

NOTICE

AN APPOINTMENT WITH STAFF
IS REQUIRED
PRIOR TO THE SUBMITTAL OF A
PLANNING AND ZONING
APPLICATION

The pre-submittal meeting with staff will assist you in preparing your submittal information and help to prevent delays in the process and review of your application by the Planning and Zoning Commission

CONTACT JONATHAN RAICHE, CITY PLANNER
(314) 984-5926

**CITY OF KIRKWOOD
PLANNING AND ZONING COMMISSION
APPLICATION PROCEDURE
SEPTEMBER 2016**

MUST BE SIGNED AND ATTACHED TO APPLICATION FORM

The Planning and Zoning Commission meets on the first and third Wednesdays (except June, July, August, and December) of each month at 7:00 p.m. in the Council Chambers at Kirkwood City Hall, 139 South Kirkwood Road (see attached schedule). Submittal of a petition authorizes the City to place a Zoning Matters sign on the premises advising the public of the petition.

An applicant shall complete and submit the following items to the Public Services Department according to the attached schedule. ***These are the minimum submittal requirements needed for review. Failure to provide all information will result in the application being delayed or returned.***

- APPLICATION FORM.** All forms must be completed in full, including signature of property owners. A copy of the Contract between the property owner and petitioner will suffice. Incomplete or partial applications will not be accepted and will be returned to the petitioner. *All designated spaces on the forms must be appropriately filled in prior to filing of the application.*
- COVER LETTER.** A one-page letter describing the project in detail, including nature of business, proposed use, hours of operation, number of employees, etc.
- PROPERTY TITLE.** A copy of the title, deed, title commitment, or survey which includes the legal description of the property and present ownership.
- DRAWINGS.**
 - (a) Site plan** shall be signed and sealed by a Professional Engineer and shall show all required information as noted on attached checklist.
 - (1) 18 sets 11"x17" (folded into 8.5"x11"); and
 - (2) Five sets of drawings (**no larger than 24"x36"**), (folded into 12"x10").
 - (b) Floor plan**, if applicable - 18 copies 11"x17", folded.
 - (c) Landscaping plan** showing the required information as noted on attached checklist.
 - (1) 18 sets 11"x17" (folded into 8.5"x11"); and
 - (2) Five sets of drawings (**no larger than 24"x36"**), (folded into 12"x10").
- TREE STUDY.** Study shall be signed by a certified forester, certified arborist, or landscape architect and include value of significant trees and protection methods. Trees on abutting public rights-of-way and private property within five feet of all property lines shall also be shown on study.
- PHOTOGRAPHS.** One set of color photographs of site frontage, adjacent properties, and significant site features, including significant trees.
- PROCESSING FEE.** A non-refundable filing fee is required for **each** of the following, as applicable:

Rezoning and Zoning Code Amendment	\$1,000
Special Use Permit and Amendments	\$1,000
Site Plan Review	\$700
Site Plan Review Amendment	\$500
Preliminary Site Plan Review, Mixed Use in B2	\$1,000 + \$25/acre or portion over one acre
Final Site Plan Review, Mixed Use in B2	\$500
Preliminary B4 and B5 development Plans (includes site plan review fee)	\$1,000 + \$100/acre or portion over one acre
Final B4 and B5 development Plans, (includes site plan review fee)	\$1,000

Signature

Date

CITY OF KIRKWOOD

APPLICATION FOR PLANNING AND ZONING COMMISSION ACTION

CASE NUMBER: _____

DATE: _____

PROJECT ADDRESS: _____

ZONING DISTRICT: _____ LOT SIZE: _____

LOCATOR NUMBER: _____

ACTION REQUESTED

- Zoning Change From _____ to _____
- Community Unit Plan, Type: _____
- Special Use Permit, Category: _____
- Subdivision Development, Number of Lots: _____
- B4 Development Plan
- B5 Development Plan

- Site Plan Review
 - Right-of-Way/Easement Vacation
 - Other: _____
- Comments: _____

PETITIONER INFORMATION

I (We) hereby certify that I (we) have legal interest in the hereinabove described property and that all information given herein is true and a statement of fact

Name (Print): _____ Signature: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

E-mail Address: _____

Petitioner's Status: Corporation Partnership Individual

Relationship of Petitioner to Property: Owner Tenant Option Holder (Attach Copy of Contract) Other

AGENT INFORMATION

Agent's Name: _____ Signature: _____ Phone No.: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

E-mail Address: _____ FAX No.: _____

(NOTE: The petitioner's agent, if listed, shall receive the official notice of public hearing)

PROPERTY OWNERS

Signature required or submit proof petitioner has legal interest in property.

Name: _____ Name: _____

Signature: _____ Signature: _____

Address: _____ Address: _____

City/State/Zip: _____ City/State/Zip: _____

Phone: _____ Phone: _____

FOR CITY USE ONLY

Date Received: _____ Total Received: \$ _____ Agenda Date: _____

- Rezoning: \$1,000
- Zoning Code Amendment: \$1,000
- Special Use Permit and Special Use Permit Amendments: \$1,000
- Site Plan Review: \$700
- Site Plan Review Amendment or Extension: \$500
- Preliminary Site Plan Review, Mixed Use in B2 Zoning District: \$1,000 (includes SPR fee) + \$25/acre or portion over one acre
- Preliminary Community Unit Plan (Multi Family): \$1,000 + _____ Dwelling units @ \$20/Each = \$ _____ = \$ _____
- Preliminary Subdivision/CUP (Detached Single Family): _____ Lots @ \$500/Lot = \$ _____
- Preliminary B-4/B-5 Development Plan: \$1,000 + _____ Acres @ \$100/Acre or portion over one acre) = \$ _____
- Easement Vacation: \$75
- Right-of-way Vacation: \$100
- Letter of Credit Extension: \$100

Final Subdivision Plat/Community Unit Plan/B-4or B-5 Development Plan

Date Received: _____ Total Received: \$ _____ Agenda Date: _____

- Final Subdivision Plat/CUP Type A: _____ Lots @ \$100/Lot = \$ _____ + 1-1/4% of \$ _____ = \$ _____
- Sidewalk Wavier on _____ feet @ \$30/Foot = \$ _____ = \$ _____
- Final CUP Type C: \$500 + 1-1/4% of \$ _____ = \$ _____
- Amend Approved Community Unit Plan Type A or Type C: \$500
- Amend Final Development Plan of Approved Subdivision Plat: \$200
- Final B-4 and B-5 Development Plan or Amend Approved B4 Plan (when public hearing is not required): \$1,000
- Amend Approved B5 Plan (when public hearing is not required): \$500
- Final Site Plan Review, Mixed use in B2 Zoning District: \$500
- Amend Approved Final Site Plan, Mixed use in B2 Zoning District: \$300

SUBCOMMITTEE (_____)

**CITY OF KIRKWOOD
 PLANNING AND ZONING COMMISSION
 CITY CONTACTS
 AUGUST 2016**

NAME/TITLE	LOCATION	PHONE NUMBER	E-MAIL ADDRESS
Bill Bensing Public Services Director	City Hall 139 South Kirkwood	314-822-5846	bensinwe@kirkwoodmo.org
Ted Dunkmann, P.E. City Engineer	City Hall 139 South Kirkwood	314-822-5820	dunkmatj@kirkwoodmo.org
Jonathan Raiche, AICP City Planner	City Hall 139 South Kirkwood	314-984-5926	raichejd@kirkwoodmo.org
Amy Lowry Assistant City Planner	City Hall 139 South Kirkwood	314-822-5815	lowryag@kirkwoodmo.org
Cory Meyer City Forester	Public Works Building 345 South Fillmore	314-984-5907	meyercc@kirkwoodmo.org
Jack Schenck Building Commissioner	City Hall 139 South Kirkwood	314-822-5814	schencjw@kirkwoodmo.org
Russell Todd Deputy Building Commissioner	City Hall 139 South Kirkwood	314-822-5817	toddrd@kirkwoodmo.org
Leo Meyer Assistant Chief/Fire Marshal	Fire House 2 11804 Big Bend	314-822-5884	meyerla@kirkwoodmo.org
Rick McKinley Distribution Engineer	Utilities Building 212 South Taylor	314-984-5925	mckinlry@kirkwoodmo.org
John Howze Sanitation Superintendent	Public Works Building 345 South Fillmore	314-822-5849	howzeje@kirkwoodmo.org

City of Kirkwood Planning Division
2016 Planning and Zoning Commission Submittal Calendar & Meeting Schedule

Pre-application Meeting	Formal Application Deadline	P&Z Commission Meeting 7pm (Presentation)
	Monday	Wednesday
	12/21/2015	1/6/2016
	1/4/2016	1/20/2016
	1/19/2016*	2/3/2016
	2/1/2016	2/17/2016
	2/16/2016*	3/2/2016
	2/29/2016	3/16/2016
	3/21/2016	4/6/2016
	4/4/2016	4/20/2016
	4/18/2016	5/4/2016
	5/2/2016	5/18/2016
	5/31/2016*	6/15/2016
	7/5/2016*	7/20/2016
	8/1/2016	8/17/2016
	8/22/2016	9/7/2016
	9/6/2016*	9/21/2016
	9/19/2016	10/5/2016
	10/3/2016	10/19/2016
	10/17/2016	11/2/2016
	10/31/2016	11/16/2016
	11/21/2016	12/7/2016

Each case must have at least one pre-application review meeting prior to formal submittal
(314) 984-5907

Summer Schedule

All submittal deadlines are firm. Any deviation from these deadlines will result in delay of hearing date.
Dates and times of meetings are subject to change without notice
Applications requiring a public hearing before the PZ Commission shall alter the initial meeting date
*Tuesday

