



Planning and Development Services

10 N. Bemiston Avenue • Clayton, Missouri 63105 • 314-290-8453 • FAX 314-863-0296 • TDD 314-290-8435

Planned Unit Development

What are Planned Unit Developments (PUDs)?

Planned Unit Development (PUD) is a distinct zoning classification established to provide flexibility for unified developments by waiving certain zoning requirements in exchange for public benefits. PUD encourages the efficient use of land resources and promotes innovation in planning and building for residential, mixed use and commercial projects.

Commercial/mixed-use projects (those incorporating at least two of these uses: office, retail, residential, or hotel) that exceed 50,000 square feet in size, that are located in a commercial or service zoning district, and are unable to meet the established zoning criteria are eligible for a PUD. PUDs are also required for all developments in certain Downtown overlay districts.

Residential projects that are on a lot at least 30,000 square feet in size, that are located in a multi-family zoning districts (R-4 to R-7), and unable to meet the established zoning criteria are eligible for a PUD.

What is the process?

Predevelopment Meeting

Although this first step is optional, it is highly recommended that the petitioner schedule a meeting with the Planning Department staff to discuss the feasibility of the proposal and to become familiar with City requirements and procedures.

Conceptual Review

Conceptual review is an opportunity for the applicant to get direct feedback from the Plan Commission/Architectural Review Board on whether or not a project design is headed in the right direction prior to the development of detailed civil, architectural, and landscape plans. It is not a completeness review and other issues may arise with the submittal of more detailed plans.

The Plan Commission/Architectural Review Board meets the first and third Monday of every month. The application deadline is 3 p.m. on the Monday two weeks prior to the meeting. Submittals for conceptual review must include the components listed below:

- Completed and signed Architectural Review Board application and \$135 application fee
- 1 full-size plan set and 10 half-size plan sets. Plan sets must include the follow items:
 - Proposed Site Plan
 - Floor Plans

- Context Elevation
- Architectural Elevations
- Colored Renderings
- A PDF copy of the complete plan set and all supplemental documents (CD or email)
- A brief narrative describing the proposed project.

Impact Studies

A traffic study is required for the majority of PUD projects. The City contracts with Crawford Bunte Brammeier (CBB) to conduct traffic studies for new developments. To initiate the traffic study, the applicant first submits a preliminary site plan showing proposed building footprints, parking, site access and circulation, and information regarding the number of structures, units, square footage, and proposed uses. City staff then engages CBB to prepare a scope of services and estimated fee that is reviewed by the City and the applicant. Once the scope and fee is agreed upon, the applicant will submit a check in the full amount to the City and the traffic study is initiated. Most traffic studies are completed within four weeks, but some can take longer depending on the size and complexity of the project or if St. Louis County maintained roads are involved.

Parking, noise, and shadow studies may also be required depending on the location and type of project proposed. All studies must be completed before and submitted to the City prior to staff review.

Submittal and Staff Review

Each PUD application first undergoes an interdepartmental review by City staff. Staff review meetings are conducted every Thursday for applications that are received by noon the previous Friday. When a project requires multiple approval and plan sets, the applicant may submit the same plans (combined plan sets) for all applicable approvals provided the combined sets include all of the information required for each applicable project review. Submittals for staff review must include the components listed below. Incomplete submittals will not be accepted.

- Completed and signed Planned Unit Development application (pages 5-13), Petition For Rezoning (page 23), and Architectural Review Board application (pages 28-33). If the project requires a lot consolidation or subdivision (most projects do), the application for Subdivision/Boundary Adjustment (page 24) must be submitted as well.
- A \$1,990 submittal fee (\$2,275 if a subdivision plat is required) which includes a \$535 Planned Unit Development application fee, \$285 Petition For Rezoning application fee, \$135 Architectural Review Board application fee, \$285 site plan review fee, \$450 deposit for landscape review, and \$300 Storm Water Prevention Pollution Plan (SWPPP) review fee).
- 6 copies of **complete and stapled** plan sets folded print side out to approximate 8 ½ X 11. Plan sheets should be 24" x 36" in size. Plan sets must include the follow items:
 - Current boundary survey
 - Subdivision Plat (if applicable)
 - Proposed Site Plan (Civil and Architectural)
 - Stormwater Pollution Prevention Plan (SWPPP)
 - Landscape Plan
 - Floor Plans
 - Architectural and Context Elevations, and Colored Renderings

- Colored photos of the property and adjacent properties
- A completed City of Clayton Tree Chart (excel spreadsheet). Contact kcranford@claytonmo.gov to request a blank spreadsheet.
- A PDF copy of the complete plan set and all supplemental documents (CD, flash drive or email)
- A brief narrative describing the proposed project.
- Subdivision Trustee approval (via letter or signatures on plans), if applicable.

Within seven days of the staff review meeting, an email is sent to the applicant outlining plan deficiencies. City consultants review the Landscape Plan and SWPPP, and those comments are forwarded to the applicant at the same time. The applicant has 30 days from the date of the deficiency email to submit revised plans addressing the listed deficiencies and comments.

Resubmittal

Once the plans have been revised based on staff's comments, the applicant should submit **two full-size plan sets with revisions clouded and note referenced and a letter stating how each of the City's comments are addressed**. Plans submitted in response to staff's comments may result in new or additional comments, and plans will only be put on the Plan Commission meeting agenda when staff feels the plans are complete and satisfactory. Once staff has determined that the plans are sufficient to proceed to the Plan Commission/Architectural Review Board, the applicant shall submit **ten 11 X 17 plan sets** (not clouded/not referenced) for distribution to the members. **A combined pdf document of the submittal shall also be submitted** (flash drive or email).

Plan Commission/Architectural Review Board Meeting

The Plan Commission and Architectural Review Board are two distinct boards that are composed of the same members and hold joint meetings the first and third Monday of the month. The Plan Commission will make a recommendation to the Board of Aldermen on the PUD, Rezoning, and Subdivision applications. The Architectural Review Board will have final authority on the design and materials of the proposed project.

City staff prepares the public hearing notice for the meeting. The public hearing notice for the project must appear in the newspaper at least fifteen days before the scheduled meeting date.

