

Charlotte Tree Manual (CTM)



~~Initial Manual Version 1.2+~~

~~August-April 23, 2024, 2023~~

The Charlotte Tree Manual (CTM) is also known as Section 4.1 of the UDO Zoning Administration Manual

The City of Charlotte has a robust and diverse tree canopy that provides significant environmental, economic, and social benefits to Charlotte residents. Tree canopy is also an integral part of Charlotte's identity and character. Charlotte is known as "The City of Trees" largely due to the historically important value residents and leaders have placed on a healthy tree canopy, and the wise decisions and investments made to sustain this important natural resource.

The purpose of the Charlotte Tree Manual (CTM) is to: 1) support and clarify use of tree preservation regulations and requirements found in the City of Charlotte Tree Ordinance and Article 20. Landscape, Screening, & Tree Preservation of the Unified Development Ordinance (UDO); 2) provide general support and guidance on urban forestry best practices; and 3) increase overall awareness and understanding on tree canopy issues in Charlotte.

The guidelines and illustrations included within this manual are intended to help development professionals and property owners better understand tree preservation regulations and requirements.

The CTM is incorporated into the UDO Zoning Administration Manual (section 4.1)

Additional resources:

Regulatory

- [UDO - Article 20. Landscape, Screening, & Tree Preservation: 20.13 – 20.18](#)
- [Charlotte Tree Ordinance – CURRENT \(Chapter 21 Charlotte Code of Ordinances – ~~May 15~~ June 21, 2023\)](#)
- [Charlotte Tree Ordinance – LEGACY \(Ch. 21 Charlotte Code of Ordinances Pre-UDO version\)](#)
- [Charlotte Land Development Standards Manual \(CLDSM\) – 4000 series – tree standards](#)
 - o [CLDS Approved Species List](#) – page 19
- [Charlotte Landscape Construction Standards](#)
- American Standards of Nursery Stock (ANSI Z60.1)
- [USDA-NRCS Plants Database](#) – native North Carolina tree species
- [UDO Zoning Administration Manual](#)

Policy

- [Charlotte Urban Forest Master Plan](#)
- [Charlotte Future 2040 Comprehensive Plan](#)
- [Tree Canopy Action Plan \(TCAP\)](#)
- Charlotte Tree Canopy Goal – 50% Canopy by 2050

Programs

- Tree Canopy Preservation Program (TCPP)
 - o TCPP Manual
- [Tree by Tree](#)

Tree Care & Preservation Awareness

- [Tree Resources & Education](#)
- [Storm Response & Tree Emergencies](#)

Charlotte Tree Manual

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Heritage Tree Preservation



UDO – Article 20. Landscape, Screening, & Tree Preservation: 20.14
Charlotte Tree Ordinance: 21-8 (g)

****Removal of ANY heritage tree without a removal permit or City-approved land development plan is prohibited. Except in cases of declining health or hazard reasons (see below)****

General

1. Definition - Trees native to North Carolina per the USDA-NRCS Plants [Database](#) with a DBH \geq 30 inches. DBH (diameter) is measured on tree trunk at 4 ½ feet above the ground. [See National Register of Champion Tree Guideline pages 8-15 for specific measurement guidance](#). See native North Carolina Tree List guideline in this manual for [additional native tree guidance](#).
 - a. Native tree species exempt from heritage tree status:
 - i. All ash species (*Fraxinus spp.*)
2. City limits - protected at all times on all public and private property (parcels) in city limits, regardless of development status. City trees and trees in alleyways are not heritage trees.
3. Charlotte's extraterritorial jurisdiction (ETJ) - preservation requirements ONLY apply at time of land development permitting, on all public and private property (parcels).
4. Types of heritage trees
 - a. Common heritage trees (CHT)– trees NOT been preserved specifically for a development requirement are *common heritage trees*. Only applies in City limits.
 - b. UDO heritage trees (UHT)- trees have been preserved for a development requirement specified in the Unified Development Ordinance (UDO), a Conditional Zoning District, or Neighborhood Conservation District are considered *UDO heritage trees*.

Heritage Trees – Removal Permits & Prohibited Tree Disturbing Activity (TDA)

1. Permit types - Visit the [CLT Development Center](#) website for more information on permits.
 - a. **Non-development customers** – prior to removing a heritage tree customers must obtain a [Non-Development Heritage Tree Permit](#).
 - a.i. **Permit expiration** – [removal permits are valid for 1 year, after expiring new permits must be obtained](#)
 - b. **Development customers** – new projects that trigger or sites that have previously triggered [UDO development applicability](#) are required to submit plans via the [City's land development permitting processes](#).
2. What type of TDA is prohibited and when? – certain types of TDA are prohibited and/or regulated related to heritage trees depending on:
 - a. the type of heritage tree (CHT vs. UHT); and
 - b. whether a scenario is non-development or development-related.

The following activities are considered TDA:

Spray, fertilize, remove, destroy, cut, top, damage, trim, prune, or carve or otherwise severely prune any tree or its root system.

Attach any object, including, but not limited to, rope, wire, nail, chain, or sign, to any such tree or shrub.

Alter the natural drainage, excavate, or lay any drive within the critical root zone.

Perform excavation or construction work, which shall include but not be limited to driveway installations, irrigation work, tree removal and/or grading of any kind, within the drip line of any tree without first installing a fence, frame, or box in a manner and of a type and size satisfactory to the City to protect the tree during excavation or construction work.

c. Prohibited TDA

i. All heritage trees

1. Removal without a permit or approved land development plan

a. except for declining health or hazard reasons

2. **Topping is prohibited in all cases** and is considered an ordinance violation

ii. Non-development - common heritage trees (CHT)

1. Removal permit required in all cases, unless authorized for declining health or hazard reasons per section 21-8 (g) of the Charlotte Tree Ordinance and this guideline.

2. TDA Restrictions – only removal and topping is prohibited ~~restricted~~. Other types of TDA don't require a tree work permit (TWP).

iii. Development/post development - UDO heritage trees (UHT)

1. Removal due to allowable conflict/~~restriction~~ restriction via a City-approved land development plan is required except for declining health and hazard reasons.

a. Allowable conflicts/restrictions qualifying for removal:

i. required streets, pools, accessory dwelling unit, driveway, building addition, retaining wall, shed with foundation, sidewalk/walkway, patio, utility installations, property access ~~severley~~ severely restricted, utility service severely restricted, reduction in capacity to maintain property/improvements, public infrastructure.

ii. Conflicts and/or restrictions MUST impact heritage tree critical root zone, trunk, and canopy collectively beyond a preservable condition to qualify for removal.

b. Items typically NOT qualifying for removal:

i. fence, shed without foundation, garden, gazebo without foundation, playground equipment

2. TDA Restrictions

a. TDA that DOES require a permit:

i. tree removal, installation of any structures and/or improvements, grade changes \geq +/- 4 inches, digging, trenching, and any excavation, impacting CRZ

~~b. TDA not requiring a permit:~~

~~i.~~ ii. general tree canopy maintenance work including crown cleaning; crown balancing; cabling/bracing; reduction of limbs; removing dead, damaged and broken limbs; deep root fertilization, root pruning.

~~ii.~~ General tree canopy maintenance shall be completed under the supervision one of the following: an ISA-certified arborist, a NC Licensed Landscape Contractor, or a City of Trees – Canopy Care Certified contractor (*certification program in development*).

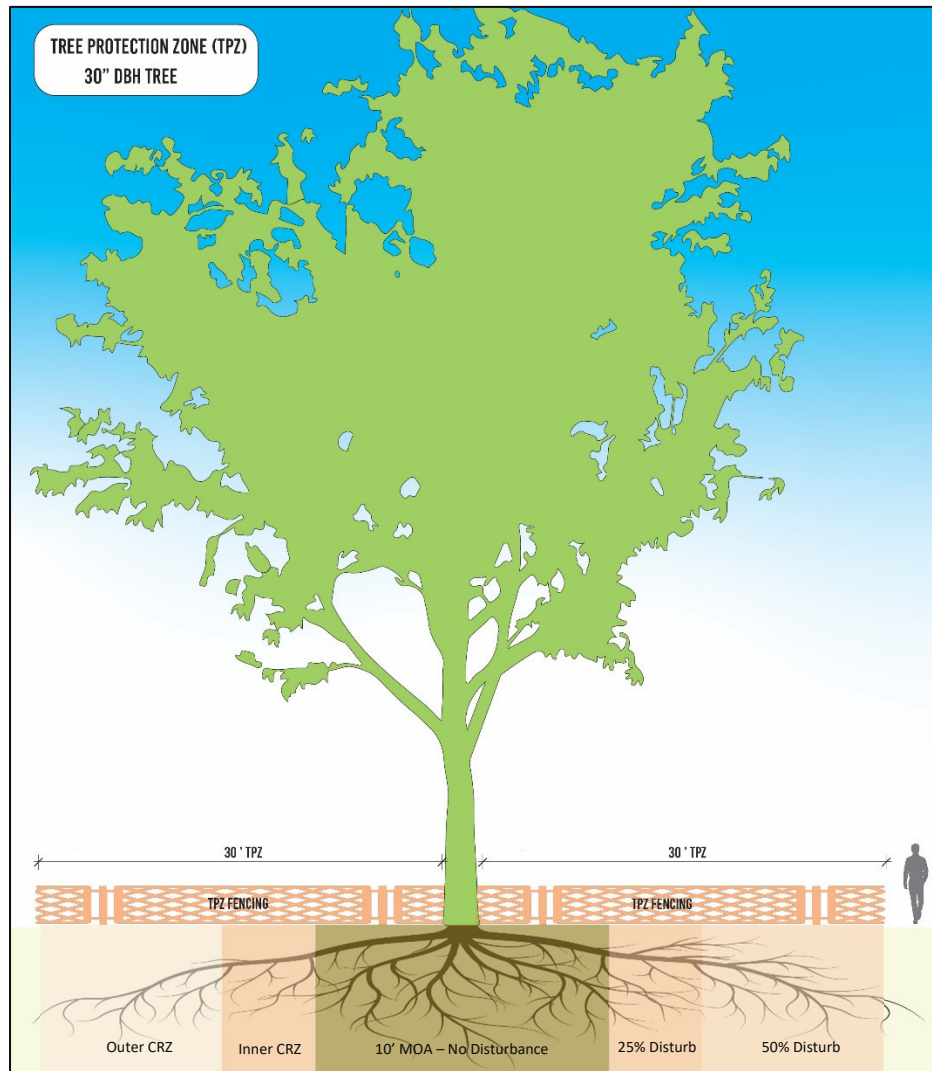
€- **Heritage Tree - Critical Root Zone (CRZ) Protection** – CRZ shall equal one (1) linear foot of protection for each inch of tree trunk diameter (DBH).

