

MILWAUKIE PLANNING
 6101 SE Johnson Creek Blvd
 Milwaukie OR 97206
 503-786-7630
 planning@milwaukieoregon.gov

Application for Land Use Action

R-2023-001;

Primary File #: VR-2023-003

Review type*: I II III IV V

CHECK ALL APPLICATION TYPES THAT APPLY:

- | | | |
|---------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Amendment to Maps and/or | <input type="checkbox"/> Land Division: | <input type="checkbox"/> Planned Development |
| <input type="checkbox"/> Comprehensive Plan Map | <input type="checkbox"/> Final Plat | <input type="checkbox"/> Residential Dwelling |
| <input type="checkbox"/> Amendment | <input type="checkbox"/> Lot Consolidation | <input type="checkbox"/> Manufactured Dwelling Park |
| <input type="checkbox"/> Zoning Text Amendment | <input type="checkbox"/> Partition | <input type="checkbox"/> Manufactured Dwelling |
| <input type="checkbox"/> Zoning Map Amendment | <input type="checkbox"/> Property Line Adjustment | <input type="checkbox"/> Temporary Dwelling Unit |
| <input type="checkbox"/> Code Interpretation | <input checked="" type="checkbox"/> Replat | <input type="checkbox"/> Transportation Facilities Review** |
| <input type="checkbox"/> Community Service Use | <input type="checkbox"/> Subdivision | <input checked="" type="checkbox"/> Variance: |
| <input type="checkbox"/> Conditional Use | <input type="checkbox"/> Mixed Use Overlay Review | <input type="checkbox"/> Use Exception |
| <input type="checkbox"/> Development Review | <input type="checkbox"/> Modification to Existing Approval | <input type="checkbox"/> Variance |
| <input type="checkbox"/> Director Determination | <input type="checkbox"/> Natural Resource Review** | <input type="checkbox"/> Willamette Greenway Review |
| <input type="checkbox"/> Downtown Design Review | <input type="checkbox"/> Nonconforming Use Alteration | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Extension to Expiring Approval | <input type="checkbox"/> Parking: | Use separate application forms for: |
| <input type="checkbox"/> Historic Resource: | <input type="checkbox"/> Quantity Determination | Annexation and/or Boundary Change |
| <input type="checkbox"/> Alteration | <input type="checkbox"/> Quantity Modification | • Compensation for Reduction in Property |
| <input type="checkbox"/> Demolition | <input type="checkbox"/> Shared Parking | • Value (Measure 37) |
| <input type="checkbox"/> Status Designation | <input type="checkbox"/> Structured Parking | Daily Display Sign |
| <input type="checkbox"/> Status Deletion | | • Appeal |

RESPONSIBLE PARTIES:

APPLICANT (owner or other eligible applicant—see reverse): Integrity Homes NW, Inc.
 Mailing address: 7505 NE 53rd Ave, Vancouver, WA State/Zip: 98661-1462
 Phone(s): 503-522-1055 Eduard Shtogrin Email: office@integrityhomesnw.com
 Please note: The information submitted in this application may be subject to public records law.

APPLICANT'S REPRESENTATIVE (if different than above): PAUL ROEGER
 Mailing address: 20330 SE Hwy 212, Pamascos, OR State/Zip: 97089
 Phone(s): 503-860-2545 Email: paul@cmtsc.net

SITE INFORMATION:

Address: 10705 SE 52nd Ave Map & Tax Lot(s): 1-2E-31BA ~ 1200
 Comprehensive Plan Designation: MD Zoning: R-MD Size of property: 12,408 SF

PROPOSAL (describe briefly):

Replat 5 old subdivision lots into 5 new lots for Middle Housing

SIGNATURE: I attest that I am the property owner or I am eligible to initiate this application per Milwaukie Municipal Code Subsection 19.1001.6.A. If required, I have attached written authorization to submit this application. To the best of my knowledge, the information provided within this application package is complete and accurate.
 Submitted by: Paul Roeger Date: 3-7-23

IMPORTANT INFORMATION ON REVERSE SIDE

*For multiple applications, this is based on the highest required review type. See MMC Subsection 19.1001.6.B.1.

** Natural Resource and Transportation Review applications may require a refundable deposit.

WHO IS ELIGIBLE TO SUBMIT A LAND USE APPLICATION (excerpted from MMC Subsection 19.1001.6.A):

Type I, II, III, and IV applications may be initiated by the property owner or contract purchaser of the subject property, any person authorized in writing to represent the property owner or contract purchaser, and any agency that has statutory rights of eminent domain for projects they have the authority to construct.

Type V applications may be initiated by any individual.