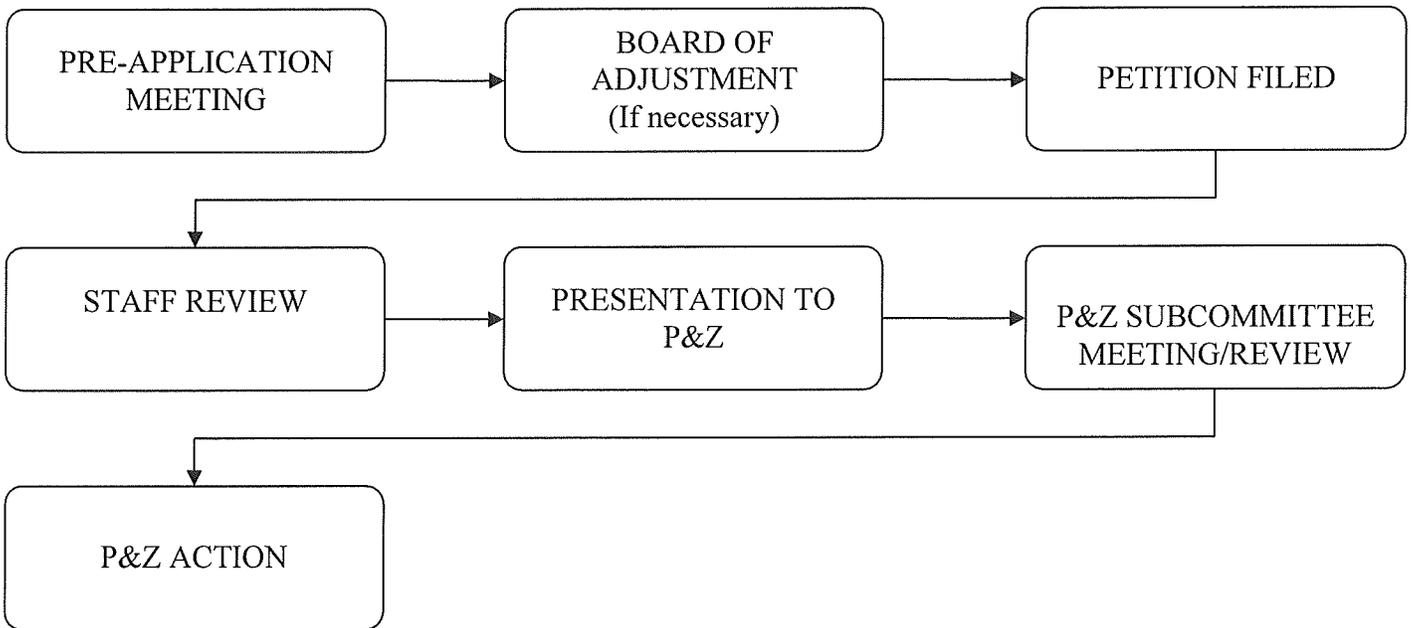
Special Notes:

**CITY OF KIRKWOOD
2017 PLANNING AND ZONING COMMISSION
SUBMITTAL DEADLINE AND MEETING SCHEDULE**

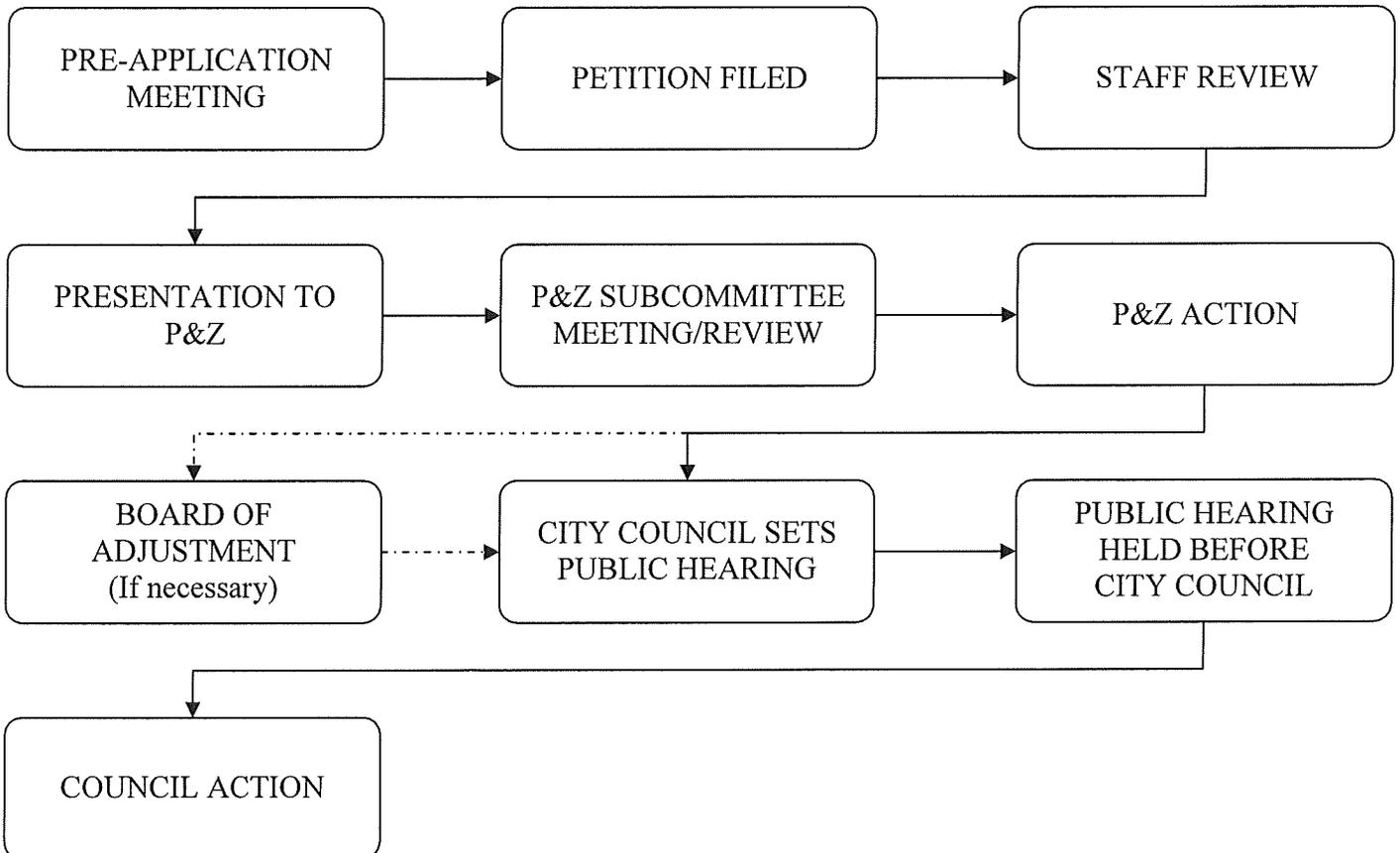
PRE-APPLICATION MEETING	APPLICATION DEADLINE	P&Z COMMISSION MEETING DATE (PRESENTATION)
	Friday	Wednesday
	12/16/2016	1/4/2017
	12/30/2016	1/18/2017
	1/13/2017	2/1/2017
	1/27/2017	2/15/2017
	2/10/2017	3/1/2017
	2/24/2017	3/15/2017
	3/17/2017	4/5/2017
	3/31/2017	4/19/2017
	4/14/2017	5/3/2017
	4/28/2017	5/17/2017
	6/2/2017	6/21/2017
	6/30/2017	7/19/2017
	7/28/2017	8/16/2017
	8/18/2017	9/6/2017
	9/1/2017	9/20/2017
	9/15/2017	10/4/2017
	9/29/2017	10/18/2017
	10/13/2017	11/1/2017
	10/27/2017	11/15/2017
	11/17/2017	12/6/2017
<p>Each case must have at least one pre-application review meeting prior to formal application</p>		Summer schedule

SPECIAL NOTES: All submittal deadlines are firm. Any deviation from these deadlines will result in delay of hearing date. Dates and times of meetings are subject to change without notice. Applications requiring a public hearing before the PZ Commission will alter the initial meeting date.

