in the International Society of Arboriculture publication Tree and Shrub Transplanting Manual or similar publication. Reference the American Association of Nurserymen publication American Standard for Nursery Stock (ANSI Z60, 1973) for plant material quality specifications. Reference the Manual of Woody Landscape Plants (Michael Dirr, 1983, Castle Books) or similar publication for information on tree species site requirements.~~
- ~~B. It is desirable that replanted trees be ecologically compatible with the site and neighboring sites. Accordingly, the replanted trees shall be of the same or similar species as those removed when practical.~~
- ~~C. All replanted overstory trees shall be at least six (6) feet tall and have a trunk of not less than two (2) caliper inches. All replanted understory trees shall be at least four (4) feet tall or have a trunk not less than one (1) caliper inch. In order to provide sufficient growing area for planted trees, the following minimum criteria must be observed unless otherwise approved by the Director.~~
- ~~1. Overstory trees—200 square feet of pervious root zone.~~
 - ~~2. Understory trees—75 square feet of pervious root zone. (However, up to 30% of root zone may be impervious area.)~~

3.2.11 Tree survey inspection.

Following the receipt of the completed tree removal application and supporting data, the Director shall schedule and conduct an inspection of the proposed development site. ~~The applicant or his designee shall may be advised as to the date and time of the inspection and given an opportunity to participate.~~ Following inspection, the Director shall advise the applicant of any recommended changes in the applicant's proposed tree removal, protection or replanting plans necessary to make the plans comply with the provisions of this Ordinance.

3.2.12 Tree removal ~~approval~~ applications, approval and expiration.

- A. The Director shall review all applications and supporting data and take one (1) of the following actions: approve, approve with conditions or disapprove. Applications, which meet the requirements of this Ordinance, shall be approved.
- B. Development Activity will not be authorized until such time as appropriate Land Disturbance Permits have been issued and approval granted.
- C. Tree removal and replacement shall begin no later than one hundred eighty (180) days after issuance of the permit and shall be completed no later than two (2) years after the issuance of the permit. Except as provided in these regulations authorizing certain cut and fill activities. The Director may refuse to issue any permit for tree removal until the submission of all development plans and receipt of other evidence satisfactory to the Director that there is a reasonable certainty that the Development is imminent.

3.2.13 ~~15~~ Tree removal and landscaping compliance inspection.

- A. Following the issuance of a Land Disturbance Permit for the development site, the Director shall from time to time inspect the site for the purpose of certifying compliance with the requirements of the tree removal. In the event of non-compliance, the Director may revoke or modify any City permit pertaining to the Development Activity for which the Land Disturbance Permit has been issued. No certificate of occupancy shall be issued until actual compliance is obtained.
- B. If any required Land Disturbance Permit conditions have not been met within the time specified in the Land Disturbance Permit, and provided the Director has not granted a written extension, the City may use the cash or bond proceeds to insure that these conditions are met. The bond will have an expiration date no longer than one (1) year, and the proceeds will go to the City of Alpharetta Tree Replacement Fund.
- C. After development is complete, the Director shall continue to make random inspections to insure that required trees and landscaping are maintained. Replacement shall be required or bond/letter of credit posted within thirty (30) days of notice by the Director should any of these ~~se~~ tree(s) or landscapings die, be removed or be destroyed ~~within two (2) years after completion of development.~~
- D. Notwithstanding any other provision of this Ordinance to the contrary, a home builder's responsibility to replace a newly planted tree or trees shall terminate upon the issuance of a certificate of occupancy or at the end of the maintenance bond time frame, whichever is longer, provided longer, provided that an inspection conducted immediately prior to the issuance of the certificate of occupancy confirms that the replanted tree or trees were planted properly as established in the ISA (International Society of Arboriculture) standards, and are healthy and free of pests and disease. Nothing in this Ordinance shall be deemed to eliminate any other obligation the homebuilder may have pursuant to any private agreement between the homebuilder and homeowner, or any restrictive covenants that are applicable to the property.

3.2.14 ~~16~~ Approval letter fee; permit ~~Permit~~ fee.

The fee for review of a request for ~~an approval letter~~ permits shall be \$5.00. The fee for review of an application for a Land Disturbance Permit (which only applies to Development Activity and Grading Activity) shall be \$50.00 per acre and a maximum of \$500.00. These fees may be revised from time to time by resolution of the City Council, or delegated to the Director to be administratively established and revised from time to time.

3.2.15 ~~17~~ Enforcement, appeals and variances.

- A. Enforcement. All requests for ~~approval letters~~ permits and all applications for tree removal shall initially be submitted to and reviewed by the City Arborist. The City Arborist shall be responsible for

recommending to the Director ~~and to the Director of Community Development~~ the approval or denial of applications for Land Disturbance Permits.

B. Appeals.

1. Requests for appeal of any administrative decision shall first be addressed to the Director.
2. Written requests for appeal of any administrative decision are permitted and must be submitted to the Board of Zoning Appeals within ten (10) days after notice of such decision. Such written appeal shall be made in the form of a letter, which outlines the salient points upon which the appeal is based.
23. The Board of Zoning Appeals shall schedule a hearing as soon as reasonably practicable to consider the appeal, and shall issue a written decision within thirty (30) days of the hearing.
34. If the appeal concerns an administrative decision regarding Specimen Trees, Trees of Quality, Tree Groupings, or Boundary Trees it shall be the applicant's burden to demonstrate that reasonable alternatives have been considered in order to save said trees~~Specimen Trees~~ (as described herein). Documented evidence shall be filed by the applicant with the written request for appeal and shall include, but not be limited to the following:
 - a. Boundary survey showing topography, easements, creeks and other features of the property.
 - b. Two alternative development plans, which include the Specimen Tree(s), Trees of Quality, Groupings of Trees, or Boundary Trees.
 - c. An itemized estimate of additional costs associated with saving the trees.

C. Variance.

1. Written requests for a variance are permitted.
2. The Director shall have the authority to grant variances not to exceed twenty percent (20%) of the minimum or maximum standards of this Ordinance.
3. Variances that exceed twenty percent (20%) or variances that exceed the allowance of administrative variances shall be heard by the Board of Zoning Appeals.
4. Variances can be granted only in the case of extreme hardship or unusual circumstance. The factors to be taken into consideration by the Board may include the following, but shall not be solely economic:
 - a. The ease with which the applicant can alter or revise the proposed development or improvement to accommodate existing trees.
 - b. The economic hardship that would be imposed upon the applicant were the variance denied.
 - c. The heightened desirability of preserving tree cover in densely developed or densely populated areas.
 - d. The need for visual screening in transitional zones or relief from glare, blight, commercial or industrial unsightliness or any other visual affront.
 - e. Whether the continued presence of the tree or trees is likely to cause danger to a person or property.
 - f. Whether the topography of the area in which the tree is located is of such a nature to be damaging or injurious to trees.
 - g. Whether the removal of the trees is for the purpose of thinning a heavily wooded area where some trees will remain.
 - h. Whether tree removal would have an adverse impact upon existing biological and ecological systems.

- i. Whether tree removal would affect noise pollution by increasing source noise levels to such a degree that a public nuisance may be anticipated or a violation of the noise control ordinance will occur.
 - j. Whether the general health and life expectancy of the tree or trees warrant the measures necessary to prolong the life of the trees based upon accepted ISA practices.
- D. Appeal from the Decisions of the Board of Appeals shall be by Writ of Certiorari to the Fulton Superior Court, and must be filed within thirty (30) days of the date of the Board's decision.

3.2.16 18 Natural ~~resources~~ Resources ~~commission~~ Commission.

The Mayor and each City Council member shall appoint one (1) member to a seven (7) member Natural Resources Commission.

- A. The Natural Resources Commission shall give advice to the Council based on an annual re-evaluation of experience under the Ordinance, provide leadership in the development of understanding of the objectives and methods of the tree program, and assist the Director in the development and maintenance of technical specifications and guidelines. In addition, the natural Resources Commission primary objectives shall be:
 - 1. To promote the benefits of maintaining a healthy tree canopy for the City of Alpharetta;
 - 2. To provide educational outreach activities for the purpose of informing the community about resource conservation, protection of the environment, and the maintenance of the city's natural amenities, in particular its trees;
 - 3. To plan and organize Arbor Day and facilitate other events, activities, meetings and projects that support environmental awareness and education;
 - 4. To encourage Alpharetta's citizens to take greater responsibility for improving their community through litter prevention, waste reduction, recycling, tree plantings and other, similar means.
 - 5. To oversee the following:
 - a. Alpharetta's Tree ~~Protection~~ Conservation, Landscape, and Buffer Ordinance.
 - b. Tree City USA designation.
 - c. Keep America Beautiful affiliation.
- B. The Natural Resources Commission shall assist the Arborist in producing and maintaining the Arborist Guidance Document, including the a list of proposed changes to the kinds and species of trees described in the Tree Planting List to this Section ~~Ordinance~~. Any such changes may be adopted and may be changed from time to time.
- C. The Natural Resources Commission shall enlist technical advisors in the fields of land development, landscape architecture and horticulture or related professions.
- D. The Natural Resources Commission shall have the power and authority to maintain the Tree City USA and Keep America Beautiful (KAB) certifications by:
 - 1. Strengthening environmental outreach opportunities associated with the Tree City USA and KAB organizations by promoting community participation and acting as an advocate of tree and environmental conservation efforts;
 - 2. Supporting the City's efforts through public/private partnerships;
 - 3. Making recommendations for the enhancement of public outreach and education programs concerning environmental and tree related issues;
 - 4. Developing and implementing a sustainable program for their environmental accomplishments; and

5. Providing regular updates to City Council regarding Natural Resources Commission activities.

3.2.17 19 Penalties.

Any person, firm, corporation, limited liability company, Responsible Party, or other entity found guilty of violating or knowingly assisting in the commission of a violation of this [Section Ordinance](#) shall be subject to the penalties specified herein. Each day any violation of any provision of this [Section Ordinance](#) shall occur and each day any violation shall continue shall constitute a separate offense of this [Section Ordinance](#).

- A. A violation of this Section shall constitute a misdemeanor punishable by a fine of up to one thousand dollars per incident. Replacement plantings shall also be required. Penalties and fines, including replacement plantings must be satisfied within the timeline stated on the violation and/or stop work order. Appeals can be filed with the [Board of Zoning Appeals](#) ~~Code Enforcement Board~~.
- B. In the event that a Specimen Tree is damaged or removed in violation of this Section on non "For-Sale" residential property or as part of a construction project, violators shall be subject to replace Specimen Trees with trees having a total density equal to eight (8) times the unit value of the tree removed with a minimum four-inch (4") tree caliper. Furthermore, the location and extent of the tree's Critical Root Zone shall permanently remain in a previous state with no structures or buildings placed on it. In the event that a Specimen Tree is damaged or removed in violation of this Section on a "For-Sale" residential property not in conjunction with a construction project, violators shall be subject to replace Specimen Trees with trees having a total density up to three (3) times the unit value of the tree removed. The city shall take into consideration the amount of trees that can be reasonably placed on the property in violation. If the ~~dbh~~ [DBH](#) of the removed tree cannot be determined the measurement shall be taken at the upper most portion of the remaining stump.
- C. In the event that a non-specimen tree, [including Trees of Quality and Tree Groupings](#), is damaged or removed in violation of this Section, violators shall be subject to replacement plantings equal to one (1) times the ~~unit~~ [DBH](#) ~~value~~ of the tree removed with a minimum two inch (2") caliper trees. If the ~~dbh~~ [DBH](#) of the removed tree cannot be determined the measurement shall be taken as stated in Section 3.2.19 ~~7~~.B.
- D. In addition to A. and B., upon notice from the Director, work on any development that is being done contrary to the provisions of this Section shall immediately cease. The stop-work notice shall be in writing and shall go to the owner of the property, or to his agent, or to the person doing the work, and shall state the conditions under which work may be resumed. When an emergency exists, the Director shall not be required to give written notice prior to stopping the work. Further, in the event that work on any development is being done contrary to the provisions of this Section, the Director may revoke any permit pertaining to the development activity for which the Land Disturbance Permit has been issued and may refuse to issue any further permit until, at the discretion of the Director, the work on the development is brought into compliance with the provisions of this Section.

TABLE 3.1 TREE DENSITY CALCULATION

~~A basic requirement of the Tree Conservation and Replacement Ordinance is that all applicable sites maintain a minimum tree density of 20 units per acre. The term "unit" is an expression of the Basal area (a standard forest inventory measurement), and is not synonymous with "tree".~~

~~This density requirement must be met whether or not a site had trees prior to development. The density may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two as represented by the formula.~~

$$\text{SDF} - \text{EDF} = \text{RDF}$$

Where:

~~SDF (Site Density Factor)—The minimum tree density required to be maintained on a developed site (units per acre).~~

~~EDF (Existing Density Factor)—Density of existing trees to be preserved on a site.~~

~~RDF (Replacement Density Factor)—Density of new trees to be planted on a site.~~

~~The SDF is calculated by multiplying the number of acres by andhellip;~~

~~EXAMPLE: A 2.2 acre site has a SDF of $2.2 \times 20 = 44$~~

~~The EDF is calculated by converting the diameter of individual trees to density factor units. Using Table A below does this.~~

~~EXAMPLE: A total of 15 trees will remain on the 2.2 acre site. The tree inventory is as follows:~~

~~7—12 inch diameter pines~~

~~3—14 inch diameter pines~~

~~3—18 inch diameter pines~~

~~1—21 inch diameter hickory~~

~~1—30 inch diameter oak~~

~~Converting diameters (DBH) to density units, the EDF is determined as follows:~~

DBH	UNITS		NO. OF TREES		TOTALS
12 inch	0.8	×	7	=	5.6
14 inch	1.2	×	3	=	3.6
18 inch	1.8	×	3	=	5.4
21 inch	2.6	×	1	=	2.6
30 inch	4.4	×	1	=	4.4
					21.6

-

~~See section 3.2.7.B for Tree Density Requirements and calculation for "For-Sale" residential lots.~~

TABLE 3.2 TREE DENSITY CONVERSION CHART
Conversion of Tree Diameters (DBH) to Density Factor Units

Tree Size (DBH)	Unit Value
2"	0
3"	0
4"	.1
5"	.1
6"	.2
7"	.2
8"	.4
9"	.4
10"	.6
11"	.6
12"	.8
13"	.8
14"	1.2
15"	1.2
16"	1.8
17"	1.8
18"	1.8
19"	1.8

20"	2.6
21"	2.6
22"	2.8
23"	2.8
24"	3.4
25"	3.4
26"	3.8
27"	3.8
28"	4.0
29"	4.0
30"	4.4
31"	4.4
32"	4.6
33"	4.6
34"	5.0
35"	5.0
36"	5.4
37"	5.4
38"	5.8
39"	5.8

40"	6.2
41"	6.2
42"	7.0
43"	7.0
44"	8.0
45"	8.0
46"	9.0
47"	9.0
48" inches or greater	10.0

-

Note: DBH is rounded to nearest inch (.5 and higher to next full inch, .4 and lower is truncated to lower inch).

Note: Values for tree sizes 24 inch and greater are for trees that do not qualify as Specimen Trees and are not subject to Specimen Tree designation under Appendix A. Trees qualifying as Specimen Trees are subject to the benefits and restrictions note in the previously cited section.