PREAPPLICATION CONFERENCE:

A preapplication conference may be required or desirable prior to submitting this application. Please discuss with Planning staff. *Held 11-23-2022 22-016 PA*

DEPOSITS:

Deposits require completion of a Deposit Authorization Form, found at www.milwaukieoregon.gov/building/deposit-authorization-form

REVIEW TYPES:

This application will be processed per the assigned review type, as described in the following sections of the Milwaukie Municipal Code:

- Type I: Section 19.1004
- Type II: Section 19.1005
- Type III: Section 19.1006
- Type IV: Section 19.1007
- Type V: Section 19.1008

THIS SECTION FOR OFFICE USE ONLY:

FILE TYPE	FILE NUMBER	AMOUNT <small>(after discount, if any)</small>	PERCENT DISCOUNT	DISCOUNT TYPE	DATE STAMP
Primary file	R-2023-001	\$ 1,000.00			Application materials received on 3/8/2023. Payment received on 3/xx/2023.
Concurrent application files	VR-2023-003	\$ 1,000.00 (\$750)	25%	Multiple Applications	
		\$			
		\$			
Deposit (NR/TFR only)				<input type="checkbox"/> Deposit Authorization Form received	
TOTAL AMOUNT RECEIVED: \$			RECEIPT #:		RCD BY: R. Dyar

Associated application file #s (appeals, modifications, previous approvals, etc.):

Neighborhood District Association(s): Hector Campbell; Linwood

Notes: Applicant is applying to adjust the boundaries of five historic subdivision lots through a replat and establish five townhouse lots. The applicant is also requesting a Type II variance to reduce the street-side-yard setback from the required 15 feet to 11 feet 3 inches and to increase the maximum lot coverage for proposed Lot 2 from the maximum allowed 45% to 49.5%.

NARRATIVE
Subdivision Replat
10705 SE 52nd Avenue

I. GENERAL INFORMATION

Applicant:	Eduard Shtogrin Integrity Homes NW, Inc. 7505 NE 53 rd Avenue Vancouver, WA 98661 503-522-1055
Applicant's Representative:	Paul H. Roeger CMT Surveying & Consulting 20330 SE Hwy. 212 Damascus, Oregon 97089 503-850-4672 503-860-2545 Cell
Civil Engineer:	Tom Sisul Sisul Engineering 375 Portland Avenue Gladstone, OR 97027 503-657-0188
Surveyor:	David Roeger, PLS CMT Surveying & Consulting 20330 SE Hwy. 212 Damascus, OR 97089 503-850-4672
Property Owner:	Integrity Homes NW, Inc. 7505 NE 53 rd Avenue Vancouver, WA 98661-1462
Tax Lot Information:	Tax Map 1-2E-31BA, Tax Lot 1200
Location:	10705 SE 52 nd Avenue
Current Zoning:	R-MD, Moderate Density Residential
Site Area:	12,408 Sq. Ft.
Water District:	City of Milwaukie
Sanitary Sewer:	City of Milwaukie
Surface Water Mgmt.:	City of Milwaukie
Fire District:	Clackamas County Fire District #1

NARRATIVE
Subdivision Replat
10705 SE 52nd Avenue

Power: Portland General Electric

Telephone: Century Link

Cable: Comcast

Gas: Northwest Natural

II. REQUEST – APPROVALS SOUGHT

The Applicant, Eduard Shtogrin, is requesting Land Use approval for a Replat of five lots of the old MINTHORN ADDITION subdivision, specifically, Lots 1 through 5, Block, 48, to be able to construct five new townhouses. The one single-family house that was on the property has been demolished, along with the detached garage and a shed along the South side of the property. The property will be subdivided into five lots to construct two attached townhouses on the Western two lots and three attached townhouses on the Eastern three lots, all with frontage on SE Jackson Street.

III. SITE DESCRIPTION AND SURROUNDING AREA

The property was zoned R-5 until recently when all single-family residential properties in the City were rezoned to R-MD, Residential Moderate Density, which now allows development on smaller parcels. All surrounding properties were and are zoned the same, and all are developed to the R-5 standard, but now are subject to increased density due to the new zoning standards.

Site access to the previous single-family home was from SE 52nd Avenue. However, with five new lots fronting on SE Jackson Street, primary front door access will be from SE Jackson Street. Parking will be provided by a garage for each townhouse.

IV. PROPOSAL SUMMARY

The existing house, garage, and shed have been demolished. The one tax lot (five 25-ft x 100-ft lots) will be replated into five lots, the Western two of which will have attached townhouses, one on each of the Western two lots and the Eastern three with three attached townhouses, one on each of the Eastern three lots. Front door access will be from the SE Jackson Street side of the units. Parking will be provided in a garage within the proposed townhouses.

The existing house was connected to a sanitary sewer lateral from the dead-end sanitary sewer manhole in SE Jackson Street just West of this property in the middle of the street. This service will be abandoned, and the main line will be extended to the East in order to serve all five lots from SE Jackson Street.

NARRATIVE
Subdivision Replat
10705 SE 52nd Avenue

The existing house was served water from a meter in SE 52nd Avenue. This meter may be used for the new townhouse on Lot 1 or abandoned and a new service installed. There is a 12-inch water main on the North side of SE Jackson Street to which all new townhouses on Lots 2 through 5 will be connected, and possibly Lot 1, too.

Storm drainage for the new townhouses will be run to drywells per Code.

Power, telephone, and cable to the existing house was provided overhead to the North side of the house. This has been abandoned and all new power, telephone, and cable will be installed underground to the new townhouses as required.

There are two existing gas services into this property from SE 52nd Avenue. These will be abandoned. If gas service is needed for the new townhouses there is a 2-inch main on the South side of SE Jackson Street just West of this property that can be extended to serve these units. There is also a 1-inch gas main on SE 52nd Avenue.