Maximum CRZ disturbance:

Minimum offset area (MOA) – area directly adjacent to root flare where no TDA is permitted. Minimum 10' for all heritage trees. May be adjusted on a case-by-case basis based on tree characteristics and/or existing site conditions or constraints. Trees greater than 30" DBH may require greater MOA.

Inner CRZ – zone directly adjacent to root flare equaling half of tree's dbh in linear feet, overlaps with MOA to some degree, up to 25% of total area may be disturbed.

Outer CRZ – zone outside of Inner CRZ equaling half of trees dbh in linear feet, Up to 50% of area may be disturbed.



3. Declining health or hazard guidance tree removal information – no permit required

Declining health preliminary review – must be completed by the City prior to the removal of any heritage trees proposed to be removed for declining health reasons. Urban Forestry will conduct a preliminary review and determine if removal work qualifies for declining health justification. Applications qualifying for declining health justification won't be charged a permit fee, require a permit, or require mitigation.

3-

- a. Declining health justification – requires:

- i. Submittal of the following documentation **PRIOR** to any tree removal work starting
 - 1. Current ISA ~~tree~~ Tree Risk Assessment Form ~~from completed by an~~ ISA-certified & TRAQ-qualified arborist.
 - 2. Additional data as needed to support assessment results such as pictures, report, analysis results, etc.
- ii. assessment states ~~entire tree is expected to fail within 1-3 years from assessment date~~To qualify for declining health justification assessments must specify:
 - 1. entire tree failure may occur within a timeframe of 1-3 years with a risk rating of High or Extreme per Form's Matrix 2. Risk Rating Matrix.

Matrix 2. Risk rating matrix.

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

ii-

- b. Hazardous tree justification – likelihood of failure is imminent, meaning failure started or is most likely to occur in the near future (minutes, days, or < 2 weeks). Trees that require immediate action to protect people and property from harm.
 - i. Trees may be removed immediately without a permit, however, minimum documentation shall be provided within 3 days of removal and shall include an assessment from an ISA-certified arborist or a combination of picture, ~~/~~video, and ~~/~~witness statement evidence.
- c. Hazardous tree dDocumentation - for removal of trees due to declining health and hazardous reasons must be provided to the City by property owners and/or contractors performing ~~the~~ removal work. Failure to provide removal documentation within 3 days of tree removal may subject property owner and other ~~related~~ persons to permit fees, mitigation requirements, -civil penalties and fines.

Mitigation

Mitigation Tree Planting

- 1. In all cases, a mitigation payment and a minimum of one mitigation tree shall be planted on-site to mitigate the removal of heritage trees, unless removed for hazardous reasons or preserving a specimen tree per the UDO and Charlotte Tree Ordinance.
- 2. Mitigation tree planting timeline:
 - a. Non-development scenarios - all required mitigation trees shall be planted within 30 days of permit approval unless otherwise approved by Urban Forestry.
 - b. Development scenarios – all required mitigation trees shall be planted prior to hold release.

1-

- 2.3. Mitigation trees are code-required trees and must be replanted in the future if dead/missing. Mitigation trees are in addition to other required trees and do NOT count toward meeting other requirements.

- 3.4. Mitigation trees shall be native large mature species if no overhead powerline conflict exists, unless otherwise approved by the Chief Urban Forester or their designee.
- 4.5. Mitigation trees shall be a minimum of two-inch caliper and have a minimum height of eight feet, multi-stem trees shall have a minimum of three to five stems if applicable, unless otherwise approved by the Chief Urban Forester.
- 5.6. Mitigation trees shall have a minimum of 274 square feet of planting area, unless otherwise approved by the Chief Urban Forester. Amended soil may be required for mitigation tree planting.
- 6.7. Mitigation trees planted in locations of previous heritage trees may be located less than ten feet from buildings and underground utilities and may have less than 274 square feet of planting area. Trees planted in other locations must maintain ten-foot separation unless otherwise approved by the Chief Urban Forester.

Mitigation Payment

1. Development scenarios - \$1,500 per heritage tree removed
2. Non-land development scenarios - \$500 per heritage tree removed
3. Mitigation payments may be reduced by \$250 per tree for each additional mitigation tree planted beyond the minimum requirement

Specimen Tree Mitigation

1. Specimen trees preserved for heritage tree mitigation shall be credited at a 1:~~1~~ ratio
2. ~~Only~~ large mature trees may count for specimen tree mitigation
3. In no scenario may specimen trees located in existing or proposed tree save (green area) qualify for heritage tree mitigation
4. Non-native tree species may qualify as specimen trees for this provision

Tree Survey Guidance

1. Conditional Zoning Map Amendments – all heritage trees on-site shall be identified and depicted (no CRZ required). In all cases center point location, trunk diameter at DBH, and species must be noted.
2. Land Development Permitting – The following heritage information shall be depicted on all land development plans submitted to the City:
 - a. All heritage trees within 50' of land disturbing activity on a site
 - b. All heritage trees selected to meet development requirements or green area incentives
 - c. All specimen trees used for heritage tree mitigation
 - d. In all cases center point location, trunk diameter at DBH, and species must be depicted and noted
 - e. CRZ of all preserved heritage trees and/or specimen trees that will ~~impacted~~be impacted by TDA
 - f. Graphic representation
 - i. All heritage trees shall be represented by a circle or point
 - ii. Trees proposed to be to be removed shall be displayed with an X overlaid on circle or point
 - iii. CRZ - Inner CRZ, Outer CRZ, and Minimal off-set area shall be depicted when required. All portions of these zones/areas that will ~~impacted~~be impacted by TDA shall be hashed differently from undisturbed CRZ zones/areas.

iii. —



Green Area Guideline

UDO – Article 20. Landscape, Screening, & Tree Preservation: 20.15
Charlotte Tree Ordinance: 21-8

Applicability - All development (including additions to existing sites) occurring on/or after June 1st, ~~2023~~2023, subject to UDO Article 20 -15 shall meet green area requirements. No exemptions are allowed.

General Tree Save Standards

Invasive plant species – see the North Carolina Invasive Plant Council's [list of invasive species](#) found in the Piedmont. Invasive plant species are considered removed if they are no longer living in or under the tree canopy. Vine species at minimum must be cut at the base of trunks. Trees, shrubs, and herbaceous species must be eradicated completely from tree save areas or managed to allow all phases of forest succession to occur unimpeded.

Alterations to tree save – all alterations to tree save must obtain a tree work permit from Urban Forestry. All authorized work in tree save areas may be required to implement critical root zone and/or trunk protection.

Tier 3 & 4 Place Types – no mechanized or vehicular equipment including but not limited to: chainsaws, pole saws, trenching equipment, skid steers, and excavation equipment are allowed to access, maneuver, or operate in tree save areas. Installations must be organic and environmentally friendly materials approved by Urban Forestry (~~e.g.e.g.~~ double-hammered non-dyed mulch). Ground cover in tree save areas must be a composed of a natural wood non-dyed mulch or native vegetation.

Tier 1 & 2 Place Types - mechanized or vehicular equipment may be allowed in tree save areas ONLY if authorized by Urban Forestry via a tree work permit.

Minimum dimensions – all on-site and off-site tree save, and land donated to meet green area requirements shall be a minimum of 30' x 30'. Any proposed tree save or donated land less than 30' in width shall be delineated on site with boundary and property lines by a licensed surveyor prior to first plan submittal. Deviation from minimum 30' dimension is not permitted unless otherwise approved by the Chief Urban Forester or their designee due to special conditions including but not limited to: topography, existing on-site canopy fragment size, conflict/constraint with another UDO requirement.

Ten Foot No-build Zone – No structure shall be allowed within ten feet of the tree save area. A building restriction note shall be indicated on the record plat and the ten foot no-build zone shall be depicted on the plat.

Tier 1 & 2 Place Types – ten foot no-build zones may count toward tree save area as long as the zone directly and continuously abuts a tree save area and remains pervious. No code-required trees are allowed in ten foot no-build zones.

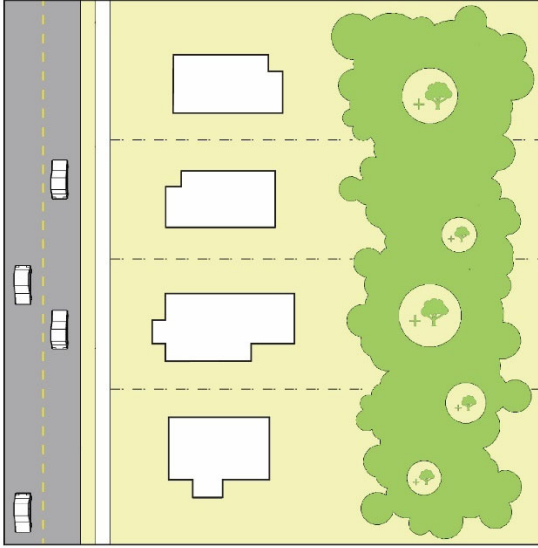
Amenity elements – benches, trails, gazebos, sheds, fences, and other minor amenity elements may be installed in tree save areas on a case-by-case basis and must be authorized by Urban Forestry via a tree work permit or City-approved land development plan.