The applicant will receive a copy of the agenda and the staff report prior to the meeting date. Adjacent property owners within 200 feet of the subject property will be notified of the meeting. Each project will have three items on the meeting agenda (Planned Unit Development, Rezoning & Architectural Review). If a subdivision plat is required, it will be listed as a separate agenda item. At the meeting, planning staff will give a summary of the proposed project and each request on the agenda, including a staff recommendation to approve, approve with conditions, or deny the request. The applicant will have an opportunity to address the Plan Commission/Architectural Review Board and there will be an opportunity for public comments. **A 3D rendering of the project must be brought to the Plan Commission meeting for presentation to the members.** The Plan Commission may vote to continue the requests to a later meeting, or may recommend approval, approval with conditions, or denial to the Board of Aldermen. The Architectural Review

board may also vote to continue the request to a later meeting, or may vote to approve, approve with conditions, or deny the request.

Board of Aldermen Meeting

The Board of Aldermen meets the second and fourth Tuesday of every month. All requests for PUD, Rezoning, and Subdivision Plat require final approval by the Board of Aldermen. After the Plan Commission has made its recommendation to the Board of Aldermen, the City will publish notice at least 15 days prior to the meeting date. At least a week before the scheduled meeting date, the applicant must submit one full-size plan set with revisions clouded and note referenced, a letter explaining all plan revisions, 12 half-size plan sets (without clouded revisions), and a PDF copy of the revised plans (flash drive or email). **A 3D rendering of the project must be brought to the Plan Commission meeting for presentation to the members.**

All adjacent property owners within 200 feet of the subject property will be notified of the meeting. Each project will have two items on the meeting agenda (Planned Unit Development & Rezoning). If a subdivision plat is required, it will be listed as a separate agenda item. At the meeting, staff will give a summary of the proposed project. The applicant will have an opportunity to address the Board and there will be an opportunity for public comments. The Board may vote to continue the requests to a later meeting, or may vote to approve, approve with conditions, or deny the requests.

If the project is approved, the applicant will receive a copy of the approved ordinances. The PUD ordinance, development plan, and subdivision plat must be recorded with the St. Louis County Recorder of Deeds.

Building Permits

Application for building permits must be made within one year from the date of Board of Aldermen approval or the PUD will expire. A written request for an extension must be received by the City Clerk no less than 45 days before the expiration date. Approval of a request for an extension is at the sole discretion of the Board of Aldermen.

The Planning Department will not accept any building permit applications until the project has received all required approvals and all conditions of approval have been met. The building permit plans must reflect the plans as approved by the Board of Aldermen and Architectural Review Board.



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APPLICATION FOR PLANNED UNIT DEVELOPMENT

Check off each box to indicate that the required items, in the quantities required, have been included in your submittal. Completion of this page does not mean the submittal is “sufficient,” it means that the application can be accepted for later sufficiency review by staff. Make sure to include all other items required for your specific project. **Incomplete applications will not be accepted.**

- Completed and signed Planned Unit Development application (pages 5-13), Petition for Rezoning (page 23), and Architectural Review Board application (pages 28-33). If the project requires a lot consolidation or subdivision (most projects do), the application for Subdivision/Boundary Adjustment (page 24) must be submitted as well.
- A \$1,990 submittal fee (\$2,275 if a subdivision/boundary adjustment plat is required) which includes a \$535 Planned Unit Development application fee, \$285 Petition For Rezoning application fee, \$135 Architectural Review Board application fee, \$285 site plan review fee, \$450 deposit for landscape review, and \$300 Storm Water Prevention Pollution Plan (SWPPP) review fee).
- Copies of **complete and stapled** plan sets (6 full size sets for initial staff review; 11 sets for Plan Commission distribution (1 full size & 10 11 X 17 size) & 11 sets for Board of Aldermen (all 11 X 17). Plan sets must include the follow items:
 - Current boundary survey
 - Subdivision Plat (if applicable)
 - Proposed Site Plan (Civil and Architectural)
 - Stormwater Pollution Prevention Plan (SWPPP)
 - Landscape Plan
 - Floor Plans
 - Architectural and Context Elevations, and Colored Renderings
 - Colored photos of the property and adjacent properties
- A completed City of Clayton Tree Chart (excel spreadsheet). Contact kcranford@claytonmo.gov to request a blank spreadsheet.
- A PDF copy of the complete plan set and all supplemental documents (CD, flash drive or email)
- A brief narrative describing the proposed project.
- Subdivision Trustee approval (via letter or signatures on plans), if applicable.

This page was completed by:

Signature _____ Print name _____
Phone & Email _____ Date _____

ALL APPLICABLE SECTIONS OF THIS APPLICATION MUST BE COMPLETED, AND THE APPLICATION MUST BE CONSISTENT WITH SUBMITTED MATERIALS

(type or print)

Address of Project: _____

Project Description: _____

PARTIES OF INTEREST

The full legal names of owner (partnership, incorporation, etc.), applicant, agent, architect, landscape architect, planner, engineer and/or manager are required.

Name of Owner(s) : _____

Complete Address (include zip code): _____

Phone Number (include area code): _____

Name of Applicant: _____

Complete Address (include zip code): _____

Phone Number (include area code) and E-mail: _____

Interest in Property: _____

Name of Applicant's Agent - if different from above: _____

Complete Address (include zip code) : _____

Phone Number and E-mail: _____

Name of Architect, Landscape Architect, Planner or Engineer:

Name/Position: _____

Complete Address (include zip code): _____

Phone Number and E-mail: _____

SITE DESCRIPTION

Lot Number: _____ Block Number: _____ Locator Number: _____

Subdivision: _____

Current Zoning: _____ Overlay or Urban Design District (If applicable): _____

Current Use of Site: _____

PROPOSED PROJECT

Briefly describe the project and intended use: _____

Project Type: Residential _____ Commercial _____ Mixed-Use _____

Is the intended use: Permitted _____ Conditional _____

Will there be any dwelling units in the project? Yes _____ No _____

If yes, number of units: _____

SITE DEVELOPMENT

Total Square Footage of Site: _____ Total Square Footage of Building(s): _____

Floor Area Ratio (FAR) [for commercial or mixed-use project] _____

Total Lot Impervious Coverage Percentage—Existing: _____ Proposed: _____

Total height of new structure (measured from average existing grade to the mean elevation of the pitched roof, or to the top of a flat roof): _____

Number of Floors: _____

Describe Stormwater Mitigation: _____

Stormwater Differential Runoff Calculations—Existing: _____ CFS

Proposed: _____ CFS Differential Runoff: _____ CFS

Total Number of Proposed Off-Street Parking Spaces: _____

Location of Proposed Parking: _____

Describe any amenities to be provided: _____

Provide a tabulation/breakdown of the total square footage of the site and what percentage and amount of square footage will be reserved for commercial space, residential, off-street parking, open spaces, parks, etc.