V. 17.12.020 – APPLICATON PROCEDURE AND APPROVAL CRITERIA

This will be a Type III review, since the proposal is for a Replat of these five lots of the old MINTHORN ADDITION TO THE CITY OF PORTLAND, originally subdivided in 1890, into five lots. The Western lots will have two attached townhouses constructed on them, one on each lot. Lot 5 will be 24.75-feet wide and Lot 4 will be 24.67-feet wide by 100.00-feet deep. The Eastern three lots will have three attached townhouses constructed on them, one on each lot. Lot 3 will be 24.67-feet wide, lot 2 will be 20-feet wide, and lot one, which is a corner lot, will be 29.99-feet wide by 100.00-feet deep.

The non-attached sides of the townhouses on lots 4 and 5 will have a 5-foot setback. The non-attached side of the townhouse on lot 3 will be 5-feet. The townhouse on lot 1, the corner lot, will have a street side setback of 11.32-feet, for which we have applied for a Variance, since the standard setback is 15-feet.

17.12.030 – APPROVAL CRITERIA FOR LOT CONSOLIDATION, PROPERTY LINE ADJUSTMENT, AND REPLAT

The replat of these five lots into five new lots will allow development of the affected lots under the new R-MD zone with five new townhouses, one on each of the new lots. However, we are applying for a Variance on the corner lot side yard setback standard and on the Lot Coverage standard for Lot 2, a 20-foot wide lot with a proposed townhouse that will have two common walls.

17.12.040 APPROVAL CRITERIA FOR PRELIMINARY PLAT

The Preliminary Plat complies with Title 19 of the City Code, including Chapter 16.32 – Tree Code.

NARRATIVE
Subdivision Replat
10705 SE 52nd Avenue

The proposed subdivision will allow reasonable development, however, a Variance has been applied for due to Lot 1 being a corner lot and the required street side yard setback cannot be met without a Variance to the required 15-foot set back standard. We can only get 11.32-feet on the East side yard.

The propose subdivision plat name of "JACKSON PLACE" has been reserved with the Clackamas County Surveyor's Office.

No new streets or roads are proposed and the existing rights-of-way (ROW) are wide enough, 60-feet, so no additional ROW dedication will be required.

Separate utility service connections are being designed for each of the new lots, including water, sewer, and stormwater.

Now easements will be necessary for any of the new dwellings.

New utility services for power, telephone, cable, and gas are available, or can be made available from SE Jackson Street.

Pedestrian access to each dwelling unit will be directly from SE Jackson Street, a public road.

Driveways to each unit will come directly from SE Jackson Street to the garage of each unit.

Only one dwelling unit will be located on each resulting lot. No lots or tracts are being proposed for common areas.

The townhouses to be built on each lot will comply with applicable building codes provisions relating to new property lines.

Each townhouse or any other buildings located on the newly created lots will comply with the Oregon Residential Specialty Code.

All five of these lots abut SE Jackson Street and Lot 1, the corner lot, abuts SE 52nd Avenue. Neither of these streets meet City standards, except for the existing ROW is adequate for this development. However, it is our understanding that the developer will be required to pay a Fee-In-Lui-Of constructing the street improvements.

There are no existing improvements on any of these lots since the old house and garage that was on the property has been demolished.

The proposed subdivision only includes land zoned for residential uses and the new lots will only be developed for residential use. None of this property includes land that is specifically mapped and designated in the comprehensive plan and land use regulations for full or partial protection of natural features under statewide planning goals.

This land division will not result in development that creates enough lots to allow building residential units at 80 percent or more of the maximum net density of 25 units per Acre for the R-MD zone. Since the property is a total of 12,408 square feet, or 0.2848 Acres, which results in 5 units on the 0.2848 Acres, which equals 17.55 units per Acre, which is only 70 percent of the maximum net density. Therefore, the units will need to be sold or rented to households with incomes below 120 percent of the medium family income for Clackamas County.

**NARRATIVE
Subdivision Replat
10705 SE 52nd Avenue**

All Conditions of Approval required by the City for this Replat will be complied with by the developer.

VI. 17.16 Application Requirements and Procedures

An application for a Replat with the signature of all owners is included in this submittal and required fees will be paid. No waivers are being requested. A narrative report describing how the proposal meets approval criteria and additional information, including a Preliminary Replat are also included. The “preliminary plat checklist” is also included.

VII. 17.20 Preliminary Plat

17.20.010 and 17.20.020 – SUBMISSION OF PLANS and SCALE

A Preliminary Replat drawn at a 1” = 20’ scale is included in this submittal.

17.20.030 – GENERAL INFORMATION TO BE SHOWN ON THE PRELIMINARY PLAT

The Preliminary Replat has been prepared by an Oregon registered land surveyor.

All required information is on the Preliminary Replat.

17.20.050 and 17.20.060 – EXISTING CONDITIONS and PROPOSED CONDITIONS

A separate Existing Conditions Plan is being provided with this submittal. We have also included the proposed Replat on the Existing Conditions Plan. Contour lines and existing utilities are also shown. Sisul Engineering has submitted Engineering Plans to extend the existing sanitary sewer in SE Jackson Street to serve all five new lots with individual sewer laterals. New water services from the City’s 12-inch water main on the North side of SE Jackson Street are also shown.

A conceptual plan of the Replat layout with new townhouses and driveways are shown on the Proposed Replat with Townhouses Plan overlaid on the Existing Conditions.