Tree save overhang & utility easements – sites in Tier 1, 2, and 3 Place Types or nonresidential sites in Tier 4 Place Types may include existing tree canopy which overhangs existing underground utility easements only if existing canopy is provided from healthy and structurally sound trees and the canopy will be preserved during duration of project construction. Only the dripline area overhanging utility easements may be used to meet green area requirements and must be depicted on final plats. Any area within the utility easement being used for green area credit shall be included in overall site calculations.

Power distribution lines – small maturing trees planted within 25' of distribution lines in accordance with Duke Energy or other power utility's's approved planting list and area requirements may count toward tree save.

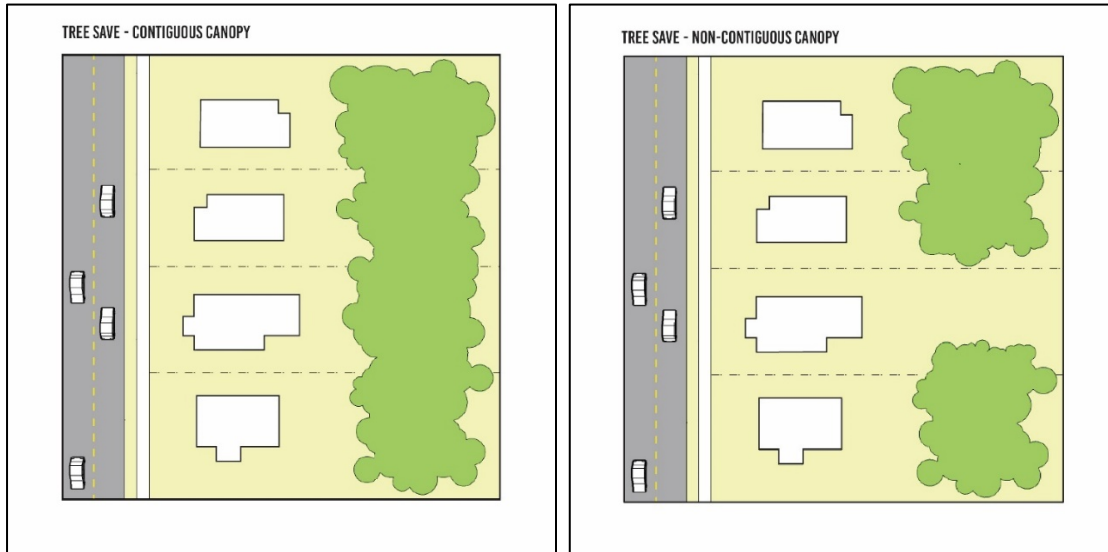
Canopy voids – are considered areas lacking canopy where existing trees are not expected to fill in voids over time as part of natural forest succession. Voids are a maximum of 40' in width.

TREE SAVE - CANOPY VOIDS



Contiguous Tree Save ~~On-site Tree Save~~

~~- Contiguous Tree Save~~ On-site contiguous tree canopy shall be preserved ~~in a contiguous manner~~ per the guidelines below.



1. Contiguous ~~Guidelines~~ Guidelines

- a. Scenario 1 – No Fragments – a fully contiguous tree save area of existing on-site tree canopy with no separations, one continuous fragment
- b. Scenario 2 – Fragments & separations - a tree save area of existing on-site tree canopy, with a maximum of 3 non-contiguous fragments separated by one or more of the following allowed separations:
 - i. Streams, creeks, rivers, wetlands, water quality buffers, floodway
 - ii. Utility easements and r/w
 - iii. Storm water control measures
 - iv. Required streets
 - v. Rail r/w
 - vi. Other City/State-required and/or critical property access features

A minimum of 30' of all tree save area fragments must directly abut allowable separations. On-site tree canopy may be considered contiguous where canopy is able to grow naturally to fully cover a separation naturally or with the planting of 1 tree, and the area of the separation is included in site calculations for green area compliance.

- c. Scenario 3 – Fragments & forest quality - a tree save area of existing on-site tree canopy, with a maximum of 3 non-contiguous fragments, allowed separations noted in

Scenario 2 are not required, however all fragments shall meet the following increased forest quality requirements:

- i. Incentives - all high-quality tree incentives in UDO Table 20-5 Green Area Credits are considered and implemented when feasible, minimum of one incentive per fragment;
- ii. Native species – tree save areas are comprised by at least 75% native species, additional planting may be required;
- iii. Stocking level – tree save areas shall have a minimum of 54 trees per acre stocking level, additional planting may be required;

Fragment size – fragments shall be a minimum of 20% of total tree save area, a contiguous area of existing on-site tree canopy shall be preserved unless one of the following separations occurs, maximum of 3 non-contiguous fragments is allowed, a portion of all fragments must directly abut separation:

iv. _____

i. Streams, creeks, rivers

ii. Utility easements and r/w

iii. Required streets

iv. Rail r/w

v.d. Scenario 4 – E Sites with an existing fragmented canopy

- i. Developed and vacant sites that trigger green area applicability, and have an existing fragmented on-site tree canopy may use multiple fragments to meet the 15% requirement. Tree save shall be provided in as few fragments as possible.

1.

A minimum of 30' border of all non-contiguous tree save area fragments must directly abut allowable separations.

b.e. In combination – On Tier 1 & 2 sites when existing on-site tree canopy will be preserved in combination with other green area options available per UDO Table 20-5 Green Area Credits, preserved tree save area shall be contiguous per items 1.a. – b. above.

e.f. Replanted tree save – available when existing on-site tree canopy is < 15%. When allowed does NOT have to be contiguous or adjacent to preserved tree save area. Must be a minimum width of 20'.

e.g. Replanted tree save mitigation

- i. Tier 1 & 2 – available as a standard option.
- ii. Tier 3 & 4 – only available as a last resort.
 1. Removal of existing on-site tree canopy below 15% requirement only authorized if: 1) preservation impacts buildable area of a site improvement or City-required structure /improvement and no other reasonable location is available; and/or 2) preservation would unreasonably restrict use/access of property.

2. If authorized, ~~a re-planting penalty is applied requiring an additional~~ 150% ~~of~~ mitigation tree save area ~~shall be provided to off-set/offset~~ the percentage of existing on-site tree canopy removed below 15% requirement.
3. Must be a minimum width of 20'.

~~e.h.~~ Heritage and Specimen Trees – may be preserved individually or in groups outside of tree save area fragments and count toward 15% green area requirement.

~~f.~~ Adjacent property contiguous tree save incentive – A minimum of 30' of a developing site's tree save boundary must directly abut a neighboring property's tree save to qualify for the incentive. If the neighboring property's tree save is < 30', the developing site's tree save boundary must directly abot the entire tree save boundary of the neighbor property.

i.

Off-site Tree Save

~~When qualifying, an applicant may convey or protect, at no cost to the City, an amount of land equal to the required green area acreage, or a portion thereof, within the City or ETJ, to a land conservation group or the City, for the purpose of preserving off-site tree canopy to meet Green Area requirements. UDO tables 20-4 and 20-5 should be consulted to determine if off-site tree save is available as an option. Off-site tree save is not available as an option for single-family development and cannot be used in combination with payment-in-lieu to meet applicable green area requirements.~~

~~An applicant must convey or protect land to qualify off-site tree save within Charlotte's city limits or ETJ. Off-site tree save is not available as an option for single-family development and cannot be used in combination with payment-in-lieu to meet applicable green area requirements. UDO tables 20-4 and 20-5 should be consulted to determine off-site tree save is available as an option. How to Convey for Off-site~~

1. ~~Deed restriction and plat recordation – off-site tree save may be provided via plat and deed restriction requirements outlined in UDO sections 20.15 and 20.18. Off-site tree save tracking plans must be included with all projects using off-site tree save.~~
2. ~~Donation to conservation organization via land donation, conservation easement, or other conservation protection acceptable to the receiving organization.~~



Areas Qualifying for Off-site

1. Properties within the same Community Planning area as the sending project site, or
2. Alternative locations within Charlotte's city limits or ETJ may be considered on a case-by-case basis. To be considered, alternative locations should address one or more tree canopy-related equity and/or environmental justice issues such as: < 35% tree canopy coverage or urban heat island impacts. Contact Urban Forestry for more information on off-site tree save locations.
 - a. 2022 Charlotte Urban Tree Canopy Assessment
 - b. Charlotte Future 2040 Comprehensive Plan – Equitable Growth Framework

Payment-in-Lieu

A payment may be made by a developer or a property owner to a City administered tree preservation fund, per item 1 below. The payment shall be a percentage of the tax value of the land being developed pursuant to the Charlotte Tree Manual. The tax value of the land being developed shall not exceed 90% of the average tax value of land in the City limits and of the ETJ, excluding the land within the boundaries of I-77/I-277 and in accordance with the Charlotte Tree Manual. The City shall update the average tax value of the land for this formula with each County property revaluation. Payment-in-lieu may be used for a portion of the required 15% green area or the entire required green area in accordance with the requirements of this section

~~1.~~ Collected monies from mitigation and payment-in-lieu processes per this item shall be deposited into the Tree Conservation Fund established in Section 20-18.D.1.a.