<u>Intended Use:</u>	<u>Square Footage</u>	<u>Percentage</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Give a statement showing the relationship of the proposed Planned Unit Development to applicable recommendation of the Master Plan. If there is no relationship to the Master Plan, please give justification for the variance:

Give a statement showing how the proposed Planned Unit Development (PUD) differs from the zoning ordinance requirements:

Explain why this difference from the zoning ordinance is necessary for the project to proceed:

What aspects of this project make it unusual and desirable enough for the City to allow the variation from the zoning ordinance:

What, if any, public benefit is the developer willing to provide the City? (Refer to Section 405.1380 of the Zoning Code).

Adjacent Land Use:

How is the proposed development compatible with the surrounding neighborhood?

Will there be any adverse impact on the surrounding neighborhood or the City as a whole?

If appropriate, will buffering be provided to protect adjacent land uses from light, noise, etc.?

How are the operating and delivery hours compatible with the adjacent land use?

Architecture:

How is the architecture/building materials consistent with a high quality development and adjacent area?

How does the development preserve significant architectural/environmental features of the property?

Describe how the development preserves the designated historical features of the property

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Landscape:

Demonstrate how the landscaping is appropriate for the scale of the development and enhances greenspace in the City.

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What provisions will be made for care and maintenance of greenspace areas?

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Traffic:

Will street and other means of access to the proposed development be suitable and adequate to any anticipated traffic without overloading the adjacent streets?

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If not, how will this be resolved?

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How does the internal circulation of the proposed development allow for movement of vehicles and pedestrians?

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Utilities:

Are the existing or proposed utility services adequate for the proposed development?

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LANDSCAPE PLAN

Are trees and/or evergreens to be removed? Yes _____ No _____

If yes, number of trees _____ Caliper inches (total) _____

Number of evergreens _____

New trees/evergreens proposed: Number of trees _____ Caliper inches (total) _____

Number of evergreens _____ (1:1 replacement required)

LAND DISTURBANCE

Check one of the three boxes below that accurately describes the proposed land disturbance associated with this application:

- Site Less Than 5,000 SF:** A Land Disturbance Permit and Storm Water Pollution Prevention Plan (SWPPP) are not required for sites with proposed land disturbance activities in an area less than 5,000 SF. Erosion and sediment control measures shall be provided as directed by the City's Public Works Department.
- Site Less Than One Acre but Equal to or Greater Than 5,000 SF:** A Storm Water Pollution Prevention Plan (SWPPP) is required for all sites with proposed land disturbance activities of an area greater than 5,000 SF. The SWPPP shall be separate from other site plan sheets. Refer to the Site Plan Review Checklist for requirements.
- Site Equal to or Greater Than One Acre:** A Land Disturbance Permit is required for all sites with proposed land disturbance activities in an area greater than 1 acre (43,560 SF). This is a separate permit that is required in addition to any other City permits. Application and information regarding a Land Disturbance Permit can be obtained from the Public Works Department or on the City's Website at <http://www.claytonmo.gov/permits> under Land Disturbance Requirements (SWPPP).

AMENDMENT TO A PLANNED UNIT DEVELOPMENT (PUD) ORDINANCE

Please describe in detail the proposed Amendment: _____

Please describe why Amendment is being sought:

Please describe how the proposed Amendment is in conformance with the approved Development Plan:

***A letter addressed to the Mayor & Board of Aldermen describing the request in detail must accompany this application.**

SIGNATURES (FULL LEGAL NAME IS REQUIRED)

Signature of Property Owner (Required): _____

Print name: _____

Date: _____ Title: _____

Signature of Applicant (Required): _____

Print Name: _____

Date: _____ Title: _____

PUD CHECKLIST

Submittal Requirements

- Completed and signed Planned Unit Development application (pages 5-13), Petition For Rezoning (page 23), and Architectural Review Board application (pages 28-33). If the project requires a lot consolidation or subdivision (most projects do), the application for Subdivision/Boundary Adjustment (page 24) must be submitted as well.
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- Subdivision Trustee approval (via letter or signatures on plans), if applicable.

Plan Requirements

- The street address and legal description of the subject property.
- Zoning district, subdivision name, lot number, dimensions, area and zoning of adjacent parcels where different than site.
- A vicinity map with north point, scale and date.
- The proposed title of the project and the names, addresses and telephone numbers of the architect, landscape architect, planner or engineer on the project.
- The boundaries of the subject property, all existing property lines, setback lines, existing streets, buildings, watercourses, water ways or lakes, wetlands and other existing physical features in or adjoining the project.
- Location and identification of all easements (existing and proposed).
- Dimensions of existing and proposed roadway pavements, sidewalks and right-of-way width for streets abutting the site.

- The location and size of sanitary and storm sewers, water, gas, telephone, electric and other utility lines, culverts and other underground structures in or affecting the project, including existing and proposed facilities and easements for these facilities.
- Existing and proposed contour lines or elevations based on mean sea level data, unless otherwise waived by the Department of Planning and Development Services. The topographic survey shall depict the elevation of streets, alleys, buildings, structures, watercourses and their names. The topography shall be shown by adequate spot elevations.
 - Significant topographical or physical features of the site, including any existing or proposed water features. The elevation of the curb (if existing or proposed) in front of each lot shall be indicated.
 - The proposed nature and manner of grading of the site, including proposed treatment of slopes in excess of ten percent (10%) to prevent soil erosion and excessive runoff.
- Type, location, height and degree of brightness of all exterior lighting. Note on the plans that exterior lights over 75 watts in residential districts must be fully shielded.
- Overall dimensions of all structures and the gross floor plans of each floor within the proposed building.
- A separate landscape plan prepared and sealed by a registered landscape architect, certified arborist or other similarly qualified professional. Refer to the Landscape Plan Regulations for specific requirements.
- A Stormwater Pollution and Prevention Plan (SWPPP) is required for all sites with proposed land disturbance activities of an area greater than 5,000 square feet. The SWPPP shall be a separate plan sheet and shall include the following information:
 - Existing and proposed contours.
 - Drainage facilities and methods for preserving the natural watercourse and patterns of drainage.
 - Identify limits of any areas to be disturbed by the proposed construction.
 - Amount of current impervious coverage and proposed impervious coverage.
 - Methods to mitigate additional impervious coverage and/or address drainage issues on the site.
 - Connection to storm sewer and/or method of controlling storm water run-off on-site.
 - Best Management Practices (BMPs) to reduce sediments and other pollutants associated with construction activities.
 - Location of siltation fences, hay bales and other runoff prevention methods (as well as other items as required by the site plan review process) and plans for maintenance of these installations during construction.
 - Schedule of street and sidewalk cleaning to alleviate mud and dirt on public right-of-way.
 - Seal of a registered Professional Engineer in the State of Missouri.
 - Benchmark information from the site survey.
 - Other information as required by the Director of Public Works or the Director of Planning & Development Services.
- Location and screening of trash containers and HVAC units.
- The location, height, type and material of all fences and walls.
- The materials, architectural style and distance from adjacent property lines of all proposed structures.