The RDF is calculated by subtracting the EDF from the SDF.

EXAMPLE: $RDF = 44 - 21.6 = 22.4$

The density factor credit for each Caliper size of replacement (new) trees is shown in TABLE 3.3.

TABLE 3.3 TREE REPLACEMENT CHART

Conversion of Replacement Tree Caliper to Density Factor Units

Caliper Size (at 12 inches height)	Density Credit	Number of trees required to meet 20 units/acre standard ⁽⁺⁾
1	0	N/A
2	.4	50

3	.5	40
4	.6	33
5	.7	29
6	.8	25
7	1.0	20
8	1.1	19
Greater than 8	1.1	19

-

Note: This column represents the number of trees that would need to be replanted if all one-size tree was used. This is provided for information purposes only, as it is likely that a variety of tree sizes would be used.

Tree Replacement Requirements:

1. No more than 30% of all trees planted for replacement density credit may be of any one species.
2. Seven gallon Pine trees to be planted to meet required replacement densities must be at least one-inch (1") in Caliper and greater than or equal to four feet (4') tall.
3. Specimen Tree replacement/recompense trees must be at least four inch (4") Caliper.

APPENDIX A – SPECIMEN TREES

Some trees on a site warrant special consideration and encouragement for conservation. These trees are referred to as Specimen Trees.

The following criteria are used by the Director to identify specimen trees.

A Specimen Tree is any tree which qualifies for special consideration for preservation due to its size, type, condition, location, or historical significance and is determined by the City Arborist, prior to development, to be in overall good health without the aid of a specialized care plan according to accepted ISA practices, and which also meets the minimum size criteria set forth below.

Size Criteria:

Pine Trees: 30-inch (30") diameter or larger.

Overstory Trees: 24-inch (24") diameter or larger.

Understory Trees: 8-inch (8") diameter or larger.

In order to encourage the conservation of Specimen Trees and the incorporation of these trees into the design of projects, additional density credit will be given for Specimen Trees, which are successfully saved by a design feature specifically designated for such purpose. Credit for any Specimen Tree thus saved

~~would be two (2) times the assigned unit value shown in Table 3.3. The Critical Root Zone of Specimen Trees will be protected with hog-back/wire-back tree save fencing with metal support poles or as described in section 3.2.11.~~

~~If a Specimen Tree is to be removed, a plan or written document indicating the reason for the removal must be submitted to the Director.~~

~~Specimen Trees that cannot be saved (see Section 3.2.11) must be replaced with trees having three (3) times the unit value of the tree removed with a minimum four-inch (4") tree caliper by species with potentials for comparable size and quality.~~

~~Any Specimen Tree which is removed without the appropriate review and approval of the Director must be replaced by trees with a total density equal to eight (8) times the unit value of the tree removed with a minimum four-inch (4") tree caliper. Size alone will determine whether a tree was a specimen quality if the tree is removed without approval and there is no evidence of its condition. Violations will be subject to the applicable penalties as described in Section 3.2.19.~~

~~Specimen trees removed on "For-Sale" Residential lots not in conjunction with construction projects shall follow sections 3.2.13 and 3.2.19 for approval, replanting, and violation requirements.~~

~~APPENDIX C – TIMBER HARVEST PERMITTING~~

~~Tree cutting, clearing, or clearing and grubbing projects, which result in the sale of timber, shall conform to state law regarding payment of taxes. A Georgia Department of Revenue Form PT-283T, along with the required payment, must be submitted to the Fulton County Tax Assessor's Office within the time frame prescribed by law. Failure to do so shall be considered a violation of the Fulton County Erosion and Sedimentation Control Ordinance as well as the tax law. Call the Fulton County Tax Assessor's Office for more information.~~

- ~~• Provided documentation regarding the type of timber sale, estimated date of purchase, and estimated PT-283T submittal date when submitting plans to the Engineering Public Works Department for review.~~

~~Applications for tree cutting, clearing, or clearing and grubbing shall be in accordance with current land disturbance permit plan review procedures.~~

~~Plans and other supportive documents submitted for a land disturbance permit for tree cutting in areas greater than five (5) acres shall bear the signature of a Georgia Registered Forester.~~

~~The minimum size of plans shall be 11 × 14 inches. The maximum size shall be 24 × 36 inches.~~

~~Plans shall include the following information:~~

- ~~• Owner's name, address and phone number.~~
- ~~• Consultant's and Contractor's names, addresses and phone numbers.~~
- ~~• Location/vicinity map.~~
- ~~• Land Lot(s) and Districts(s).~~
- ~~• North Arrow.~~
- ~~• Scale (minimum 1" = 100').~~
- ~~• Closed property boundary showing bearings and distances of all property lines.~~
- ~~• Current zoning of property.~~

- ~~Current zoning of adjacent properties.~~
- ~~Total acreage of property and approximate acreage of area to be disturbed.~~
- ~~24-hour emergency contact name and phone number(s) in bold type (no smaller than 20-point type).~~
- ~~Names of adjoining roadways.~~
- ~~Location of and detail for the trunk exit (Co or crushed stone pad).~~
- ~~Approximate location of the following land features:~~
 - ~~All state waters.~~
 - ~~Topography at 20 ft. intervals (U.S.G.S. Quadrangle Map).~~
 - ~~Forest cover areas.~~
 - ~~100-year floodplain.~~
 - ~~Wetlands.~~
- ~~Limits of land disturbance.~~
- ~~Approximate locations and dimensions of any logging decks.~~
- ~~Location of any state water buffers (dimension 25 ft. undisturbed zones from the top of each bank).~~
- ~~Location of Streamside Management Zone (dimension required width).~~
- ~~Approximate locations of any haul roads.~~
- ~~Approximate locations of any stream crossings showing approximate width of crossing (bank to bank) and method of sediment control (rock riprap or culvert).~~
- ~~Approximate locations of any historical features including cemeteries; or, a note indicating the absence of such on the site.~~
- ~~Delineation and labeling of any required buffer zones around the perimeter of the property.~~
- ~~A detail of the method to be used to delineate all buffers on the site.~~
- ~~Expected time frame in which the operation will occur.~~
- ~~Additional information as may be required by City of Alpharetta staff to perform a proper review of the project and assure that the intent of the Soil and Erosion and Sediment Control Ordinance is met.~~

The Following Notes:

- ~~The City of Alpharetta Engineering/Public Works Department reserves the right to require additional erosion and sedimentation control measures deemed necessary.~~
- ~~The contractor shall implement all Best Management Practices for forestry as prescribed by the Georgia Forestry Commission and the U.S. Environment Protection Agency.~~
- ~~No trees may be cut in buffer zones marked "undisturbed." Tree cutting shall be limited to the non-mechanical removal of pine (*Pinus* spp.) or yellow-poplar (*Liriodendron tulipifera*) trees with stump diameters greater than fifteen (15) inches; provided that a minimum of fifty (50) square feet of basal area remains in good condition in the buffer area at completion of the project. The non-mechanical removal of dead,~~

diseased or insect infested trees is also allowed in this buffer (subject to verification by the City of Alpharetta Arborist).

- ~~All buffers of state waters shall remain undisturbed except for haul road crossing points.~~
- ~~Projects, which are restricted to a "Residential Thinning", must leave a minimum density of thirty (30) square feet of basal area throughout all areas not designated as buffers or logging decks. Trees to be preserved to meet this requirement must be identifiable both before and after the harvest either by species or by a continuous marking around the trunk at 4.5 feet and at .5 feet above the ground. These trees must be left in good condition with no injuries to the trunk, crown or root system, which would predispose them to disease or pest infestation.~~
- ~~All pine logging slash with stems larger than five (5) inches in diameter shall be chipped and returned to the site or removed from the site to reduce the possibility of insect infestation.~~
- ~~Logging decks, temporary haul roads, skid trails and any other disturbed areas left idle for two to four weeks will be restored to their contours and established to temporary vegetation (DsD). These disturbed areas left idle for four weeks or more will be established to permanent vegetation (Ds3). All areas remaining at the end of the project will be established to permanent vegetation within two weeks.~~
- ~~When hand planting, mulch (hay or straw) should be uniformly spread over seeded area within 24 hours of seeding.~~
- ~~During unstable growing seasons, mulch will be used as a temporary cover (Ds1). On slopes that are 4:1 or steeper, mulch will be anchored.~~
- ~~The City of Alpharetta Land Disturbance Permit must be displayed on site at all times during the project operation and in plain view from an adjacent county road or street.~~

~~Before any activity can begin an inspection must be performed for basal area confirmation, erosion control devices and buffer area delineation. At this time, the contractor must show a current City of Alpharetta business license or registration certificate. At completion of the project, a final inspection must be performed.~~



Guidance Document
For
Tree Conservation, Landscape, and Buffer Requirements
Article III Section 3.2

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Revision History

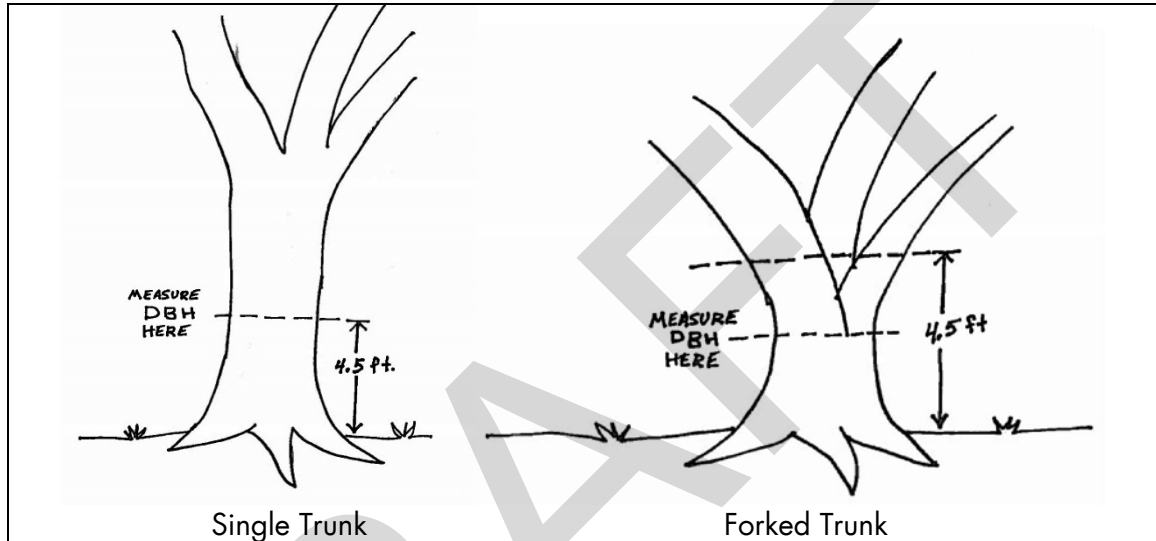
Revision Number	Revision Date	Revision Summary
1.0	02/09/2017	Original Document

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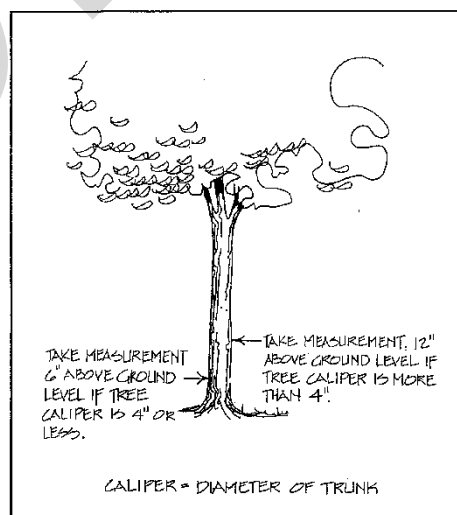
Technical Standards

1. Tree Measurements

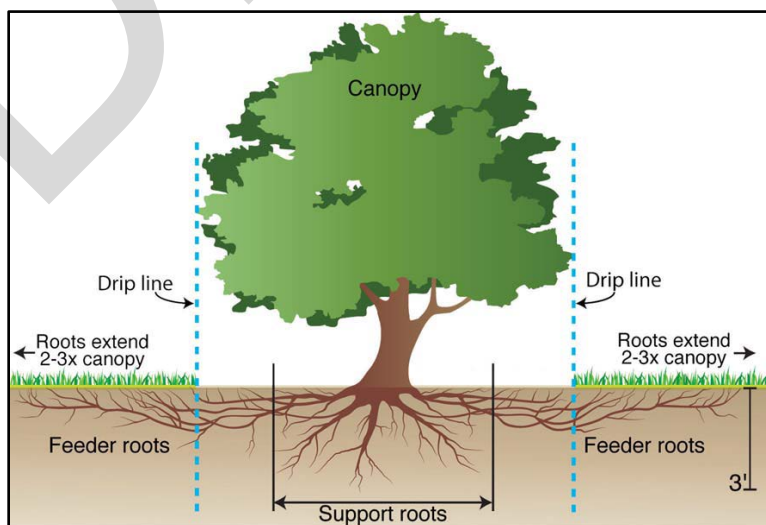
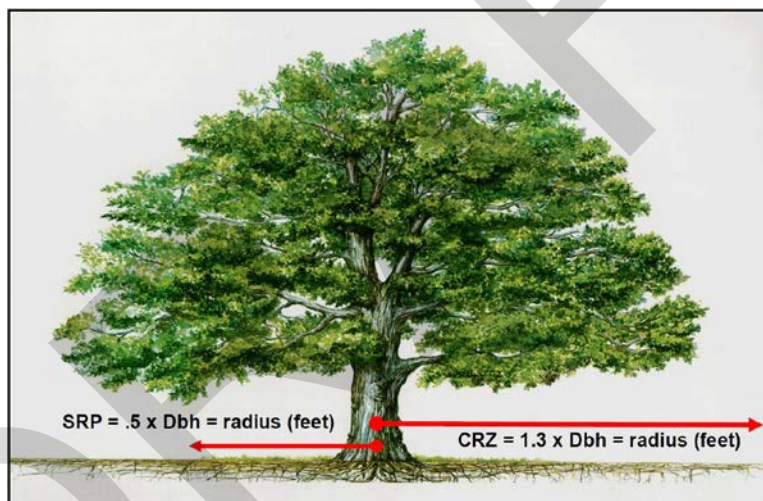
- a. Diameter at Breast Height (DBH): The standard measure of tree size (for trees existing on a site). The tree trunk is measured at a height of 4 1/2 feet above the ground. If a tree splits into multiple trunks below 4 1/2 feet, the trunk is measured at its most narrow point beneath the split.



- b. Caliper: A standard of trunk measurement for replacement trees. Caliper inches are measured at the height of 6 inches above the ground for trees up to and including 4 inch caliper and 12 inches above the ground for trees larger than 4 inch caliper.



- c. Critical Root Zone (CRZ): The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The Critical Root Zone will typically be represented by a concentric circle centering on the tree's trunk with a radius equal in feet to one and three-tenths (1.3) times the number of inches of the trunk diameter.
- i. EXAMPLE: The CRZ radius of a twenty (20) inch diameter tree is twenty-six (26) feet.
- d. Structural Root Plate (SRP): The zone of rapid root taper that provides the tree stability against wind throw. The radius of the structural root plate is equal to 0.5 feet per inch of DBH.
- i. EXAMPLE: The SRP radius of a twenty (20) inch diameter tree is ten (10) feet.