SITE PLAN REVIEW PROCEDURE

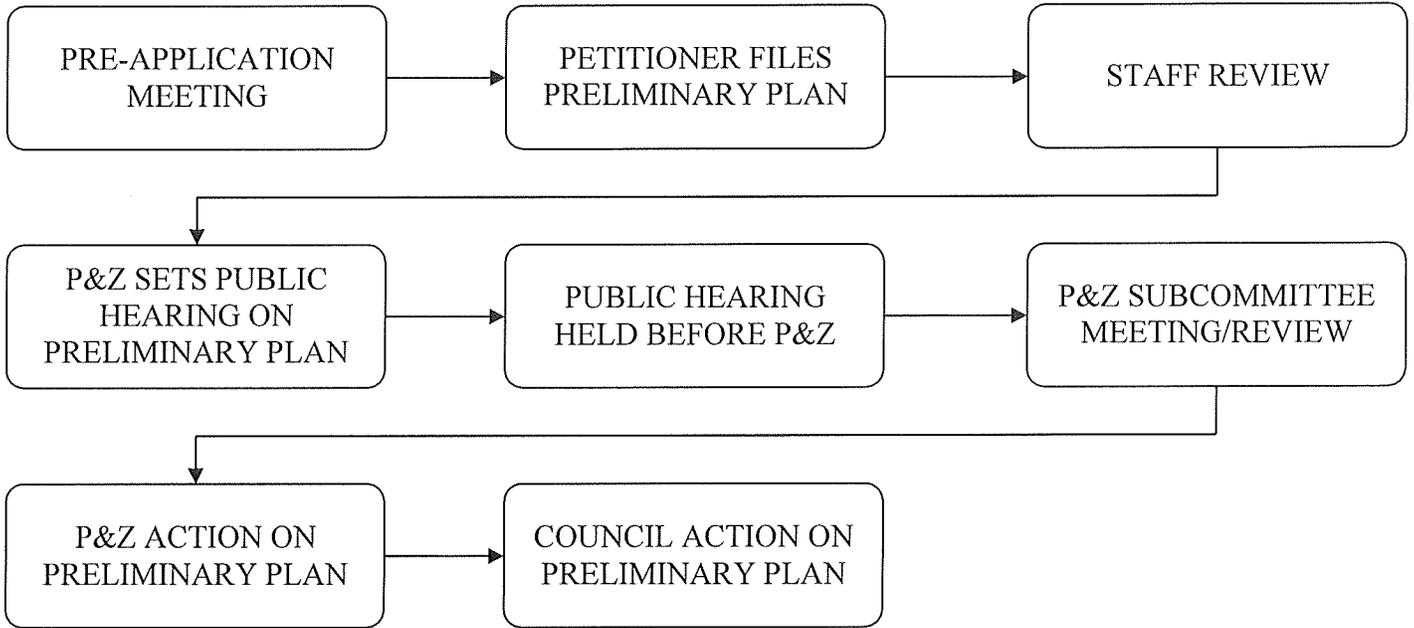


REZONING/SPECIAL USE PERMIT AND SITE PLAN REVIEW PROCEDURE

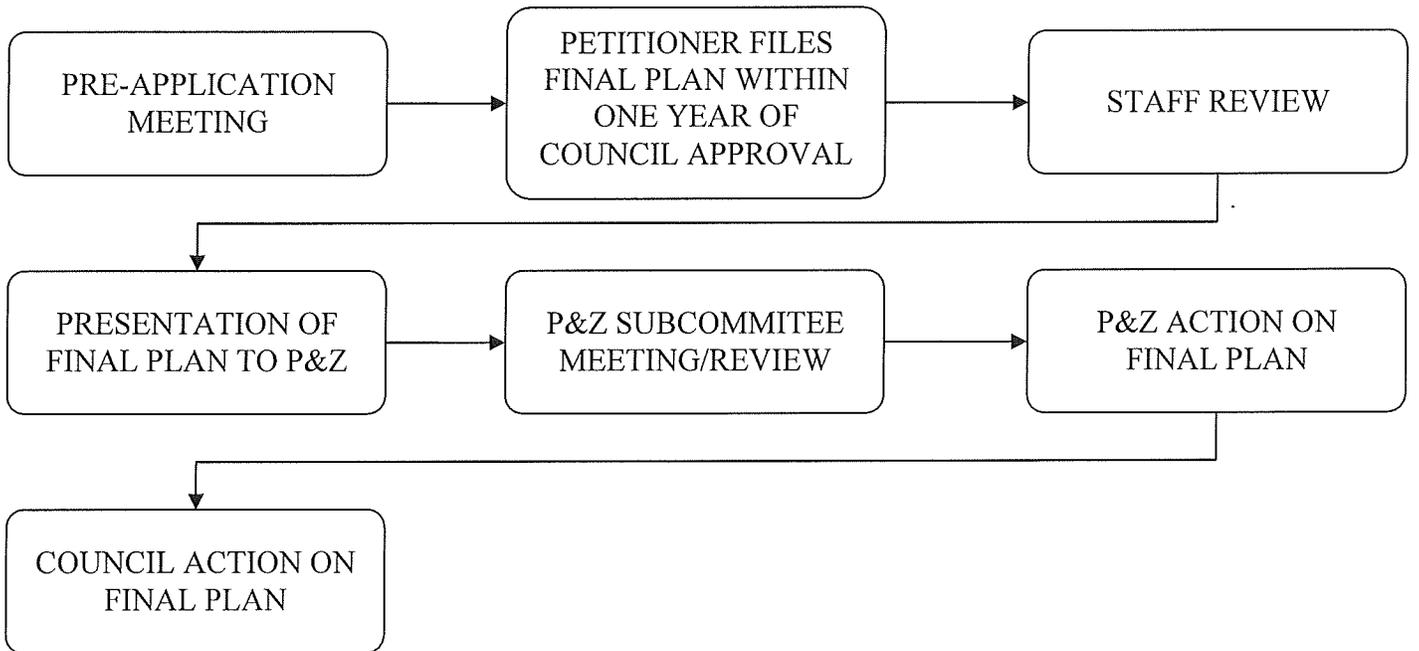


**B-4/B-5 DEVELOPMENT PLAN
(WITHOUT REZONING)**

PRELIMINARY DEVELOPMENT PLAN

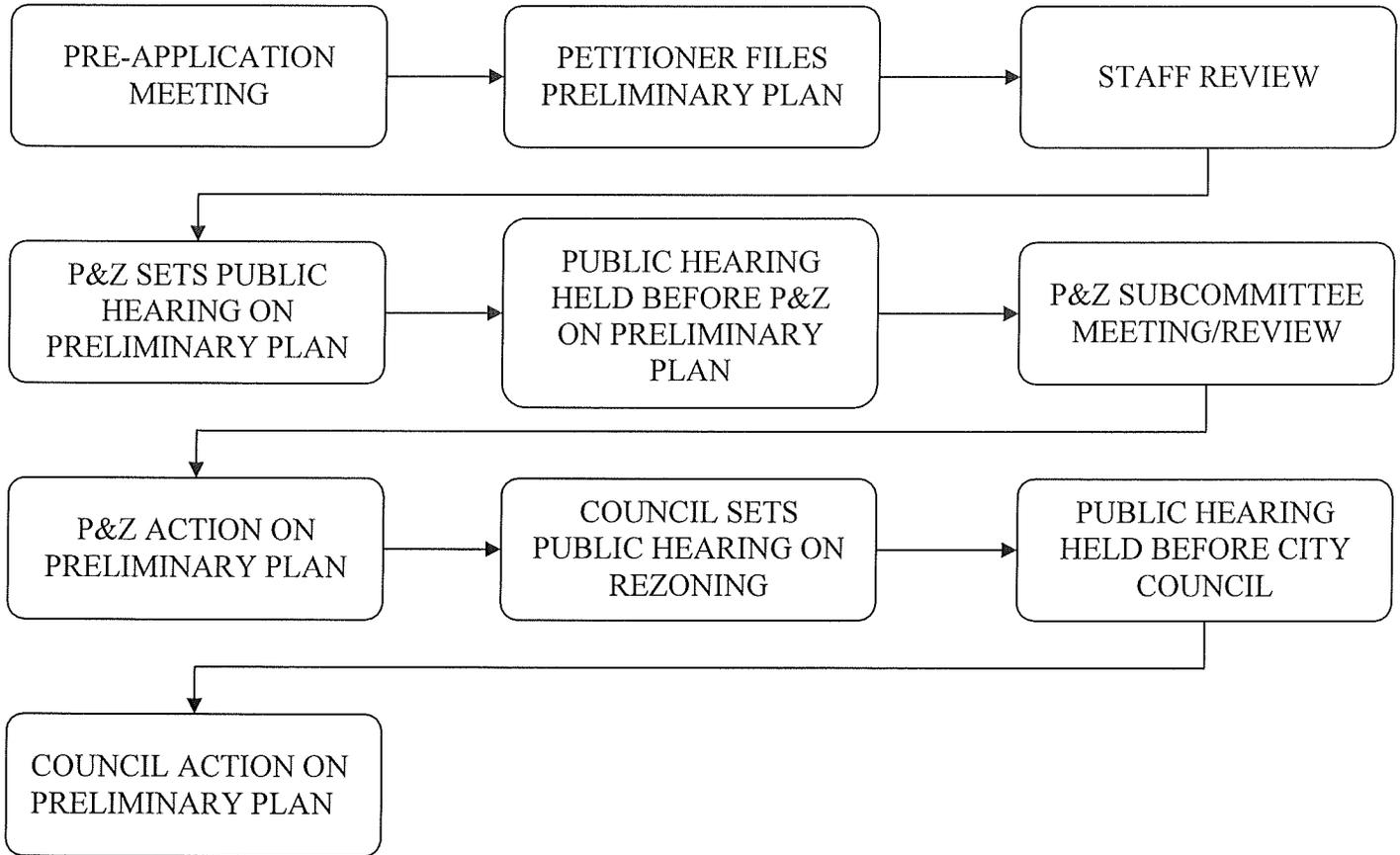


FINAL DEVELOPMENT PLAN

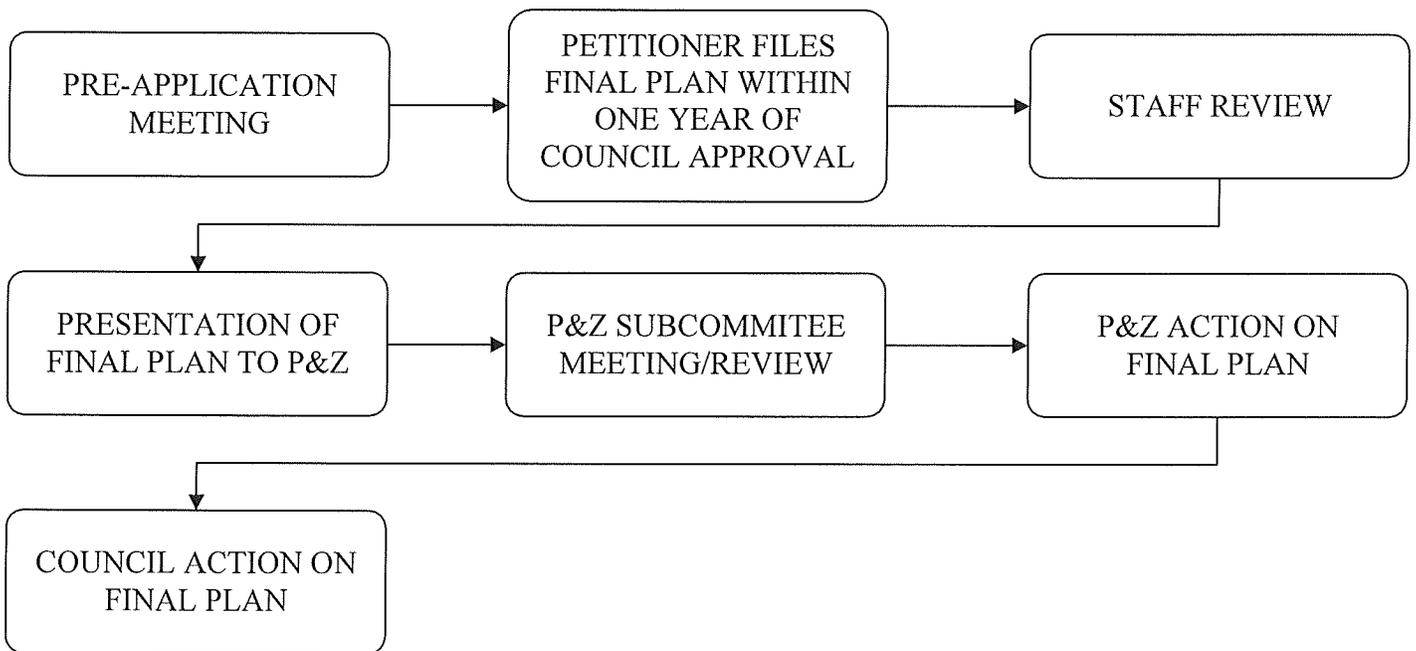


**B-4/B-5 DEVELOPMENT PLAN
(REQUIRING REZONING)**

PRELIMINARY DEVELOPMENT PLAN



FINAL DEVELOPMENT PLAN



**SITE PLAN REVIEW
PLANNING AND ZONING COMMISSION REVIEW**

The Planning and Zoning Commission will review a Site Plan taking into account the following matters in accordance with Article II, Section A-220, of the Zoning Code, Site Plan Review:

1. The efficiency and harmonious relationship of the topography to the Site Plan, the size and type of lot, the character of adjoining property, and the type and size of buildings that the site will be developed so as not to impede the normal and orderly development or improvement of surrounding property for uses permitted in this Ordinance.
2. The landscaping and buffering should be preserved in its natural state, insofar as reasonably practicable, by minimizing tree and soil removal, and by topographic modifications which result in maximum harmony with adjacent areas and shall be in accordance with the Landscape Standards of the City of Kirkwood, if any.
3. Site surface drainage should provide for the reasonable removal of storm waters so as not to adversely affect neighboring properties.
4. Reasonable visual and sound buffering should be provided for all dwelling units located in the surrounding area.
5. Landscaping, fences, walks, and buffers should be used, as appropriate, for the protection and enhancement of property and for the privacy of its occupants.
6. All structures or dwelling units should have access to a public street, walkway, or other area designated for common use.
7. A pedestrian circulation system should be reasonably insulated from the vehicular circulation system.
8. All loading and unloading areas and outside storage areas, other than for the storage of trash and recyclables, which face or are visible from residential properties or thoroughfares shall be screened.
9. All outside storage areas for the storage of trash and/or recyclables shall be screened. Trash dumpster screening shall be constructed of sight-proof fence or wall not less than six (6) feet in height. Latching gates of similar or complementary materials shall be required to completely enclose the trash dumpster. Recycling dumpsters will be screened from thoroughfares and adjoining properties as determined by the Planning and Zoning Commission.
10. Exterior lighting should provide adequate safety for users of the site and should be arranged so that it is deflected away from adjacent properties and so that it does not impede the vision of traffic along adjacent streets.
11. Vehicular loading and unloading and parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways should not create hazards to safety, should not result in serious loss of natural features of the land, and should not impose a significant burden upon public facilities. Absent extraordinary circumstances, the proposed development must avoid vehicular circulation onto adjacent public streets in residential areas and should direct vehicular circulation onto adjacent public streets in commercial areas in order to promote safety and maintain the integrity of residential areas.
12. A reasonable plan for the private care and maintenance of all open space should be provided.
13. The proposed development should not adversely affect off-site public services including sewer, water, and streets, or adversely affect the character of the neighborhood, or adversely affect the general welfare of the community.