VIII Title 19 - ZONING

19.301 - MODERATE DENSITY RESIDENTIAL ZONE

This property is in the Moderate Density Residential Zone – R-MD. The proposal is to Replat five existing old subdivision lots into five new subdivision lots to meet the current zoning of the property.

The intent is to build two townhouses on the Western two lots, one on each lot, and three townhouses on the Eastern three lots, one on each lot.

NARRATIVE
Subdivision Replat
10705 SE 52nd Avenue

Per Table 19.301.2, Moderate Density Residential Uses Allowed, townhouses are permitted outright in the R-MD zone and must meet the standards of Subsection 19.505.5 for Townhouses.

All proposed lots are at or below 2,999 square feet. Therefore, per Table 19.301.4, Moderate Density Residential Development Standards, Townhouses are a permitted Dwelling Type on all of these lots. All of the required Lot Standards, including Minimum lot width, Minimum lot depth and Minimum street frontage for townhouses are met. Our minimum lot width is 20-feet (lot 2). Lot depths are all 100-feet, and the minimum street frontage is 20-feet (lot 2).

Development Standards per this table also are met. Minimum front yard for all the townhouses will be 20-feet. The side yard of the portion of the units that is not a common wall will be a minimum of 5-feet. The rear yard for all of the townhouses is 32-feet. The one street side yard on lot 1 at the corner of SE Jackson Street and SE 52nd Avenue is proposed at 11.32-feet, for which we have applied for a Variance. The maximum lot coverage will average well under 45 percent, although lot 2 will exceed the lot coverage due to the two common walls and the depth of the townhouse being 48-feet on a 20-foot-wide lot. Therefore, lot 2 has a lot coverage of 48 percent. We have applied for a Variance of this standard.

Other Standards of this table include minimum and maximum density, which for these sized lots is 25 units per acre for both maximum and minimum density. We can only get 17.6 units per acre.

The minimum vegetation requirement of 15 percent for a townhouse lot will be met at the time of Building Permit.

19.500 – Supplementary Development Regulations

Our conceptual plan of the Replat with the townhouse layout and driveways show adequate clear vision at the intersection of SE 52nd Avenue and SE Jackson Street since the front yard setback is 20-feet and the side yard abutting SE 52nd Avenue is proposed at 11.32 feet for which we have applied for a Variance.

All other required setbacks are being met.

Most Site and Building Design Standards will be met at Building Permit time. Two attached townhouses are proposed on the Western two lots (one on each lot) and three attached townhouses are proposed on the three Eastern lots.

19.600 - Off-Street Parking Standards for Residential Areas

Even though off-street parking is not required for townhouses, one off-street parking space is proposed to be provided for each townhouse. That one space will be provided in a garage within the townhouse. The two units on the Western two lots will have a 19.5-foot wide shared driveway, half on each lot. Two of the three units on the Eastern three lots will have a 19.5-foot wide shared driveway, half on each lot, and the other unit will have a 9.5-foot wide driveway.

One bicycle parking space will be provided per unit, as required per Code section 19.609.2.A.3.

NARRATIVE
Subdivision Replat
10705 SE 52nd Avenue

IX. 16.32 Tree Code

16.32.042 - An Arborist Report is being submitted with this application. It appears that most trees will be removed, including those in public right-of-way, and then mitigated. All of the trees onsite are in the way of the proposed development, as are most of the trees in the public right-of-way. A new tree planting proposal (mitigation) will be provided as needed.

Bonds for tree protection and post development warranties will be provided, as necessary.

X. Title 13 – Public Services

13.04 – A 12-inch DI Water main is located on the North side of SE Jackson Street. New water services for each of the lots will be installed off of that main. Permits and System Development Charges will be paid as necessary for this development. We understand there will be a credit for the existing house that has been removed from this property.

13.12 – There is an existing 8-inch sanitary sewer located in the center of SE Jackson Street just West of the Northwest corner of the property. Engineering plans have already been submitted to the City for review of the extension of this line to serve all the properties from SE Jackson Street. All permits and System Development Charges will be paid as necessary for this development. We understand there will be a credit for the existing house that has been removed from this property.

13.14 – Stormwater management for the new townhouses will be handled onsite by installation of drywells for all the roof drains. System development charges will be paid as necessary for this development.

13.32 – It is our understanding that Fee In Lieu of Construction (FILOC) for Street Improvements will be required.



503-522-1055
office@integrityhomesnw.com

Date: 2/11/2023

To: City of Milwaukie

From: Eduard Shtogrin

Subject: 10705 SE 52nd Ave – Adjustment to street side setback and lot 2 coverage – type II variance

Response to approval criteria 19.911.4

- 1. The proposed variance, or cumulative effect of multiple variances, will not be detrimental to surrounding properties, natural resource areas, or public health, safety, or welfare.*

This land use application is for adjusting property lines and the replat of the existing 5 lots of record. The variance is for reducing the street side setback by 25% from 15' to 11' 3" and also increasing the allowed coverage of lot 2 by 10% to 990 SqFt. The property was originally platted for 5 lots and no additional lots are being created therefore there is no detriment in regards to the surrounding properties, public health, safety, or welfare. Furthermore, there are no natural resource areas on the property. All other alternatives were considered, but the required 15' street side setback made developing the corner property impossible. A reduction of the street side setback makes it possible to develop the corner lot as it was originally platted and to meet all other City of Milwaukie development standards. Increasing the allowed coverage of lot 2 by 10% to 990 SqFt allows the building of a townhouse unit that matches the size and style of the other attached units with no detrimental affects .