How to Calculate Green Area Payment-in-lieu (PIL) Fee

A. PIL formula

a. **Developing Site's Acreage X Site's Appraised Land Tax Value¹ X .15 or .30² = (\$) Fee**

- i. ¹ If a site's value is greater than 90% of the average value, the site qualifies to use the capped value below
- ii. ² Check Table UDO Table 20-5 Green Area Credits to see which multiplier applies

B. Determine property's acreage and land tax value

- a. Go to [Charlotte Explorer](#), enter relevant Parcel ID and search, click highlighted parcel, check *Parcel Information* and *Assessment Value/Card Info* section in information panel

C. Capped value = 90% of average tax value for one (1) acre of land in Charlotte and it's extraterritorial jurisdiction (ETJ) = **\$192,626**

- a. Derived by analysis of current county property records and [2019 Revaluation](#) results

D. Multiplier – determine site's place type, consult UDO Table 20-4: Tier Assignment of Place Types to determine applicable tier, consult UDO Table 20-5: Green Area Credits to determine applicable multiplier. Tier 1 = 15% Tier 2 = 30%

Table 20-4: Tier Assignment of Place Types			
Tier 1 Place Types	Tier 2 Place Types	Tier 3 Place Types	Tier 4 Place Types
Regional Activity Center Place Type	Manufacturing and Logistics Place Type	Neighborhood 2 Place Type - All zoning districts other than N2-C Zoning District	Neighborhood 1 Place Type
Community Activity Center Place Type	Neighborhood Activity Center Place Type		
Campus Place Type - If zoned IC-2 or RC Zoning District	Commercial Place Type	Campus Place Type - All zoning districts other than IC-2 or RC Zoning District	Parks and Preserves Place Type
	Innovation Mixed-Use Place Type		
	Neighborhood 2 Place Type - If zoned N2-C Zoning District		

Table 20-5 Green Area Credits				
Green Area Credits	Multipliers			
	Tier 1	Tier 2	Tier 3	Tier 4
Payment-in-Lieu (See Section 20.15.G) ³	1	0.5		

Restrictions

- ~~1.~~ Single-family subdivision development – PIL is not available as an option
- 2. Combination – PIL may not be used in combination with off-site tree save
- 3. Payment timing – payments must be submitted prior to approved plans being released. The City may consider a 60-day maximum delayed payment agreement with customers on a case-by-case basis. Delayed payment will only be considered if customer submits information justifying the delay via a letter of agreement with the Chief Urban Forester. If delayed payment is granted, no site work or tree disturbing activity of any kind may begin until payment is submitted. Entire payment must be submitted in one installment, multiple installments or phased payments are not permitted.

~~F.~~

PIL Formula Examples

Example 1



- 1-acre PIL qualifying site with an appraised land tax value of \$175,000 opts to use the payment-in-lieu option to meet the Green Area requirement. Tier 1 Green Area Credit rate of 1 (15%) multiplier applies

1.0-acre X \$175,000 land tax value X .15 = \$26,500

Example 2

- 1-acre PIL qualifying site with an appraised land tax value of \$1,500,000 opts to use the payment-in-lieu option to meet the Green Area requirement. Tier 1 Green Area Credit rate of 1 (15%) multiplier applies

1.0-acre X \$192,626* land tax value X .15 = \$28,893.90

*site qualifies to use capped value due to appraised land tax value exceeding \$192,626

Example 3

- 1-acre PIL qualifying site with an appraised land tax value of \$1,500,000 opts to use the payment-in-lieu option to meet the Green Area requirement. Tier 2 Green Area Credit rate of 0.5 (30%) multiplier applies

1.0-acre X ~~\$385,252~~192,626* land tax value X .30 = ~~\$115,575.60~~57,787.80

*site qualifies to use capped value due to appraised land tax value exceeding \$192,626

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Frontage Tree Planting Requirements

UDO – Article 20. Landscape, Screening, & Tree Preservation: 20.16

Applicability

Frontage tree planting requirements apply to development projects constructing a single and new single-family, duplex, triplex, or quadraplex structure (principal structure) on a single property in N1 and N2 zoning districts, except as part of an approval of a new subdivision as defined by UDO section 30.3.A, or as part of a multi-dwelling development, or if constructed on three or more contiguous or adjacent lots. See UDO sections 2.3 General Definitions and 15.3 Use Definitions for clarity on structure and dwelling unit definitions.

Length of frontage will be determined on overall length of property line adjacent to public street right-of-way.

Planting – minimum one tree per lot

1. Tree type – large mature tree species must be planted on 40' spacing to meet this requirement unless there is a conflict with overhead distribution power lines (no large mature trees allowed within 25'). Service power lines providing electrical services to dwellings are not considered conflicts. Additional items that significantly restrict and reduce root and canopy growth such as insufficient tree spacing, planting strip width, water meters, sewer lines,

driveways, stop sign visibility, and sight triangles may allow for the planting of small tree species.

2. Size & Placement – trees must be planted between residential buildings and public streets. Trees may be planted in City-maintained public street right-of-way (not in NCDOT right-of-way).

- a. Spacing adjustment – The minimum spacing between large maturing trees may be reduced from 40 feet to 30 feet. The minimum spacing between small maturing trees may be reduced from 30 feet to 20 feet.

- b. Utilities – trees may not be planted closer than 10 feet to underground utilities.

- c. Conflicts – Sites with demonstrated constraints including insufficient tree spacing, planting strip width, water meters, sewer lines, driveways, stop sign visibility, and sight triangles may meet this requirement through payment-in-lieu or planting in alternate locations on the site, only if constraints significantly restrict and reduce root and canopy growth.

~~e.~~

- ~~b-d.~~ Existing trees – only existing large maturing shade trees two-inch caliper or greater may be counted towards this requirement if adequately protected during construction.

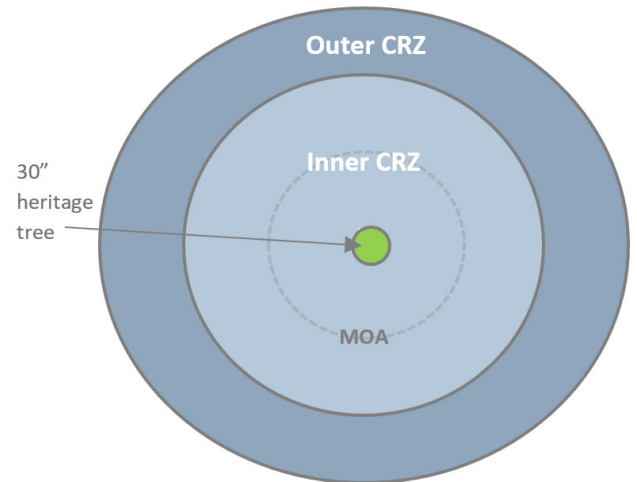
- ~~e-e.~~ Tree size – trees shall be a minimum of two-inch caliper and meet American Standards of Nursery Stock (ANSI Z60.1), unless otherwise authorized by the Chief Urban Forester or their designee.

- i. Growth – topping is prohibited. Frontage trees must be allowed to grow to their natural height and form. Any code-required tree that is dead or missing, or that is authorized for removal shall be replaced with a new tree by the property owner during the next planting season (November – March) to maintain continuing compliance with this requirement.

- ii. Tree Disturbing Activity – trees planted to meet this requirement are considered protected and code-required trees, and require tree work permits from the City prior to tree disturbing activity for maintenance. Topping is prohibited.

- f. Minimum planting area – trees planted to meet this requirement shall be provided a minimum planting area of 274 square feet. Existing sites with demonstrated constraints may be allowed to provide reduced planting area with approval of Chief Urban Forester or their designee.

~~e.~~



Critical Root Zone (CRZ)

UDO – Article 2. Rules of Construction, Abbreviations, & Definitions: 2.3
Charlotte Tree Ordinance: 21-2
CLDS 40.02 Tree Protection Detail

Definition

The area of soil around the tree where roots that provide stability and uptake of water and minerals are located, the main structural and functional part of the root system. It is a protected circular area around a tree with a radius equal to one foot per inch of tree diameter at breast height (DBH) with the tree trunk at the center of the circle.

CRZ Standards

CRZ shall equal one (1) linear foot of protection for each inch of tree trunk diameter (DBH). Trees shall have a minimum CRZ of 6'.

Disturbance terminology in this guideline refers to tree disturbing activity (TDA) as defined in the definitions section of the Charlotte UDO and Tree Ordinance.