2. Specimen Trees: Any tree which qualifies for special consideration for preservation due to its size, type, condition, location or historical significance and which also meets the minimum size criteria set forth below.

Size Criteria:

Pine Trees: 30-inch diameter or larger for trees in the *Pinus* (Pine) genus.

Coniferous Trees: 20" diameter or larger for trees in the *cedrus* (deodar cedar), *Thuja* (Arborvitae), or other ecologically similar trees,

Overstory Trees: 30-inch diameter or larger for trees in the *Liquidambar* (Sweetgum) or *Liriodendron* (Tulip poplar) genus

20-inch diameter or larger for trees in the *Fagus* (Beech), *Nyssa* (Tupelo), *Diospyros* (Persimmon), *Sassafras* (Sassafras), or other ecologically similar trees,

20-inch diameter or larger for *Magnolia grandiflora* (Southern magnolia) and those cultivars that generally reach a mature height over 40'

24-inch (24") diameter or larger for trees in all other genera

Understory Trees: 8-inch (8") diameter or larger.

10-inch diameter or larger for *Oxydendron arboreum* (Sourwood).

3. Tree Density Calculation:

Trees located on the subject property or those found in the right-of way in front of the property may count towards your required tree density or canopy coverage.

a. Standard Tree Density Calculation (130 inches per acre)

To calculate the Required Tree Density on all properties within the City use the formula below:

$$\text{SDF} - \text{EDF} = \text{RDF}$$

Where:

SDF (Site Density Factor): The minimum tree density required to be maintained on a developed property in inches per acre. The SDF is calculated by multiplying the number of acres by 130 inches.

EDF (Existing Density Factor): The density of the existing trees to be conserved measured in inches at DBH (Diameter at Breast Height)

RDF (Replacement Density Factor): Density in inches of new trees to be planted on a property

Example A: 15,000 square foot lot (.34 acres)

$$\text{SDF} = .34 \text{ (acres)} \times 130 \text{ (inches)} = 44.2 \text{ inches}$$

With no existing trees:

$$44.2 \text{ (SDF)} - 0 \text{ (EDF)} = 44.2 \text{ (RDF)}$$

You will need to plant:

11 – 4" caliper trees or 22 – 2" caliper trees.

With 2 existing 15" trees:

$$44.2 \text{ (SDF)} - 30 \text{ (EDF)} = 14.2 \text{ (RDF)}$$

You will need to plant:

3 – 4" caliper trees and 1 - 2" caliper tree.

Example B: 4,000 square foot lot (.09 acres)

$$\text{SDF} = .09 \text{ (acres)} \times 130 \text{ (inches)} = 11.7 \text{ inches}$$

With no existing trees:

$$11.7 \text{ (SDF)} - 0 \text{ (EDF)} = 11.7 \text{ (RDF)}$$

You will need to plant:

3 – 4" caliper trees or 6 – 2" caliper trees.

With 1 existing 8" tree:

$$11.7 \text{ (SDF)} - 8 \text{ (EDF)} = 3.7 \text{ (RDF)}$$

You will need to plant:

1 – 4" caliper tree or 2 - 2" caliper trees.

- b. Alternate Tree Density Calculation (30% Canopy Coverage). This calculation is only for detached single family residential properties and can be accomplished through the preservation or planting of any combination of Large, Medium, Small, or Very Small canopy trees as defined in the City of Alpharetta Tree List:

To calculate the alternative tree density based upon canopy coverage use the formula below.

$$\text{SCC} - \text{ECC} = \text{RCC}$$

Where:

SCC (Site Canopy Coverage): The minimum canopy coverage required to be maintained on developed detached single family residential properties in square feet. The SCC is calculated by multiplying the area of the property in square feet by 30%.

ECC (Existing Canopy Coverage): The canopy coverage in square feet of the existing trees to be conserved, obtained from the City of Alpharetta Tree List.

RDF (Replacement Canopy Coverage): The canopy coverage in square feet of the new trees to be planted on a property, obtained from the City of Alpharetta Tree List.

Example A: 15,000 square foot lot with no existing trees

$$SCC = 15,000 \text{ (square feet)} \times .30 \text{ (30\%)} = 4,500 \text{ square feet}$$

$$4,500 \text{ (SCC)} - 0 \text{ (ECC)} = 4,500 \text{ (RCC)}$$

You will need to plant:

3 large canopy trees: $1,600 \text{ (square feet)} \times 3 = 4,800 \text{ square feet}$

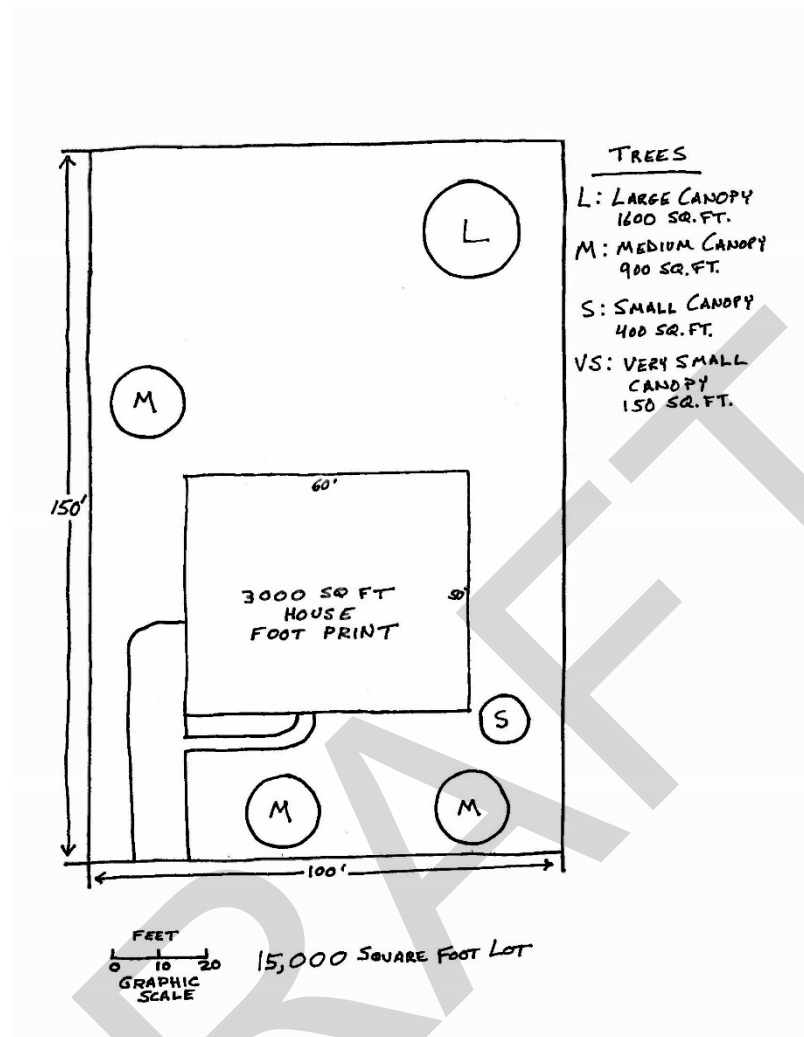
Or

1 large canopy tree (1,600 square feet)

3 medium canopy trees (900 square feet $\times 3 = 2,700 \text{ square feet}$)

1 small canopy tree (400 square feet)

Total: 4700 square feet. (See Diagram)



Example B: 15,000 square foot lot with 2 existing medium canopy trees:

$$SCC = 15,000 \text{ (square feet)} \times .30 \text{ (30\%)} = 4,500 \text{ square feet}$$

$$4,500 \text{ (SCC)} - 1,800 \text{ (ECC)} = 2,700 \text{ (RCC)}$$

You will need to plant:

1 large canopy tree (1,600 square feet)

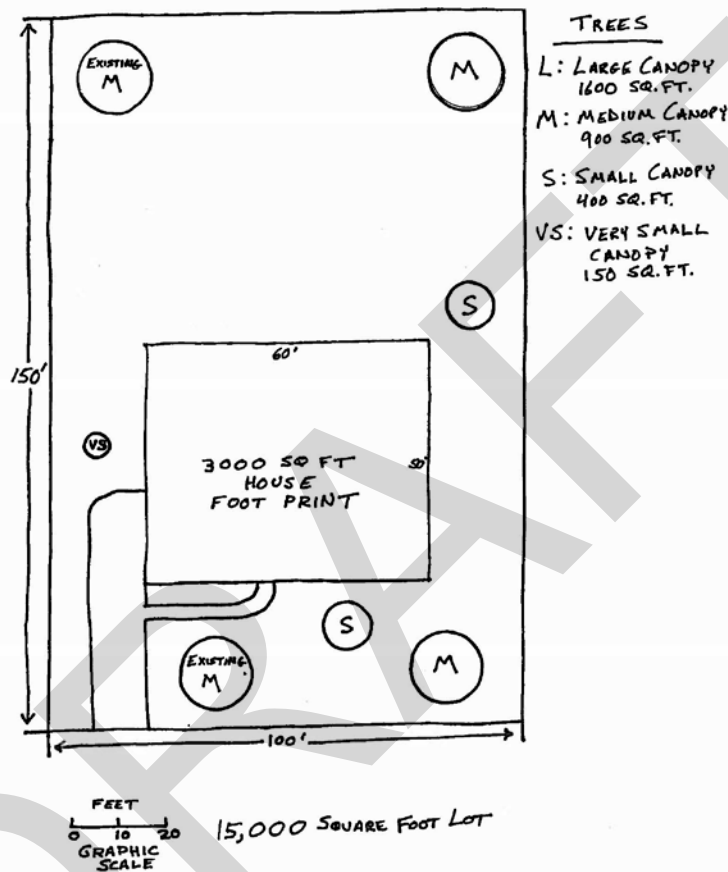
1 medium canopy tree (900 square feet)

2 small canopy trees (150 square feet $\times$ 2 = 300 square feet)

Total 2800 square feet

Or

2 medium canopy trees (900 square feet X 2 = 1,800 square feet)
 2 small canopy trees (400 square feet X 2 = 800 square feet)
 1 very small canopy tree (150 square feet)
 Total 2750 square feet) See Diagram



Example C: 4,000 square foot lot with no existing trees:

$SCC = 4,000 \text{ (square feet)} \times .30 \text{ (30\%)} = 1,200 \text{ square feet}$

$1,200 \text{ (SCC)} - 0 \text{ (ECC)} = 1,200 \text{ (RCC)}$

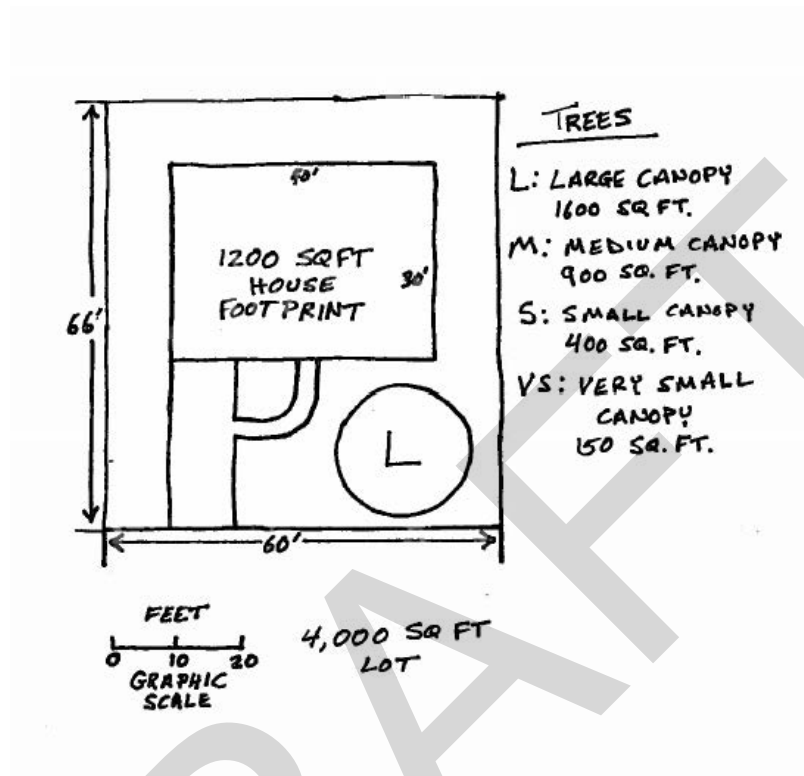
You will need to plant:

1 large canopy tree (1,600 square feet) X 1 = 1,600 square feet

See Diagram

Or

1 medium canopy tree (900 square feet)
 2 very small canopy trees (150 Square feet X 2 = 300 square feet)
 Total 1200 square feet



Example D: 4,000 square foot lot with 1 existing medium canopy tree

$$SCC = 4,000 \text{ (square feet)} \times .30 \text{ (30\%)} = 1,200 \text{ square feet}$$

$$1,200 \text{ (SCC)} - 900 \text{ (ECC)} = 300 \text{ (RCC)}$$

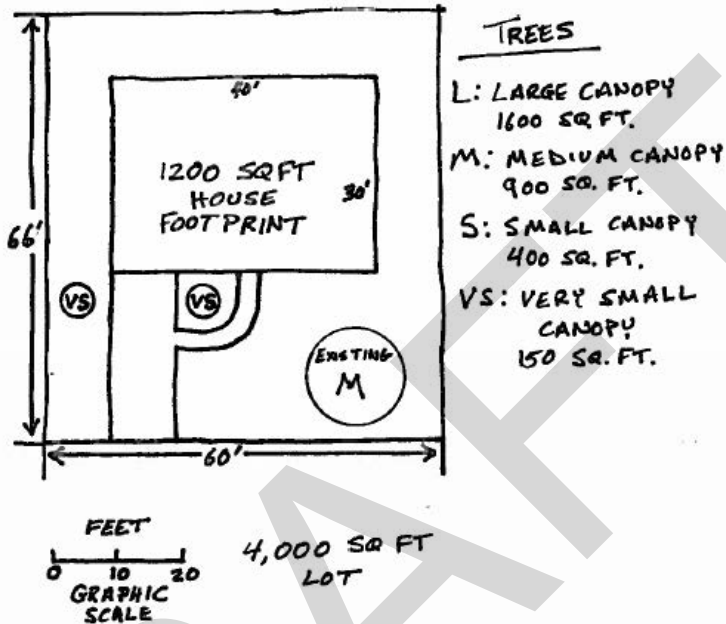
You will need to plant:

1 small canopy tree (400 square feet)

Or

2 very small canopy trees (150 Square feet X 2 = 300 square feet)

See Diagram



Tree Removal Requirements

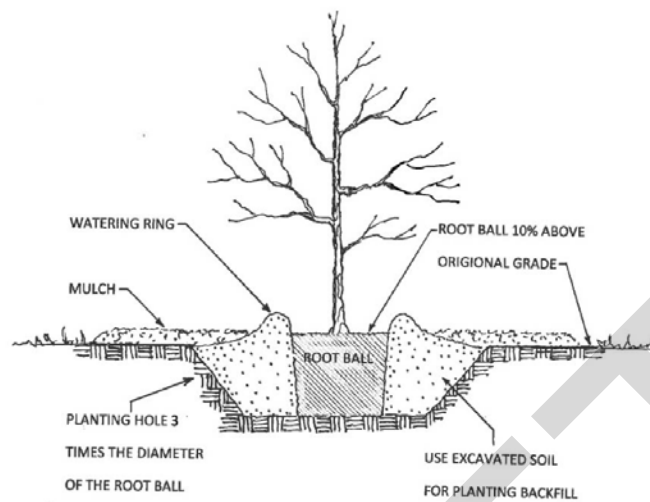
The City of Alpharetta has an online Tree Removal Permitting Process. Please follow the link below to the Tree Removal information page, instructions, and online application.