- 2. The proposed variance will not interfere with planned future improvements to any public transportation facility or utility identified in an officially adopted plan such as the Transportation System Plan or Water Master Plan.*

There are no future plans to widen SE 52nd Ave and the current right of way is wide. The proposed variance would have no impact on future development to any public transportation facility or utilities.

- 3. Where site improvements already exist, the proposed variance will sustain the integrity of, or enhance, an existing building or site design.*

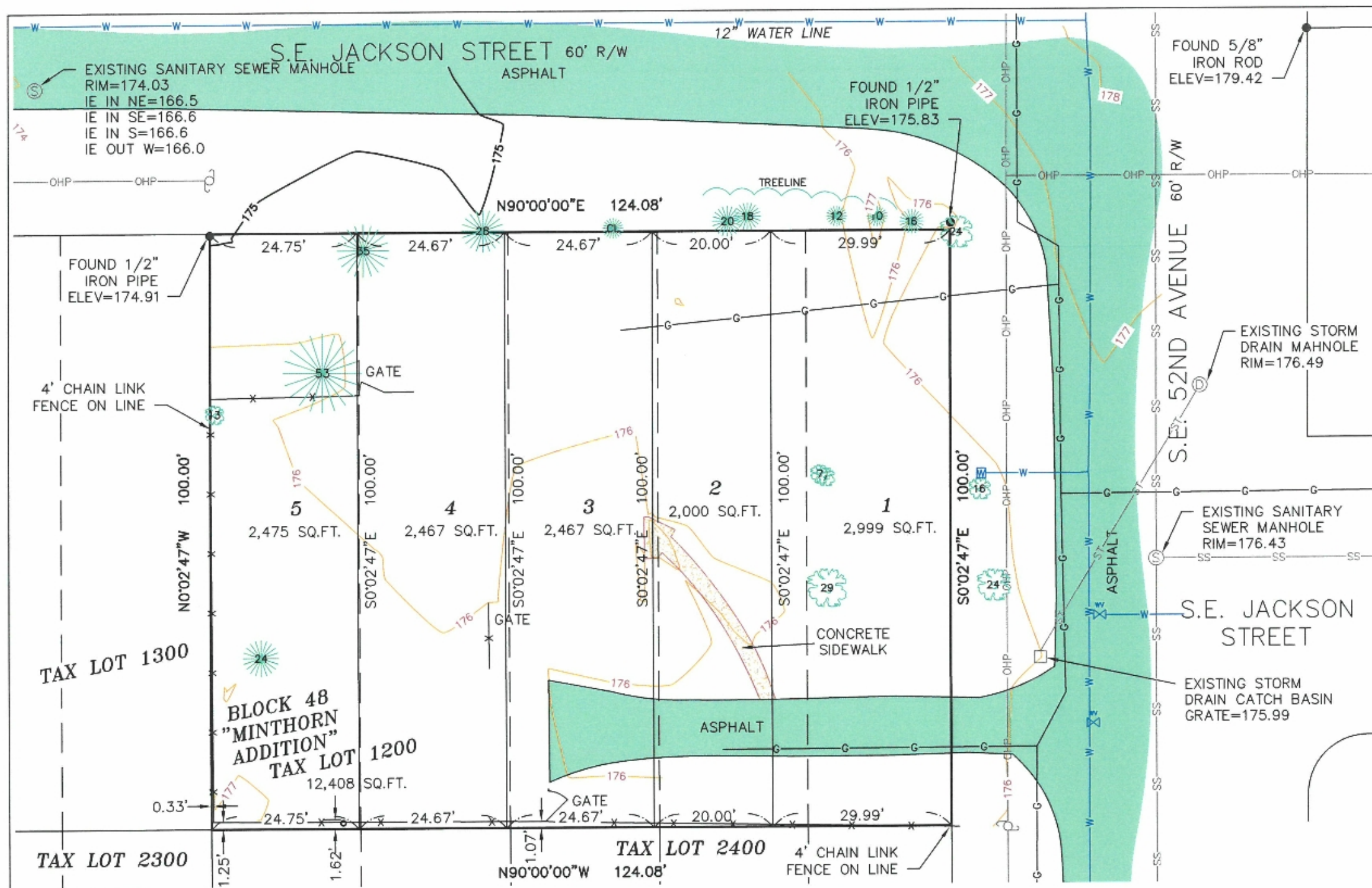
The property is currently as previous existing house has been demolished.

4. Impacts from the proposed variance will be mitigated to the extent practicable.

There is no mitigation proposed as development of this property will still need to meet all City of Milwaukie development standards and tree code.

5. The proposed variance would allow the development to preserve a priority tree or trees, or provide more opportunity to plant new trees to achieve 40% canopy, as required by Chapter 16.32.

Development of this property will include the planting of new trees to achieve canopy requirements of the City of Milwaukie and will preserve trees that are healthy and do not interfere with the development of this property.