- Elevations of all proposed buildings.
- A context drawing depicting the street elevation of the proposed structure with existing structures shown on each side.
- The location of all proposed buildings and structures, accessory and principal, and a tabulation of the total number of stories and height, number of dwelling units and type and the overall project density in dwelling units per gross acre, where applicable.
- The location, dimensions and a tabulation of the total square footage in the project and the percentage and square footage thereof proposed to be allocated to any commercial uses, recreation areas, off-street parking, open spaces, parks, other required amenities and improvements, where applicable.
- Parking and loading facilities, required and proposed, including the number, size and location, including those facilities for the handicapped, as specified in the Building Code adopted by the City, as amended and as in force at the time of approval of the site plan.
- Each site plan shall bear the seal, signed and dated, of the licensed entity who prepared the drawing or under whose immediate personal supervision the site plan has been prepared. Revised plans and amended or modified approved plans shall also be so authenticated by the licensed entity who prepared the revision, amendment or modification to the drawing or under whose immediate personal supervision the site plan has been revised, amended or modified.
- Information shall be provided for the site itself and for an area within fifty (50) feet, or as required, of any property line of the site.

Article XXX: Trees and Landscaping Regulations

405.4030: Purpose and Objectives

The purpose of this article is to ensure the preservation of existing healthy trees and landscaping and to provide appropriate new landscaping and trees on development sites. Landscape plantings and trees are an important community asset as they provide environmental benefits, enhance community character, and add to property values. The objectives set forth in this article include the following:

1. Preserve and enhance the longevity of landscape plantings and trees in areas throughout the city;
2. Reduce soil erosion and stormwater runoff and protect water quality;
3. Enhance the appearance and preserve the character of surrounding properties;
4. Visually integrate developments into the existing landscape;
5. Improve the quality of plant and tree selection through the implementation of landscape standards and specifications;
6. Maintain adequate tree canopy coverage citywide and promote a multi-aged urban forest;
7. Provide standards for the protection, preservation and replacement of trees;
8. Promote tree species diversity and the planting of Missouri native trees and plant material; and,
9. Enhance, protect and promote the natural environment of the City of Clayton to ensure public health, the safety and welfare and the comfort and enjoyment of its citizens.

405.4040: Applicability

1. All sections of this article shall apply to any project located on private property which is subject to Article VIII: Site Plan Review, Article IX: Special Development District, or Article X: Planned Unit Development.
2. The following sections of this article shall apply to projects located on private property which request a Demolition Permit for the purposes of preparing a lot for a development project subject to Article VIII: Site Plan Review, Article IX: Special Development District, or Article X: Planned Unit Development. The Planning Director may modify the applicability provisions if an applicant can demonstrate that existing trees on site will not be impacted.
 - a. Section 405.4050: Definitions
 - b. Section 405.4060: Plan Review and Inspections
 - c. Section 405:4080: Tree Protection Plan Requirements
 - d. Section 405.4100: Tree Removal
 - e. Section 405:4120: Tree Protection Measures
3. The following sections shall apply to pre-development tree removal on private property for the purposes of preparing a lot for a development project subject to Article VIII: Site Plan Review, Article IX: Special Development District, or Article X: Planned Unit Development.
 - a. Section 405.4050: Definitions
 - b. Section 405.4110: Tree Removal

405.4050: Definitions

For purposes of applying this article, the following words, terms and phrases shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Arborist, Certified: An individual trained in the art and science of planting, caring for and maintaining individual trees and certified by the International Society of Arboriculture (ISA).

Caliper: The diameter of a tree trunk measured at 6 inches above the ground for trees up to 4 inch caliper or 12 inches above the ground for trees 4 inch caliper to 12 inch caliper. Typically used to describe the size of nursery stock or recently planted trees. For trees with multiple stems, the caliper of each stem shall be measured and the average of all measurements shall constitute the caliper of the tree. (See definition of “Diameter at Breast Height (DBH)” for measurement of larger trees over 12 inch caliper).

Condition, Existing Trees:

Good Condition – The tree shape and form is average to excellent. The tree has a good main trunk. The branches may be crowded with minor branch dieback. There are few or minor pests, good leaf color and size, no obvious root or structural problems.

Fair Condition – The tree needs pruning of live or dead branches due to habit, decline or lack of maintenance. The tree may have pest problems or minor trunk damage, poor branch angle and multi-trunks. There are no obvious structural or hazardous conditions.

Poor Condition - The tree has many dead branches, splitting trunk and hazardous branches with more than half of the crown dead. The tree may be leaning, have structural problems and extensive damage from insects or disease.

Dead/Dying Condition – The tree has extensive branch dieback or trunk decay, storm damaged branches, heavy pest problems, or already dead and needing to be removed.

Contributing Tree: Any tree measuring 3 caliper inches to 19 inches DBH that is in fair to good condition and is not an invasive species as defined by the Missouri Department of Conservation. (See definition of “Condition”).

Construction Damage: Injury to a tree caused as a result of construction activities including but not limited to root damage caused by trenching, pulling of roots, changes in soil grade (relocation, removal or filling of soil), paving over roots or compaction of soil, and damage to tree trunks or branches. (See definition of “Impacted Tree”).

Critical Root Zone (CRZ): A given distance from the trunk of a tree that includes the soil area below ground that contains the tree’s root structure and the space above ground within the tree’s canopy drip line or beyond. The CRZ is protected for the viability and stability of a tree to be retained on site in a healthy condition. (See definition of “Structural Root Zone (SRZ)”). The Critical Root Zone radius equals 1.25 feet for every 1 inch of tree diameter except in circumstances where the observed CRZ is significantly larger or smaller, in which case on-site conditions will take precedence.

Diameter at Breast Height (DBH): The diameter of a tree trunk at 4.5 feet above ground for trees over 12 caliper inches. For species of trees whose normal growth pattern is characterized by multiple stems the diameter at breast height of each stem shall be measured and the average of all measurements shall constitute the diameter of the tree.

