



712.08 Tree protection and landscaping

A. Intent and Purpose.

The purpose of these standards is to facilitate the preservation and/or replacement of trees as part of the land development process within the municipal boundaries of the City of Marietta. Benefits derived from tree protection and replanting include: improved control of soil erosion, moderation of storm water runoff and improved water quality, interception of airborne particulate matter and the reduction of some air pollutants, enhanced habitat for desirable wildlife, reduction of noise and glare, climate moderation, increased property values and aesthetic/scenic amenities.

B. Applicability. These regulations shall apply to all real property in the City now and in the future. For additions to existing projects, all areas undergoing land disturbance shall meet the regulations specified under this section. For redevelopment projects exceeding thresholds specified under Section 706.03, the entire site shall meet the regulations specified under this section. In accordance with Division 728 (Platting Procedures), all preliminary plats and subdivision improvement plans must contain a tree protection plan which meets the standards set forth in this section. Exempt from these standards are:

1. Any singular residential lot occupied by not more than one dwelling structure containing (in aggregate) not more than two dwelling units.
2. The plantings of public and private plant nurseries, tree farms or botanical gardens which are for sale to the general public.
3. Any property undergoing renovation or for which an application for a building permit for renovation has been submitted to the City prior to the adoption of this ordinance.
4. Any property zoned Central Business District.
5. Area devoted to recreational fields/ball fields, parks, and lakes.
6. Tree loss on private property due to a government or utility project

C. Definitions.

1. *Buildable Area* - The portion of a lot which is not located within any minimum required yard, landscape strip/area, or buffer; that portion of a lot wherein a building may be located.
2. *Buffer* - A natural undisturbed portion of a lot which is set aside to achieve a visual and noise barrier between land uses. A buffer is achieved with natural vegetation, except for approved access and utility crossings, and must be replanted when sparsely vegetated subject to the approval of the Department of Development Services. See Section 710.05 for regulations addressing buffers.
3. *Caliper* - American Association of Nurseryman standard for trunk measurement of nursery stock. Caliper of the trunk shall be taken 6 inch above the ground for up to and including 4 inch caliper size, and 12 inches above the ground for larger sizes.
4. *Canopy Drip Line* - The vertical line extending from the outer surface of a tree's branch tips down to the ground containing the tree's critical root zone (see Figure A).
5. *DBH* - Diameter-at-breast-height is a standard measure of tree size and is a tree trunk diameter measured 4 ½ feet above the ground. If a tree splits into multiple trunks below 4 ½ feet, then the trunk is measured at the point directly beneath the split.
6. *Density Unit* - A unit of measurement used to prescribe and calculate required tree coverage on a site. Unit measurements are based upon tree size and are not equal to individual tree counts.
7. *DFD* - Density Factor Deficit is the unit value that cannot be provided for on site, or the difference between the SDF and the summation of the RDF and EDF.



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8. *EDF* - Existing Density Factor (EDF) is the density of existing trees to be preserved on a site. The EDF is calculated by converting the diameter of individual trees to density units.
9. *Evergreen tree* – A tree than has leaves in all seasons
10. *Hardwood tree* – Trees with broad, flat leaves as opposed to coniferous or needled trees. Wood hardness varies among hardwood species and some are actually softer than some softwoods.
11. *Improved Accessway* – A private driveway that provides primary access into the interior of a development.
12. *Land Disturbance Permit* - An official authorization issued by the Department of Public Works, allowing defoliation or alteration of the site, or the commencement of any land disturbing activities.
13. *Protected Zone* - All lands that fall outside the buildable area of a parcel, all areas of a parcel required to remain in open space, and/or all areas required as landscaping strips and/or buffers according to provisions of the City of Marietta Tree Protection Ordinance.
14. *Private Street* - A local street, including but not limited to a cul-de-sac or loop design, which has only one point of intersection with an existing city or state road or with a proposed road having more than one access point.
15. *Public Street* - A publicly owned right-of-way intended for general public use to provide means of access for vehicles and pedestrians to abutting properties.
16. *RDF* - Replacement Density Factor (RDF) is the density of new trees necessary to meet the minimum Site Density Factor.
17. *Revegetation* - The replacement of trees or landscape plant materials into the minimum required landscape areas.
18. *SDF* - Site Density Factor (SDF) is the minimum tree density required to be maintained on a developed site.
19. *Specimen Tree* - Any tree which has been determined to be of a high value because of its species, size, age, or other arboreal criteria [see Subsection (D)(4)(d)].
20. *Tree* - Any self-supporting woody plant, usually having a single woody trunk and a potential DBH of at least two inches.

D. Tree Preservation and Replacement.

A tree protection and landscaping plan shall be submitted with all other permit drawings as part of the building permit process on any non-exempt parcel of land. Land disturbing activity includes any activity which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands within the state, including, but not limited to clearing, dredging, grading, excavating, transporting, and filling of land, excluding agricultural practices. The intent of these standards is to provide the necessary information to facilitate development project design, plan review, and enforcement processes in order that the provisions of the ordinance are administered in the most effective manner.