<http://www.alpharetta.ga.us/government/departments/community-development/tree-removal>

1. Detached Single Family Residential:
 - a. A tree permit is required for the removal of all trees that are alive.
 - b. A tree removal permit is not required for dead trees or trees that have already fallen. It is recommended to take photos of these trees for your records.
 - c. Replacement trees may be required.
2. Commercial and Attached or Multi-Family Residential:
 - a. All commercial properties are required to apply for a tree removal permit for the removal of any trees dead or alive.
 - b. Replacement trees may be required.
3. Emergency Removals:
 - a. Emergency removals will be handled on a case by case basis.
 - i. During normal business hours please contact the City Arborist by phone at (678)297-6229 or by email at treepermits@alpharetta.ga.us.
 - ii. If an emergency tree removal must occur during non-business hours, provide the City Arborist with a voice message at (678)297-6229 or email as soon as possible. Take pictures documenting the removal and submit them to the City Arborist as soon as possible but no later than the next business day.
 - b. If a tree is in imminent danger of falling and causing damage to person or property a permit is not required. Examples include broken trunks and uprooting trees. Please schedule the removal, take photographs, and provide notification to the City including address and date removal is going to take place.
4. Storm-Damaged Tree Removals:
 - a. From time to time a storm will pass through Alpharetta that will topple trees. In this instance the City may decide to suspend tree removal requirements. If this happens please check the City of Alpharetta website (www.alpharetta.ga.us) for information.

Tree Care

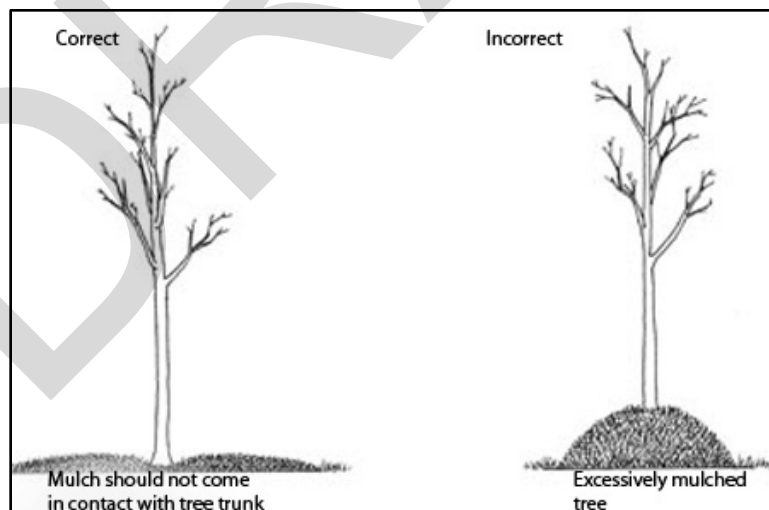
1. Planting:
 - a. A properly planted tree has a better chance of survival.



TREE PLANTING DETAIL

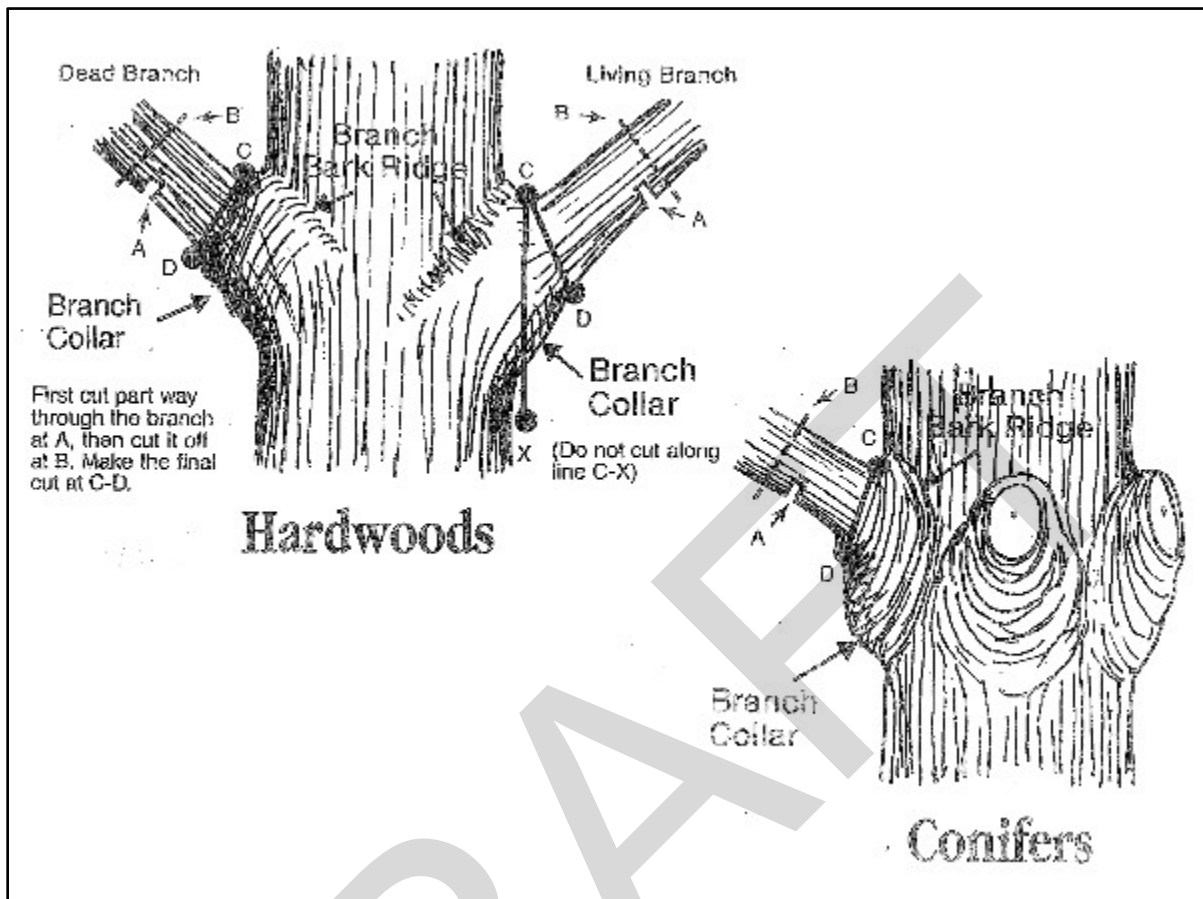
2. Mulching:

- Organic non-synthetic mulch should be applied to the rooting zone of all trees and be refreshed as needed.
- Mulch helps to keep the soil moist over the roots, minimizes weeds, and provides nutrients as the mulch breaks down.
- Mulch should be placed at a depth of 2-4 inches and should never touch the trunk of a tree.



3. Pruning:

- Trees should be pruned to remove dead, dying, or diseased branches.
- Shaped for aesthetic reasons.
- Provide clearance for pedestrians, vehicles, structures, or light.



The basic pruning of trees should follow the Three Cut Method.

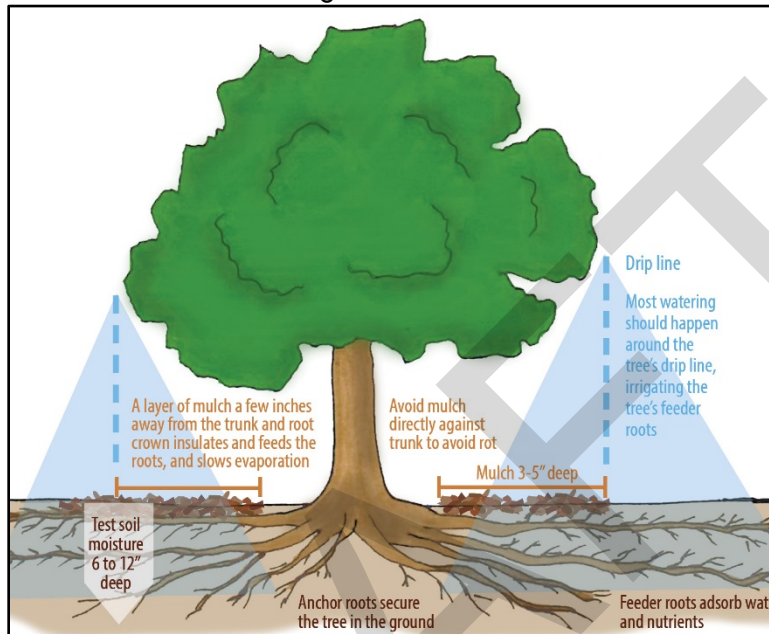
- First cut should be made at location A
- Second cut should be made along line B
- Final cut should be made along line C-D
- Never cut along line X

4. Watering

- a. Newly planted trees should be watered until fully established with drip irrigation or watering bags. If watering bags are used manufacturers recommendations should

be used to determine the size of the watering bag and the schedule to fill the watering bags.

- b. Established trees should be watered during times of drought or lower than normal rainfall. During droughts please make sure to follow local water usage regulations.
- c. Watering should simulate at least 1" of rainfall per week and be long and slow so the water can infiltrate through the soil to the roots of the trees.



Landscape Design Guidelines

1. Tree Selection

- a. It is recommended to use the City of Alpharetta Tree List when selecting trees for planting.
 - i. No more than 25% of any one genus may be included in any replanting plan.
 - ii. Greater than 50% of all trees planted shall be native tree species.
 - iii. It is recommended to include at least 40% overstory trees in any replanting plan
- b. Trees should be chosen that are of a high quality and able to grow into a specimen tree.
 - i. Free of disease and pests
 - ii. A Single main leader
 - iii. Good form and structure
 - iv. Solid root ball
 - v. Overstory trees shall be a minimum of 6 feet tall and have a minimum trunk caliper of 2 inches
 - vi. Understory trees shall be a minimum of 4 feet tall and have a minimum trunk caliper of 2 inches.
- c. Trees should be selected that are ecologically compatible with the site conditions such as:
 - i. Soil moisture
 - ii. Sunlight
 - iii. Rooting space and soil volume
- d. Trees should also be selected that are compatible with the built environment based upon size, form, and structure.
 - i. Georgia Power: Planting the Right Tree in the Right Place:
 - 1. <https://www.georgiapower.com/in-your-community/includes/planting-guide.html>
 - ii. National Arbor Day Foundation: The Right Tree in the Right Place:
 - 1. <https://www.arborday.org/trees/righttreeandplace/>

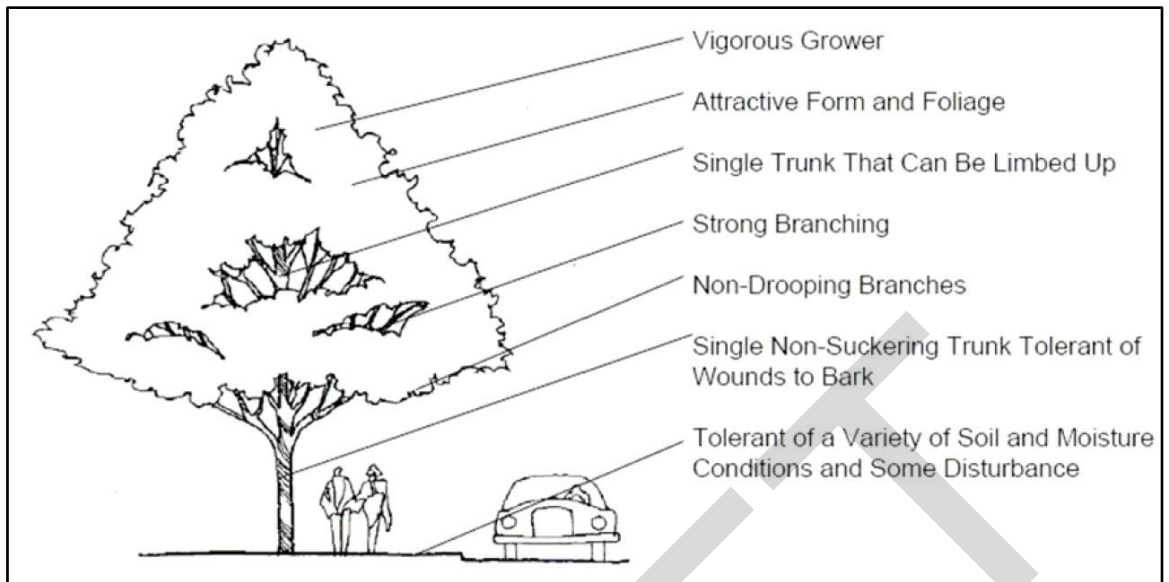
2. Streetscape and Landscape Strips

- a. The City wants to promote tree lined streets therefore, a minimum of ten (10) feet wide landscape strip shall be provided along all public right-of-ways and private roads. Main streets which are listed below shall have twenty (20) foot landscape strips, except those located within the Downtown Overlay District, which shall have ten (10) feet wide landscape strips or landscaping as approved by the Director.

iii. MAIN STREETS:

- 1. Highway 9
- 2. Mansell Road
- 3. Windward Parkway
- 4. Northpoint Parkway
- 5. Westside Parkway
- 6. Old Milton Parkway
- 7. Haynes Bridge Road
- 8. Kimball Bridge Road

- b. Actual spacing of street trees is based on the average canopy spread of the species selected as detailed in the Tree List.
- c. If the spacing of shade trees exceeds 25 feet on center it is recommended to fill in the gaps between each shade tree with understory trees.
- d. Spacing of shade trees shall not exceed 40 feet on center.
- e. Shade trees shall be a minimum 4" caliper; ornamental trees shall be a minimum 3" caliper. The use of a combination of shade trees and ornamental trees is recommended.
- f. It is desirable to plant trees and shrubs within the beauty strip along roadways to provide a separation between pedestrians and vehicular traffic.
- g. Street trees shall be pruned or have a clear trunk to a minimum height of 7 feet.
- h. For commercial development and for master plan subdivisions, a minimum of five (5) foot landscape strip shall be provided along all property lines which do not adjoin a public right-of-way or private road. One (1) shade tree, minimum 4" caliper, shall be provided for every fifty (50) linear feet of landscape strip. For master plan subdivisions, this requirement is only required along the external property line of the overall project.
- i. Shrubs shall be provided in all landscape strips. Shrubs shall be a minimum of 2 feet tall at time of planting. Shrubs located in landscape strips may be used to meet the parking lot screening requirement.
- j. Street lights and pedestrian lights shall not conflict with tree locations and shall be a minimum of 20 feet away from a tree where practical.