Impacted Tree: A tree and its critical root zone (CRZ) that is in or adjacent to the development footprint and/or construction activities and whose growing conditions are or will be directly or indirectly changed as a result. (See definition of “Critical Root Zone (CRZ)” and “Tree Protection Zone (TPZ)”).

Landmark Tree: Any tree exceeding 19 inches DBH that is in fair to good condition and is not an invasive species as defined by the Missouri Department of Conservation. (See definition of “Condition”).

Landscape Architect: An individual trained in design and construction of sites and landscapes and licensed as a Professional Landscape Architect by the Missouri Division of Professional Registration.

Landscape Plan: The graphic depiction and written specifications indicating the planned arrangement of natural and constructed elements on the land (plantings, ground and water forms, circulation, walkways, irrigation, landscape lighting, etc.). All plants and trees are labeled on the landscape plan and keyed to complete tree and plant lists. Required elements of the Tree Protection Plan (TPP) can be included on the Landscape Plan or submitted as a separate plan. (See definition of “Tree Protection Plan.”)

Maintenance: Any measure considered vital in accordance with standard horticultural practices to promote the general health of plant material.

Native Tree: Any tree species identified by Grow Native as a Missouri native plant.

Plant List: Tabulation of all proposed plants by group (trees, shrubs, perennials, groundcovers and bulbs) and listed by common name, genus and species, installed size, spacing, and root stock type (bare root, pot or balled and burlapped).

Public Right-of-Way: The area, the air space above the area, the area below and the area adjacent to any public street, highway, lane, path, alley, sidewalk, boulevard, drive, bridge, tunnel, parkway, waterway, public easement or sidewalk in which the City, County or State now or hereafter holds any property interest.

Street Trees: Any tree located within a public right-of-way along a street.

Structural Root Zone (SRZ): The circular zone radiating from the trunk of a tree that is required for the tree’s stability in the ground. This zone contains the woody root growth and soil cohesion that is necessary to hold the tree upright but not the critical root zone (CRZ) required for the tree’s long-term health and viability. (See definition of “Critical Root Zone (CRZ)” and “Tree Protection Zone (TPZ)”). The Structural Root Zone will be determined by the tree’s caliper or DBH. For reference and site planning purposes, the SRZ radius by tree size is indicated below:

Caliper or DBH (inches)	SRZ Radius (feet)
1	1
2-3	2
4-5	3
6-7	4
8-9	5
10-11	6
12-14	7
15-18	8
19-22	9
24-36	10
37-45	11
50-55	12
60-65	13
70+	14

Tree: A woody deciduous or evergreen plant typically growing as a single stem or multi-stem in an upright or weeping form that will attain a mature height of at least 15 feet and at least 3 caliper inches.

Tree Canopy: The layer of leaves, branches and stems of a tree that cover the ground when viewed from above.

Tree Protection Plan (TPP): Drawings that graphically illustrate the existing trees on the project site, adjacent to the site and in the right-of-way. The TPP will include graphic depictions of the Tree

Protection Zones (TPZ)/tree protection fence, Critical Root Zone (CRZ) and Structural Root Zones (SRZ), and specific measures to protect trees during construction or other site disruptions. Required elements of the TPP can be included on the Landscape Plan or submitted as a separate plan. (See definition of "Landscape Plan.")

Tree Protection Zone (TPZ): The zone around the tree that will be maintained as natural and original conditions over the course of the development. This zone must be no less than a 5-foot radius from the trunk per caliper inch or DBH. The TPZ is to be illustrated on the landscape plan or the Tree Protection Plan (TPP).

405.4060: Plan Review and Inspections

The City may engage professional expertise to assist in the review of landscape/tree preservation plans and the property owner shall be responsible for any costs incurred to engage professional consultation. The following inspections shall be performed by the City's contracted Landscape Architect:

1. After submission of the landscape/tree preservation plan, to ensure the landscape plan provides sufficient information and detail to clearly demonstrate that all applicable requirements and standards of this article are or will be fully satisfied.
2. Prior to site work, demolition or the commencement of construction to ensure tree protection measures meet the requirements and standards of this article.
3. Ongoing inspections during or after construction as deemed necessary by the City to ensure compliance with this article.

405.4070: Landscape Plan Requirements

1. Projects subject to the requirements of this article shall submit a landscape plan for review concurrent with the submittal of other required applications and plans. The drawings shall conform to the specifications of this Article and any other requirements or conditions imposed by the City or the City's contracted landscape architect.

2. The landscape plan is subject to approval by the Plan Commission or Board of Aldermen, as appropriate depending on which body is authorized to render a final decision for the type of development approval for which the landscape plan is submitted.
3. Amendments or modifications to approved landscape plans are subject to the applicable requirements of Article VIII: Site Plan Review, Article IX: Special Development District, or Article X: Planned Unit Development, as appropriate depending on the type of development.
4. The following items shall be provided on the landscape plan. Additional information may be requested by the City or the City's contracted landscape architect.
 - a. Project title listing project name, owner name and name of firm or individual preparing the plan.
 - b. North arrow, graphic and written scale.
 - c. Scaled base plan using current information from the site development plan depicting existing and proposed grades, location of all improvements, existing and proposed utilities and sewers.
 - d. Graphic legend depicting existing vegetation and proposed conditions.
 - e. Graphic depiction and listing of all proposed trees, shrubs and plants for the project area.
 - f. A Tree Protection Plan (TPP) pursuant to Section 405.4080: Tree Protection Plan Requirements. Required elements of the TPP can be included on the landscape plan or submitted as a separate plan.
 - g. A completed digital tree chart shall be submitted with the landscape plan based on a digital spreadsheet provided by the City which automatically calculates the required and proposed tree canopy lot coverage or caliper replacement based on inputs provided by the project's landscape architect or arborist. The tree chart shall list the size, species and condition of all existing and proposed trees. Each tree schedule from the digital tree chart shall also be shown on the landscape plan.
 - h. Certification (signed and sealed) by a Missouri licensed landscape architect or ISA certified arborist.

405.4080: Tree Protection Plan Requirements

1. Projects subject to the requirements of this article shall submit a tree protection plan (TPP) for review concurrent with the submittal of other required applications and plans. The drawings shall conform to the specifications of this Article and any other requirements or conditions imposed by the City or the City's contracted landscape architect.
2. The TPP is subject to approval by the Director of Planning and Development Services or his/her designee, Plan Commission or Board of Aldermen, as appropriate depending on which officer or body is authorized to render a final decision for the type of development approval for which the TPP is submitted.
3. Amendments or modifications to an approved TPP are subject to the applicable requirements of Article VIII: Site Plan Review, Article IX: Special Development District, Article X: Planned Unit Development, or Demolition Permits, as appropriate depending on the type of development.
4. The following items shall be provided on the TPP. Additional information may be requested by the City or the City's contracted landscape architect:
 - a. Project title listing project name, owner name and name of firm or individual preparing the plan.
 - b. North arrow, graphic and written scale.
 - c. Scaled base plan using current information from the site development plan depicting existing and proposed grades, location of all improvements, existing and proposed utilities and sewers.