1. No land disturbance permit shall be issued for projects/lots until the landscaping plans have been reviewed and approved by the Department of Development Services. All tree protection measures shall be installed prior to land disturbance and no land disturbance permit shall be issued for full site development without it being determined that the proposed development is in compliance with the provisions of these regulations. The tree protection and landscape plan may either be a separate drawing or part of the overall landscape plan, but shall include the following information:
 - a) The name of the project
 - b) The name of the owner and/or developer, including 24 hour contact

- c) The location of proposed building(s) and corresponding dimensions
 - d) Spatial limits of land disturbance, clearing, grading and trenching
 - e) All required undisturbed buffers, landscape strips and parking islands
 - f) The location of all specimen trees or stands of specimen trees with an indication whether they are to be retained or removed; accurate locations are required when the preservation of a specimen tree is questionable, or when a site design alteration is feasible.
 - g) The location of all hardwood and softwood trees with a DBH > 3" to be counted toward counting density requirements. Sampling methods may be used to determine existing tree densities for large forested areas subject to prior approval of the City Arborist.
 - h) Areas of tree protection and revegetation and all relevant tree density calculations
 - i) The specific name and location of all materials to be planted or maintained on the site
 - j) Procedures and schedules for the implementation, installation and maintenance of tree protection measures, including, but not limited to, detailed drawings of protective tree fencing (both active and passive) including signage and erosion control measures. Tree protection fencing must be shown around the canopy drip line of any tree or stands of trees proposed to be saved for tree density credit on the site. Tree protection fencing must be indicated on the erosion control plans and grading plans, as well as the tree protection and landscape plans so as to ensure that tree protection areas are not disturbed.
 - k) Planting and staking specifications
 - l) The location of any utilities, easements, or signs
2. Grading for future site development shall be considered and regulated as timbering and mining unless site development plans are submitted and approved as per City platting regulations. Applications for tree cutting, clearing or clearing and grubbing shall be in accordance with current land disturbance permit plan review procedures and shall meet the following standards:
- a) The exterior boundary of the site shall have an undisturbed 50 foot buffer area. This buffer area shall remain undisturbed except for improved perpendicular access points, which may be no wider than 24 feet. Sites over 2 acres in size must retain a minimum of 50% of those trees with a DBH greater than 6 inches (inclusive of the required buffer).
 - b) Submitted plans shall include the following information:
 - 1) Owner's name and address
 - 2) Closed property boundary showing bearing and distances of all property lines
 - 3) Limits of land disturbance activity
 - 4) Location of tree protection fencing. Tree protection fencing must be shown around the canopy drip line of any tree or stands of trees proposed to be saved for tree density credit on the site. Tree protection fencing must be indicated on the erosion control plans and grading plans, as well as the tree protection and landscape plans so as to ensure that tree protection areas are not disturbed.
 - 5) 24 hour emergency contact name and phone number
 - 6) Location of and detail for the truck exit (crushed stone pad)
 - 7) Delineation and labeling of all required buffer zones
 - 8) Documentation of all existing trees with a DBH > 6"
 - c) All timber harvesting activities shall be in accordance with the U.S. Clean Water Act, Section 404 and *Recommended Best Management Practices for Forestry in Georgia*.
3. Tree loss on any nonexempt parcel shall not be considered an exemption from this section. Trees shall not be removed without prior authorization of the Department of Development Services staff, unless loss occurred due to sudden weather conditions which create an imminent hazard condition. Dead, dying, diseased, infested or otherwise hazardous trees may be removed only



after a Notification of Tree Removal form has been submitted and the condition of the tree(s) is verified by City staff prior to removal. A decision on the Notification of Tree Removal shall be issued as soon as possible but no later than 10 business days from receipt of all required documents. The following procedures shall be observed:

- a) If the location of the tree(s) satisfies a specific requirement, such as trees required in vehicle use areas or buffers, trees must be replaced in such a way as to meet the minimum standards for that requirement. If this cannot be achieved, all such variance requests must be submitted to City Council for consideration.
- b) If the removed tree satisfies the site density factor (SDF) only and not a specific location requirement, the following options are available:
 - 1) Replace the tree(s) with a tree of equal size; however a 3” caliper tree shall be the maximum diameter tree required to be planted, regardless of the size of the tree removed. Replacement trees must be appropriate for the location on the site according to the approved species list. NOTE - This option is only available if a Notification of Tree Removal has been submitted and approved prior to the tree’s removal.
 - 2) Provide a tree survey, complete with density calculations, for the entire site. If the density remaining on the site after the removal does not meet the minimum SDF, replacement will be necessary.
 - 3) Payment into the City of Marietta Tree Replacement Fund according to Section 712.08 (M) for the loss in the removed tree’s density.
4. The Site Density Factor (SDF) is the minimum tree density required to be maintained on a developed site (see Table D). This density requirement must be achieved whether or not a site had trees prior to development. The required unit density may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two.