LEGEND

- EXISTING DECIDUOUS TREE W/ TRUNK DIAMETER (INCHES)
- EXISTING CONIFEROUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING POWER POLE
- EXISTING OVERHEAD POWER LINES
- EXISTING UNDERGROUND WATER
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING UNDERGROUND GAS LINE
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING MAILBOX
- EXISTING ROOF DOWNSPOUT
- EXISTING FENCE
- FOUND MONUMENTS
- EXISTING CONCRETE
- EXISTING ASPHALT



SCALE 1" = 20'


REGISTERED
PROFESSIONAL
LAND SURVEYOR

David Roeger
OREGON
SEPTEMBER 21, 2018
DAVID ROEGER
86811

EXPIRES DECEMBER 31, 2024

NOTES

1. THE PURPOSE OF THIS MAP WAS TO SHOW THE EXISTING CONDITIONS FOR 10705 S.E. 52ND AVENUE.
2. THE BASIS OF BEARINGS WAS PER THE PLAT OF "MINTHORN ADDITION TO THE CITY OF PORTLAND", MULTNOMAH COUNTY RECORDS.
3. LOCAL DATUM WAS ESTABLISHED BY GPS OBSERVATION, NAD 83 DATUM.
4. THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF K & C CUSTOM HOMES FOR CIVIL ENGINEER DESIGN.
5. THIS MAP WAS PREPARED BY PLAT RECORDS, CALCULATED DATA, AND FIELD MEASUREMENTS, A RECORDED BOUNDARY SURVEY WILL BE FILED AT A DATE TO BE DETERMINED.
6. ALL UTILITY LOCATIONS ARE SHOWN BY ABOVE GROUND FEATURES AND LOCATION OF PAINT MARKS SUPPLIED BY THE LOCAL UTILITY COMPANIES. CMT TAKES NO RESPONSIBILITY OF UNDERGROUND LOCATION. PLEASE NOTIFY THE UTILITY NOTIFICATION CENTER BEFORE ANY DIGGING 1-800-332-2344.
7. ZONING IS R-MD FOR ALL PROPERTIES WITHIN 200 FEET.

EXISTING CONDITIONS WITH PROPOSED REPLAT	10705 S.E. 52ND AVENUE
NW 1/4 SEC 31, T 1 S, R 2 E, W.M.	 CMT SURVEYING AND CONSULTING 20330 SE HIGHWAY 212 DAMASCUS, OR 97089 PHONE (503) 850-4672 FAX (503) 850-4590
CITY OF MILWAUKIE	
CLACKAMAS COUNTY, OREGON	
MARCH 3, 2023	
DRAWN: JMR CHECKED: DMR	
SCALE 1"=20' ACCOUNT # 343	
Y:\343-010\DWG\343010EX2.DWG	

JACKSON PLACE

REPLAT OF LOTS 1-5, BLOCK 48, MINTHORN ADDITION



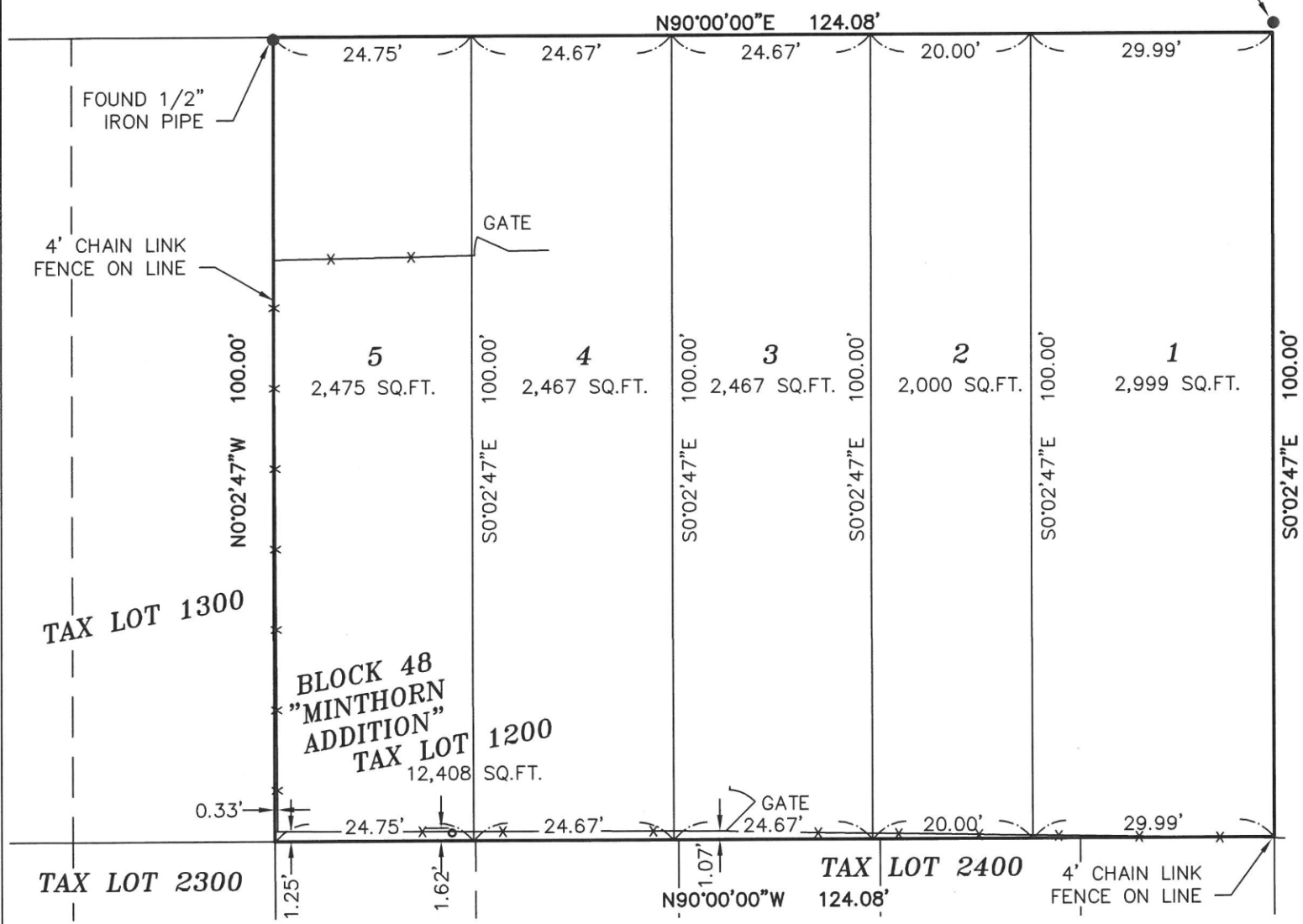
SCALE 1" = 20'