- d. Graphic depiction of all existing trees to remain and to be removed including location, types and size.
- e. Graphic depiction of the accurate drip line canopy showing the extent of the Critical Root Zones (CRZ) and Structural Root Zones (SRZ).
- f. Graphic depiction of the proposed Tree Protection Zones (TPZ) and location of tree protection fencing.
- g. Tree protection and planting notes and details applicable to the project, pursuant to Section 405.4120: Tree Protection Measures.
- h. A completed digital tree chart shall be submitted with the TPP based on a digital spreadsheet provided by the City which automatically calculates the required and proposed tree canopy lot coverage or caliper replacement based on inputs provided by the project's landscape architect or arborist. The tree chart shall list the size, species and condition of all existing and proposed trees. Each tree schedule from the digital tree chart shall also be shown on the TPP.
- i. Certification (signed and sealed) by a Missouri licensed landscape architect or ISA certified arborist.

405.4090: Design Standards

The following standards shall apply to new trees and landscaping:

1. Tree Standards

- a. Trees preserved or planted to meet the requirements of this article shall be preserved onsite in perpetuity and if lost over time, shall be replaced in conformance with Section 405.4110: Tree Preservation and Replacement during the first planting season after the loss occurs.
- b. New trees must be selected from Section 405.4140: Approved Tree List. Appropriate substitutions may be approved at the professional discretion of the City's contracted Landscape Architect. All trees shall meet American Standard for Nursery Stock, ANSI Z60/1-2004.
- c. New trees shall be planted in locations appropriate to the species' growth habit and horticultural requirements, and shall be located in such a manner to minimize damage to trees or structures on the project site and on adjacent properties.
- d. No more than 33 percent of the total number of new trees shall be from the same genus, and at least 33 percent of the total number of new trees shall be Missouri native trees.
 - i. The Plan Commission or Board of Aldermen, as appropriate depending on which body is authorized to render a final decision for the type of development approval under consideration, shall have the authority to approve a reduction or waiver of these requirements in instances where an applicant can demonstrate that there are unique circumstances affecting the site and that a good faith effort has been made to meet the requirements.
- e. New trees should not be located within any utility easement. Trees which can reach a mature height over 25 feet should not be planted within 20 feet of overhead utility lines. Any plantings installed in or near utility easements must be so installed and maintained as to not pose a reasonably foreseeable risk of interference with or interruption of utility service.
- f. The removal and/or planting of street trees, including species selection, are at the sole discretion of the Director of Public Works. If approved by the Director, the removal of

street trees regardless of their size or condition requires prior approval, replacement and/or payment into the City's Forestry Fund in the amount specified by the City.

2. Landscaping Standards

- a. The landscape design shall address functional requirements and enhance the context of the neighborhood and the architecture of the building or site through the provision of appropriate foundation and perimeter landscaping.
- b. Plants shall comply with recommendations and requirements of ANSI Z60/1-2004 "American Standard for Nursery Stock." All plants shall be healthy and vigorous stock suitable for the climate zone within the City of Clayton, grown in a recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae and defects such as knots, sunscald, injuries, abrasions, or disfigurement.
- c. The use of appropriate Missouri native plants identified by the Missouri Department of Conservation is strongly encouraged.
- d. HVAC and other mechanical units are to be screened from public view and adjacent properties with evergreen plantings or a fence. The plantings shall be of a type, size and height so that at least 50 percent of screening opacity is reached within one year of planting and 100 percent of screening opacity is reached within two years of planting.

405.4100: Tree Removal

- 1. The removal of any hazardous, dead or diseased trees on private property, as determined by a letter from a qualified arborist, and as necessary to remedy an immediate threat to person or property is not subject to the requirements of this article.
- 2. Trees removed within one year preceding the submittal of a development application to the City must be documented by a dated conditions report prepared by a certified arborist or forester, dated conditions photographs and a copy of the work order with date of service. Any tree removed within one year prior to the submittal of a development application that is not documented and approved by the City will be considered in good condition by default.
- 3. With the exception of any property for which a landscape/tree preservation plan has been approved in accordance with this article and a building permit has been issued, it shall be prohibited for any person to remove 19 or more caliper inches of Contributing Trees or any Landmark Tree located outside a lot's buildable area (as defined in Article III: Definitions) for the purposes of preparing a lot for a development project subject to Article VIII: Site Plan Review, Article IX: Special Development District, or Article X: Planned Unit Development.

405.4110: Tree Preservation and Replacement

- 1. Residential developments located in residential zoning districts shall provide for the preservation and/or planting of trees on the lot to the extent that the minimum tree canopy lot coverage complies with the values in the following table.

Zoning District	Minimum Tree Canopy Lot Coverage¹
R-1	62 %
R-2	46 %
R-3	31 %
R-4	26 %
R-5	20 %
R-6	24 %
R-7	5 %

Planned Unit Development (PUD)	Refer to base zoning district prior to rezoning to PUD.
<i>2013 St. Louis County Urban Tree Canopy Assessment, Forest Releaf</i>	

- a. The tree canopy lot coverage shall be the sum total of the tree canopy area for each individual tree to be preserved or proposed, calculated in accordance with this article and shown as a percentage of the total lot area.
- b. The tree canopy area for preserved trees located on site shall be the sum total of the surface area of the Critical Root Zone (CRZ) for each Contributing or Landmark Tree. The CRZ radius equals 1.25 feet for every 1 inch of tree diameter except in circumstances where the observed CRZ is significantly larger or smaller, in which case the on-site conditions will take precedence.
- c. To encourage the preservation of existing trees, Landmark Trees preserved on site shall be calculated at 125 percent of their calculated tree canopy area.
- d. Lots that do not meet the minimum tree canopy lot coverage requirements through the preservation of existing trees shall plant new trees on site selected from Section 405.4140: Approved Tree List, and in accordance with the following requirements:
 - a. The tree canopy cover for new trees shall be the sum total of the tree canopy cover potential for each individual tree, as listed in the following table and Section 405.4140: Approved Tree List.