TABLE D. MINIMUM TREE DENSITY CALCULATIONS

Minimum density units provided (per acre)
17

- a) Existing Density Factor (EDF) is the density of existing trees to be preserved on a site. The EDF is calculated by converting the diameter of individual trees to density units using Table E.

TABLE E. DENSITY CREDIT FOR EXISTING TREES

DBH (inches)	Density Units (Evergreen)	Density Units (hardwoods)
3-4”	0.2	0.3
5-8”	0.3	0.6
9-12”	0.4	0.9
13-16”	0.6	1.2
17-20”	0.8	1.9
21-24”	1.2	2.8
25-40”	2.0	4.5
41+”	2.5	7.0

- b) Replacement Density Factor (RDF) is the density of new trees to be planted on a site. Calculate the RDF by subtracting the EDF from the SDF. The density units given for each caliper size of replacement (new) trees is shown in Table F. Any number or combination of transplantable size trees can be used so long as their total density units will equal or exceed the RDF.

DENSITY CREDIT FOR PLANTED TREES

TABLE F-1	
Caliper Size to Unit Value	
<i>For deciduous trees normally sold by caliper size</i>	
Caliper	Density Units
1" or 7 gallon	0.1
2"	0.4
3"	0.6
4-5"	0.8
6-7"	1.2
8-9"	1.5
10+"	2.0

TABLE F-2	
Height to Unit Value	
<i>Evergreen or Multi-Trunk Trees</i>	
Height	Density Units
5 – 6 feet	0.4
7 – 8 feet	0.6
9 – 12 feet	0.8
13 feet +	1.2

- c) For additions to existing projects, the tree density requirements are calculated as noted above for only those areas in which new land disturbance is taking place. This density may be achieved using one of the following methods:
- 1) Calculate the area of any new land disturbance and add replacement trees based on that area (existing trees elsewhere on the site may not be counted with this option);
 - 2) Base density requirements on the total site area and count any existing trees on the site (subject to all restrictions noted elsewhere in these standards).

Ex: Sample Tree Density Calculation

(1) A 2.2 acre site has a Site Density Factor (SDF) of $2.2 \times 17 = 37.4$

(2) The Existing Density Factor (EDF) of trees to be preserved is calculated by converting the diameter of individual trees slated for preservation to density units as follows (all existing trees are assumed to be hardwoods):

<u>DBH</u>	<u># of trees</u>	<u>unit value</u>	<u>Totals</u>
24"	2 x	2.8	= 5.6
18"	8 x	1.9	= 15.2
10"	10 x	0.9	= 9.0
<i>Total EDF</i>		29.8	



(3) Replacement Density Factor (RDF) calculates the minimum density of new trees to be planted by subtracting the EDF from the SDF:

$$RDF = 37.4 - 29.8 = 7.6 \text{ units required}$$

(4) Tables F-1 and F-2 are used to determine the RDF as follows:

Caliper	# of trees	unit value	=	Totals
2"	10 x	0.4	=	4.0
3"	8 x	0.6	=	4.8
4"	3 x	0.8	=	<u>2.4</u>
<i>Total RDF</i>		<i>11.2</i>		

*EDF (29.8) + RDF (11.2) > SDF (37.4) therefore **DENSITY SATISFIED***

d) Specimen trees warrant special consideration and encouragement for preservation. In order to encourage the preservation of specimen trees and the incorporation of these trees into the design of projects, additional density credit will be given for specimen trees that are successfully protected during the land disturbance and construction process [subsections (I)(3) and (I)(4)]. Credit for any specimen tree thus saved shall be calculated at twice the assigned unit value shown in Table D. The following criteria are used by the Department of Development Services to identify specimen trees. Both size and condition criteria must be met for a tree to qualify. In order to obtain double density credit for specimen trees, a certified arborist must provide written verification that the tree(s) meets the following criteria prior to the issuance of a land disturbance permit. However, failure to continuously protect any specimen tree(s) during the construction process may result in the loss of the additional tree density credit, thereby rendering the previously approved tree protection and landscape plan void, and a new plan will have to be submitted for review and approval by the Department of Development Services.

Size:

- Large hardwoods: 18-inch diameter or larger
- Large softwoods: 24-inch diameter or larger
- Understory trees: 9-inch diameter or larger

Condition:

- Life expectancy of greater than 15 years
- Relatively sound and solid trunk with no extensive decay
- No more than one major and several minor dead limbs (hardwoods only)
- No major insect or pathological problem

E. Methods of Tree Protection.

1. The protective zone for designated tree save areas shall include no less than the total area beneath the canopy drip line of the tree(s).
2. Construction site activities such as material storage, concrete washout, burnhole placement, etc., may not encroach into designated tree protective zones. Any such activity within the designated tree protective zones may render the previously approved tree protection and landscape plan void, and a new plan will have to be submitted for review and approval by the Department of Development Services.