3. Parking Lot Landscaping

- a. Surface parking lots shall provide a minimum 200 square foot wide landscape island at the end of each parking bay, and a 200 square foot island located each 72 feet of single parking length.
- b. Each landscape island shall be planted with one shade tree and excavated to 3 feet deep or to a depth 6 inches greater than the height of the root ball and backfilled with a minimum of 600 cubic feet of friable soil.
- c. Islands that are 400 square feet or larger and corner islands shall be planted with a large overstory tree.
- d. Parking lot trees must be 2" caliper minimum at time of planting and have a clear trunk to a minimum height of 6 feet.
- e. The remainder of a landscape island shall be planted with shrubs, ornamental grasses, and ground covers; and mulch shall be applied. Turf grass will not be accepted.
- f. Utilities and lighting shall not be allowed within required parking lot landscape islands or other areas trees are planted and shall not conflict with tree locations.
- g. The required tree area shall be protected against compaction and shall provide sufficient area for tree growth.
- h. Trees planted at the head of any parking stalls must be located in line with the parking stall striping to prevent damaging the trunks of the trees by cars.
- i. Trees shall be maintained in accordance with best management practices as defined by the International Society of Arboriculture guidelines.
- j. Shrubs shall be provided to screen paved areas and parking lots from the public right of way, private drives and adjacent property year round. Shrubs shall be 2 feet tall at time of planting, 2 rows deep and shall provide a screen within 3 years of planting.
- k. Alternate landscape configurations may be approved if the Director determines that the alternate design exceeds the standards above. An alternate configuration could include a stormwater component or the preservation and enhancement of existing trees which are provided above and beyond other tree preservation requirements; which are deemed of community value by the Director; and shall result in a minimum of 50% parking lot canopy coverage within 15 years.

Example Parking Lot Layouts and Configurations:



4. Screening Requirements

- a. Additional screening shall be provided around all utility areas, detention facilities, dumpster / refuse areas, drive through areas, loading and unloading zones, etc. to screen views from the public right of way, private roads, drives, and adjacent properties year round. Screening shall be provided in any combination of the standards below or as approved by the Director.
 - iv. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
 - v. Deciduous trees must be a minimum of 2 inch caliper at time of installation;
 - vi. Evergreen trees must be a minimum of 6 foot tall at time of installation;
 - vii. Shrubs must be a minimum of 4 foot tall at time of installation;
 - viii. Screening for detention facilities must incorporate an alternating double row of evergreen shrubs 4 foot tall at time of planting.
 - ix. A combination of decorative walls, fences, and landscape material may be used with the approval of the Director.

5. Buffers

- a. Except as otherwise provided, herein, buffer strips shall be preserved in their natural undisturbed state, except that sparsely planted buffers shall be enhanced with additional plant material. Enhancement plants must provide an opaque screen within two (2) years of planting and must consist of trees, shrubs, and groundcover plants meeting the following standards:
 - x. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
 - xi. Deciduous trees must be a minimum of 2 inch caliper at time of installation;
 - xii. Evergreen trees must be a minimum of 9-10 foot tall at time of installation;
 - xiii. Shrubs must be a minimum of 3 foot tall at time of installation;
 - xiv. Plants will be spaced a maximum of eight (8) feet on center or as approved by the Director;
 - xv. Plantings shall be designed with plant pallet containing a mixture of colors, textures, and heights.

- b. Undisturbed buffers shall not contain any surface parking or storm water, detention facilities, or any structures except that the Director may approve underground facilities within the buffer or the crossing of the buffer for the purpose of extending utilities.
- c. Stream buffers must be replanted where disturbed for approved access, detention and utility crossing. Replacement plantings must be native and be arranged to have a natural appearance and approved by the Arborist.

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Tree List

The **City of Alpharetta Tree List** is intended to support the Unified Development Code, site planning and design activities for tree conservation and establishment, and tree maintenance planning and decision-making. In the list trees are arranged alphabetically by the tree's common name with the "genus" listed first. For example, red maple is listed as "Maple, Red" (maple is the genus name). The Latin name is also listed for more definitive species identification. In some cases, the commonly planted variety or cultivar of the species has also been included apart from the species. This is a recommended tree list and not a required tree list.

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Key to Symbols and Tree Species Characteristic Descriptions

TREE CHARACTERISTIC	DESCRIPTION and ENTRY CHOICES
Species Common Name	Entered with genus common name first, then species, then cultivar if applicable. For some species an alternate common name is included in parentheses.
Latin Name	Genus, species, and variety or cultivar; always italicized or underlined.
CANOPY AREA FOR DEVELOPMENT CODE	
Square Feet of Canopy	The total area projection of the crown onto the ground in square feet as typically achieved in urban situations with less than optimal growing conditions.
Parking Lot Canopy Tree	Trees approved for planting in parking lots. <u>1 = trees that will project significant shade, intercept enough water, substantially filter out pollutants, and survive the conditions within a parking area to the extent they could be considered a "canopy" tree.</u> <u>2 = the same as 1, except these trees are ONLY appropriate for large, expanded tree islands or landscape strips, swales, or moist soil conditions with plenty of rooting space.</u>
Canopy Size Category	Very Small - 150 square feet with a 15 foot crown diameter Small – 400 square feet with a 25 foot crown diameter Medium – 900 square feet with a 35 foot crown diameter Large – 1,600 square feet with a 45 foot crown diameter
RECOMMENDED USES	
Level of Use	The level of use that the tree should receive. P = Plant New Trees and Conserve Existing Trees C = Conserve Existing Trees L = For Limited Planting or Conservation Only N = Do Not Plant
Large Landscape Areas Road Frontages – Street Road Frontages – Yard Parking Lots Plazas and Downtown Settings Riparian Zones and Drainage Areas Utility Corridors	Recommendations on the site situation where the tree may be planted and/or conserved; locations where the tree would adapt well. ○ = tree to avoid; not suitable Blank = may or may not be suitable x = good choice XX = excellent choice

TREE CHARACTERISTIC	DESCRIPTION and ENTRY CHOICES
PHYSICAL CHARACTERISTICS	
Height Class in Urban Conditions	Height class (ground to tip of leader or tallest branch) of a mature tree commonly achieved in urban situations with less than optimal growing conditions. S = Small: 15-25 feet M = Medium: 25-40 feet L = Large: 40 feet and taller
Crown Class in Urban Conditions	The width of the crown (at its widest point) commonly achieved in urban situations with less than optimal growing conditions. VS = Very Small (150 square feet with a 15 foot crown diameter) S = Small (400 square feet with a 25 foot crown diameter) M = Medium (900 square feet with a 35 foot crown diameter) L = Large (1,600 square feet with a 45 foot crown diameter)
Mature Crown Form	General shape of the tree crown (leaves and branches) when fully leafed out. Irregular Multi-Stemmed Oval (Columnar) Pyramidal Rounded Spreading Upright (Vase)
Typical Range of Mature Tree Height	Typical range of height of tree in feet from ground to bud at tip of leader or tallest branch under various conditions.
Typical Range of Mature Crown Width	Typical range of spread of branches in feet at the widest diameter across the crown under various conditions.
Leaf Type	Persistence and type of leaf on the tree. Deciduous trees lose their leaves in the fall. DB = Deciduous Broadleaf DC = Deciduous Conifer EB = Evergreen Broadleaf EC = Evergreen Conifer
Leaf Texture	Relative size and appearance of leaves. F = Fine M = Medium C = Coarse
Fall Leaf Color	The typical color of the tree's fall foliage. EV = evergreen BR = bronze or brown MA = maroon MU = multi-colored: maroon, red, orange, yellow OR = orange RE = red YE = yellow I = insignificant color change

TREE CHARACTERISTIC	DESCRIPTION and ENTRY CHOICES
PHYSICAL CHARACTERISTICS (continued)	
Flower Color	For trees with showy flowers, indicates the typical flower color. B = blue L = purple M = multiple colors: white, pink, purple, red, or others P = pink R = red W = white Y = yellow I = insignificant flowers: small with an unremarkable color
Flowering Time	For trees with showy flowers, the general season of blooming for the species.
Wildlife Value	Indicates with an "X" if the tree produces flowers (nectar) or fruits that are consumed by insects, birds, or mammals.
Excessive Litter	Indicates with an "X" if the tree produces large or hazardous leaves, fruit, or other litter.
ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES	
Native Tree to Alpharetta	Indicates whether or not the tree is found naturally growing in the Alpharetta area. Y = Yes N = No
Growth Rate	Typical rate of growth under urban conditions. S = Slow: 1/2 to 1-1/2 feet/year M = Moderate: 1-1/2 to 2-1/2 feet/year F = Fast: 2-1/2 to 3+ feet/year
Average Life Span	The average life span (useful service life) of the species when growing under average urban conditions. A tree is at the end of its useful service life when its risk of failure becomes unacceptable and cannot be improved or when the tree is no longer an asset due to its appearance or condition. S = Short: less than 25 years useful service life. M = Moderate: 25 to 40 years useful service life. L = Large: 50 years or greater useful service life.
Net Effect on Air Quality	The net monetary effects in cents attributable to the species on air quality; listed as a benefit (positive) or cost (negative). Includes the species net effect on ozone, sulfur dioxide, nitrogen dioxide, particulate matter (PM10), and carbon monoxide.
Soil Moisture	The typical soil moisture conditions for the species in its native habitat. H = Hydric: wet and may be occasionally flooded for short periods M = Mesic: moist but moderately well- to well-drained X = Xeric: dry and very well-drained

TREE CHARACTERISTIC	DESCRIPTION and ENTRY CHOICES
ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES (continued)	
Drought Tolerance	Tolerance of the species to infrequent rain, low soil moisture, full sun, and high temperatures. Low = not tolerant to drought conditions Moderate = tolerant to mild drought conditions; moderately tolerant to severe drought conditions High = very tolerant to mild to severe and prolonged drought conditions
Preferred Soil pH	Relative soil acidity or alkalinity preferred by the species. In many cases, a range of pH preference is given if it was available. In other cases, a general level is given. A pH of 7.0 is neutral, a pH of less than 7.0 is acidic, and a pH of greater than 7.0 is alkaline. ac = acidic (5.0 to 6.0) sl ac = slightly acidic (6.0 to 7.0) nu = neutral (7.0) sl al = sl alkaline (7.0 to 8.0) al = alkaline (8.0 to 8.5) n/a = no information available
Light Requirement	The amount of sunlight the species prefers or will tolerate. Trees that are typically found in the understory or are characteristic of late forest successional stages prefer shade or at least partial shade, while trees that typically form the overstory or are characteristic of early successional stages prefer full sun. FS = Full Sun PS = Partial Shade SH = Shade
Construction Tolerance/Limitations	The broad tolerance of the species in its home range to construction damage, and the limitations that constrain a species tolerance to damage. Tolerance P = Poor M = Moderate G = Good Limitations I = physical injury, wood compartmentalization and decay P = pest complications, including chronic and acute attacks S = soil conditions, including aeration and water availability C = limited climatic tolerances, including native range, hardiness, and micro-climate change A = all of the limitations described above
Urban Tolerant Tree	Based upon other characteristics and tolerances to urban conditions; an "X" indicates the species is suitable for planting under "tough" urban conditions