Tree Group	Tree canopy cover potential
Deciduous-Large	750 square feet
Deciduous-Medium	500 square feet
Deciduous-Columnar/Small/Ornamental	250 square feet
Evergreen-Large	500 square feet
Evergreen-Medium	250 square feet

- b. At least one new large or medium deciduous tree shall be planted on site.
 - i. The Plan Commission shall have the authority to waive this requirement in instances where an applicant can demonstrate that there are unique circumstances on-site which would make compliance with this requirement impractical such as smaller than average lot size, the presence of utility easements, or the presence of existing large or medium deciduous trees.
2. Non-residential developments located in residential zoning districts are subject to the following requirements:
 - a. Contributing and Landmark Trees that are proposed to be removed or that were removed within one year preceding the submittal of an application to the City shall be replaced on site with new trees selected from Section 405.4140: Approved Tree List so that the combined caliper inches of new trees is at least equal to the number of inches being removed.
3. Modifications
 - a. The Plan Commission shall have the authority to approve a reduction of up to 20 percent of the minimum required tree canopy square footage and the total caliper-inch replacement requirements in instances where an applicant can demonstrate that the following criteria have been met:

- i. There are mitigating circumstances affecting the site which do not generally apply to sites developed for the same use and in the same district.
 - ii. A good faith effort has been made to retain and/or replant as many trees as feasibly possible.
 - iii. Additional understory plantings and groundcover is provided to mitigate the tree deficiency.
- b. The City shall be compensated for any tree canopy lot coverage or caliper-inch replacement deficiency through payment to the City's Forestry Fund based on the following rates, to be made prior to the removal of trees on site and the issuance of a building permit:
 - i. Residential Developments: \$0.60 per square foot of canopy cover deficiency.
 - ii. Non-Residential Developments: \$250 per inch deficiency.

405.4120: Tree Protection Measures

Any construction, demolition, site work or similar activity which may injure existing trees shall require the installation of tree protection measures as set forth in this section or as determined by the City's contracted landscape architect. The following tree protection measures are to be followed and must be noted on the landscape/tree preservation plan:

1. All tree protection measures shall be installed prior to the commencement of demolition, excavation, construction or site work.
2. A pre-construction meeting shall be held on-site to review the installed protection measures with operators, construction supervisors, contractor's representatives, and the city representative (if required by the City).
3. Development impact shall not enter the Structural Root Zone (SRZ) of trees to be preserved. If this is not avoidable, the tree may have to be removed and tree replacement requirements will be applied.
4. Tree protection fencing shall be installed along the edge of the Tree Protection Zone (TPZ) of each preserved and impacted tree within the disturbed areas. Trees that share a TPZ can be fenced together in a cluster. Tree protection fencing shall be installed along hardscape edges that will remain intact. No more than 25 percent of the TPZ can be impacted.
5. The contractor on the site shall stake clearing limits in order to facilitate location for trenching and fencing installation for tree protection.
6. The sequence of tree preservation measures, if required, shall be as follows: tree protection fencing installation to establish the TPZ; root pruning trenching; tree pruning and chemical treatment; and aeration systems.
7. Tree protection fencing shall be maintained and repaired by the contractor for the duration of construction and approved by the City. No alteration shall occur without prior approval by the City.
8. Access to the TPZ by construction equipment, materials, or individuals that may cause harm to protected trees will not be allowed. Only limited access, if necessary, shall be permitted with the prior approval of the City.
9. All designated aeration zones shall be protected with temporary fencing until final grading.
10. Removal of trees, shrubs, or undergrowth from protected areas shall only be performed when necessary and must be done with hand tools only.
11. Utility locations should be planned for areas outside of the Tree Protection Zone (TPZ). Utilities that must cross through the TPZ of trees due to site constraints and utility design requirements

must be approved by the City and will be directional bored. No open trenches are allowed. Tree protection fencing must be maintained on both sides of the boring alignment.

12. Attachment of any construction signs, fencing, etc. to any tree to be saved is strictly prohibited. Construction fence footings or support locations are required to be shown on the plan. Position post locations to span the TPZ. Upon completion of construction, all temporary barriers, fencing, and debris shall be removed from the site by the contractor.

405.4130: Certificate of Occupancy

No certificate of occupancy or final approval shall be issued until the planting of trees and landscaping as shown on the approved landscape plan is complete and the final inspection has been approved and accepted by the City.

1. Should the Director of Planning and Development Services or his/her designee determine that the season is inappropriate for planting, a maximum 6-month temporary certificate of occupancy may be issued upon written request by the property owner, noting the reasons for the delay in planting and payment of a performance bond named for the benefit of the City of Clayton, in an amount equal to 100 percent of the value of the new trees, landscape material and installation.
2. The bond or portion thereof will only be released if upon inspection by the City, the trees and/or landscaping as shown on the approved landscape plan have been installed and are observed to be in a healthy growing condition.
3. If after the 6-month extension period all trees and landscaping are not installed or the applicant has not notified the City that installation is complete, the entire performance bond or portion thereof shall be forfeited and the performance bond shall be deposited into the City's Forestry Fund.

405.4140: Approved Tree List

The following list includes approved trees to be used in conformance with the requirements of this article. Appropriate substitutions may be approved at the professional discretion of the City's contracted Landscape Architect. All trees will meet American Standard for Nursery Stock, ANSI Z60/1-2004.

Tree Group: Deciduous-Large

Characteristics: Trees 50 feet or more in height at maturity with a spread approximately equal to or more than their height and trees over 75 feet in height at maturity with a spread less than their height. Size is measured by DBH.