S.E. JACKSON STREET

FOUND 1/2" IRON PIPE

LEGEND

- x — EXISTING FENCE
- FOUND MONUMENTS



S.E. 52ND AVENUE

REGISTERED
PROFESSIONAL
LAND SURVEYOR


David Roeger

OREGON
SEPTEMBER 11, 2018
DAVID ROEGER
86811

EXPIRES DECEMBER 31, 2024

OWNER & SUBDIVIDER: INTERGITY HOMES NW
7505 NE 53RD AVE.
VANCOUVER, WA 98661

ENGINEER: TOM SISUL
TOM SISUL ENGINEERING
375 PORTLAND AVE.
GLADESTONE, OR 97027

PROPOSED PRELIMINAY REPLAT	10705 S.E. 52ND AVENUE
NW 1/4 SEC 31, T 1 S, R 2 E, W.M.	 CMT SURVEYING AND CONSULTING 20330 SE HIGHWAY 212 DAMASCUS, OR 97089 PHONE (503) 850-4672 FAX (503) 850-4590
CITY OF MILWAUKIE	
CLACKAMAS COUNTY, OREGON	
FEBRUARY 27, 2023	
DRAWN: JMR CHECKED: DMR	
SCALE 1"=20' ACCOUNT # 343	
Y: \343-010\DWG\343010PRO.DWG	



MILWAUKIE PLANNING
6101 SE Johnson Creek Blvd
Milwaukie OR 97206
503-786-7630
planning@milwaukieoregon.gov

Submittal Requirements

**For all Land Use Applications
(except Annexations and Development Review)**

All land use applications must be accompanied by a signed copy of this form (see reverse for signature block) and the information listed below. The information submitted must be sufficiently detailed and specific to the proposal to allow for adequate review. Failure to submit this information may result in the application being deemed incomplete per the Milwaukie Municipal Code (MMC) and Oregon Revised Statutes.

Contact Milwaukie Planning staff at 503-786-7630 or planning@milwaukieoregon.gov for assistance with Milwaukie's land use application requirements.

1. **All required land use application forms and fees**, including any deposits.

Applications without the required application forms and fees will not be accepted.

2. **Proof of ownership or eligibility to initiate application** per MMC Subsection 19.1001.6.A.

Where written authorization is required, applications without written authorization will not be accepted.

3. **Detailed and comprehensive description** of all existing and proposed uses and structures, including a summary of all information contained in any site plans.

Depending upon the development being proposed, the description may need to include both a written and graphic component such as elevation drawings, 3-D models, photo simulations, etc. Where subjective aspects of the height and mass of the proposed development will be evaluated at a public hearing, temporary onsite "story pole" installations, and photographic representations thereof, may be required at the time of application submittal or prior to the public hearing.

4. **Detailed statement** that demonstrates how the proposal meets the following:

A. All applicable development standards (listed below):

1. **Base zone standards** in Chapter 19.300.
2. **Overlay zone standards** in Chapter 19.400.
3. **Supplementary development regulations** in Chapter 19.500.
4. **Off-street parking and loading standards and requirements** in Chapter 19.600.
5. **Public facility standards and requirements**, including any required street improvements, in Chapter 19.700.

B. All applicable application-specific approval criteria (check with staff).

C. Compliance with the Tree Code (MMC 16.32): www.milwaukieoregon.gov/trees

These standards can be found in the MMC, here: www.qcode.us/codes/milwaukie/

5. **Site plan(s), preliminary plat, or final plat** as appropriate.

See Site Plan, Preliminary Plat, and Final Plat Requirements for guidance.

6. **Copy of valid preapplication conference report**, when a conference was required.

G:\Planning\Internal\Administrative - General Info\Applications & Handouts\Submittal Rqmts_Form_revised.docx—Rev. 6/22

APPLICATION PREPARATION REQUIREMENTS:

- Electronic copies of all application materials are required at the time of submittal.