3. No disturbance shall occur within the protective zone of specimen trees or stands of trees without prior approval by the Department of Development Services.
4. The use of tree save islands and stands is encouraged over the protection of individual (non-specimen) trees scattered throughout a site. This will facilitate ease in overall site organization, increase the effectiveness of protection measures and prevent pathology.
5. Layout of the project site utility and grading plans should accommodate the required tree protective zones, which is defined as the area beneath the canopy drip line (See Figure A). Utilities must be placed between tree protective zones or incorporate those techniques described in subsections (I)(3) and (I)(4).

F. Protective Barriers.

1. Prior to any land disturbance, active tree protective fencing shall be installed so that it surrounds the critical root zones of all protected tree zones, which is defined as the area beneath the canopy drip line (See Figure A).
2. Active protective tree fences must be at least 4 feet high and may be either a wood and post construction or orange polyethylene laminar safety fencing.
3. Passive forms of tree protection may be utilized to delineate tree save areas which are remote from areas of land disturbance. These areas must be completely surrounded with continuous rope or flagging (heavy mill. minimum 4 inches wide).
4. All tree protection zones (both active and passive) should be designated as such with "tree save area" signs posted visibly on all sides of the fenced area. These signs are intended to inform subcontractors of the tree protection process. Signs requesting subcontractor cooperation and compliance with tree protection standards are recommended for site entrances although the developer shall be held responsible for any violations found.
5. All specimen trees or stands of trees, or otherwise designated tree protective zones must be protected from the sedimentation of erosion control. Silt screening must be placed along the outer uphill edge of tree protective zones at the land disturbance interface and shall be backed by twelve (12) gauge two (2) inch x four (4) inch wire mesh fencing in areas of steep slope.
6. All erosion control must comply with Article 7-8-12 of this ordinance. All tree fencing and erosion control barriers must be installed prior to and maintained throughout the land disturbance process and building construction and may not be removed until landscaping is installed.

G. Vehicle Use Areas.

1. Parking Lots: Interior landscaping of parking lots shall contain planter islands located so as to relieve the expanse of parking, provide shading and channel water runoff.
 - a) A maximum of 12 parking spaces in a row shall be permitted without a planter island.
 - b) Planter islands shall have a minimum of 125 square feet in area and shall contain at least one non- pine species tree having at installation a minimum caliper of 2 inches and 10 feet in height. This requirement may be waived in those instances in which facing parking rows are separated by a continuous island at least five feet in width containing at least one small or medium canopy tree every twenty feet. The remaining area shall be landscaped with appropriate materials.
 - c) Encroachment: Landscaped areas shall require protection from vehicular encroachment. Car stops shall be required should any tree trunk be placed within 2' of a curb. Car stops shall be required in all instances where parking is adjacent to a landscaped area and curbing is not provided, to prevent damage to any trees by automobiles.



2. **Planted Strip/Border Area:** The intent of the planted border areas is to create tree-lined roadways that improve the quality of the built environment for pedestrians and motorists alike. All trees in planted borders must be classified as “Road Frontage Street” trees in Table G-2. Border areas are required on both sides of the roadway where applicable. Pine species are excluded from parking islands and along streets or accessways. The remainder of the planted area shall be landscaped with appropriate materials.
- a) Each area of the site which abuts any roadway, including public streets, private streets or improved accessways providing access to the interior of a development must provide a planted border parallel to the roadway as described below. Alleyways are excluded from any planted border requirements.

(a) TABLE G-1a. REQUIREMENTS FOR PLANTED STRIP/BORDER AREAS
(excluding single family lots in residential subdivisions)

Public Street	10-foot minimum width
	Minimum one tree per 30 lineal feet of roadway
	Medium and large canopy trees only
	3” minimum caliper
Private Street	10-foot minimum width
	Minimum one tree per 30 lineal feet of roadway
	Medium and large canopy trees only
	3” minimum caliper
Improved Accessway	5-foot minimum width
	Minimum one tree per 20 lineal feet of roadway
	Small and medium canopy trees only
	2” minimum caliper

- b) Street trees for individual lots within residential subdivisions shall be required based on total lineal road frontage as described below. Trees must be planted as close to the 10’ landscape strip/border as possible but in no case shall trees located outside the front setback (or major side setback in case of corner lots) to be counted as street trees. Parcels used for purposes other than residential lots (common areas, detention areas, community clubhouses, etc.) shall follow the regulations above (TABLE G-1a) for planted border areas. Trees must be medium or large canopy only and a minimum of 3” caliper.