CRZ areas

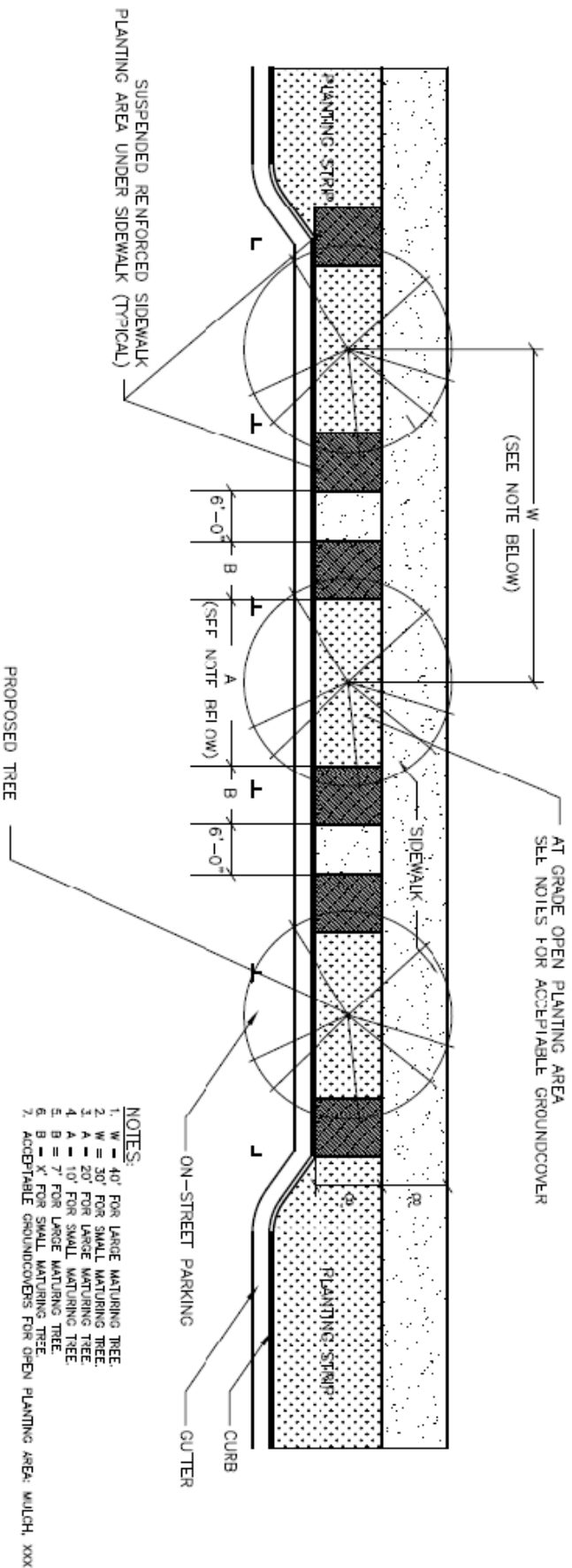
1. Minimum offset – the minimum distance at which tree disturbing activity may occur in proximity to the root flare of a protected tree. TDA within the minimum offset area is prohibited as it may lead to immediate loss of structural integrity and significant decline in tree health.
 - a. For heritage trees MOA shall be a minimum distance of 10'.
2. Inner CRZ – zone directly adjacent to root flare and equal to half of tree's DBH. This area contains vital structural roots critically important to supporting a tree's structural integrity and health. Overlaps with MOA.
3. Outer CRZ – zone adjacent to Inner CRZ area and equal to half of tree's DBH. This area contains important feeder roots important to biological processes supporting tree health, also contains roots important to structural support. Trees can generally tolerate TDA in this area better than within the Inner CRZ area.
4. CRZ adjustments –The Chief Urban Forester or their designee may consider adjustment to CRZ dimensions on a case-by-case basis depending on pre-existing site conditions and specific tree characteristics such as species tolerance to construction activity. Existing site conditions that may be considered include: foundations, utilities, bedrock, and other existing structures.
 - a. Heritage trees - have specific maximum CRZ disturbance limits. See heritage tree guideline in this manual for more information.

Spatial Tree Data Plan Guideline

Guideline and enforcement of spatial tree data plan requirement currently projected to be finalized and implemented in September 2024.

|

DRAFT DETAIL



- NOTES:**
1. W = 40' FOR LARGE MATURING TREE.
 2. W = 30' FOR SMALL MATURING TREE.
 3. A = 20' FOR LARGE MATURING TREE.
 4. A = 10' FOR SMALL MATURING TREE.
 5. B = 7' FOR LARGE MATURING TREE.
 6. B = X' FOR SMALL MATURING TREE.
 7. ACCEPTABLE GROUNDCOVERS FOR OPEN PLANTING AREA: MULCH, XXX

NOT TO SCALE

 <p>CHARLOTTE</p>	<p>CITY OF CHARLOTTE</p> <p>LAND DEVELOPMENT STANDARDS</p> <p>INCLUDES CHARLOTTE ETJ</p>	<p>HYBRID PLANTING STRIP (PLAN)</p>	<table border="1"> <tr> <td>STD. NO.</td> <td>REV.</td> </tr> <tr> <td>40.XX</td> <td>00</td> </tr> </table>	STD. NO.	REV.	40.XX	00
	STD. NO.	REV.					
40.XX	00						



Amended Soil Guideline

UDO – Article 20. Landscape, Screening, & Tree Preservation
Charlotte Tree Ordinance
CLDS 40.06, 40.08A, 40.08B, 40.08C

Amended Soil (AS)

The AS requirement may be met in one of the following ways:

1. Preparing the existing soil for planting by tilling to a depth of 18", and adding some new planting mix and/or organic matter. This option may also require the removal of some existing soil along with other mitigation work and soil amendments to improve soil structure.
2. Removing all existing soil from a protected/required planting area and replacing it with new planting mix and other soil amendments.
3. Condition and compaction of existing soil minimum requirements as stated below.
3. AS requirements may be waived by the Chief Urban Forester, City Arborist, or their designees.

Determination of AS requirements will be made by the Chief Urban Forester, City Arborist, or their designees. Staff will inspect soil at the time of planting to determine required soil amendments.

Compaction

In all cases existing and amended soils used to meet planting requirements shall not have a compaction level greater than 300 psi.

Soil Condition & Structure
Determination of AS requirements will be made by the Chief Urban Forester, City Arborist, or their designees. Staff will inspect soil at the time of planting to determine required soil amendments.

Planting mix used to meet AS requirements shall have uniform composition throughout, with a mixture of subsoil. It shall be free of stones, lumps, live plants and their roots, sticks, and other extraneous matter. It shall contain no man-made materials unless otherwise specified. Planting mix shall not be used while in a frozen or muddy condition.

Unless otherwise specified in the contract documents, new/added planting mix shall contain the following specified percentages of constituents:

CLAY	Minimum 10%/ Maximum 40%
SAND	Minimum 20%/ Maximum 50%
SILT	Minimum 20%/ Maximum 50%
ORGANIC MATTER	Minimum 5%/ Maximum 10%

Organic Matter is defined as compost/humus such as sawdust or leaf mold that has completed the decomposition process. Percentage of organic matter shall be determined by loss on ignition of moisture free samples dried at 65 degrees.

AS shall have a have an acidity range of pH 5.5 to 7.0.

AS shall have a Cation Exchange Capacity (CEC) from 5 to 25 cmol +/kg(meq/100g).



AS shall have normal contents of nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, and proper micronutrient levels. Nutrient levels must satisfy growing needs (as recommended by lab report) of the existing or planned plant material.

Lab testing may be required to verify the quality of existing soil, AS and other soil amendments

Tree Planting Guideline – Code Required Trees

UDO – Article 20. Landscape, Screening, & Tree Preservation
Charlotte Tree Ordinance
CLDS 4000 Series

Soil Specifications

1. See Amended Soil Guideline in this manual for more information.

General

1. Planting Season - is defined as November through March.
2. Planting area – minimum planting dimensions:
 - a. 274 square feet minimum, and width dimensions at tree location of at least eight feet (8') unless otherwise specified or approved by the City.
 - b. Connection points for irregularly shaped parking lot islands supporting internal tree requirements may taper down to a minimum twenty-four-inch width (24").
3. Staking – Staking is not required for code-required trees or trees planted in public street right-of-way unless specifically called for by the City. When required, staking shall be installed per CLDS 40.01. Property owners shall remove all staking within one year of installation.
4. Native species
 - a. At least 75% of new required trees shall be native species per NRCS Plant Database for North Carolina.
 - b. Sites required to plant more than 20 trees shall follow requirements set forth in UDO Table 20-1 Plant Diversity Requirements.
5. Tree planting location
 - a. Buildings – Located at least ten feet from buildings unless otherwise approved by the City.
 - b. Underground utilities – Located at least ten feet from on-site underground utilities where feasible, unless otherwise approved by the City. For the purposes of this standard, underground utilities mean primary service lines for water, sewer, City-maintained stormwater, electric, gas, cable TV, and data transmission lines.
 - c. Above ground power lines – Large maturing trees shall not be planted within 25 feet of overhead power distribution. Small maturing trees may be planted where overhead power distribution lines would interfere with normal growth of large maturing trees. Large and small maturing trees shall not be planted within any electric utility rights-of-way for overhead transmission lines, without documented and confirmed authorization of the corresponding utility provider.

- d. Lighting – The required separation between site lighting and trees on a site shall conform to the standards of Table 20-6 Site Lighting and Tree Separation Requirements below.
- 6. Soil Specifications – The entire planting area for all code-required trees shall contain a soil mix and profile that meets requirements of the amended soil guideline found in the Charlotte Tree Manual. Typically planting locations require some type of amendment action to meet requirements. This may be accomplished via multiple actions including but not limited to: decompaction from tilling & amending, hydraulic fracturing, hydrovac excavation, removal and replacement; and the addition of soil amendments such as organic material and suitable amended soil. Amendment actions will vary based on site specific needs and should be implemented without damaging existing vegetation.
- 7. Long-term compliance – developed properties and other properties subject to development requirements, and/or other types of code-required trees and preserved/protected areas are required to maintain compliance in perpetuity.
 - a. Re-planting – Code-required or protected trees shall be removed and replaced by the property owner during the next planting season.
 - b. Species – Trees of the same approved species as those existing may be used to replace dead, missing, or unhealthy trees. The property owner is required to use large maturing shade trees as replacements whenever possible.
 - c. Maintenance – Trees shall be allowed to grow to their natural height and form. Pruning of these trees is permissible when obtaining a tree work permit.

Topping is prohibited. Property owners will not be held liable for pruning conducted by utility providers.

Perimeter Tree Planting

- 1. Existing trees – Per UDO section 20.17.C.1.B., existing trees used to meet perimeter planting requirements shall be protected per CLDS 40.02 and the Critical Root Zone Protection Guideline within this manual. Planting Dimensions
 - 1. _____
 - 2. Townhome development (attached single-family housing)
 - a. A minimum of 50% of all required perimeter trees shall be planted in all cases. Connection points for irregularly shaped parking lot islands supporting internal tree requirements may taper down to a minimum twenty-four inch width (24”).