**SPECIAL USE PERMIT
PLANNING AND ZONING COMMISSION REVIEW**

The Planning and Zoning Commission will review a Special Use Permit taking into account the following matters in accordance with Article IX, Section 900, of the Zoning Code:

1. That the minimum yard requirements of the district in which the use is to be located are observed.
2. That provision is made for appropriate lighting which will not disturb adjacent property or affect traffic on adjacent right-of-way.
3. That there is appropriate provision for greenery planting and its maintenance, both for division purposes from adjacent rights-of-way and also from adjacent properties, which planting may be required to be as high as eight feet when for the purpose of screening from adjacent properties, and of sufficient width to accomplish the purpose.
4. That the area or necessary portions thereof are adequately fenced so as to prevent unauthorized persons from having access to the area, which fencing may be required to a height of six feet.
5. That there is adequate off-street parking, taking into account the number of employees and number of members of the public that will be using the area.
6. That appropriate provision is made for paving all parking and drive areas.
7. That appropriate provision is made for all sanitary sewage and storm water run-off.
8. That adequate provision is made for off-street loading and unloading docks or other facilities.
9. That adequate provision is made for ingress and egress to abutting rights-of-way.
10. That there is adequate area for the intended use, which area may be greater than the minimum specified in paragraph (a) of this section and which shall be sufficient to protect all surrounding properties, taking into account all aspects of the intended use.
11. In off-street parking for public use or for employees, no sales, dead storage, repair work, nor dismantling of automobiles shall be permitted. Except for the approved exits and entrances, the parking area shall be screened or enclosed in such manner as approved by the Building Commissioner or it shall be screened or enclosed by a planting screen not less than ten feet in width as approved by the City and adequately maintained, provided that a planting screen shall not be required within ten feet of any public street or right-of-way.
12. That adequate provision has been made for the disposition of refuse and rubbish, garbage, or other materials.
13. That there is reasonable assurance that the proposed project or development will be completed if authorized; and to guarantee such completion, a bond may be required.

The Commission will make a recommendation to the City Council, who shall hold a public hearing in relation to the matter and determine whether such Special Use Permit shall:

- a. Substantially increase traffic hazards or congestion.
- b. Substantially increase fire hazards.
- c. Adversely affect the character of the neighborhood.
- d. Adversely affect the general welfare of the community.
- e. Overtax public utilities.

A negative finding by the City Council with regard to any of the above items shall cause the application to be denied.

CITY OF KIRKWOOD
PLANNING AND ZONING COMMISSION
SITE PLAN REVIEW/SPECIAL USE PERMIT
B-4/B-5 DEVELOPMENT PLANS
September 2016

INFORMATION TO BE SHOWN ON SITE PLAN

- Property boundary survey (signed and sealed by Professional Engineer)
- Existing buildings and improvements on site
- Location map, north arrow, scale, and date
- Name, signature, and seal of professional engineer preparing plan
- Existing and proposed uses
- Existing and proposed zoning
- Setback lines for front, side, and rear yard
- Proposed buildings, additions, or improvements located with dimensions, including dimensions to property lines
- Gross and usable square footage calculations of buildings
- Parking layout and driveway, including parking stall size, accessible parking, aisle and driveway widths, entrance approach details, number of cars in each row, loading zone, and paving details
- Required and proposed parking calculations, including accessible parking spaces and loading zones
- Accessible routes from adjacent right(s)-of-way and parking to building entrance
- Exterior Lighting Plan
- Refuse and recycling container location, screening, and access, fully dimensioned
- Site topography showing existing and proposed contours at intervals of two feet or less, including grading plan
- Utilities: Water, storm sewers, sanitary sewers, gas, and electric, including provisions for access
- Easements, existing and proposed
- Existing right-of-way, street, and entrance
- Drainage pattern, proposed storm water management improvements

Petitioner/Engineer

Date

These are the minimum submittal requirements needed for review. Failure to provide all information will result in application being returned.

**CITY OF KIRKWOOD
PLANNING AND ZONING COMMISSION
LANDSCAPE PLAN
JUNE 2013**

INFORMATION TO BE SHOWN ON DRAWING

- Location map, north arrow, scale, and date
- Name, signature, and contact information of preparer
- Proposed buildings, additions, and other improvements on site including parking and driveway layout and refuse container, including trash and recycling, location with appropriate screening drawn to scale
- Location of all existing and proposed trees, shrubs, and plants in conformance with the City of Kirkwood Department of Public Works Landscaping Guidelines, attached
- Planting schedule
- Ground cover type and location
- Location and dimensions of proposed landscape buffers
- Tree Study
- Tree Preservation Plan
- Irrigation Plan
- Calculations:
 - Lot Size
 - Proposed Open Space Square Footage
 - Proposed Landscape Buffer Square Footage
 - Proposed Impervious Area Square Footage

Petitioner/Engineer

Date

These are the minimum submittal requirements needed for review. Failure to provide all information will result in application being returned.

**CITY OF KIRKWOOD
DEPARTMENT OF PUBLIC WORKS
STORM WATER RUNOFF STANDARDS
FOR
NEW DEVELOPMENTS
AND/OR
THE EXPANSION OF IMPERVIOUS AREAS**

REVISED SEPTEMBER 2016

1. GENERAL CONDITIONS

All storm water drainage facilities shall be designed and constructed in accordance with the latest rules and regulations and engineering design requirements of the Metropolitan Sewer District and the following additional minimum requirements.

2. IMPERVIOUS AREAS

Any impervious area, paved area, or parking area in excess of 3,000 square feet shall be provided with on-site storm water drainage facilities designed and constructed in accordance with the plans and specifications submitted to and approved by the City of Kirkwood and Metropolitan St. Louis Sewer District. (Exception: one single-family hose and accessory parking or building).

3. DRAINAGE ACROSS SIDEWALK AND DRIVEWAYS

No paved, impervious, or parking area greater than 3,000 square feet in area or over land flow greater than one c.f.s. shall discharge across a sidewalk or driveway.

4. MAXIMUM FLOW IN SWALE OR BEHIND BERM

The maximum capacity of a swale or behind a berm shall not exceed two c.f.s. The swale shall have adequate slope (2% minimum) and flow velocity to prevent ponding. Cross-section shall be provided for all swales. The maximum velocity in a swale shall not exceed five c.f.s. Sheet flow shall not be permitted over terraces.

5. STORM WATER DETENTION

Storm water detention shall be provided under the Rules and Regulations, and Engineering Design Requirements of the Metropolitan St. Louis Sewer District. However, if required by M.S.D., storm water detention in single-family residential

subdivisions shall be provided underground in pipes or chambers designed for such detention. The pipes or chambers shall be constructed of reinforced concrete and shall be covered with earth and shall not be located in the principle building area of any lot. Dry or wet above-ground detention shall not be permitted in single-family subdivisions.

6. SINKHOLE DISCHARGE

No project shall increase the storm water discharge into an existing sinkhole.

7. GRATED TROUGHS

Grated troughs may be required by the City of Kirkwood on streets of six percent grade or greater. Grated troughs may also be required at commercial entrances to the public right-of-way. Grated troughs, if required, shall be designed and constructed to the Standards of St. Louis County Department of Transportation. Grated troughs on City of Kirkwood public streets will become the maintenance responsibility of the City of Kirkwood upon final approval, inspection, dedication, and acceptance by the City of Kirkwood.

8. TRANSVERSE UNDER DRAINS

Transverse under drains shall be required under street pavement at all sags, low points, or other locations which contain a storm water inlet adjacent to the street pavement. The under drain shall be connected to the storm water inlet and shall be designed and constructed in accordance with City of Kirkwood standards. Under drains shall become the maintenance responsibility of the City of Kirkwood upon final approval, inspection, dedication, and acceptance by the City of Kirkwood.

9. INTERSECTIONS

Storm water flow through an intersection shall not exceed 0.5 c.f.s.

10. SPECIAL REQUIREMENTS

Development plans, parking lots, and commercial and multi-family buildings are subject to review by the City of Kirkwood Planning and Zoning Commission and Public Services Department. The City of Kirkwood may require additional storm water regulations or conditions of an approval to any project.

**TREE STUDY
SITE PLAN REVIEW**

PROPERTY LOCATION: _____

*** ATTACH SCALED LANDSCAPE/TREE LOCATION PLAN TO THIS STUDY/SHEET.**

List all significant trees (live, healthy trees, of a species suitable for the urban environment having a diameter of eight inches or greater) on premises, on abutting public rights-of-way, and on private property within five feet of all property lines.

KEY TO DRAWING	TREE SPECIES	DIAMETER	SAVE YES/NO IF NO, EXPLAIN IN NOTES	PROTECTION METHODS EXPLAIN IN NOTES, PROVIDE DRAWINGS	DOLLAR VALUE FROM GUIDE FOR TREE APPRAISAL
A					
B					
C					
D					
E					
F					

NOTE: Public trees abutting the site shall not be removed and require tree protection fencing.

NOTES:

- A
- B
- C
- D
- E
- F

I hereby certify that I have viewed the premises and provide this professional opinion regarding the survivability of significant trees on the site and abutting the site and the appropriateness of proposed tree replacement and landscaping. Attached is a landscape plan prepared by me or under my direction.

Name/Signature/Certification

** Copy this form as needed for additional trees.

**CITY OF KIRKWOOD
PUBLIC WORKS DEPARTMENT**

November 2, 2016

COMPANY NAME	INDIVIDUAL'S NAME	COMPANY ADDRESS	PHONE NUMBER	E-MAIL ADDRESS
Allen's Tree Service	John Beckman	2755 West Pearce Blvd, Wentzville, MO 63385	(636) 332-5535	johnb.allenstree@gmail.com
Davey Tree Expert Co.	Tom Beshoar	1206 Hanley Industrial Ct, Brentwood 63144	(314) 961-5440	tom.beshoar@davey.com
Droege Tree Care, Inc.	Colleen Baum	6770 Olive Blvd., St. Louis, MO 63130	(314) 863-1903	colleen@droegetreecare.com
Gamma Tree Experts	Bryan Davidson	P.O. Box 16103, Clayton, MO 63105	(314) 725-6022	bryan@gammamatree.com

The above individuals have expressed an interest to perform tree studies in accordance with the codes of the City of Kirkwood. This list is not exclusive. Any arborist certified by the International Society of Arboriculture and qualified to perform tree studies may be utilized. The City of Kirkwood has no obligation or responsibility for the performance of the arborist. This list is furnished only to assist in the retaining of an arborist interested in performing tree studies. Certified Arborists who have an interest in tree studies may contact the City of Kirkwood Public Works Department at 314-822-5822 to be included on the above list.