TABLE G-1b. REQUIREMENTS FOR PLANTED STRIP/BORDER AREAS IN RESIDENTIAL SUBDIVISIONS

Lineal Road Frontage	Minimum Number of Trees Required per lot
≤ 64’	1
65’ - 94’	2
95’ – 124’	3
≥ 125’	Minimum one tree per 30 lineal feet of roadway

- c) Landscaped border areas may be interrupted to provide perpendicular vehicular and/or pedestrian ingress and egress, maximum 24 feet wide. Driveway or accessway interruptions shall be excluded from the calculations of total lineal feet to determine the number of trees required.
3. In those instances where trees are planted closer than 5 feet from a public street or sidewalk, either concrete or HDPE (high density polyurethane plastic) root barriers must be installed. These root barriers must be a minimum of 30 inches deep, but depending upon the size, location and specie of tree to be planted, the Director of Public works may require the root barrier to be 36 inches to 42 inches deep. (Other methods or types of root barriers, i.e. biobarriers, may be considered at the discretion of the Director of Public Works.)
4. The Board of Zoning Appeals shall not issue and are not granted the authority to issue variances to any of the regulations relating to Vehicle Use Areas as contained in this paragraph; all such variance requests must be submitted to City Council for consideration.

H. Encroachment.

Most trees can tolerate only a small percentage of critical root zone loss. If encroachment is anticipated within the critical root zones of specimen trees, stands of trees, or otherwise designated protected tree zones, the following preventative measures shall be employed:

1. Clearing activities: Roots often fuse and tangle among trees. The removal of trees adjacent to tree save areas can cause inadvertent damage to the protected trees. Wherever possible, it is advisable to cut minimum 2 foot deep trenches (e.g. with a ditch-witch) along the limits of land disturbance, so as to cut, rather than tear, roots. Trenching may be required for the protection of specimen trees.
2. Soil compaction: Where compaction might occur due to traffic or materials storage, the tree protective zone must first be mulched with a minimum four inch layer of processed pine bark or wood chips, or a six inch layer of pine straw.
3. Trenching: The installation of utilities through a protective zone should occur by way of tunneling rather than trenching.
4. Grade changes: Moderate fill can be tolerated within a tree's critical root zone with the prior installation of an aeration system. A decrease in grade is best accomplished through the use of retaining walls or terracing.
5. When irreparable damage has occurred to trees within the tree protective zones, the trees must be removed and replaced with new trees of comparable unit value.

I. Remediation.

Remedial site reclamation and tree care procedures shall be implemented when encroachment within protective zones has caused damage to either the tree or the trees' growing site and the damage is reparable. If encroachment is anticipated, these horticultural practices should be employed as preemptive measures to improve tree survival.

1. Once a tree has been damaged, it is advisable to delay pruning until the deadwood becomes evident (1-3 years). Pruning for deadwood removal is then recommended. The removal of live plant tissue from a damaged tree can accelerate decline. Pruning of root severed trees may reduce the possibility of windthrow. Trees which have not been affected by construction activities can be pruned for maintenance of the tree's health, appearance and safety.
2. Fertilizer applications will enhance the vigor of trees stressed by site disturbances, thereby promoting root development.

3. A tree's adequate root development, and ultimately its chances for survival, is improved with reclamation of the growing site. Whenever possible, the soil should be brought back to its natural grade. Compacted soils within the critical root zones of trees should be aerated. The air exchange, nutrient, and water holding capacities of soils can be improved with soil amendments. A 4 to 6 inch layer of mulch material, such as pine bark or wood chips, spread within the critical root zones of trees on construction sites, is extremely beneficial.
4. The availability of water to trees on construction sites should be monitored. If grade changes or excessive rain cause the accumulation of water near trees, steps must be taken to improve drainage. Conversely, if grade changes or prolonged periods without rain cause a drought situation, then irrigation may be necessary.

J. Revegetation.

1. The replacement of trees must occur if the EDF does not meet the calculated SDF. The quantity of replacement trees must be sufficient so as to produce a total site density factor which meets the requirements established in subsection (D)(4). (Note: the terms 'unit' and 'tree' are NOT interchangeable).
2. Species selected for replacement must be quality specimens and ecologically compatible with the site. Table G-2 lists those species of trees generally acceptable for credit in density calculations based upon use or need. The Department of Development Services has information on trees and may accept alternatives to those listed in Table G-2. Pine species may only be planted in buffer or screening areas to the rear of the principal use and are specifically excluded from parking islands and along right-of-ways. No more than 50% of all new trees may be pine species, regardless of their planting location.
3. Any portion of the subject property which is within a utility power easement is required to meet the height standards of the controlling entity. These areas may be required by the City to have additional vegetation installed to compensate for these restrictions, subject to approval from the Department of Development Services.
4. All trees and landscaping shall be installed in a sound workmanlike manner and according to accepted planting procedures with quality materials as provided in literature from the Georgia Forestry Commission or the Georgia Extension Service. All landscaping shall be completed within 6 months after the date of the issuance of the certificate of occupancy; however any required fencing shall be installed prior to issuance of the certificate of occupancy. Should the landscaping not be completed in this period, it shall be deemed a violation of this section.
5. The owner, occupant, tenant or agent, shall be jointly responsible for the maintenance of all landscaping. Landscaping shall be maintained in a good condition so as to present a healthy, neat and orderly appearance at least equal to the original installation. Any dead vegetation and landscaping material or any damaged nonliving landscaping materials shall be promptly replaced.