Minimum size at planting: 3 caliper inch

Tree Canopy Coverage: 750 square feet

<i>Botanical Name</i>	<i>Common Name</i>
Acer platanoides	Norway Maple
Acer rubrum	Red Maple (Missouri native)
Acer saccharum	Sugar Maple (Missouri native)
Aesculus spp	Horsechestnut
Alnus spp	Alder
Carya spp	Hickory
Carya ovata	Shagbark Hickory (Missouri native)
Castanea spp	Chestnut
Celtis spp	Hackberry (Missouri native)
Gleditsia triacanthos var. inermis	Thornless Honey locust
Gymnocladus dioica	Kentucky Coffeetree (Missouri native)
Liriodendron tulipifera	Tulip poplar (Missouri native)
Magnolia acuminata	Cucumbertree Magnolia
Metasequoia glyptostroboides	Dawn Redwood
Platanus x acerfolia	London Planetree
Platanus occidentalis	American Sycamore (Missouri native)
Quercus alba	White Oak (Missouri native)
Quercus bicolor	Swamp White Oak (Missouri native)
Quercus borealis	Red Oak (Missouri native)
Quercus coccinea	Scarlet Oak
Quercus imbricaria	Shingle Oak (Missouri native)
Quercus macrocarpa	Bur Oak (Missouri native)
Quercus muehlenbergii	Chinkapin Oak (Missouri native)
Quercus palustris	Pin Oak (Missouri native)
Quercus phellos	Willow Oak (Missouri native)
Quercus robur	English Oak
Quercus shumardii	Shumard Oak (Missouri native)
Quercus stellata	Post Oak (Missouri native)
Quercus velutina	Black Oak
Taxodium distichum	Bald Cypress (Missouri native)
Ulmus 'Homestead'	Homestead Elm
Ulmus parvifolia	Chinese Elm

Zelkova serrata	Japanese Zelkova
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Tree Group: Deciduous-Medium

Characteristics: Trees 25 to 50 feet in height at maturity with a spread equal to or greater than their height and trees over 50 feet in height at maturity with a spread less than their height. Size is measured by caliper or DBH.

Minimum size at planting: 3 caliper inch

Tree Canopy coverage: 500 square feet

<i>Botanical Name</i>	<i>Common Name</i>
Acer campestre	Hedge Maple
Acer griseum	Paperbark maple
Acer truncatum	Shantung Maple
Aesculus x carnea	Red Horsechestnut
Betula nigra	River Birch (Missouri native)
Carpinus betulus	European Hornbeam
Carpinus caroliniana	American Hornbeam (Missouri native)
Cercidiphyllum japonicum	Katsuratree
Cladrastis kentukea (C. lutea)	American Yellowwood (Missouri native)
Fagus spp	Beech
Ginkgo biloba	Ginkgo (male only)
Magnolia macrophylla	Bigleaf Magnolia
Nyssa sylvatica	Black Gum (Missouri native)
Ostrya virginiana	American Hophornbeam
Sophora japonica	Japanese Pagoda Tree
Tilia americana	American Linden (Missouri native)

Tree Group: Deciduous-Small & Columnar

Characteristics: Trees 50 feet or less in height at maturity with a spread less than one-half of their height. Size is measured by caliper or DBH.

Minimum size at planting: 2.5 caliper inch

Tree Canopy Coverage: 250 square feet

<i>Botanical Name</i>	<i>Common Name</i>
Acer buergerianum	Trident Maple
Acer japonicum	Full Moon Maple
Acer palmatum	Japanese Maple
Acer pensylvanicum	Striped Maple
Asminia triloba	Pawpaw (Missouri native)
Carpinus betulus 'Fastigiata'	Fastigate European Hornbeam
Carpinus betulus 'Columnaris'	Columnar European Hornbeam
Carpinus caroliniana	American Hornbeam/Ironwood
Sassafras albidum	Common Sassafras (Missouri native)

Tree Group: Deciduous-Ornamental

Characteristics: Trees that can be maintained at a height of 20 feet or less and have a spread approximately equal to their height. Size is measured by caliper or height. Multi-stem tree size is determined by measuring caliper of the largest stem and adding half the size of each of the other stems together for the total.

Minimum size at planting: 2 caliper inch (single stem), 1.5 caliper inch (multi-stem), 8 feet tall (clump).

Tree Canopy Coverage: 250 square feet

<i>Botanical Name</i>	<i>Common Name</i>
Amelanchier spp	Serviceberry (Missouri native)
Cercis canadensis	Eastern redbud (Missouri native)
Cercis spp	Redbud
Chionanthus virginicus	White Fringetree (Missouri native)
Cornus florida	Flowering dogwood (Missouri native)
Cornus spp	Dogwood
Cotinus obovatus	American Smoketree (Missouri native)
Crataegus crusgalli var. inermis	Thornless Hawthorn (Missouri native)
Crataegus mollis	Downy Hawthorn (Missouri native)
Crataegus phaenopyrum	Washington Hawthorn (Missouri native)
Crataegus spp (species with thorns)	English Hawthorn (only in non-pedestrian areas due to thorns)
Crataegus viridis	Green Hawthorn (Missouri native)
Magnolia stellate	Star magnolia
Magnolia virginiana	Sweet Bay Magnolia
Magnolia x loebneri	Loebner Magnolia
Magnolia x soulangiana	Saucer magnolia
Malus spp	Flowering Crabapples
Prunus spp	Flowering Cherry
Syringa reticulata	Japanese Tree Lilac
Viburnum prunifolium	Blackhaw Viburnum (Missouri Native)

Tree Group: Evergreen - Large

Characteristics: Trees with needled boughs or evergreen/semi-evergreen leaves and foliage, with a mature height of 40 to 80 feet depending upon genus and species. Size is measured by caliper or height.

Minimum size at planting: 8 feet tall

Tree Canopy Coverage: 500 square feet

<i>Botanical Name</i>	<i>Common Name</i>
Abies spp	Fir
Chamaecyparis spp	Falsecypress
Larix spp	Larch
Metasequoia glyptostroboides	Dawn Redwood
Picea spp	Spruce
Pseudotsuga menziesii	Douglas Fir

Tree Group: Evergreen – Medium

Characteristics: Trees with needled boughs or evergreen/semi-evergreen leaves and foliage, with a mature height of 30 to 60 feet depending upon genus and species. Size is measured by caliper or height.

Minimum size at planting: 8 feet tall

Tree Canopy Coverage: 250 square feet

<i>Botanical Name</i>	<i>Common Name</i>
Ilex opaca	American Holly (Missouri native)
Juniperus virginiana	Eastern Red Cedar (Missouri Native)
Juniperus virginiana 'Canaertii'	Canaerti Juniper
Magnolia grandiflora	Southern Magnolia
Thuja occidentalis	American Arborvitae
Thuja orientalis	Oriental Arborvitae
Tsuga Canadensis	Canada hemlock

Tree Group: Evergreen - Small

Characteristics: Trees with needled boughs or evergreen/semi-evergreen leaves and foliage, with a mature height of 15 to 25 feet depending upon genus and species. Size is measured by caliper or height.

Minimum size at planting: 6 feet tall

Tree Canopy Coverage: not contributing – no canopy coverage

<i>Botanical Name</i>	<i>Common Name</i>
Arborvitae spp	Arborvitae
Ilex x attenuate 'Fosters #2'	Foster's Holly
Juniperus chinensis varieties	Upright Juniper
Juniperus scopulorum varieties	Upright Juniper