TREE PROTECTION SPECIFICATIONS

General – Tree protection has three primary functions: (1) to keep the foliage canopy and branching structure clear from contact by equipment, materials, and activities; (2) to preserve roots and soil conditions in an intact and non-compacted state; and (3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted.

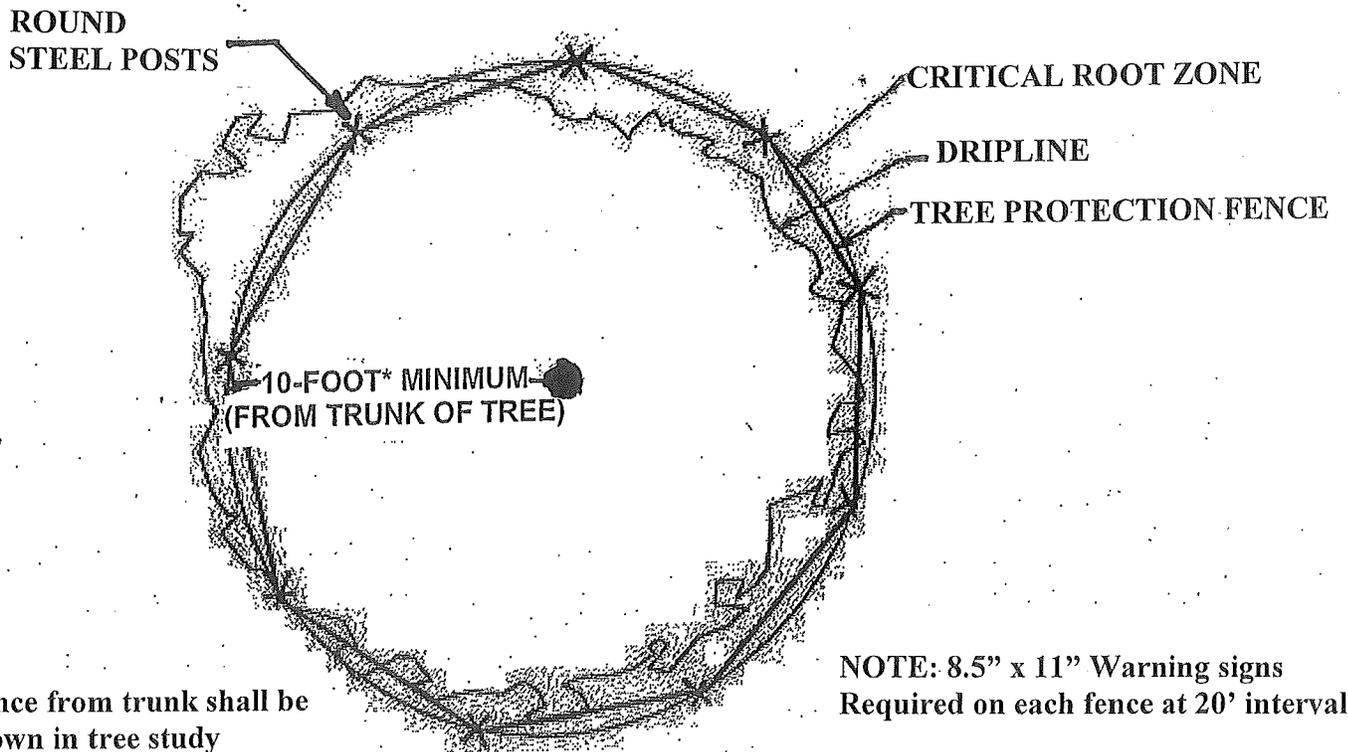
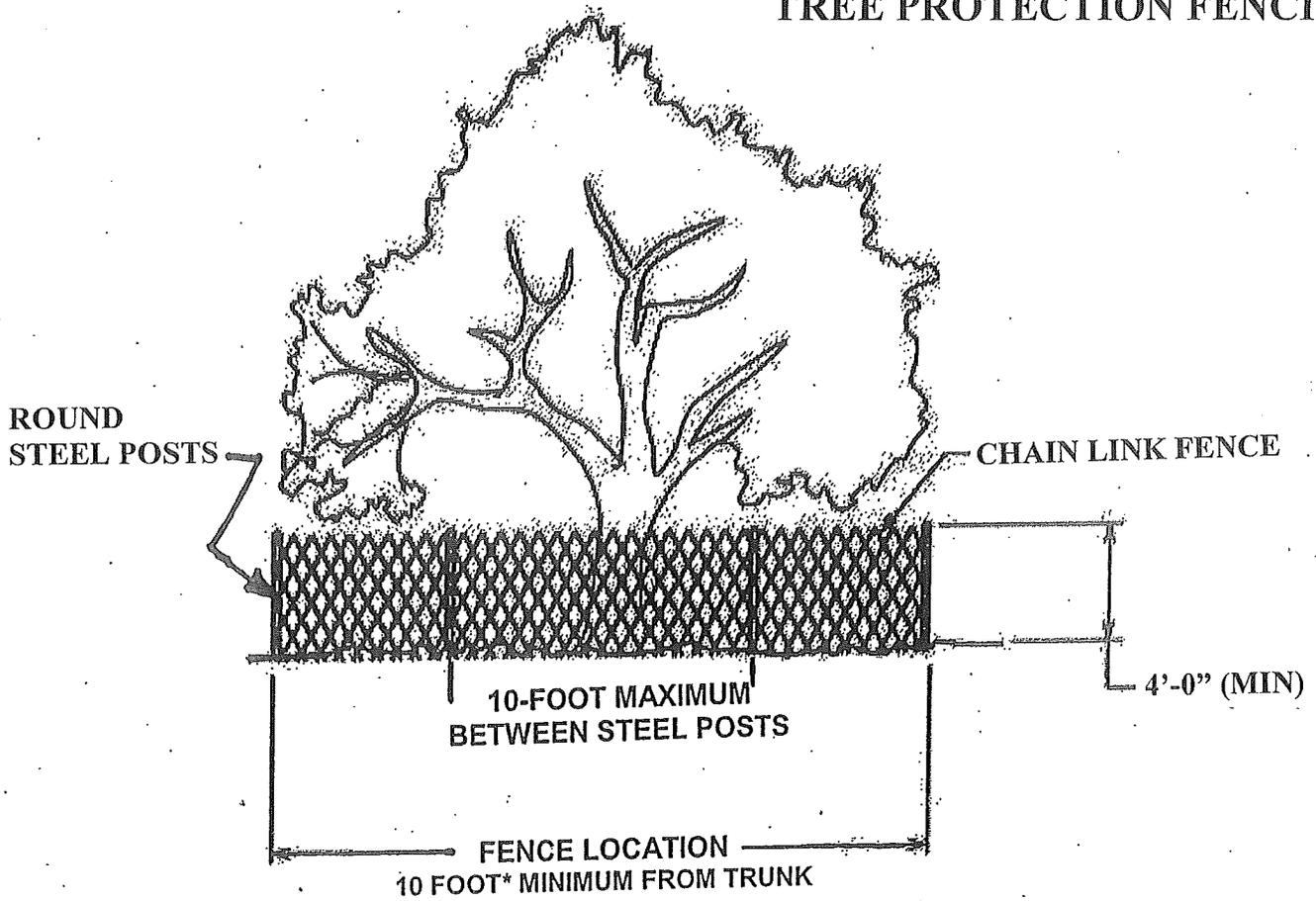
Trees to be Protected – All public trees on City right-of-way and all trees designated to be saved in tree study for site.

Materials

- a. The Tree Protection Zone (TPZ) is a restricted area around the base of the tree at the drip line with a minimum radius of ten (10) feet or as shown in the Tree Study, whichever is greater, enclosed by fencing. **No work, storage, or equipment operation shall be performed in this area.**
- b. Tree Protection: The fence shall enclose the entire area of the TPZ of the tree(s) to be protected throughout the life of the construction project. In some parking areas, if fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base, if approved. For trees situated within a planting strip or near a sidewalk or driveway, only the planting strip and yard side of the TPZ shall be enclosed with the required chain link protective fencing in order to keep the sidewalk and street open for public use.
- c. Size, type, and area to be fenced: All trees to be preserved shall be protected with four (4) foot high chain link fences. Fences are to be mounted on round steel posts driven into the ground to a depth of at least two feet and no more than 10-foot spacing.
- d. Warning Sign: A warning sign shall be weatherproof and prominently displayed on each fence at 20-foot intervals on the tree protection fencing. The sign shall be a minimum 8.5 inches by 11 inches and clearly state: “WARNING – Tree Protection Zone”. See exhibit A-S.
- e. Duration. Tree fencing shall be erected before construction begins and remain in place until final inspection of the project, except for work specifically allowed in the TPZ.
- f. During Construction.
 1. All neighbors’ trees that overhang the project site shall be protected from impact and protection fencing may be required.
 2. The applicant shall be responsible for the repair or replacement of any publicly-owned trees that are damaged during the course of construction.
 3. The following tree preservation measures apply to all trees to be saved:
 - (a) No storage of material, topsoil, vehicles, or equipment shall be permitted within the TPZ.
 - (b) The ground under and around the tree canopy area shall not be altered.
 - (c) Trees to be retained shall be irrigated, aerated, and maintained as necessary to ensure survival.

EXHIBIT A

TREE PROTECTION FENCING



* Distance from trunk shall be as shown in tree study or 10' minimum.

NOTE: 8.5" x 11" Warning signs Required on each fence at 20' intervals

**CITY OF KIRKWOOD
DEPARTMENT OF PUBLIC WORKS
LANDSCAPING GUIDELINES**

1. PLAN AND SCHEDULE

A landscape plan (drawing) and planting schedule is required for new developments and additions reviewed by the Planning and Zoning Commission under the Site Plan Review procedures.

PLANTING SCHEDULE

<u>KEY</u>	<u>QUANTITY</u>	<u>COMMON NAME</u>	<u>BOTANICAL NAME</u>	<u>SIZE</u>
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2. PLANT MATERIALS

Recommended Trees and Shrubs Species

Appendix A contains a list of plant materials which will satisfy the requirements of this Section. The list is intended to suggest typical species which would be appropriate for the purposes of providing buffering and appropriate aesthetics along street frontages and within parking lots.