K. General Landscaping Requirements.

Beyond tree protection and revegetation, the extent of permissible impervious surfaces and required landscaping are regulated through the standards of the controlling zoning district. Landscaping may include grass, hedges and trees as well as natural features. All site plans submitted for new construction or renovations to an existing building according to Section 712.08 (B) must contain a separate landscape plan which includes the following information:

1. The name of the project
2. The name of the owner and/or developer
3. The location of proposed building(s) and corresponding dimensions

4. Spatial limits of land disturbance, clearing, grading and trenching
5. All required undisturbed buffers, landscape strips and parking islands
6. The location and listing of all specimen trees or stands of specimen trees
7. Areas of tree protection and revegetation and all relevant tree density calculations
8. The specific name and location of all materials to be planted or maintained on the site
9. Procedures and schedules for the implementation, installation and maintenance of tree protection measures including, but not limited to, detail drawings of protective tree fencing (both active and passive) including signage and erosion control measures
10. Planting and staking specifications
11. The percentage of the total lot containing impervious surfaces
12. The percentage of the total lot which shall remain undisturbed
13. The percentage of the total lot devoted to landscaping
14. The location of any utilities, easements, or signs

L. Acceptable Tree Species.

Table G denotes those species of trees which may be incorporated for full credit towards the tree replacement requirements of paragraph (D). Other trees may be approved on a case by case basis provided they are large growing and ecologically compatible with the site. Revegetation plans containing at least ten new trees must incorporate at least three separate tree species with no single tree species accounting for more than 50% of all newly planted trees. Pine trees can be utilized for screening and buffer areas only. All planting and replanting plans are subject to approval through the Department of Development Services.

TABLE G-2. TREE SPECIES SELECTION LIST

Species Common Name	Genus & Species	Canopy Size	Large Landscape Areas	Road Frontage Street	Road Frontage Yard	Parking Lot Trees Islands >200 sq ft	Parking Lot Trees Islands 100 to 200 sq ft	Buffers	Riparian/ Drainage Areas	Utility Corridors	Urban Tolerant	Notes
Ash, Green (Improved Var.)	<i>Fraxinus pennsylvanica</i>	Large	X			X					X	N
Baldcypress	<i>Taxodium distichum</i>	Medium	X			X			X		X	N
Birch, River	<i>Betula nigra</i>	Medium	X					X	X			N
Blackgum (Tupelo)	<i>Nyssa sylvatica</i>	Medium	X	X	X	X			X		X	
Catalpa, Southern	<i>Catalpa bignonioides</i>	Medium	X						X			N
Cedar, Deodar	<i>Cedrus deodara</i>	Medium	X					X				
Chastetree (Vitex)	<i>Vitex agnus-castus</i>	Small	X					X				
Cherry, Japanese Flowering	<i>Prunus serotina</i>	Small			X			X	X	X		
Cherry, Yoshino	<i>Prunus x yedoensis</i>	Small			X			X		X		
Cherry, Kwanzan	<i>Prunus serrulata 'Kwanzan'</i>	Small			X			X		X		
Cherrylaurel, Carolina (Improved)	<i>Prunus caroliniana</i>	Medium			X			X	X			N
Chestnut, Chinese	<i>Castanea mollissima</i>	Large	X		X							
Crapemyrtle (single trunk)	<i>Lagerstroemia indica</i>	Small	X							X		
Cryptomeria	<i>Cryptomeria japonica</i>	Small	X					X				
Devilwood	<i>Osmanthus americanus</i>	Small	X					X		X		S
Dogwood, Pink Flowering	<i>Cornus florida var. rubra</i>	Small	X					X		X		
Elm, American (Improved Var.)	<i>Ulmus americana</i>	Large	X	X	X	X	X	X			X	
Elm, Chinese	<i>Ulmus parvifolia</i>	Large	X		X	X	X					N
Elm, Winged	<i>Ulmus alata</i>	Medium	X	X	X	X	X					
Fringetree, Chinese	<i>Chionanthus retusus</i>	Small	X		X	X			X	X	X	
Fringetree (Grancy Gray Beard)	<i>Chionanthus virginicus</i>	Small	X		X	X			X	X	X	
Ginkgo (male)	<i>Ginkgo biloba</i>	Large	X	X	X							
Golden Rain Tree	<i>Koelreuteria paniculata</i>	Small		X	X							
Hemlock, Canadian	<i>Tsuga canadensis</i>	Medium	X					X				
Hickory (spp.)	<i>Carya spp.</i>	Large	X					X				N
Holly, American	<i>Ilex opaca</i>	Medium			X			X			X	N
Holly, Chinese	<i>Ilex cornuta 'Burfordii'</i>	Very Small			X			X			X	
Holly, Fosters	<i>Ilex x attenuata 'Fosteri'</i>	Small			X			X			X	S
Holly, Lusterleaf	<i>Ilex latifolia</i>	Small						X				S
Holly, Savannah	<i>Ilex x attenuata 'Savannah'</i>	Small			X			X			X	S
Holly, Yaupon	<i>Ilex vomitoria</i>	Small						X	X			S
Honeylocust (thornless)	<i>Gleditsia triacanthos var. inermis</i>	Large	X									N
Hornbeam, American	<i>Carpinus caroliniana</i>	Medium	X		X	X	X		X			N
Juniper, Hetzi	<i>Juniperus</i>	Small						X				S
Juniper, Pfitzer	<i>Juniperus</i>	Small						X				S
Katsura Tree	<i>Cercidiphyllum japonicum</i>	Medium	X		X	X	X					
Locust, Black (seedless)	<i>Robinia pseudoacacia</i>	Medium	X	X					X		X	N
London Planetree	<i>Platanus x acerifolia</i>	Large	X	X	X	X			X		X	
Magnolia, Japanese (Saucer)	<i>Magnolia x soulangiana</i>	Medium	X		X							
Magnolia, Southern	<i>Magnolia grandiflora</i>	Large	X					X	X			N
Magnolia, Southern "Little Gem"	<i>Magnolia grandiflora</i>	Medium			X	X		X		X		N