Internal Tree Planting Tree pits – see CLDS 4000 series

- 1. Parking lot islands
 - a. Light poles – shall not be installed in parking islands used for code-required trees unless explicitly allowed per the UDO or approved by the Chief Urban Forester.
 - b. Utilities and transformers – shall not be installed in parking lot islands used for code-required trees.



1.

Tree Protection Signage

UDO – Article 20. Landscape, Screening, & Tree Preservation: 20.18 A.2.

Charlotte Tree Ordinance: 21-7

CLDS 40.02 Tree Protection Detail

Tree protection signage will be required for all projects approved on/or after June 1st, 2024.

Tree Protection Sign Standards

Tree protection zone (TPZ) signs, as provided below, are required to be installed on all City-required tree protection fencing. TPZ signs must be clearly visible and legible on all sides of TPZ by the general public and all persons working in close proximity to protected trees and areas. TPZ signs must be installed throughout the life of projects and may not be removed except to replace any existing signs that are insufficient or if authorized by City.

Quality – TPZ signs must be provided and installed with white background and red warning font on the top of the sign.

Minimum dimensions – TPZ signs shall be a minimum of 8.5" x 14" and made from water resistant material.

Attachment – TPZ signs must be attached to fencing and may be attached using zip ties, twine, or another material that will adequately hold signs in place.

Placement – At least one TPZ sign shall be installed on all fence segments surrounding a protected tree or area. One sign shall be installed every 100' on fencing segments greater than or equal to 100' in length, or as otherwise approved by the City.

[TPZ sign template available on next page](#)

Sign image below provided for reference purposes only

Tree Protection Zone (TPZ) Do Not Enter

Zona De Protección De Arboles (ZPA) – No Entre

No tree disturbing activity may occur in the TPZ without authorization by the City of Charlotte.

Tree protection fencing must remain in place and cannot be removed without authorization by the City of Charlotte.

Unauthorized tree disturbing activity and failure to maintain tree protection measures may subject persons to civil penalties and fines per Article 20 of the Charlotte Unified Development Ordinance and/or the Charlotte Tree Ordinance (Chapter 21 of city code).

No se permite ninguna actividad que disturba los árboles en la ZPA sin la autorización de la Ciudad de Charlotte

La cerca de protección de árboles debe permanecer en su lugar y no puede ser removida sin la autorización de la Ciudad de Charlotte.

Actividades no autorizadas que disturbaban los árboles o la falta de medidas para mantener la protección de árboles pueden someter a las personas a sanciones civiles y multas según el Artículo 20 de la Ordenanza de Desarrollo Unificado de Charlotte y / o la Ordenanza de Árboles de Charlotte (Capítulo 21 del código de la ciudad).

Contact Information – concerns/inquiries may be directed to [CharMeck 311](#).

Información de contacto: preguntas se pueden dirigir a [CharMeck 311](#).

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Native NC Tree Species List



The native species list helps customers and residents identify heritage trees on their property. The list is intended to support heritage tree requirements of the UDO and Charlotte Tree Ordinance. The native species list is NOT the same as Approved Species List.

The list contains all North Carolina native tree species commonly found in Charlotte, NC in heritage tree size. For a comprehensive list of all native species visit the U.S. Department of Agriculture Natural Resource Conservation Service [Plants Database](#).

Tree identification resources:

- [ID Your Tree](#) – City of Charlotte Landscape Management
- [Identification of Common Trees of North Carolina](#) – NC State Extension
- [Trees of North Carolina](#) – NC State University

Native Tree Species to North Carolina – Common to Charlotte in Heritage Tree Size				
#	Scientific Name	Common Name	Common to Charlotte	Common Heritage Tree
1	<i>Acer floridanum</i> (Chapm.) Pax	southern sugar maple	y	y
2	<i>Acer rubrum</i> L.	red maple	y	y
3	<i>Acer saccharinum</i> L.	silver maple	y	y
4	<i>Acer saccharum</i> Marshall	sugar maple	y	y
5	<i>Carya cordiformis</i> (Wangenh.) K. Koch	bitternut hickory	y	y
6	<i>Carya glabra</i> (Mill.) Sweet	pignut hickory	y	y
7	<i>Carya illinoensis</i> (Wangenh.) K. Koch	pecan	y	y
8	<i>Carya laciniosa</i> (Michx. F.) G. Don	shellbark hickory	y	y
9	<i>Carya ovata</i> (Mill.) K. Koch	shagbark hickory	y	y
10	<i>Carya tomentosa</i> (Lam.) Nutt.	Mockernut hickory	y	y
11	<i>Catalpa bignonioides</i> Walter	southern catalpa	y	y
12	<i>Catalpa speciosa</i> (Warder) Warder ex Engelm.	Northern catalpa	y	y
13	<i>Celtis laevigata</i> Willd.	Sugarberry	y	y
14	<i>Celtis occidentalis</i> L.	common hackberry	y	y
15	<i>Fagus grandifolia</i> Ehrh.	American beech	y	y
16	<i>Fraxinus americana</i> L.	white ash	y	y
17	<i>Fraxinus caroliniana</i> Mill.	Carolina ash	y	y
18	<i>Fraxinus pennsylvanica</i> Marshall	green ash	y	y
19	<i>Juglans nigra</i> L.	black walnut	y	y
20	<i>Liquidambar styraciflua</i> L.	sweetgum	y	y
21	<i>Liriodendron tulipifera</i> L.	tuliptree	y	y
22	<i>Magnolia grandiflora</i> L.	southern magnolia	y	y
23	<i>Nyssa sylvatica</i> Marshall	blackgum	y	y

#	Scientific Name	Common Name	Common to Charlotte	Common Heritage Tree
24	Pinus echinata <u>lyrata</u> e Mill.	Shortleaf pine	y	y
25	Pinus taeda L.	loblolly pine	y	y
26	Platanus occidentalis L.	American sycamore	y	y
27	Populus ×canadensis Moench (pro sp.) [deltoides × nigra]	Carolina poplar	y	y
28	Populus deltoides W. Bartram ex Marshall	eastern cottonwood	y	y
29	Quercus alba L.	white oak	y	y
30	Quercus bicolor Willd.	Swamp white oak	y	y
31	Quercus coccinea Münchh.	Scarlet oak	y	y
32	Quercus falcata Michx.	Southern red oak	y	y
33	Quercus laurifolia Michx.	Laurel oak	y	y
34	Quercus lyrata <u>lyrata</u> Walter	overcup oak	y	y
35	Quercus montana Willd.	Chestnut oak	y	y
36	Quercus nigra L.	water oak	y	y
37	Quercus palustris Münchh.	Pin oak	y	y
38	Quercus phellos L.	willow oak	y	y
39	Quercus rubra L.	northern red oak	y	y
40	Quercus shumardii Buckley	Shumard's oak	y	y
41	Quercus stellata Wangenh.	Post oak	y	y
42	Quercus velutina Lam.	Black oak	y	y
43	Quercus virginiana Mill.	Live oak	y	y
44	Taxodium distichum (L.) Rich.	Bald cypress	y	y
45	Tilia americana L.	American basswood	y	y
46	Ulmus alata Michx.	Winged elm	y	y
47	Ulmus americana L.	American elm	y	y
48	Ulmus rubra Muhl.	Slippery elm	y	y



Mitigation Requirements

Mitigation requirements apply to authorized removals

Mitigation Fees & Planting Requirements		
<u>Tree or Mitigation Type</u>	<u>Mitigation Fee</u>	<u>Other Mitigation</u>
<u>City Tree (authorized removal)</u>	<u>\$200/inch</u>	<u>Additional planting may be required</u>
<u>Heritage Tree (development)</u>	<u>\$1,500/tree</u>	<u>Plant minimum of 1 mitigation tree</u> <u>or</u> <u>preserve 1 specimen tree</u>
<u>Heritage Tree (non-development)</u>	<u>\$500/tree</u>	<u>Each additional planted mitigation tree</u> <u>shall reduce fee by \$250</u>
<u>Tree Save Pay-in-lieu</u>	<u>Current county-appraised tax</u> <u>value (land only)</u> <u>or</u> <u>Pay-in-lie cap = \$192,626 per</u> <u>acre</u>	<u>N/A</u>
<u>Perimeter Tree Pay-in-lieu (tree pit)</u>	<u>\$6,500/tree pit</u>	
<u>Perimeter Tree Pay-in-lieu (planting</u> <u>strip)</u>	<u>\$750/tree</u>	
<u>Other code-required or protected</u> <u>trees may require mitigation</u>	<u>\$100/inch</u>	<u>Additional planting may be required</u>