3. LANDSCAPING REQUIREMENTS

a. Standards

All new landscaping materials shall meet the following criteria:

1. Canopy (deciduous shade) trees - two (2) inch minimum caliper
2. Understory (ornamental or flowering) trees - one and one-half (1-1/2) inch minimum caliper.
3. Evergreen trees - six (6) feet minimum height.
4. Deciduous and/or evergreen shrubs
 - I. Type A - Less than eighteen (18) inches in height.
 - ii. Type B - Eighteen (18) to twenty-four (24) inches in height.
 - iii. Type C - Greater than eighteen (18) inches in height.
5. Ground Cover - Suitable ground cover shall be provided throughout the site and appropriately identified. Ground Cover shall be construed to include any combination of low plants that cover the ground, grass, wood chips, bark mulch, crushed stone and similar substances.

b. Landscaping to New Development

1. Street frontage (within front yard setback), in the following manner:
 - i. A minimum of one (1) canopy tree per every twenty-five (25) feet of frontage (excluding driveway openings).
2. Side and Rear (within the side and rear yard setbacks):
 - i. a minimum of one (1) canopy tree or understory tree every thirty (30) linear feet of side and rear yard or a minimum of one (1) canopy tree and one evergreen tree for each fifty (50) feet with the evergreen trees clustered in groups of two or more
 - ii. earthen berms, sight proof walls, and/or fences are encouraged, and may be required by the Planning and Zoning Commission.

c. Landscaping to Building Additions

A minimum of two (2) canopy trees; one (1) understory tree; and a sufficient distribution of Type C shrubs for every one-hundred (100) linear feet of exterior building addition, foot print, or portion thereof. The placement of this plant material shall be in the general area of the building addition.

d. Landscaping Accessory Structures

All accessory structures and/or mechanical equipment shall be landscaped around their respective footprints in the following manner:

One (1) evergreen tree per structure side, or one (1) understory tree per every twenty (20) linear feet.

e. Landscaping to New Parking Lots and Parking Lot Additions

1. Landscaping shall be required along all sides of parking lots, paved areas, and drive lanes as follows:
 - i. At least one (1) canopy tree per every twenty-five (25) feet; or understory trees per every twenty (20) feet as approved by the Planning and Zoning Commission;
 - ii. a sufficient distribution of Type A or Type B deciduous and/or evergreen shrubs as approved by the Planning and Zoning Commission;
 - iii. the use of earthen berms, sight proof walls and/or fences is encouraged, and may be required by the Planning and Zoning Commission.

- iv. Open space for the interior of parking lot areas shall be determined by the number of proposed parking spaces, as shown below:

<u>Number of Parking Spaces</u>	<u>Required Open Space</u>
Less than 10 spaces	200 sq. ft.
11 to 20 spaces	400 sq. ft.
21 to 30 spaces	600 sq. ft.
31 to 40 spaces	800 sq. ft.
41 to 50 spaces	1,200 sq. ft.
Greater than 50 spaces	1,200 sq. ft. plus additional 100 s.f. for each 10 spaces over 50.

- 2. Wherever possible, curbed traffic islands shall be located at the ends of parking aisles and shall be landscaped with one canopy tree or understory tree planted at twenty (20) foot centers, including appropriate ground cover.

f. Landscaping Around Trash Enclosures

All exterior trash areas shall be enclosed by a six (6) foot high sight proof fence and the placement of one (1) evergreen tree, per side, or one (1) evergreen tree per every ten (10) linear feet, whichever is greater. This requirement shall not apply to points of ingress/egress.

g. Additional Landscaping

The Planning and Zoning Commission may require additional landscaping when it is their opinion the landscaping requirements as they relate to a particular development do not provide an adequate buffer or screen and the adjoining properties or public right-of-way may be more than normally affected by the proposed development.

4. ALTERATIONS/EXCEPTIONS

In the event strict adherence to the requirements of this Section would serve no meaningful purpose or site conditions make it physically impossible to install and maintain the required landscaping, the Planning and Zoning Commission may alter or exempt these requirements. These alterations or exemptions may occur at the request of the property owner, who must demonstrate to the Planning and Zoning Commission that an alteration or exemption is justified. Criteria for demonstrating this need include having one or more of the following conditions present:

- a. There are physical characteristics or defects associated with the land such as a severe ledge or unusual or extreme variations in grade;

- b. The parcel of ground has an unusual shape or configuration;
- c. There are safety considerations; or
- d. The spatial arrangement or size of the existing buildings, structures, and/or other manmade features occupying the parcel of ground are unique.
- e. The parcel of ground has space limitations.

5. SUBSTITUTIONS

- a. Existing plant material shall be counted as contributing to or utilized as a substitute for the requirements of this Section.
- b. The Planning and Zoning Commission may, in lieu of these landscape and buffering requirements, accept a compatible plan prepared by a professional landscaping architect or urban forester that satisfies the intent and spirit of these guidelines.

6. MAINTENANCE REQUIREMENTS

The owner or the owner's agent shall be responsible for providing, protecting, and maintaining all landscaping in a healthy and growing condition. Additionally, the repair or replacement of all fences, walls, and other visual barriers, including refuse disposal area screens, that have fallen into disrepair shall be made when necessary to insure continuous conformance with these requirements.

2012

City of Kirkwood Street Tree Guide



City of Kirkwood
139 S. Kirkwood Road
Kirkwood, MO 63122
314-822-5801

Introduction

Introduction

The Kirkwood Urban Forestry Commission (KUFC) is pleased to present these updated lists of recommended street trees for enhancing Kirkwood's streets, avenues, boulevards, and ways. Development of this composite list is the result of significant research, incorporating the advice from local professionals including arborists, urban foresters, nurserymen, horticulturists, and landscaping managers. The intention of this effort is to provide urban planners, architects, landscape architects, public works managers, utility managers, and Kirkwood residents with a list of trees appropriate for street tree application, tailored to the Kirkwood environment. Since the world of living plants is quite dynamic, these lists will be reviewed periodically by the KUFC and updated if deemed necessary after reviewing the results of current urban forestry research.

The KUFC completed its most recent review and update of the city's current list of recommended street trees as of June, 2012. The Kirkwood Urban Forestry Commissions' primary intention associated with development of this highly researched document is to provide Kirkwood citizens and staff with state-of-the-art tree recommendations as the community continues to enhance Kirkwood's urban forest.

Kirkwood Urban Forestry Commission (Fall 2012)

Roger Vonder Bruegge, Chair
David Endres, Vice Chair
Alan Hautly
David Slane
Michelle Storgion
Priscilla Ward
Rita Schoenberg

Kirkwood City Council

Arthur McDonnell, Mayor
Iggy Yuan, Deputy Mayor
Gerry Biedenstein
Nancy Luetzow
Gina Jaksetic
Bob Sears
Paul Ward

A Note about the Organization of this Guide: For the convenience of users, each list is offered twice: First, alphabetically sorted by **botanical name** and then alphabetically by **common name**.

Definitions

- **Botanical Name:** the scientific Latin name of a plant.
- **Cultivar:** a named plant variety selected for specifically unique and desired characteristics.
- **Invasive:** by introduction to the landscape, any plant that can cause economic or environmental harm or harm to human health.
- **Street Tree:** trees growing on city right-of-way of all streets, avenues, or ways within the city. [NOTE: Contact *City of Kirkwood Public Works/Engineering* 314-822-5822 for verification of city right-of-way locations.]
- **Tree-form:** a single trunk form of a tree species normally offered as a clump or multi-trunk tree
- **Tree Lawn:** the city right-of-way planting area between the street curb/edge and the sidewalk.

Undesirable Trees Not Recommended for Kirkwood

While many tree species are quite applicable and adaptable for Kirkwood's challenging urban streetscape, the KFUC has also identified a variety of trees not appropriate for use within the streetscape environment. Primary reasons for discouraging the use of these undesirable tree species include:

- Weak branching habit, resulting in frequent release of fallen branches.
- Producer of messy fruit, creating a slip hazard on the pavement and sidewalk surfaces.
- Prone to damage by insects, diseases and nutrient deficiencies.
- Producer of numerous viable seeds, creating an invasive plant impact upon the surrounding landscape.

Potentially Threatened Trees

The dynamic nature of plants and the environment requires constant monitoring of trees and their potential pest enemies. The increased presence of such pests as Emerald Ash Borer and Japanese Beetle can affect the decision to place trees on the recommended lists or on the list of undesirable trees. Potential pest problems are referenced in the comment section associated with each tree list.

Kirkwood Electric and Ameren Lines

Ameren does not recommend planting trees under power lines that will attain more than 25' in height. Kirkwood Electric does not recommend planting any trees under power lines. Cable and phone lines using the same power poles are only about 16' off the ground. Electric utilities are required to trim trees in the right-of-way so that they do not interfere with electric lines, which can be detrimental to the look and shape of the trees.

Small Trees
(>30 feet tall)

Small Trees (Under 30 Feet in Height)

SORTED BY BOTANICAL NAME
TL = Suited for Tree Lawn spaces

BOTANICAL NAME	SUGGESTED CULTIVAR(S)	COMMON NAME	TL
<u>Acer buergeranum</u> <i>Tolerant of dry sites</i>		Maple, Trident	YES
<u>Acer ginnala</u> <i>Tolerant of dry sites; considered to be invasive in the eastern US, but not found to be problematic in the Midwest; suggest tree-form (single-trunk) selections for street tree application</i>		Maple, Amur	YES
<u>Acer palmutura</u>		Maple, Japanese	YES
<u>Acer tataricum</u>		Maple, Tatarian	YES
<u>Amelanchier x grandiflora</u>	Autumn Brilliance Autumn Sunset Cumulus Princess Diana Snowcloud Tradition	Serviceberry	YES
<i>Suggest tree form (single-trunk) selection for street tree application</i>			
<u>Cercis canadensis</u>		Redbud, Eastern	YES
<u>Cornus Florida</u>		Flowering Dogwood	YES
<u>Crataegus punctata</u>	Ohio Pioneer (thornless)	Hawthorne, Dotted	YES
<u>Crataegus viridis</u>	Winter King	Hawthorne, Green	YES
<i>Maintains attractive red fruit during the winter months</i>			
<u>Maackia amurensis</u> <i>Not readily available</i>		Maackia, Amur	YES
<u>Magnolia soulangiana</u>	Merrill	Magnolia	YES
<i>Suggest tree-form (single trunk) selections for street tree application</i>			
<u>Magnolia x hybrids</u>	Centurion Harvest Gold Prairie Fire Professor Sprenger Snowdrift Sugar Tyme	Crabapple, Flowering	YES
<i>Suggested cultivars are most resistant to foliar diseases</i>			
<u>Syringa reticulata</u>	Ivory Silk Regent Summer Snow	Lilac, Japanese Tree	YES

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Medium Trees
(30 to 45 feet tall)

Underlined Species =
Plants of Merit



Medium Trees (30 to 45 Feet in Height)

SORTED BY BOTANICAL NAME
TL = Suited for Tree Lawn spaces

BOTANICAL NAME	SUGGESTED CULTIVAR(S)	COMMON NAME	TL
<u>Acer campestre</u> <i>Not readily available</i>	Queen Elizabeth	Maple, Hedge	YES
<u>Acer miyabei</u> <i>May be drought sensitive</i>	State Street (Morton)	Maple, Miyabe	YES
<u>Acer x truncatum</u>	Norwegian Sunset Pacific Sunset	Maple, Shantung	YES
<u>Betula nigra</u> <i>Extensive surface roots compete with ground cover plantings; suggest tree-form (single trunk) selections for street tree application; may be short lived as a street tree</i>	<u>Heritage</u> Dura Heat	Birch, River	YES
<u>Carpinus betulus</u> <i>Suggest tree-form (single trunk) selections for street tree application</i>	<u>Fastigate (upright)</u>	Hornbeam, European	YES
<u>Cladrastis kentukea</u>		Yellowwood, American	YES
<u>Corylus columna</u> <i>Tolerant of dry sites; not readily available</i>		Filbert, Turkish	YES
<u>Eucommia ulmoides</u> <i>Not readily available</i>		Hardy Rubber Tree	YES
<u>Gleditsia triacanthos</u> <i>Suggested cultivars are thornless</i>	Imperial	Honeylocust, Thornless	YES
<u>Ilex opaca</u>		Holly, American	YES
<u>Magnolia acuminata</u>		Magnolia, Cucumbertree	YES
<u>Ostrya virginiana</u>		Hophornbeam, American	YES
<u>Phellodendron amurense</u> <i>Tolerant of dry sites</i>	Macho	Corktree, Amur	YES

Note:

The Kirkwood Urban Forestry Commission discourages the use of ornamental pear (Pyrus) trees as street trees. Even the purported "improved" cultivars have been found to be subject to storm damage and fire blight disease. Arborists consider these species to be invasive, creating an adverse plant impact upon the surrounding landscape.