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Magnolia, Sweetbay	<i>Magnolia virginiana</i>	Medium	X		X			X	X		X	N
Maple, Hedge	<i>Acer campestre</i>	Medium	X		X			X	X			
Maple, Japanese	<i>Acer palmatum</i>	Small	X		X					X		
Maple, Red (Hybrids only)	<i>Acer rubrum</i>	Medium	X	X	X	X		X	X			N
Maple, Sugar	<i>Acer saccharum</i>	Large	X	X	X			X	X			N
Maple, Trident	<i>Acer buergerianum</i>	Small			X	X		X		X	X	
Oak, Black	<i>Quercus velutina</i>	Large	X	X	X	X		X				N
Oak, Chestnut	<i>Quercus prinus</i>	Large	X	X	X	X		X				N
Oak, Laurel	<i>Quercus hemisphaerica</i>	Large	X	X	X	X		X				N
Oak, Northern Red	<i>Quercus rubra</i>	Large	X	X	X	X		X				N
Oak, Nuttall	<i>Quercus nuttalli</i>	Large	X	X	X	X	X	X				N
Oak, Overcup	<i>Quercus lyrata</i>	Large	X	X	X	X	X	X				N
Oak, Post	<i>Quercus stellata</i>	Large	X	X	X	X		X				N
Oak, Sawtooth	<i>Quercus acutissima</i>	Large	X	X	X	X		X				
Oak, Scarlet	<i>Quercus coccinea</i>	Large	X	X	X	X		X				N
Oak, Shumard	<i>Quercus shumardii</i>	Large	X	X	X	X		X				N
Oak, Swamp White	<i>Quercus bicolor</i>	Large	X	X	X	X		X	X			
Oak, Water	<i>Quercus nigra</i>	Large	X	X	X			X				N
Oak, White	<i>Quercus alba</i>	Large	X	X	X	X		X				N
Oak, Willow	<i>Quercus phellos</i>	Large	X	X	X	X		X				N
Pagodatree, Japanese	<i>Saphora japonica</i>	Large	X		X			X				
Pine, Virginia	<i>Pinus virginiana</i>	Medium						X				N
Pine, Loblolly	<i>Pinus taeda</i>	Medium						X				N
Pistache, Chinese	<i>Pistacia chinensis</i>	Medium		X	X	X	X				X	
Planetree, London	<i>Platanus x acerifolia</i>	Large	X	X	X	X						
Popular, Tulip	<i>Liriodendron tulipifera</i>	Large	X		X				X			N
Redbud, Eastern	<i>Cercis canadensis</i>	Small	X	X	X			X		X		N
Redcedar, Eastern	<i>Juniperus virginiana</i>	Medium	X		X			X				N
Redwood, Dawn	<i>Metasequoia glyptostroboides</i>	Medium	X		X			X				
Serviceberry, Downey	<i>Amelanchier arborea</i>	Small	X		X			X	X	X	X	
Silverbell, Carolina	<i>Halesia carolina</i>	Medium	X		X						X	N
Smoketree	<i>Cotinus obovatus</i>	Very Small			X					X		
Sourwood	<i>Oxydendrum arboreum</i>	Medium	X		X						X	N
Sweetgum (fruitless)	<i>Liquidambar styraciflua</i>	Large	X			X	X					N
Sycamore, American	<i>Platanus occidentalis</i>	Large	X									N
Tupelo, Swamp	<i>Nyssa ogeeche</i>	Large							X			
Walnut, Black	<i>Juglans nigra</i>	Large	X						X			N
Waxmyrtle, Southern	<i>Myrica cerifera</i>	Small	X					X	X			
Yellowwood, American	<i>Cladrastis kentukea</i>	Medium	X		X	X						
Zelkova, Japanese	<i>Zelkova serrata</i>	Large	X	X	X	X						
Note (S) = shrub, (N) = native to Marietta												