Fines & Penalty Schedule

See notes section for additional information

<u>Unauthorized Removal or Tree Damaged & Total Loss^{1,4,5,6,9}</u>			
<u>Tree Type⁴</u>	<u>Fine Level</u>	<u>Non-Monetary Penalty</u>	<u>Mitigation Required¹</u>
<u>City Tree</u>	<u>\$300/inch</u>	<u>Additional planting may be required</u>	<u>N/A</u>
<u>Perimeter Tree (non-City tree)</u>	<u>\$100/inch</u>	<u>Re-plant for site compliance, additional planting may be required</u>	
<u>Internal Tree</u>	<u>\$100/inch</u>		
<u>Tree Save (development)²</u>	<u>\$100/inch</u>	<u>Provide 150% of area disturbed, re-plant for site compliance, additional planting may be required</u>	
<u>Tree Save (non-development)</u>	<u>\$100/inch</u>	<u>Re-plant for site compliance, additional planting may be required</u>	
<u>Heritage Tree (development)</u>	<u>\$100/inch</u>	<u>Additional planting may be required</u>	<u>\$1,500 fee and plant 1 mitigation tree</u>
<u>Heritage Tree (non-development)</u>	<u>\$50/inch</u>	<u>Fine reduced 50% if planting 2 additional trees</u>	<u>\$500 fee and plant 1 mitigation tree</u>
<u>Specimen Tree (code-required)³</u>	<u>\$50/inch</u>	<u>Re-plant for site compliance, additional planting may be required</u>	<u>N/A</u>
<u>Mitigation Tree (code-required)³</u>	<u>\$50/inch</u>	<u>Re-plant for site compliance, additional planting may be required</u>	
<u>Tree Damage & Not a Total Loss^{1,4,5,6,9}</u>			
<u>Tree Type</u>	<u>Fine Level⁷</u>	<u>Non-Monetary Penalty</u>	<u>Mitigation Required</u>
<u>City Tree</u>	<u>\$1,000 per incident</u>	<u>Corrective tree care measures and/or additional tree planting may be required</u>	<u>N/A</u>
<u>Perimeter Tree (non-City tree)</u>	<u>\$500 per incident</u>		
<u>Internal Tree</u>	<u>\$500 per incident</u>		
<u>Tree Save (development)</u>	<u>\$1,000 per incident</u>		
<u>Tree Save (non-development)</u>	<u>\$500 per incident</u>		
<u>Heritage Tree (development)</u>	<u>\$1,000 per incident</u>		
<u>Heritage Tree (non-development)</u>	<u>\$500 per incident</u>		
<u>Specimen Tree (code-required)</u>	<u>\$500 per incident</u>		
<u>Mitigation Tree (code-required)</u>	<u>\$500 per incident</u>		

Fines & Penalty Schedule

See notes section for additional information



<u>Failure to Install or Maintain Tree Protection^{1,4,5,6,9}</u>			
<u>Violation Type</u>	<u>Fine Level</u>	<u>Non-Monetary Penalty</u>	<u>Mitigation Required</u>
<u>Failure to install protection</u>	<u>\$1,000 per incident</u>	<u>Install protection as required within specified time</u>	<u>N/A</u>
<u>Subsequent failures to install protection</u>	<u>\$1,000 per day</u>	<u>Install protection as required within specified time</u>	
<u>Failure to maintain protection</u>	<u>\$1,000 per incident</u>	<u>Install protection as required within specified time</u>	
<u>Subsequent failures to maintain protection</u>	<u>\$1,000 per day</u>	<u>Install protection as required within specified time</u>	
<u>Failure to Plant Original or Replacement Trees^{1,4,5,6,9}</u>			
<u>Violation Type</u>	<u>Fine Level</u>	<u>Non-Monetary Penalty</u>	<u>Mitigation Required</u>
<u>Failure to plant</u>	<u>\$50</u>	<u>Plant for ordinance compliance in specified time</u>	<u>N/A</u>
<u>Subsequent failure to plant</u>	<u>\$50/day</u>	<u>Plant for ordinance compliance in specified time</u>	
<u>Other Tree Violations of the UDO and/or Charlotte Tree Ordinance^{1,4,5,6,9}</u>			
<u>Violation Type</u>	<u>Fine Level⁷</u>	<u>Non-Monetary Penalty</u>	<u>Mitigation Required</u>
<u>Other violation</u>	<u>\$50</u>	<u>Additional planting may be required</u>	<u>-</u>
<u>Subsequent failures to install protection</u>	<u>\$1,000 per day</u>	<u>Install protection as required within specified time</u>	<u>-</u>
<u>Failure to maintain protection</u>	<u>\$1,000 per incident</u>	<u>Install protection as required within specified time</u>	<u>-</u>
<u>Subsequent failures to maintain protection</u>	<u>\$1,000 per day</u>	<u>Install protection as required within specified time</u>	<u>-</u>
<u>Willful & Repeat Violations^{1,4,5,6,9}</u>			
<u>Violations deemed willful and/or repeated violations may subject persons and property owners to increased violations up to \$20,000 per tree.</u>			
<u>Notes</u>			
<u>1. Trees planted for mitigation and/or penalty purposes are code-required and required for long-term site compliance.</u>			
<u>2. Trees and additional tree save area required for penalty do not have to be provided within common open space. It's preferred for tree save density bonus scenarios, but not required.</u>			
<u>3. Specimen and/or mitigation trees may become heritage trees as growth progresses.</u>			
<u>4. If multiple tree types apply, multiple penalties may also apply.</u>			
<u>5. Penalties are in addition to compliance required per the UDO and Charlotte Tree Ordinance.</u>			
<u>6. Maximum civil penalty per tree shall not exceed \$20,000 per tree per incident.</u>			
<u>7. Maximum civil penalty per tree shall not exceed \$1,000 per incident.</u>			
<u>9. See definition of Tree Disturbing Activity in the UDO or Charlotte Tree Ordinance for types of unauthorized disturbing activity that subject persons or property owners to fines and/or penalties.</u>			
<u>10. Failure to install and/or maintain penalties may be assessed per individual tree and/or tree area, and per incident.</u>			



City Trees and Protected Woody Vegetation

Charlotte Tree Ordinance Sections: 21-7

Definitions – see Charlotte Tree Ordinance for additional definitions

- City property – City of Charlotte-owned parcels and all Tree Canopy Preservation Program (TCPP) protected areas.
- Originating – the location where the trunk/main plant stem is rooted in the ground.
- Planted – any tree/shrub reasonably assumed to be intentionally planted by human activity.
- Street right-of-way (R/W) – street right-of-way includes all segments of City-accepted and/or City Landscape Management maintained public street rights-of-way (Charlotte Department of Transportation (CDOT) or North Carolina Department of Transportation (NCDOT)) in Charlotte's corporate city limits and which is not included within deeded or recorded plat private property lines. Landscape Management maintains trees on NCDOT street right-of-way in the city limits except for road segments identified in Charlotte Tree Manual – City Landscape Management Maintenance Areas.

Protected Vegetation

1. City Trees

a. Street R/W

- i. All planted trees originating on street R/W.
- ii. All trees ≥ 3 " DBH occurring naturally and originating on street R/W.
- iii. All trees with any part of the trunk at DBH located on street R/W, with a DBH ≥ 3 ".
- iv. All planted shrubs originating on street R/W.

b. City Property

- i. All planted and naturally occurring trees of any size on City property.
- ii. All trees located on City TCPP conservation land.
- iii. All planted shrubs originating on City property.

2. Enforcement

a. Permit

- i. Authorization in the form of a permit issued by the City Arborist Group, Urban Forestry Group, or approved land development plan is required for all tree removal, planting, maintenance work, and other types of tree disturbing activities occurring on the R/W or on private property that may impact or encroach upon the drip line of protected City trees/vegetation.

Tree disturbing activities include but are not limited to: driveway installations, irrigation work, tree removal, tree topping, grading of any kind, and excavation.

b. Property owners & private vegetation encroaching on Street R/W

- i. Property owners are required to maintain private vegetation encroaching on street R/W not protected by the Charlotte Tree Ordinance per the following City codes:
 - 1. Part I – Charter, Chapter 7, Article VI, Sec. 7.105
 - 2. Chapter 10, Division 4, Sec. 10-155
 - 3. Chapter 19, Article VIII, Sec. 19-245

Instances of encroaching vegetation on street R/W that's not protected by the Charlotte Tree Ordinance may be forwarded to City Code Enforcement of review.



City Tree Mitigation Policy & Requirements

Charlotte Tree Ordinance Sections: 21-7

Definitions – see Charlotte Tree Ordinance for additional definitions

- **City tree** - All planted trees in the street right-of-way and any naturally occurring trees three inches diameter at breast height (DBH) or greater in street right-of-way. For the purposes of this term, street right-of-way includes all segments of City-accepted and/or City Landscape Management maintained public street rights-of-way (Charlotte Department of Transportation (CDOT) or North Carolina Department of Transportation (NCDOT)) in Charlotte's corporate city limits. Landscape Management maintains trees on NCDOT street right-of-way in the city limits except for road segments identified in Charlotte Tree Manual – City Landscape Management Maintenance Areas.
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Mitigation Policy

City trees are considered assets of the City of Charlotte and protected at all times. The City manages City trees to provide the highest level of benefits possible to the Charlotte community while maintaining a high standard of public safety and acceptable risk.

Core Objectives:

1. The City seeks to preserve all healthy and structurally sound City trees.
2. Removal of City trees will not be authorized except in cases of significant hardship and/or site conflict.
3. When removal is authorized, mitigation is required.

Examples of significant hardship include: no property access, significant utility installation or maintenance impacts, construction crane positioning, authorized tree disturbing activity expected to cause significant decline in health or structural stability of a City tree.

Mitigation Requirements

- Mitigation Fee - submit payment equaling \$200 for every inch of diameter (DBH) removed.

DBH of Existing Tree X \$200 = mitigation fee

Example: City authorizes one 30" DBH tree for removal. 30" * \$200 = \$6,000 mitigation fee

-- Mitigation planting may be considered on a case-by-case basis by the City. Any mitigation trees shall be 3" caliper in size and meet planting requirements outlined in CLDS 40.01 (Tree Planting Detail), unless otherwise authorized by the City. Staff highly recommends coordinating pre-inspection of mitigation trees prior to planting.

- Trees in very poor health or that are structurally unsound may not require mitigation.
- Threatened/Undesirable species – all ash species, Callery pear varieties, and any species identified by the NC Invasive Plant Council does not require mitigation payments.
- Forested section of street right-of-way authorized for clearing: Only naturally occurring trees 8" in DBH or greater and all planted trees will require mitigation payments.