STREET TREE
SELECTIONS
FOR KIRKWOOD

Large Trees
(<45 feet tall)

Large Trees (Greater than 45 Feet in Height)

SORTED BY BOTANICAL NAME
TL = Suited for Tree Lawn spaces

BOTANICAL NAME	SUGGESTED CULTIVAR(S)	COMMON NAME	TL
Acer rubrum	Autumn Flame Red Sunset	Maple, Red	YES
<i>Leaf scorch may occur when growing among extensive paved areas</i>			
Acer saccharum	Green Mountain Fall Fiesta (Balista)	Maple, Sugar	YES
<i>Not well adapted to sites prone to soil compaction; may be sensitive to salt</i>			
Acer x freemanii	Autumn Blaze	Maple, Hybrid	YES
Carya ovate		Hickory, Shag Bark	YES
Celtis occidentalis	Prairie Pride	Hackberry, Common	YES
<i>Tolerant of dry sites</i>			
Ginkgo biloba	Autumn Gold Lakeview Princeton Sentry	Ginkgo, Maidenhair Tree	YES
<i>Only male cultivars are recommended; female trees produce messy and foul smelling fruit</i>			
Gleditsia triacanthos	Moraine Shademaster Skyline	Honeylocust, Thornless	YES
<i>Suggested cultivars are thornless</i>			
Platanus x acerifolia	Bloodgood	Planetree, London	YES
Quercus bicolor		Oak, Swamp White	
Quercus macrocarpa		Oak, Bur	
<i>Difficult to transplant; produces large acorns, better suited for large lawn areas</i>			
<u>Quercus phellos</u>		Oak, Willow	
<i>May be marginally cold hardy; prone to iron chlorosis</i>			
Quercus robur	Fastigiata (upright) Skymaster (upright)	Oak, English	
<i>Foliage may be prone to powdery mildew disease</i>			
Quercus rubra		Oak, Northern Red	
Quercus shumardii		Oak, Shumard	

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Large Trees
(<45 feet tall)

Large Trees (Greater than 45 Feet in Height)

SORTED BY BOTANICAL NAME
TL = Suited for Tree Lawn spaces

BOTANICAL NAME	SUGGESTED CULTIVAR(S)	COMMON NAME	TL
<u>Quercus x Warei</u> <i>Attractive glossy foliage</i>	Regal Prince (Long)	Oak, Hybrid	
<u>Taxodium distichum</u> <i>Tolerant of poorly drained sites</i>	Shawnee Brave	Bald Cypress	YES
<u>Tilia cordata</u> <i>Subject to defoliation by the Japanese beetle; not always the most salt and drought tolerant</i>	Chancellor (upright) Fairview Glenleven Greenspire	Linden, Littleleaf	
<u>Tilia tomentosa</u>	Green Mountain Sterling	Linden, Silver	
<u>Ulmus parvifolia</u> <i>May be marginally cold hardy</i>	Dynasty Ohio	Elm, Lacebark or Chinese	YES
<u>Zelkova serrata</u>	Green Vase Halka Village Green	Zelkova, Japanese	YES

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Small Trees
(>30 feet tall)

Small Trees (Under 30 Feet in Height)

SORTED BY COMMON NAME
TL = Suited for Tree Lawn spaces

COMMON NAME	BOTANICAL NAME	SUGGESTED CULTIVAR(S)	TL
Crabapple, Flowering	Malus x hybrids	Centurion Harvest Gold Prairie Fire Professor Sprenger Snowdrift Sugar Tyme	YES
<i>Suggested cultivars are most resistant to foliar diseases</i>			
Dogwood, Flowering	Cornus Florida		YES
Hawthorne, Dotted	Crataegus punctata	Ohio Pioneer (thornless)	YES
<i>Suggested cultivar is thornless; not readily available</i>			
Hawthorne, Green	Crataegus viridis	Winter King	YES
<i>Maintains attractive red fruit during the winter months</i>			
Lilac, Japanese Tree	Syringa reticulata	Ivory Silk Regent Summer Snow	YES
Maackia, Amur	Maackia amurensis		YES
<i>Not readily available</i>			
Magnolia	Magnolia x lebneri	Merrill	YES
<i>Suggest tree-form (single trunk) selections for street tree application</i>			
Magnolia, Saucer	Magnolia soulangiana		YES
<i>Suggest tree-form (single trunk) selections for street tree application</i>			
Maple, Amur	Acer ginnala		YES
<i>Tolerant of dry sites; considered to be invasive in the eastern U.S., but not found to be problematic in the Midwest; suggest tree-form (single trunk) selections for street tree application</i>			
Maple, Japanese	Acer palmatum		YES
Maple, Tatarian	Acer tataricum		YES
Maple, Trident	Acer buergerianum		YES
<i>Tolerant of dry sites</i>			
Redbud, Eastern	Cercis canadensis		YES
<i>Tolerant of dry sites</i>			

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Small Trees
(>30 feet tall)

Small Trees (Under 30 Feet in Height)

SORTED BY COMMON NAME
TL = Suited for Tree Lawn spaces

COMMON NAME	BOTANICAL NAME	SUGGESTED CULTIVAR(S)	TL
Serviceberry	Amelanchier x grandiflora	<u>Autumn Brilliance</u> Autumn Sunset Cumulus Princess Diana Snowcloud Tradition	YES

Suggest tree-form (single trunk) selections for street tree application

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Medium Trees
(30 to 45 feet tall)

Medium Trees (30 to 45 Feet in Height)

SORTED BY COMMON NAME
TL = Suited for Tree Lawn spaces

COMMON NAME	BOTANICAL NAME	SUGGESTED CULTIVAR(S)	TL
Birch, River <i>Extensive surface roots compete with ground cover plantings; suggest tree-form (single trunk) selections for street tree application; may be short lived as a street tree</i>	Betula nigra	<u>Heritage</u>	YES
Corktree, Amur <i>Tolerant of dry sites</i>	Phellodendron amurense	Macho	YES
Filbert, Turkish <i>Tolerant of dry sites; not readily available</i>	Corylus colurna		YES
Hardy Rubber Tree <i>Not readily available in commerce</i>	Eucommia ulmoides		YES
Holly, American	Ilex opaca		YES
Honeylocust, Thornless <i>Suggested cultivars are thornless</i>	Gleditsia triacanthos	Imperial	YES
Hophornbeam, American <i>Tolerant of dry sites</i>	Ostrya virginiana		YES
Hornbeam, European <i>Suggest tree-form (single trunk) selections for street tree application</i>	Carpinus betulus	<u>Fastigate (Upright)</u>	YES
Magnolia, Cucumbertree	Magnolia acuminata		YES
Maple, Hedge <i>Not readily available</i>	Acer campestre	Queen Elizabeth	YES
Maple, Miyabe <i>May be drought sensitive</i>	Acer miyabei	Morton (State Street)	YES
Maple, Shantung	<u>Acer x truncatum</u>	Norwegian Sunset Pacific Sunsest	YES
Yellowwood, American	Cladrastis kentukea		YES

NOTE:

The Kirkwood Urban Forestry Commission discourages the use of ornamental pear (Pyrus) trees as street trees. Even the purported "improved" cultivars have been found to be subject to storm damage and fire blight disease. Arborists consider these species to be invasive, creating an adverse impact upon the surrounding landscape.

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Large Trees
(<45 feet tall)

Large Trees (Greater than 45 Feet in Height)

SORTED BY COMMON NAME
TL = Suited for Tree Lawn spaces

COMMON NAME	BOTANICAL NAME	SUGGESTED CULTIVAR(S)	TL
Bald Cypress <i>Tolerant of poorly drained sites</i>	Taxodium distichum	Shawnee Brave	YES
Elm, Lacebark or Chinese <i>May be marginally cold hardy</i>	Ulmus parvifolia	Dynasty Ohio	YES
Gingko, Maidenhair Tree <i>Only male cultivars are recommended; female trees produce messy and foul smelling fruit</i>	Gingko biloba	Autumn Gold Lakeview Princeton Sentry	YES
Hackberry, Common <i>Tolerant of dry sites</i>	Celtis occidentalis	Prairie Pride	YES
Hickory, Shag Bark	Carya ovata		YES
Honeylocust, Thornless <i>Suggested cultivars are thornless</i>	Gleditsia triacanthos	Moraine Shademaster Skyline	YES
Linden, Littleleaf <i>Subject to defoliation by the Japanese beetle; no always the most salt and drought tolerant</i>	Tilia cordata	Chancellor (upright) Fairview Glenleven Greenspire	
Linden, Silver	Tilia tomentosa	Green Mountain Sterling	
Maple, Hybrid	Acer x freemanii	Autumn Blaze	YES
Maple, Red <i>Leaf scorch may occur when growing among extensive paved areas</i>	Acer rubrum	Autumn Flame Red Sunset	
Maple, Sugar <i>Not well adapted to sites prone to soil compaction; may be sensitive to salt</i>	Acer saccharum	Green Mountain Fall Fiesta (Bailsta)	
Oak, Bur <i>Difficult to transplant; produces large acorns, better suited for large lawn area</i>	Quercus macrocarpa		

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Large Trees
(<45 feet tall)

Large Trees (Greater than 45 Feet in Height)

SORTED BY COMMON NAME
TL = Suited for Tree Lawn spaces

COMMON NAME	BOTANICAL NAME	SUGGESTED CULTIVAR(S)	TL
Oak, English	Quercus robur	Fasitigiata (upright) Skymaster (upright)	
<i>Foliage may be prone to powdery mildew disease</i>			
Oak, Hybrid	Quercus x Warei	Long (Regal Prince)	
<i>Attractive glossy foliage</i>			
Oak, Northern Red	Quercus rubra		
Oak, Shumard	Quercus shumardii		
Oak, Swamp White	Quercus bicolor		
Oak, Willow	Quercus phellos		
<i>May be marginally cold hardy; prone to iron chlorosis</i>			
Planetree, London	Plantanus x acerifolia	Bloodgood	YES
Zelkova, Japanese	Zelkova serrata	Green Vase Halka Village Green	YES