City of Alpharetta Tree List

COMMON NAME		LATIN NAME		CANOPY AREA FOR DEVELOPMENT CODE		RECOMMENDED USES										PHYSICAL CHARACTERISTICS										ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES												
						Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter	Native Tree to Alpharetta	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement	Construction Tolerance/Limitations	Urban Tolerant Tree		
Alder, Hazel (Tag)		Alnus serrulata		150	Very Small	P	XX					x	XX	x	S	VS	Multi-Stemmed	10-20	10-20	DB	M	YE	I				Y	F	S	n/a	W	M	acidic	FS	G/	X		
Arborvitae, Eastern (Northern Whitecedar)		Thuja occidentalis		400	Small	L	x	0	x	0		x		0	M	S	Pyramidal	25-40	10-15	EC	F	EV	I		X		N	S	M	n/a	M	M	ac-alk	FS	G/	X		
Arborvitae, Giant (Western Redcedar)		Thuja plicata		400	Small	L	x	0	x	0		XX		0	M	S	Pyramidal	50-75	15-20	EC	F	EV	I		X		N	M	M	n/a	H	M	ac-alk	FS	M/	X		
Ash, Green		Fraxinus pennsylvanica		1,600	Large	P	XX	x	XX		x		x		L	L	Rounded	60-100	40-50	DB	M	MU	I		X		Y	F	M	0.090	W	H	sl ac-sl alk	FS	G/			
Ash, White		Fraxinus americana		1,600	Large	P	XX	x	XX		x		x		L	L	Rounded	50-80	30-60	DB	M	MA	I		X		Y	M	M	0.100	M	L	sl ac-sl alk	FS	M/IS			
Baldcypress		Taxodium distichum		900	Medium	P	x		XX			XX	XX		L	M	Pyramidal	50-100	20-50	DC	F	BR	I		X		N	M	L	0.032	M	H	ac-sl alk	FS	G/	X		
Basswood, American (Linden)		Tilia americana		1,600	Large	C	x						x		M	L	Irregular	60-100	35-50	DB	C	YE	Y	Summer	X		Y	F	M	0.144	M	L	ac-alk	PS	P/A			
Beech, American		Fagus grandifolia		1,600	Large	P	XX					0	x		L	L	Oval	80-100	50-70	DB	M	YE	I		X		Y	S	L	0.160	M	L	acidic	FS	P/A			
Birch, River		Betula nigra		900	Medium	P	XX	x	XX	x	XX	XX	XX	0	M	M	Pyramidal	50-90	40-60	DB	F/M	YE	I				Y	F	M	0.117	M	L	acidic	PS	G/			
Birch, River 'Heritage'		Betula nigra 'Heritage'		900	Medium	P	XX	x	XX	x	XX	XX	XX	0	M	M	Pyramidal	50-90	40-60	DB	F/M	YE	I				Y	F	M	n/a	M	L	acidic	PS	n/a			
Blackgum (Tupelo)		Nyssa sylvatica		900	Medium	P	XX	x	XX				x		M	M	Oval	50-100	20-35	DB	M	RE	I		X		Y	S	M	-0.053	M	M	sl ac-sl alk	FS	G/	X		
Boxelder		Acer negundo		900	Medium	C	x						x	0	L	M	Rounded	50-75	40-50	DB	M	YE	I		X		Y	F	S	0.036	W	M	adapt	FS	G/			
Buckeye, Bottlebrush		Aesculus parviflora		150	Very Small	P								x	S	VS	Multi-Stemmed	15-20	10-15	DB	M	YE	W	Summer	X		N	M	S	n/a	M	L	ac-adapt	SH	n/a			
Buckeye, Painted		Aesculus sylvatica		150	Very Small	P	x						x	x	S	VS	Rounded	15-25	5-15	DB	M	YE	P/Y	Spring	X		Y	M	S	n/a	M	L	ac-adapt	SH	n/a			
Buckeye, Red		Aesculus pavia		150	Very Small	P								x	S	VS	Rounded	10-15	10-15	DB	M	YE	R	Spring	X		N	M	S	n/a	M	L	ac	PS	M/I			
Buckthorn, Carolina		Rhamnus caroliniana		900	Medium	P	x	x	x				x		M	M	Oval	30-40	10-30	DB	M	OR	I		X		Y	M	S	n/a	M	M	ac-alk	FS	M/IS			
Buckthorn, Common		Rhamnus cathartica		900	Medium	L								x	S	M	Rounded	20-25	20-25	DB	M	YE	I		X		N	M	S	n/a	M	H	adapt	FS	n/a	X		
Buttonbush, Common		Cephalanthus occidentalis		150	Very Small	P	x						x	x	S	VS	Multi-Stemmed	10-15	10-15	DB	M	YE	W	Late Summer	X		Y	M	S	n/a	W	L	n/a	FS	G/I			
Catalpa, Southern		Catalpa bignonioides		900	Medium	C	x	0		0			x		M	M	Rounded	30-40	30-40	DB	C	YE	W	Spring	X	X	Y	F	S	0.014	M	M	sl ac-sl alk	FS	G/			
Cedar, Deodar		Cedrus deodara		900	Medium	L	x								L	M	Pyramidal	40-100	40-100	EC	F	EV	I				N	M	L	-0.031	D	H	ac-sl alk	FS	g			
Cedar, Japanese		Cryptomeria japonica		900	Medium	L	x		x			x			L	M	Pyramidal	40-60	15-20	EC	F	EV	I				N	S	M	0.084	M	H	ac	FS	n/a	X		
Chastetree (Vitex)		Vitex agnus-castus		150	Very Small	P		x	x	x	x			x	S	VS	Multi-Stemmed	15-20	10-20	DB	M	I	B/LW	Summer	X		N	M	S	n/a	D	H	ac-alk	FS	n/a	X		
Cherry, Black		Prunus serotina		900	Medium	C	x		x				x		L	M	Oval	50-90	15-50	DB	M	YE	W	Early Spring	X		Y	F	M	0.083	M	M	sl ac	FS	M/I			
Cherry, Black		Prunus serotina		900	Medium	C		0	x	0	0	XX	0		M	M	Oval	20-40	15-25	EB	M	EV	W	Spring	X		N	M	M	n/a	M	H	ac-sl alk	FS	G/	X		
Cherry, Japanese Flowering		Prunus serrulata		400	Small	L			x		x	XX		XX	S	S	Rounded	20-30	20-30	DB	M	OR	P	Spring			N	F	S	0.013	M	L	ac-alk	FS	n/a			
Cherry, Yoshino		Prunus x yedoensis		400	Small	L			XX		XX	XX		XX	S	S	Rounded	20-45	20-40	DB	M	YE	P/W	Spring	X		N	F	S	n/a	M	L	ac	FS	n/a			
Chestnut, American		Castanea dentata		1,600	Large	N	susceptible to chestnut blight								L	L	-	-	-	-						Y												
Chestnut, Chinese		Castanea mollissima		1,600	Large	P	x		x						L	L	Rounded	40-60	40-60	DB	M	BR	W	Summer	X		N	S	L	n/a	D	M	ac-sl alk	FS	n/a	X		
Chinaberry		Melia azedarach		900	Medium	N	invasive								M	M											N											
Chinquapin, Allegheny		Castanea pumila		400	Small	N	susceptible to chestnut blight								S	S	Rounded	10-25	10-25	DB	M	BR	I		X		Y	S	S	n/a	D	H	n/a	FS	P/P			
Cottonwood, Eastern		Populus deltoides		1,600	Large	C	x					0	x		L	L	Pyramidal	50-100	20-75	DB	C	YE	I		X	X	Y	F	M	-0.708	M	M	sl ac-sl alk	FS	G/	X		
Crabapple, Japanese Flowering		Malus floribunda		400	Small	L		x	x		x	XX		XX	S	S	Rounded	15-25	15-25	DB	M	YE	P	Spring	X		N	M	S	n/a	M	L	sl ac-sl alk	FS	n/a			
Crabapple, Southern		Malus angustifolia		400	Small	C	x	x	x			x		XX	S	S	Spreading	20-25	10-20	DB	M	YE	P	Spring	X	X	Y	M	S	n/a	M	L	sl ac-sl alk	FS	M/ICP			
Crapemyrtle, Common		Lagerstroemia indica		150	Very Small	L	only permitted in utility corridors								x		S	VS	Multi-Stemmed	15-30	10-25	DB	F	RE	M	Summer			N	F	M	0.004	M	H	ac-sl alk	FS	n/a	X
Cypress, Leyland		Cupressocyparis leylandii		400	Small	L	x	0	x	x		x		0	M	S	Pyramidal	50-60	20-30	EC	F	EV	I				N	F	M	0.053	M	M	ac-alk	FS	g			
Devil's Walking Stick		Aralia spinosa		150	Very Small	C		0	0	0	0	x	XX		S	VS											Y											
Devilwood		Osmanthus americanus		400	Small	C	x		x						S	S	Rounded	15-25	10-15	DB	M	YE	W	Spring	X		Y	M	M	n/a	M	M		PS	M/I			
Dogwood, Flowering		Cornus florida		400	Small	P	XX	XX	XX	0	0	XX		XX	S	S	Spreading	15-30	15-30	DB	M	RE	W	Spring	X		Y	M	M	0.021	M	L	ac-nu	PS	M/IP			
Dogwood, Flowering Pink		Cornus florida var. rubra		400	Small	P	XX	XX	XX	0	0	XX		x	S	S	Spreading	15-30	15-30	DB	M	RE	P	Spring	X		Y	M	M	n/a	M	L	n/a	PS	n/a			
Dogwood, Kousa		Cornus kousa		400	Small	P		x	x			x		x	S	S	Rounded	10-20	10-20	DB	M	RE	W	Spring	X		N	S	S	n/a	M	L	ac	PS	n/a			
Dogwood, Swamp		Cornus stricta		400	Small	C	x						x	x	S	S	Rounded	10-25	10-25	DB	M	RE	W	Spring	X		Y	S	S	n/a	W	L	n/a	PS	G/I			
Elm, American		Ulmus americana		1,600	Large	C	x		x				x		L	L	Upright	50-100	30-70	DB	M	YE	I		X		Y	M	M	0.143	M	H	sl ac-sl alk	FS	M/P			
Elm, Chinese (Lace Bark)		Ulmus parvifolia		900	Medium	L	0	XX	XX	XX	XX	0	0		M	M	Upright	40-60	30-50	DB	F/M	YE	I				N	F	M	0.058	M	H	sl ac-sl alk	FS	n/a	X		
Elm, Siberian		Ulmus pumila		900	Medium	L	pest susceptible; weed tree										L	M										N										
Elm, Slippery		Ulmus rubra		1,600	Large	C	x	x	x				x		L	L	Upright	70-80	30-50</																			

City of Alpharetta Tree List

COMMON NAME		LATIN NAME		CANOPY AREA FOR DEVELOPMENT CODE		RECOMMENDED USES								PHYSICAL CHARACTERISTICS										ENVIRONMENTALCHARACTERISTICS AND TOLERANCES										
				Square Feet of Canopy	Canopy Size Category	Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter	Native Tree to Alpharetta	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement
Fringetree (Grancy Gray Beard)	Chionanthus virginicus	150	Very Small	P	x	x	x			x	x	S	VS	Oval	10-30	5-15	DB	M/C	YE	W	Spring	X		Y	M	S	n/a	M	L	acidic	PS	M/IS		
Fringetree, Chinese	Chionanthus retusus	150	Very Small	P		x	x			x	x	S	VS	Rounded	15-25	10-15	DB	M/C	YE	W	Spring	X		N	S	S	n/a	M	M	acidic	PS	n/a		
Ginkgo (Female)	Ginkgo biloba	1,600	Large	L	x	0	x	0	0	0		M	L	Pyramidal	50-75	30-60	DB	C	YE	I			X	N	S	L	0.108	M	H	sl ac	FS	g	X	
Ginkgo (Male)	Ginkgo biloba	1,600	Large	P	x	XX	XX	x	XX	0		M	L	Pyramidal	50-75	30-60	DB	C	YE	I				N	S	L	0.108	M	H	sl ac	FS	g	X	
Goldenraintree	Koelreuteria paniculata	400	Small	P		x	x	x	x	x		M	S	Rounded	20-40	20-40	DB	M	YE	Y	Summer			N	M	M	-0.087	M	H	sl ac-sl alk	FS	n/a		
Hackberry, Common	Celtis occidentalis	1,600	Large	C	x		x				x	L	L	Spreading	60-90	25-60	DB	F/M	YE	I		X		Y	M	M	0.060	M	H	sl ac-sl alk	FS	n/a	X	
Hackberry, Georgia	Celtis tenuifolia	1,600	Large	C	x		x				x	M	L	Spreading	25-35	25-35	DB	F/M	YE	I		X		Y	S	M	n/a	D	H	sl ac-sl alk	FS	M/IS		
Hawthorne, Washington	Crataegus phaenopyrum	400	Small	P		x	x		x		x	S	S	Rounded	10-30	5-25	DB	F	MU	W	Late Spring	X		N	S	S	0.017	M	M	sl ac-sl alk	FS	g		
Hemlock, Eastern	Tsuga canadensis	1,600	Large	C	x		XX	0	0	x	0	L	L																					
Hickory, Bitternut	Carya cordiformis	1,600	Large	C	x	0	x	0	0			L	L	Oval	50-100	50-75	DB	M	YE	I		X		Y	F	L	0.069	M	L	acidic	FS	P/S		
Hickory, Mockernut	Carya tomentosa	1,600	Large	C	x	0	x	0	0			L	L	Oval	50-100	50-75	DB	M/C	YE	I		X	X	Y	S	L	0.059	D	H	sl ac	FS	MP/S		
Hickory, Pignut	Carya glabra	1,600	Large	C	x	0	x	0	0			L	L	Oval	50-100	50-75	DB	M	YE	I		X		Y	S	L	0.058	M	H	sl ac	FS	M/S		
Hickory, Sand	Carya pallida	1,600	Large	C	x	0	x	0	0			L	L	Oval	40-90	20-40	DB	M	YE	I		X		Y	S	M	n/a	D	H	sl ac	FS	M/		
Hickory, Shagbark	Carya ovata	1,600	Large	C	x	0	x	0	0			L	L	Oval	70-100	50-75	DB	M	YE	I		X		Y	S	L	0.064	M	M	sl ac	FS	P/S		
Hickory, Southern Shagbark	Carya ovata var. australis	1,600	Large	C	x	0	x	0	0			L	L	Oval	60-80	40-60	DB	M	YE	I		X		Y	S	L	n/a	M	M	sl ac	FS	n/a		
Holly, American	Ilex opaca	400	Small	P	x		XX	x		XX	0	M	S	Pyramidal	20-70	15-25	EB	M	EV	I		X		Y	S	L	0.013	M	H	acidic	PS	G/	X	
Holly, Deciduous (Possumhaw)	Ilex decidua	150	Very Small	C	x		x				x	x	S	VS	Rounded	10-20	10-20	DB	F	I	I		X		Y	M	S	n/a	W	H	ac-alk	PS	G/	
Holly, Fosters	Ilex x attenuata 'Fosteri'	150	Very Small	P			x	x	x	x		S	VS	Pyramidal	15-25	10-15	EB	F/M	EV	I		X		N	S	S	n/a	M	H	sl ac	FS	n/a	X	
Holly, Ornamental Variety	Ilex species	150	Very Small	L			x	x	x	x	x	S	VS	Rounded	10-20	10-15	EB	M	EV	I				N	S	S	n/a	M	H	ac	FS	n/a		
Holly, Savannah	Ilex x attenuata `Savannah'	150	Very Small	P	x		x	x	x	x	0	M	VS	Pyramidal	30-45	10-15	EB	M	EV	I		X		N	M	S	n/a	M	H	ac-sl alk	FS	n/a		
Holly, Yaupon	Ilex vomitoria	150	Very Small	P		x	x	x	x		x	S	VS	Irregular	10-25	5-10	EB	F	EV	I		X		Y	S	S	n/a	D	H	ac-alk	FS	G/	X	
Honeylocust	Gleditsia triacanthos	900	Medium	C	x		x	0	0			L	M	Irregular	60-80	30-50	DB	F	YE	I				Y	F	S	0.009	M	H	sl ac-sl alk	FS	G/	X	
Hophornbeam, American	Ostrya virginiana	900	Medium	P	x		x	x			x	M	M	Oval	15-40	10-30	DB	F/M	YE	W	Summer	X		Y	S	M	0.032	M	H	ac-alk	SH	M/S	X	
Hornbeam, Am. (Ironwood, Blue Beech)	Carpinus caroliniana	900	Medium	P	XX	XX	XX	x	XX	XX	XX	M	M	Oval	20-35	15-30	DB	F/M	YE	I		X		Y	S	M	0.009	M	M	sl ac-sl alk	PS	M/SC		
Hornbeam, European	Carpinus betulus	900	Medium	P		XX	XX	XX	XX	x		M	M	Oval	40-60	35-40	DB	F/M	YE	I		X		N	S	M	0.037	M	H	ac-alk	PS	n/a	X	
Hornbeam, Japanese	Carpinus japonica	400	Small	L		x	x	x	x	x		M	S	Oval	20-30	20-30	DB	M	RE	I				N	S	M	n/a	M	M	adapt	PS	n/a		
Katsuratree	Cercidiphyllum japonicum	900	Medium	L	x		x					M	M	Spreading	40-60	35-60	DB	M	YE	I				N	F	L	n/a	M	L	ac-sl alk	FS	pm		
Locust, Black	Robinia pseudoacacia	900	Medium	C	x			0	0		x	L	M	Spreading	40-90	20-40	DB	F	YE	W	Spring	X		Y	F	M	-0.123	M	H	sl ac-sl alk	FS	G/P	X	
Magnolia, Cucumber	Magnolia acuminata	1,600	Large	C	x		x	0			x	L	L	Upright	60-80	20-60	DB	C	YE	W	Spring	X		Y	F	M	n/a	M	L	acidic	PS	M/I		
Magnolia, Japanese (Saucer)	Magnolia x soulangiana	900	Medium	L			x	0			x	M	M	Upright	20-30	10-30	DB	C	YE	P	Late Winter			N	M	S	0.009	M	L	acidic	FS	n/a		
Magnolia, Southern	Magnolia grandiflora	1,600	Large	P	XX		XX	0		XX	0	L	L	Pyramidal	80-100	30-50	EB	C	EV	W	Late Spring	X	X	Y	M	L	0.002	M	M	acidic	FS	M/I		
Magnolia, Southern 'Little Gem'	Magnolia grandiflora 'Little Gem'	150	Very Small	P			x	0		x	XX	M	VS	Pyramidal	40-60	20-30	EB	C	EV	W	Late Spring	X	X	Y	S	M	n/a	M	L	acidic	FS	n/a		
Magnolia, Star	Magnolia stellata	150	Very Small	L		x	x				x	S	VS	Multi-Stemmed	15-20	15-20	DB	M	YE	W	Late Winter	X		N	S	S	n/a	M	M	acidic	PS	n/a		
Magnolia, Sweetbay	Magnolia virginiana	900	Medium	P	XX		x			XX	XX	M	M	Oval	30-60	20-40	EB	C	EV	W	Summer	X		Y	F	M	n/a	W	L	acidic	PS	G/		
Maple, Amur	Acer ginnala	400	Small	P		x	x				x	S	S	Rounded	15-25	15-25	DB	M	RE	W	Spring			N	M	M	0.008	M	M	adapt	FS	n/a		
Maple, Chalk	Acer leucoderme	900	Medium	P	x	x	x	x		x		M	M	Spreading	20-40	10-30	DB	M	I	I				Y	M	M	n/a	M	H	ac-sl alk	FS	P/A	X	
Maple, Hedge	Acer campestre	900	Medium	P		x	x	x		x		M	M	Rounded	25-35	25-35	DB	M	YE	I				N	S	S	0.017	M	H	ac-alk	FS	n/a	X	
Maple, Japanese	Acer palmatum	400	Small	L	0		x	0			x	S	S	Oval	15-25	10-25	DB	M	RE	I				N	S	S	0.008	M	L	sl ac-sl alk	PS	n/a		
Maple, Norway	Acer platanoides	900	Medium	N	pest susceptible								M	M											N									
Maple, Red	Acer rubrum	900	Medium	P	XX	XX	XX	XX	XX	XX	XX	0	M	M	Rounded	40-90	20-35	DB	M	RE	R	Late Winter	X		Y	F	L	0.084	M	L	sl ac	FS	G/	
Maple, Silver	Acer saccharinum	1,600	Large	L	0		x	0	0			L	L	Rounded	50-80	40-60	DB	M	YE	I				N	F	S	0.084	M	H	ac	FS	P/A		
Maple, Southern Sugar (Florida Sugar)	Acer barbatum	900	Medium	P	XX	x	XX	x	XX	XX	x	M	M	Rounded	40-70	25-60	DB	M	OR	I				Y	M	M	n/a	M	H	ac	FS	M/IS	X	
Maple, Sugar	Acer saccharum	1,600	Large	P	XX	XX	XX				x	0	L	L	Oval	60-80	30-50	DB	M	OR	I		X		Y	M	L	0.100	M	M	sl ac-sl alk	PS	pm	
Maple, Sugar 'Green Mountain'	Acer saccharum 'Green Mountain'	1,600	Large	P	XX	XX	XX				0	L	L	Oval	60-80	30-50	DB	M	OR	I		X		Y	F	L	0.100	M	M	sl ac-sl alk	PS	n/a		
Maple, Sugar 'Legacy'	Acer saccharum 'Legacy'	1,600	Large	P	XX	XX	XX				0	L	L	Oval	60-80	30-50	DB	M	OR	I		X		Y	F	L	0.100	M	M	sl ac-sl alk	PS	n/a		
Maple, Trident	Acer buergeranum	900	Medium	P	0	XX	XX	XX	XX	XX</																								