M. Alternative Compliance.

- 1. The intent of the Tree protection and landscaping ordinance 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. To provide an alternative in such cases, contributing to the City of Marietta Tree Replacement Fund according to the Tree Replacement Fund requirements is acceptable (see section 4-2). The following standards have been established for administering the alternative compliance method:
a. The Department of Development Services must review and approve all requests for alternative compliance. In no instance shall more than 75 percent of the required density units be met through alternative compliance. Documentation from a certified Arborist or licensed Landscape Architect must be provided to assure that as many trees as can reasonably be expected to survive must be planted on the site in question.
b. The land disturbance permit will only be issued after the Department of Development Services has approved the request for alternative compliance and received the necessary documentation and/or funds.
2. Tree Replacement Fund. As an alternative method of compliance, the City of Marietta will accept donations that will be used for the purposes of purchasing, planting and maintaining trees on public property. Funds may be used for the purchase of forested greenspace. Funds may also be used for the creation of landscape plans involving the planting of trees on public property. Calculations for donations shall be based on two (2) inch caliper replacement trees, the value of which is identified in the City of Marietta Fee Schedule. This value shall represent the average size and cost of materials, labor and guarantee for trees planted within the city limits. To determine the appropriate contribution, first calculate the Density Factor Deficit (DFD) or unit value that cannot be planted on the site. Divide the DFD by 0.3 (the unit value of a 2" caliper replacement tree) and multiply by the value identified in the City of Marietta Fee Schedule.

Ex.:A 2.2 acre site has a required Site Density Factor (SDF) of 37.4, an Existing Density Factor (EDF) of 21.4 and can only accommodate a Replacement Density Factor (RDF) of 9.0.

Determine the Density Factor Deficit (DFD) using the formula:

DFD = SDF - EDF - Approved RDF

In this example, DFD = 37.4 - 21.4 - 9.0 = 7

Determine the acceptable contribution amount as follows:

7 ÷ 0.4 X \$(value) = \$(contribution)

- 3. Fund Administration. The City of Marietta Tree Replacement Fund will be administered by the Department of Development Services. A quarterly report shall be submitted to the City Manager showing the amounts collected, amounts spent, and the types and locations of trees planted. The report will be made available to the Mayor and City Council upon their request.

N. Interior Landscaping of Vehicle Use Areas.

If sufficient cause is demonstrated that the required trees within the 10 foot landscape strip or within planter islands cannot be met, then the plan must show a method of alternative compliance. Sufficient cause is deemed to be when enforcing any of the requirements for the 10 foot landscape strip and/or



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the planter islands would violate any state or federal law, any ordinance of the City of Marietta, or zoning stipulation specific to the applicant. Should the placement of the trees within the 10 foot landscape strip and/or within the planter islands conflict with any existing above- or below-ground utilities, the Director of Development Services is hereby authorized to grant an administrative variance to allow one of the following solutions:

1. Specific trees conflicting with existing utilities may be relocated elsewhere within the 10 foot landscape strip, so long as the proposed location will not create potential crowding issues.
2. Specific trees conflicting with existing utilities may be relocated elsewhere on the site but within the front setback.
3. Full canopied tree species conflicting with existing above-ground utilities may be substituted for a fastigiated variety listed in TABLE G-2.
4. Payment into the Tree Replacement Fund for the appropriate size of tree (according to TABLE G-1.) using calculations specified under Section M.2.

O. Enforcement, Violations and Penalties.

Enforcement of the provisions of this section shall be the responsibility of the Department of Development Services. If, after inspection of a project by the administrator or their designee, the plan materials installed on the site do not comply with the approved plan, the applicant and property owner shall be notified of such deficiencies in writing. If the administrator deems the deviations from the approved plan acceptable, they will so note, and the applicant, property owner, and/or representative will be required to submit a revised plan within 10 days showing the actual plantings. If, after inspection, the administrator or their designee determines the site does not comply with the approved plan and further determines it to be unacceptable, the applicant and property owner shall be notified in writing by the Department of Development Services of said violations, and given 10 days in which to correct all violations. Failure to make such corrections shall be a violation of this section.

P. Appeal.

The Board of Zoning Appeals shall have the authority and duty to consider and act upon any application submitted for adjustment of standards provided herein, unless otherwise noted. In addition, the Board of Zoning Appeals shall have the power to hear and decide appeals from the decision of the Development Services Director. (Ord. No. 6005, 7/14/99, Sec. 1; Ord. No. 6119, 4/12/2000, Sec. 1)