Underlined Species =
Plants of Merit



STREET TREE
SELECTIONS
FOR KIRKWOOD

Undesirable Trees

Undesirable Trees

SORTED BY BOTANICAL NAME
TL = Suited for Tree Lawn spaces

BOTANICAL NAME	COMMON NAME	TL
Acer negundo <i>Messy fruit; weak branched</i>	Boxelder	
Acer saccharinum <i>Weak branched</i>	Maple, Silver/Soft	
Acsculus (species) <i>Messy fruit</i>	Horsechestnut	
Ailanthus altissima <i>Invasive weed</i>	Tree of Heaven	
Catalpa (species) <i>Messy fruit</i>	Catalpa	
Crataegus phaenopyrum <i>Highly susceptible to Cedar Apple Rust disease; thorns may be a hazard if planted along sidewalks</i>	Hawthorne, Washington	
Fraxinus Americana	Ash, White	
Fraxinus Pennsylvanica	Ash, Green	
Gingko biloba (female non-cultivars) <i>Female trees produce abundance of messy, malodorous fruit</i>	Ginkgo, Maidenhair Tree	
Gleditsia triacanthos (species with thorns) <i>Hazardous thorns</i>	Honeylocust	
Juglans nigra <i>Messy fruit</i>	Walnut, Black	
Liquidambar styraciflua <i>Messy fruit</i>	Sweet Gum	
Malus (species) (large fruit varieties) <i>Messy fruit</i>	Apple	
Malus x hybrids (disease prone varieties e.g.: Hopa, Radiant..) <i>Early leaf drop due to leaf disease</i>	Crabapple	
Morus (species) (fruiting varieties) <i>Messy fruit</i>	Mulberry	

STREET TREE
SELECTIONS
FOR KIRKWOOD

Undesirable Trees

Undesirable Trees

SORTED BY BOTANICAL NAME
TL = Suited for Tree Lawn spaces

BOTANICAL NAME	COMMON NAME	TL
Populus (species) <i>Invasive tree</i>	Poplar; Cottonwood	
Prunus (species) (fruiting varieties) <i>Messy fruit; short lived</i>	Cherry; Plum	
Pyrus (species) (fruiting varieties) <i>Messy fruit; invasive tree</i>	Pear	
Pyrus Calleryana <i>Invasive tree</i>	Bradford Pear	
Pyrus hybrids (all cultivars) <i>Quite subject to fire blight disease and wind damage; invasive tree</i>	Pear, Ornamental	
Quercus acutissima <i>Invasive tree</i>	Oak, Sawtooth	
Quercus imbricaria <i>Difficult to transplant; prone to oak wilt disease</i>	Oak, Shingle	
Quercus palustris <i>Prone to iron chlorosis (yellow foliage) on sites with high PH soils</i>	Oak, Pin	
Robinia pseudoacacia <i>Weak branched</i>	Locust, Black	
Salix (species) <i>Produces abundance of fallen branches</i>	Willow	

NOTE:

All conifer (needled evergreen) trees (e.g.: pine, spruce, etc.) are discouraged for street tree use due to low branching characteristics (evergreen tree species do not favor lower branch removal).

STREET TREE
SELECTIONS
FOR KIRKWOOD

Undesirable Trees

Undesirable Trees

SORTED BY COMMON NAME
TL = Suited for Tree Lawn spaces

COMMON NAME	BOTANICAL NAME	TL
Apple <i>Messy fruit</i>	Malus (species)	(large fruit varieties)
Ash, White	Fraxinus Americana	
Ash, Green	Fraxinus Pennsylvanica	
Boxelder <i>Messy fruit; weak branched</i>	Acer negundo	
Catalpa <i>Messy fruit</i>	Catalpa (species)	
Cherry; Plum <i>Messy fruit; short lived</i>	Prunus (species)	(fruiting varieties)
Crabapple <i>Early leaf drop due to leaf disease</i>	Malus x hybrids	(disease prone varieties e.g.: Hopa, Radiant...)
Ginkgo, Maidenhair Tree <i>Female trees produce abundance of messy, malodorous fruit</i>	Ginkgo biloba	(female non-cultivars)
Hawthorne, Washington <i>Highly susceptible to Cedar Apple Rust disease; thorns may be a hazard if planted along sidewalks</i>	Crataegus phaenopyrum	
Honeylocust <i>Hazardous thorns</i>	Gleditsia triacanthos	(species with thorns)
Horsechestnut <i>Messy fruit</i>	Aesculus (species)	
Locust, Black <i>Weak branched</i>	Robinia pseudoacacia	
Maple, Silver/Soft <i>Weak branched</i>	Acer saccharinum	
Mulberry <i>Messy fruit</i>	Morus (species)	(fruiting varieties)
Oak, Pin <i>Prone to iron chlorosis (yellow foliage) on sites with high PH soils</i>	Quercus palustris	
Oak Sawtooth <i>Invasive tree</i>	Quercus acutissima	

STREET TREE
SELECTIONS
FOR KIRKWOOD

Undesirable Trees

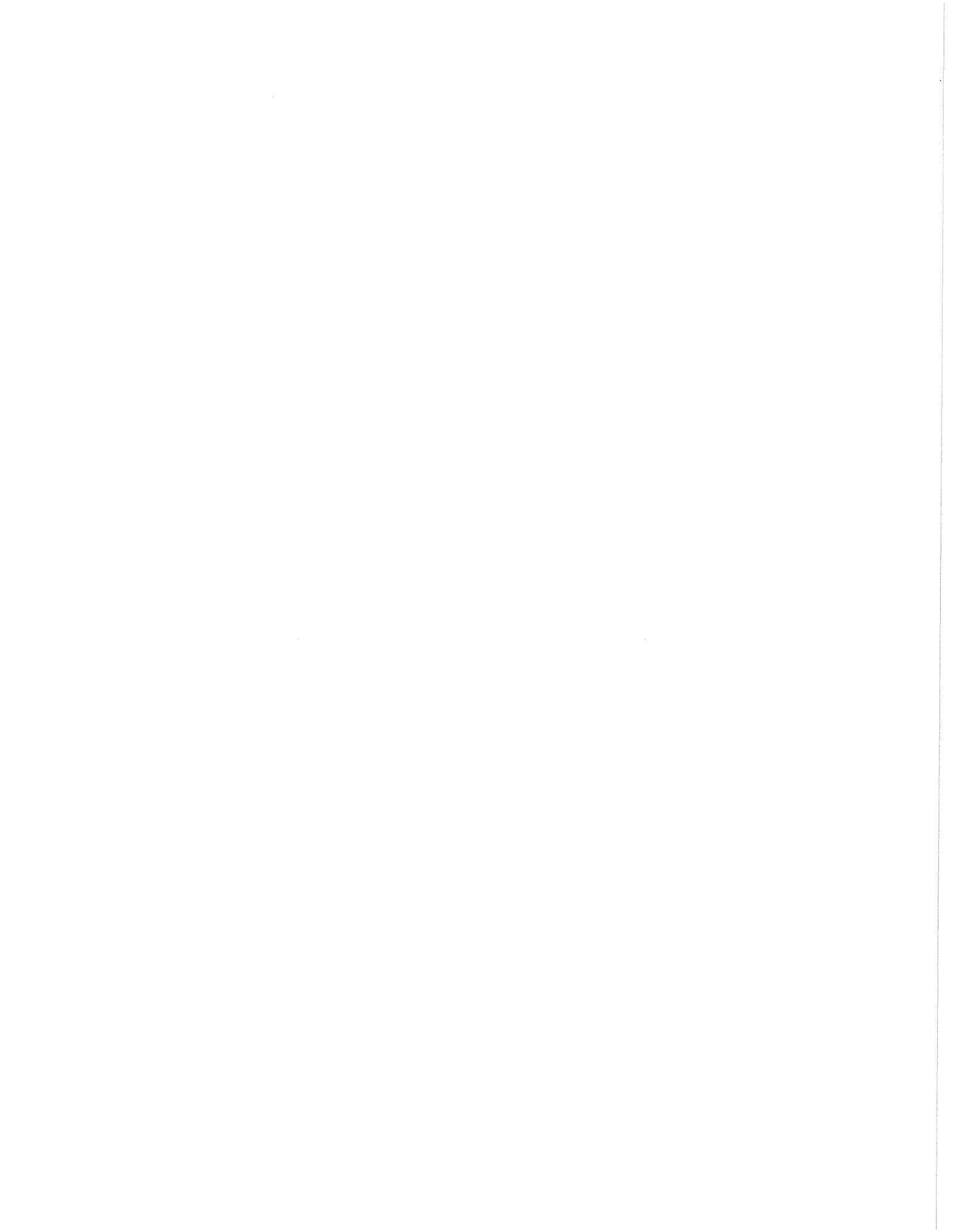
Undesirable Trees

SORTED BY COMMON NAME
TL = Suited for Tree Lawn spaces

COMMON NAME	BOTANICAL NAME	TL
Oak, Shingle <i>Difficult to transplant; prone to oak wilt disease</i>	Quercus imbricaria	
Pear, Bradford <i>Invasive tree</i>	Pyrus Calleryana	
Pear, Ornamental <i>Quite subject to fire blight disease and wind damage; invasive tree</i>	Pyrus (all cultivars)	
Pear Pyrus (species) <i>Messy fruit; invasive tree</i>	Pyrus (fruiting varieties)	
Poplar, Cottonwood <i>Invasive tree</i>	Populus (species)	
Sweet Gum <i>Messy fruit</i>	Liquidambar styraciflua	
Tree of Heaven <i>Invasive weed</i>	Ailanthus altissima	
Walnut, Black <i>Messy fruit</i>	Juglans nigra	
Willow <i>Produces abundance of fallen branches</i>	Salix (species)	

NOTE:

All conifer (needled evergreen) trees (e.g.: pine, spruce, etc.) are discouraged for street tree use due to low branching characteristics (evergreen tree species do not favor lower branch removal).



For more information about the selection, planting, and care of urban trees, visit the following useful Websites:

Alliance for Community Trees

<http://actrees.org>

Ameren: Planting Trees from the Ground Up

www.ameren.com/sites/aeu/Environment/VegetationManagement/Documents/PlantingTrees.pdf

Arbor Day Foundation

www.arborday.org

Find a Certified Arborist (International Society of Arboriculture)

www.isa-arbor.com/findArborist/findarborist.aspx

Forest ReLeaf of Missouri

www.moreleaf.org

Missouri Botanical Garden "PlantFinder"

www.mobot.org/gardeninghelp/plantfinder

Missouri Botanical Garden "Plants of Merit"

www.plantsofmerit.org

Missouri Department of Conservation/Forestry

www.mdc.mo.gov/forest

Right Tree in the Right Place

www.righttreerightplace.com

Trees are Good (International Society of Arboriculture)

www.treesaregood.com

Tree Selection Guide (University of IL Extension)

<http://urbanext.illinois.edu/treeselect/>



Plants of Merit, a program of the Missouri Botanical Garden, promotes underused, reliable, and ecologically responsible plants for diversifying private and public landscapes.