City of Alpharetta Tree List

COMMON NAME LATIN NAME		CANOPY AREA FOR DEVELOPMENT CODE		RECOMMENDED USES								PHYSICAL CHARACTERISTICS										ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES												
				Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter	Native Tree to Alpharetta	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement	Construction Tolerances/Limitations	Urban Tolerant Tree
Mulberry, Red	Morus rubra	900	Medium	C	x	0		0	0		x		L	M	Rounded	40-70	20-50	DB	C	YE	I		X	X	Y	F	S	0.099	M	H	sl ac-sl alk	FS	G/	
Oak, Black	Quercus velutina	1,600	Large	C	x		x				x		L	L	Rounded	70-90	50-60	DB	M	RE	I		X		Y	M	L	-0.253	D	H	sl ac	FS	G/	
Oak, Cherrybark	Quercus falcata var. pagodifolia	1,600	Large	P	x		x				x		L	L	Rounded	60-100	30-50	DB	M	RE	I		X		Y	M	L	n/a	M	M	ac	FS	G/	
Oak, Chestnut	Quercus prinus	1,600	Large	P	x	0	XX	0	0		0		L	L	Rounded	50-80	30-60	DB	M	RE	I		X	X	Y	S	L	-0.342	D	H	acidic	FS	GM/S	
Oak, Diamond Leaf (Laurel)	Quercus laurifolia	1,600	Large	P	x	x	x						L	L	Rounded	60-80	50-60	DB	M	YE	I		X		N	M	L	n/a	M	M	ac-sl alk	FS	G/	
Oak, English	Quercus robur	1,600	Large	L		x	x						L	L	Rounded	40-60	40-60	DB	M	BR	I		X		N	S	M	-0.275	M	M	sl ac-sl alk	FS	n/a	
Oak, Georgia	Quercus georgiana	1,600	Large	L	x		x						L	L	Rounded	20-40	10-30	DB	M	BR	I		X		Y	M	M	n/a	D	H	ac-alk	FS	n/a	
Oak, Laurel	Quercus hemisphaerica	1,600	Large	P	x	x	x						L	L	Rounded	60-90	50-60	DB	M	BR	I		X		N	F	M	-0.314	D	H	adapt	FS	n/a	
Oak, Laurel 'Darlington'	Quercus hemisphaerica 'Darlington'	1,600	Large	P	x	XX	XX						L	L	Rounded	60-90	50-60	DB	F	BR	I		X		N	F	M	n/a	D	H	adapt	FS	n/a	
Oak, Live	Quercus virginiana	1,600	Large	C	out of range								L	L											N									
Oak, Northern Red	Quercus rubra	1,600	Large	P	XX	x	XX						L	L	Rounded	60-100	30-60	DB	M	RE	I		X		Y	F	L	-0.503	M	M	ac-sl ac	FS	GM/SC	
Oak, Nuttall	Quercus nuttalli	1,600	Large	P	x	x	x						L	L	Rounded	60-80	35-50	DB	M	RE	I		X		Y	M	L	n/a	M	M	ac	FS	n/a	
Oak, Oglethorpe	Quercus oglethorpensis	1,600	Large	C	x	x	x						M	L	Rounded	40-70	30-50	DB	M	RE	I		X		Y	S	M	n/a	W	M	n/a	FS	n/a	
Oak, Overcup	Quercus lyrata	1,600	Large	P	XX	XX	XX				x		L	L	Rounded	30-45	30-45	DB	M	BR	I		X		Y	M	L	-0.159	W	M	ac-sl alk	FS	G/	
Oak, Pin	Quercus palustris	1,600	Large	L	0	x	x	0	0		0		L	L	Pyramidal	40-100	20-50	DB	M	RE	I		X		N	M	M	-0.483	M	M	acidic	FS	mg	
Oak, Post	Quercus stellata	1,600	Large	L	x	x	XX						L	L	Rounded	40-50	35-40	DB	M/C	BR	I		X		Y	M	L	-0.327	D	H	ac-sl alk	FS	G/	
Oak, Sawtooth	Quercus acutissima	1,600	Large	L	0	0	x	0	0		0		M	L	Oval	50-60	30-60	DB	M	YE	I		X	X	N	F	M	-0.159	M	M	ac-sl alk	FS	n/a	
Oak, Scarlet	Quercus coccinea	1,600	Large	P	XX	XX	XX	x	x				L	L	Rounded	50-80	30-50	DB	M	RE	I		X		Y	M	L	-0.592	D	H	sl ac	FS	G/	
Oak, Shumard	Quercus shumardii	1,600	Large	P	XX	XX	XX	XX	XX				L	L	Rounded	60-100	30-70	DB	M	RE	I		X		Y	F	L	-0.265	M	H	ac-alk	FS	G/	
Oak, Southern Red	Quercus falcata	1,600	Large	P	XX	x	XX				x		L	L	Rounded	60-100	30-70	DB	M	OR	I		X		Y	M	L	-0.576	M	H	ac	FS	G/	
Oak, Swamp Chestnut	Quercus michauxii	1,600	Large	P	x	0	x	0	0		x		L	L	Oval	70-90	30-60	DB	M	YE	I		X		Y	M	L	-0.544	M	M	n/a	FS	G/	
Oak, Swamp White	Quercus bicolor	1,600	Large	P	x	x	x				x		L	L	Oval	70-90	30-60	DB	M	YE	I		X		Y	M	L	-0.457	M	M	n/a	FS	G/	
Oak, Water	Quercus nigra	1,600	Large	P	XX	x	XX				XX	0	L	L	Rounded	50-100	30-70	DB	M	YE	I		X		Y	F	M	-0.451	M	M	ac-sl alk	FS	G/	
Oak, White	Quercus alba	1,600	Large	P	XX	x	XX						L	L	Rounded	60-100	30-80	DB	M	RE	I		X		Y	S	L	-0.348	M	M	acidic	FS	GM/S	
Oak, Willow	Quercus phellos	1,600	Large	P	XX	XX	XX	XX	XX	0	XX	0	L	L	Rounded	40-100	30-60	DB	F/M	YE	I		X		Y	F	L	-0.314	M	H	acidic	FS	GM/S	X
Orange, Osage	Maclura pomifera	900	Medium	L	x	0	x	0	0		0		M	M	Spreading	30-40	30-40	DB	M/C	YE	I		X	X	N	F	L	0.000	D	H	sl ac-sl alk	FS	n/a	X
Parrotia	Parrotia persica	400	Small	L		x	x					x	S	S	Rounded	20-40	20-35	DB	M	OR	R	Spring			N	F	S	n/a	M	M	ac-sl alk		n/a	
Pear, Callery	Pyrus calleryana	900	Medium	C	defective branch structure								M	M	Oval								X	X	N									
Pear, Common	Pyrus communis	900	Medium	C	x	0	x	0	0	0		0	M	M	Oval	35-45	35-50	DB	M	MA	W	Spring	X	X	N	F	M		M	L	sl ac-sl alk	FS	M/S	
Pecan	Carya illinoensis	1,600	Large	P	x	0	x	0	0	0			L	L	Upright	60-100	30-75	DB	M/C	YE	I		X	X	N	S	M	0.088	M	L	sl ac-sl alk	FS	mg	
Persimmon, Common	Diospyros virginiana	900	Medium	P	x	0	x	0	0		x		L	M	Oval	70-80	40-60	DB	M	RE	I		X	X	Y	M	S	0.058	M	H	ac-alk	FS	G/P	X
Pine, Eastern White	Pinus strobus	1,600	Large	C	not heat tolerant								L	L											N									
Pine, Loblolly	Pinus taeda	1,600	Large	P	XX	x	x	XX		XX	x	0	L	L	Pyramidal	80-100	20-40	EC	F	EV	I		X		Y	F	M	0.016	M	M	acidic	FS	G/	
Pine, Longleaf	Pinus palustris	1,600	Large	C			x	x		x	0		L	L	Pyramidal	60-100	20-40	EC	F	EV	I		X		N	M	L	0.010	M	H	ac-sl alk	FS	GM/C	
Pine, Shortleaf	Pinus echinata	1,600	Large	P	XX	x	x	x		x	x	0	L	L	Pyramidal	60-100	20-40	EC	F	EV	I		X		Y	M	L	0.008	M	H	ac	PS	GM/P	
Pine, Slash	Pinus elliotii	1,600	Large	C			x	x		x	0		L	L	Pyramidal	60-100	20-50	EC	F	EV	I		X		N	F	M	0.010	M	M	ac-sl alk	FS	G/	
Pine, Virginia	Pinus virginiana	900	Medium	P	x		x	x		XX	x		M	M	Pyramidal	15-70	10-35	EC	F	EV	I		X		Y	F	S	0.003	M	H	ac	FS	G/	X
Pistache, Chinese	Pistacia chinensis	900	Medium	L		x	XX	x	x	x	0		M	M	Rounded	60-80	40-50	DB	M	RE	G	Spring	X		N	M	M	n/a	M	H	ac-alk	FS	n/a	X
Planetree, London	Platanus x acerifolia	1,600	Large	P	x	XX	XX	XX	x				L	L	Irregular	60-100	20-80	DB	C	YE	I				N	F	M	-0.415	M	H	sl ac-sl alk	FS	pg	X
Plum, Chickasaw	Prunus angustifolia	150	Very Small	C	x	0	x			x		x	S	VS	Rounded	10-20	10-20	DB	F	I	W	Late Winter	X		Y	M	S	n/a	M	H	sl ac-sl alk	FS	M/IS	
Plum, Purpleleaf	Prunus cerasifera	400	Small	L		x	x			XX		x	S	S	Rounded	10-25	10-25	DB	F	RE	P/W	Spring	X		N	M	S	0.014	M	M	sl ac-sl alk	FS	mg	
Poplar, Lombardy	Populus nigra var. italica	900	Medium	N	not heat tolerant								L	M											N									
Poplar, White	Populus alba	900	Medium	C			x						L	M	Oval	40-100	20-60	DB	C	YE	I				N	F	M	-0.417	M	H	ac-alk	FS	n/a	
Poplar, Yellow (Tuliptree)	Liriodendron tulipifera	1,600	Large	P	XX		x				XX	0	L	L	Oval	80-150	30-60	DB	C	YE	Y	Spring	X		Y	M	L	0.171	M	L	sl ac	FS	P/IS	
Redbud, Eastern	Cercis canadensis	400	Small	P	XX	XX	XX		XX	XX	x	XX	S	S	Spreading	25-50	15-25	DB	M	YE	P	Spring	X		Y	F	S	0.012	M	M	ac-sl ac	PS	M/S	
Redbud, Eastern White	Cercis canadensis var. alba	400	Small	P	x	XX																												

City of Alpharetta Tree List

COMMON NAMELATIN NAME		CANOPY AREA FOR DEVELOPMENT CODE	
		Square Feet of Canopy	Canopy Size Category
Redbud, 'Oklahoma'	Cercis reniformis 'Oklahoma'	400	Small
Redbud, 'Texas White'	Cercis reniformis 'Texas White'	400	Small
Redcedar, Eastern	Juniperus virginiana	900	Medium
Redwood, Dawn	Metasequoia glyptostroboides	900	Medium
Royal Paulownia (Princess-Tree)	Paulownia tomentosa	900	Medium
Sassafras	Sassafras albidum	900	Medium
Serviceberry, Downy	Amelanchier arborea	400	Small
Silverbell, Carolina	Halesia tetraptera	900	Medium
Silverbell, Two-Winged	Halesia diptera	400	Small
Smoketree, American	Cotinus obovatus	150	Very Small
Smoketree, Common	Cotinus coggygria	150	Very Small
Sourwood	Oxydendrum arboreum	900	Medium
Sparkleberry, Tree	Vaccinium arboreum	150	Very Small
Spruce Varieties	Picea species	900	Medium
Sugarberry	Celtis laevigata	1,600	Large
Sweetgum	Liquidambar styraciflua	1,600	Large
Sycamore	Platanus occidentalis	1,600	Large
Tallowtree, Chinese	Sapium sebiferum	900	Medium
Tree-of-Heaven (Ailanthus)	Ailanthus altissima	900	Medium
Walnut, Black	Juglans nigra	1,600	Large
Waxmyrtle, Southern	Myrica cerifera	150	Very Small
Willow, Black	Salix nigra	900	Medium
Willow, Weeping	Salix babylonica	1,600	Large
Winterberry, Common	Ilex verticillata	150	Very Small
Witchhazel, Common	Hamamelis virginiana	400	Small
Yellowwood, American	Cladrastis kentukea	900	Medium
Zelkova, Japanese	Zelkova serrata	1,600	Large