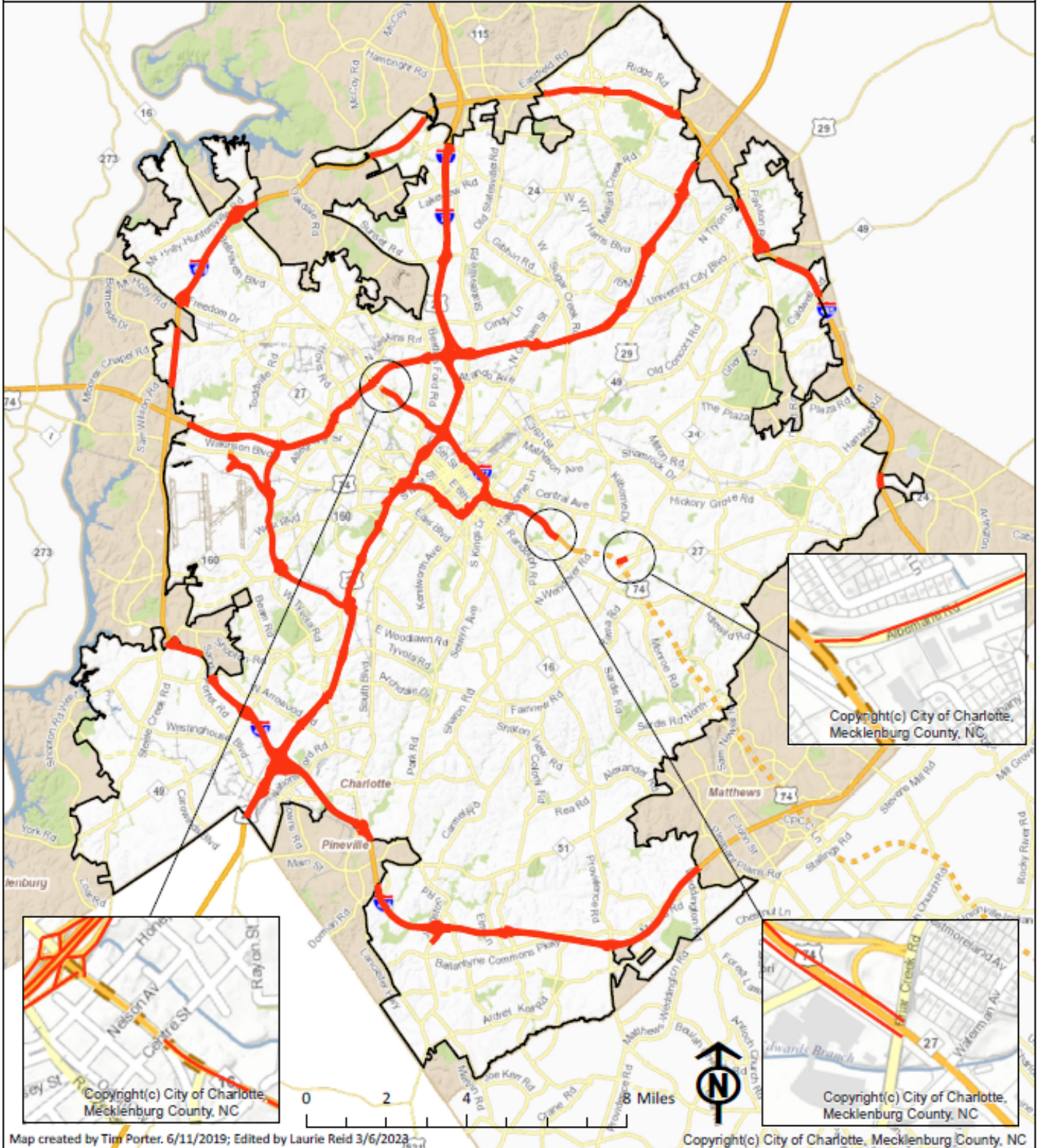
Mitigation Fee Usage

Collected fees from City tree mitigation shall be used to support the interests of public tree planting, public tree inventory, and tree canopy assessment and policy initiatives.

City of Charlotte Tree Management/Maintenance Areas

Landscape Management maintains trees planted within the rights-of-way on all City maintained public roads and NCDOT maintained roads within the City's corporate limits; exceptions include all private streets and roads identified in red on below map.

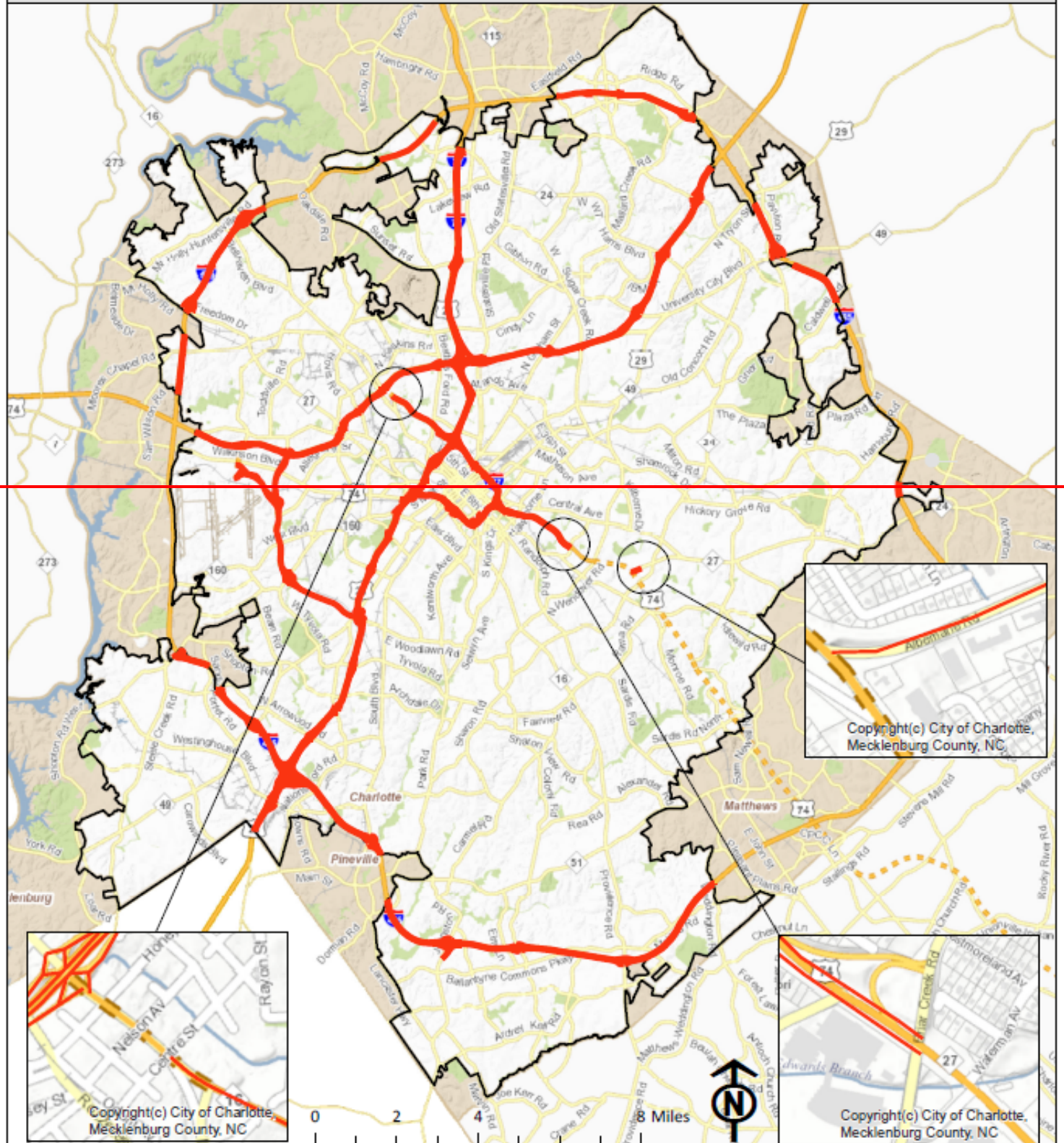
Road segments identified in red include: all interstate roads (I-77, I-277, I-85, I-485); Billy Graham Parkway; Brookshire Freeway from I-277 to Centre St; Independence Boulevard from I-277 to Briar Creek Road; Albemarle Road from Independence Boulevard to Pierson Drive.



City of Charlotte Tree Management/Maintenance Areas

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Charlotte Land Development Standards Manual (CLDSM)

[CLDSM 4000 – Tree Standards & Approved Species List](#)



The [4000 Series](#) of the CLDSM provides technical details and standardized information to be used for design, review, approval, and implementation of construction plans related to tree standards. All design details provided in this manual are approved for use within the City of Charlotte and its extraterritorial jurisdiction unless otherwise noted. Please visit the [Charlotte Development Center's](#) website for more information on the CLDSM, development regulations, and permitting processes.

The Approved Species List can be found in the CLDSM's Specifications and Special Provisions Notes section starting on page 19. This list provides guidance and standardized information related to appropriate and permitted tree and shrub species for various planting and preservation situations. This list is NOT the same as the Native NC Tree Species List.

Updates to the CLDSM 4000 Series – Tree Standards and Approved Species List will coincide with annual updates to the Charlotte Tree Manual (CTM). The Charlotte Tree Advisory Commission (CTAC) and the Development Services Technical Advisory Committee (DSTAC) review these updates and provide feedback, guidance, and recommendations to staff during update process for these 2 manuals.

The City's [Landscape Construction Standards Manual](#) provides technical guidance for City-funded construction related to trees and landscape management items.

These manuals along with the UDO and Charlotte Tree Ordinance are key elements for the implementation of the City of Charlotte's overall tree canopy policy objectives.