RECOMMENDED USES									
Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	
P		XX	XX	x	XX			XX	
P		XX	XX	x	XX			XX	
P	x		XX	x		XX	x	0	
P	x		XX	x		XX			
C		0	x	0	0		0		
C	x		x			x	x		
P	XX	XX	XX		XX	XX	x	x	
P	XX	x	x				x		
L	XX	x	x				x	XX	
L			x					x	
L			x					x	
C	XX		x						
C			x				x	x	
N	not heat tolerant								
C	x		x			0	x		
C	x	0	x	0	0		x		
P	x		x				x	0	
N	invasive								
N	brittle wood; invasive								
C	x	0	x	0	0		x		
P			x	x		x	0	x	
C	x	0		0	0		x	0	
L	x	0	x	0	0			0	
P	x	x	x			x	x	x	
P	x		x		x		x	x	
L	x		x						
L			x		x		0	0	

PHYSICAL CHARACTERISTICS													
Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter		
S	S	Rounded	20-25	15-20	DB	M	YE	P	Spring	X			
S	S	Rounded	20-25	15-20	DB	M	YE	W	Spring	X			
M	M	Pyramidal	40-60	10-20	EC	F	EV	I		X			
L	M	Pyramidal	75-100	25-30	DC	F	BR	I					
M	M	Irregular	30-50	20-50	DB	C	YE	P	Spring		X		
M	M	Oval	30-60	20-40	DB	M	OR	Y	Spring	X			
S	S	Irregular	15-40	10-20	DB	M	OR	W	Spring	X			
M	M	Irregular	30-60	20-35	DB	M	YE	W	Spring				
S	S	Rounded	15-20	15-20	DB	M	YE	W	Spring	X			
S	VS	Oval	15-30	10-25	DB	M	MU	P	Spring				
S	VS	Oval	10-15	10-15	DB	M	MU	P	Late Spring				
M	M	Spreading	30-60	20-30	DB	M	RE	W	Summer				
S	VS	Irregular	10-20	5-10	DB	F	RE	W	Late Spring	X			
L	M												
L	L	Spreading	60-80	25-60	DB	F/M	YE	I		X			
L	L	Oval	60-80	40-60	DB	M	MU	I		X	X		
L	L	Oval	70-100	30-70	DB	C	BR	I			X		
M	M												
M	M												
L	L	Rounded	60-70	50-70	DB	M	YE	I		X	X		
S	VS	Multi-Stemmed	10-30	10-30	EB	F	EV	I		X			
M	M	Irregular	30-40	30-40	DB	F/M	YE	I					
L	L	Rounded	30-70	20-70	DB	F/M	YE	I					
S	VS	Multi-Stemmed	5-15	5-10	DB	M	I	I		X			
S	S	Spreading	20-35	20-35	DB	M/C	YE	Y	Fall				
M	M	Upright	30-50	40-50	DB	M/C	YE	W	Spring				
L	L	Upright	40-80	30-75	DB	M	RE	I					

ENVIRONMENTALCHARACTERISTICS AND TOLERANCES													
Native Tree to Alpharetta	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement	Construction Toleranc	Limitations	Urban Tolerant Tree			
N	M	S	n/a	D	H	ac-sl ac	FS	n/a	X				
N	M	S	n/a	D	H	ac-sl ac	FS	n/a					
Y	S	M	-0.010	M	H	ac-nu	FS	M/IS					
N	F	L	0.163	M	M	n/a	FS	n/a	X				
N	F	S	0.022	M	M	ac-sl alk	FS	g					
Y	M	M	0.069	M	H	sl ac	FS	G/					
Y	S	M	0.004	M	M	acidic	PS	M/IS					
Y	M	M	n/a	M	L	ac-sl alk	PS	M/ISC					
N	M	M	n/a	M	M	ac-sl alk	PS	M/SC					
Y	M	S	n/a	D	H	sl ac-sl alk	PS	n/a	X				
N	M	S	n/a	D	H	sl ac-sl alk	FS	n/a	X				
Y	M	S	0.018	M	M	ac-sl ac	FS	P/A					
Y	S	S	n/a	M	M	ac-sl alk	S	M/A					
N													
Y	M	M	0.118	M	M	ac	FS	G/I					
Y	F	L	-0.488	M	L	sl ac	FS	G/					
Y	F	M	-0.789	M	M	sl ac-sl alk	FS	G/					
N													
N													
Y	M	L	0.086	M	L	acidic	FS	P/IS					
N	M	S	n/a	M	M	ac-alk	FS	G/					
Y	F	S	-0.177	W	L	n/a	FS	G/					
N	F	M	-0.096	W	M	acidic	FS	mg					
Y	M	S	n/a	M	L	ac	FS	G/					
Y	M	M	-0.009	M	M	sl ac	PS	M/IS					
N	M	M	0.013	M	M	n/a	PS	P/A					
N	M	M	0.084	M	H	ac-sl alk	FS	n/a	X				

Informational Links

City of Alpharetta Details

<http://www.alpharetta.ga.us/docs/default-source/planning-zoning/standard-arborist-plan-details.pdf?sfvrsn=14>

City of Alpharetta Checklist for Plan Submittal

http://www.alpharetta.ga.us/docs/default-source/planning-zoning/arborist_checklist.pdf?sfvrsn=10

Georgia Forestry Commission

<http://www.gfc.state.ga.us/>

Georgia Urban Forest Council

<http://www.gufc.org/>

National Arbor Day Foundation

<https://www.arborday.org/>

University of Georgia Extension

<http://extension.uga.edu/>

ORDINANCE NO.

AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT CODE SECTION 3.2: TREE CONSERVATION, LANDSCAPE, AND BUFFER REQUIREMENTS IN ORDER TO CONSOLIDATE LANDSCAPE AND TREE REQUIREMENTS INTO ONE LOCATION WITHIN SECTION THE UDC; CLARIFY AND SIMPLIFY CERTAIN REQUIREMENTS TO PROVIDE FOR EASE OF USE AND IMPLEMENTATION; AND, INCREASE INCENTIVES AND OPTIONS TO SAVE TREES DURING LAND DEVELOPMENT; TO PROVIDE FOR AN EFFECTIVE DATE; TO REPEAL CONFLICTING ORDINANCES AND RESOLUTIONS; AND FOR OTHER PURPOSES

WHEREAS, on May 21, 2001, the City of Alpharetta adopted a comprehensive zoning ordinance known as the Unified Development Code of the City of Alpharetta, Georgia; and

WHEREAS, the Unified Development Code is a document that was designed to be amended from time to time when circumstances warrant that modifications be made in order to make the Code more responsive to community needs; and

WHEREAS, prior to the adoption of this amendment the Director of Community Development for the City of Alpharetta established a public hearing date for the public discussion of this amendment which public hearing date was at least fifteen (15) but not more than forty-five (45) days after a public hearing notice was published in the Alpharetta Revue & News; and

WHEREAS, the Mayor and Council of the City of Alpharetta deem it to be in the City's best interest to amend Unified Development Code Section 3.2 Tree Conservation, Landscape, And Buffer Requirements in order to consolidate landscape and tree requirements into one location within section the UDC; clarify and simplify certain requirements to provide for ease of use and implementation; and, increase incentives and options to save trees during land development

NOW, THEREFORE, the Mayor and Council of the City hereby do ordain as follows: Unified Development Code Section 3.2: Tree Conservation, Landscaping, and Buffer is modified as shown in the attached **Exhibit**. Furthered Ordained that all ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed to the extent of such conflict.

SO ORDAINED this _____ day of _____, 2017.

CITY OF Alpharetta

By: _____
David Belle Isle, Mayor

COUNCIL MEMBERS

(SEAL)

Attest:

City Clerk

First Reading _____

Second Reading _____



City Council Meeting STAFF REPORT

Submitting Department: City Clerk

Submitted By:

Meeting Date: April 17, 2017

I. AGENDA ITEM TITLE: ALCOHOL ORDINANCE AMENDMENTS (1ST READING)

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF ALPHARETTA, GEORGIA TO AMEND CHAPTER 3 (ALCOHOLIC BEVERAGES) OF THE CODE OF THE CITY OF ALPHARETTA, GEORGIA; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING THE SALE OF ALCOHOLIC BEVERAGES FOR CONSUMPTION ON THE PREMISES; TO PROVIDE EXCEPTIONS APPLICABLE TO ART STUDIOS, GALLERIES AND COOKING CLASSES FROM CERTAIN REGULATIONS GOVERNING ON-PREMISES CONSUMPTION; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING ANCILLARY WINE TASTING LICENSES; TO MODIFY THE DEFINITION OF "DOWNTOWN DISTRICT" SET FORTH IN SECTION 3-181; TO DELETE, MODIFY AND ADD PROVISIONS PERTAINING TO THE SALE AND CONSUMPTION OF ALCOHOLIC BEVERAGES IN CERTAIN PUBLIC PARKS LOCATED IN THE DOWNTOWN DISTRICT; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING BREWERIES; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES

II. RECOMMENDATION:

III. REPORT IN BRIEF:

As a follow up to the Alcohol Ordinance Amendment Workshop we held at the February 20, 2017 Council Meeting, the attached amendments are proposed as a result of the feedback received from Council at that meeting and subsequent direction given to staff.

Highlights of the proposed amendments include:

- Expansion of the downtown district as it related to special alcohol provisions
- Allowing for sale and consumption of alcoholic within certain downtown public parks
- Provide consumption on premises exceptions to art studios, galleries, and cooking classes
- Limited retail sales for wine and spirits within downtown for restaurants
- Expansion of wine tastings provisions and allow retailers to charge for tastings
- Revisions to comply with recent state law regarding breweries

IV. ALTERNATIVES:

V. ATTACHMENTS:

Alcohol Code Amendment

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF ALPHARETTA, GEORGIA TO AMEND CHAPTER 3 (ALCOHOLIC BEVERAGES) OF THE CODE OF THE CITY OF ALPHARETTA, GEORGIA; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING THE SALE OF ALCOHOLIC BEVERAGES FOR CONSUMPTION ON THE PREMISES; TO PROVIDE EXCEPTIONS APPLICABLE TO ART STUDIOS, GALLERIES AND COOKING CLASSES FROM CERTAIN REGULATIONS GOVERNING ON-PREMISES CONSUMPTION; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING ANCILLARY WINE TASTING LICENSES; TO MODIFY THE DEFINITION OF "DOWNTOWN DISTRICT" SET FORTH IN SECTION 3-181; TO DELETE, MODIFY AND ADD PROVISIONS PERTAINING TO THE SALE AND CONSUMPTION OF ALCOHOLIC BEVERAGES IN CERTAIN PUBLIC PARKS LOCATED IN THE DOWNTOWN DISTRICT; TO DELETE, MODIFY AND ADD PROVISIONS GOVERNING BREWERIES; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES

WHEREAS, Chapter 3 (Alcoholic Beverages) of The Code of the City of Alpharetta, Georgia provides regulations governing the sale of alcoholic beverages within the City; and

WHEREAS, the Mayor and Council of the City of Alpharetta ("City Council") are charged with the protection of the public health, safety, and welfare of the citizens of the City of Alpharetta; and

WHEREAS, the City Council has determined that it is appropriate from time to time to modify alcoholic beverage regulations to comport with current conditions; and

WHEREAS, the City Council desires to amend Chapter 3 (Alcoholic Beverages) of The Code of the City of Alpharetta, Georgia in order to delete, modify and add certain provisions regulating the sale of alcoholic beverages.

NOW, THEREFORE, The Council of the City of Alpharetta hereby ordains, as follows:

Section 1: Article II of Chapter 3 of The Code of the City of Alpharetta, Georgia (the "Code") is hereby amended by adding a new Section 3-49 to read as follows:

"Sec. 3-49. Art Gallery Exception.

An art gallery may obtain a license for the sale of alcoholic beverages for consumption on the premises without meeting the requirement that it provides a full-service

kitchen serving prepared foods and fifty percent (50%) of its gross annual sales be derived from the sale of prepared meals or food, provided that it derives no more than ten percent (10%) of its total annual gross revenues from the sale of alcoholic beverages.

Section 3: Section 3-160 of the Code is hereby amended by deleting same in its entirety and inserting in lieu thereof the following:

"Sec. 3-160. Ancillary wine tasting license; conditions.

The holder of a package wine license, with or without a package malt beverage license, but in no event with a package distilled spirits license, with licensed premises having a minimum of 200 square feet of floor space dedicated to the display of wine offered for sale, shall be eligible for an ancillary wine tasting license to provide samples or tastings of wine offered for sale by the package to customers for consumption on the premises under the following conditions:

- (a) The licensee shall maintain on the premises and offer for sale by the package at least twenty-five (25) different brands of wine.
- (b) Wine sampling and tasting for customers shall only be conducted at a wine counter area constituting no more than ten percent (10%) of the entire floor area of the premises.
- (c) Wine samples shall not exceed two (2) ounces, and no customer shall consume more than eight (8) ounces in any calendar day.
- (d) Wine bottles shall be opened only by the licensee or an employee, and samples shall only be poured by the licensee and/or an employee.
- (e) No open containers of wine shall be removed from the licensed premises.
- (f) Wine sampling and tasting is only permitted within the enclosed portion of the premises.
- (g) Wine sampling and tasting is only permitted during the hours the licensed premises are authorized to provide package sales of alcoholic beverages; provided, however, no wine sampling and tasting shall be permitted on Sunday.
- (h) Wine sampling and tasting shall not be permitted prior to the City's approval of a package license holder's application for an ancillary wine tasting license and

the package license holder's payment of the subject license fee. The annual fee for an ancillary wine tasting license shall be two hundred and fifty dollars (\$250.00), which fee may be revised from time to time by resolution of the mayor and council."

Section 3: Section 3-181 of the Code is hereby amended by deleting same in its entirety and inserting in lieu thereof the following:

"Sec. 3-181. Definition of Downtown District.

For the purpose of this article only, the "Downtown District" is defined as follows: that certain portion or area of the City lying north of the northern right-of-way of Old Milton Parkway and located within the Downtown Overlay District, as designated by Ordinance No. 707 adopted July 20, 2015, and as modified from time to time by the City Council. For the purposes of this definition, the premises of any licensed establishment that abuts the foregoing boundaries shall be considered to be located within the Downtown District.

Section 4: It is the intention of the City Council and it is hereby ordained by the authority of the City Council that the provisions of this Ordinance shall become and be made a part of The Code of the City of Alpharetta, Georgia, and the codifier is authorized to make the specified deletions, insertions, additions, and to insert headings, article numbers and section numbers as and where appropriate.

Section 5: All ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed to the extent of such conflict.

Section 6: If any section, subsection, provisions, or clause of any part of this Ordinance shall be declared invalid or unconstitutional, or, if the provisions of any part of this Ordinance as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the portions of this Ordinance not so held to be invalid, or the application of this Ordinance to other circumstances not so held to be invalid. It is hereby declared as the intent of the City Council that this Ordinance would have been adopted in its current form

ORDINANCE NO. _____

without the invalid or unconstitutional provision contained therein.

Section 7: This Ordinance shall become effective immediately upon adoption.

SO ORDAINED this _____ day of _____, 2017.

CITY OF ALPHARETTA, GEORGIA

By: _____
David C. Belle Isle, Mayor

COUNCIL MEMBERS

(SEAL)

Attest:

City Clerk

First Reading _____

Second Reading _____

Adopted _____