ADDITIONAL INFORMATION:

- Neighborhood District Associations (NDAs) and their associated Land Use Committees (LUCs) are important parts of Milwaukie's land use process. The City will provide a review copy of your application to the LUC for the subject property. They may contact you or you may wish to contact them. Applicants are strongly encouraged to present their proposal to all applicable NDAs prior to the submittal of a land use application and, where presented, to submit minutes from all such meetings. NDA information: www.milwaukieoregon.gov/citymanager/what-neighborhood-district-association.
- By submitting the application, the applicant agrees that City of Milwaukie employees, and appointed or elected City Officials, have authority to enter the project site for the purpose of inspecting project site conditions and gathering information related specifically to the project site.

As the authorized applicant I, (print name) _____, attest that all required application materials have been submitted in accordance with City of Milwaukie requirements. I understand that any omission of required items or lack of sufficient detail may constitute grounds for a determination that the application is incomplete per MMC Subsection 19.1003.3 and Oregon Revised Statutes 227.178. I understand that review of the application may be delayed if it is deemed incomplete.

Furthermore, I understand that, if the application triggers the City's sign-posting requirements, I will be required to post signs on the site for a specified period of time. I also understand that I will be required to provide the City with an affidavit of posting prior to issuance of any decision on this application.

Applicant Signature: Paul N. Deen

Date: 3-7-23

Official Use Only

Date Received (date stamp below):

Received by: _____



MILWAUKIE PLANNING
6101 SE Johnson Creek Blvd
Milwaukie OR 97206
503.786.7630
planning@milwaukieoregon.gov

Preliminary Plat Checklist and Procedures

All applications for partitions and subdivisions require submission of preliminary development plans and supporting information in accordance with the Milwaukie Land Division Ordinance. In special cases, certain items listed below may not be required and can be waived by staff. All items below must be submitted except when authorized by staff signature at the end of the form. Errors, omissions, or poor quality may result in the application being rejected or declared incomplete pursuant to the Milwaukie Zoning Ordinance and/or Land Division Ordinance. The Zoning and Land Division Ordinances can be found here: www.qcode.us/codes/milwaukie/.

One hard copy and an electronic version of all submittal materials are required.

Application Checklist

1. Detailed description of how the proposal complies with Land Division Ordinance Section 17.12 Application Procedure and Approval Criteria.
2. Detailed description of how the proposal complies with Land Division Ordinance Section 17.16 Application Requirements and Procedures.
3. Detailed description of how the proposal and application complies with Land Division Ordinance Section 17.20 Preliminary Plat including the following minimum requirements:
 - a. Preliminary plats shall be prepared by an Oregon registered land surveyor.
 - b. The following general information shall be submitted with the preliminary plat:
 - 1) Proposed name of the subdivision/partition. The name shall not duplicate nor resemble the name of another subdivision in the county. Subdivision names shall be approved by the County Surveyor in accordance with Oregon Revised Statutes Chapter 92.
 - 2) Appropriate identification clearly stating the map is a preliminary plat.
 - 3) Location by section, township, and range; and a legal description sufficient to define the location and boundaries of the area to be divided.
 - 4) Names and addresses of the owner, subdivider, and engineer or surveyor.
 - 5) Information specified in Section 17.20.060.A.10 related to middle housing land divisions (if applicable).
 - 6) Other information as may be specified on application forms and checklists prescribed by the Planning Director.
 - c. Vicinity map shall be drawn at an appropriate scale, showing all existing subdivisions, streets, and unsubdivided land between the proposed subdivision and the nearest existing arterial or collector streets; and showing how proposed streets may be extended to connect with existing streets. At a minimum, the vicinity map shall depict future street connections for land within 400 ft of the subject property.
4. Existing conditions plan including the following):

- a. Location, width, and names of all existing or platted streets within or adjacent to the tract, together with easements, railroad right-of-way, and other important features, such as section lines and corners, city boundary lines, and monuments.
 - b. Contour lines related to an established benchmark or other datum approved by the Engineering Director, with intervals at a minimum of 2 ft for slopes up to 10% and 5 ft for slopes over 10%.
 - c. Location within the area to be divided, and in the adjoining streets and property, of existing sewers, water mains, culverts, storm drain system, and electric conduits or lines proposed to service the property to be subdivided, and invert elevations of sewer manholes, drain pipes, and culverts.
 - d. Zoning and existing uses within the tract and 200 ft on all sides, including the location and use of all existing structures indicating those that will remain and those to be removed.
 - e. Approximate location of areas subject to inundation or stormwater overflow with approximate high-water elevation. Location, width, direction, and flow of all watercourses on or abutting the tract including wetlands and watercourses as shown on City-adopted natural resource and Title 3 maps.
 - f. Natural features such as rock outcroppings, drainages whether seasonal or perennial, wooded areas, and isolated trees, including type and caliper.
 - g. Floodway and floodplain boundary.
 - h. Areas containing slopes of 25% or greater
5. The preliminary plat plan shall include the following information:
- a. Date, north point, scale, address, assessor reference number, and legal description.
 - b. Name and address of the record owner or owners and of the person who prepared the site plan.
 - c. Approximate acreage and square feet under a single ownership or, if more than one ownership is involved, the total contiguous acreage of all landowners directly involved in the partition.
 - d. For land adjacent to and within the area to be divided, the locations, names, and existing widths of all streets, driveways, public safety accesses, easements, and right-of-ways; location, width, and purpose of all other existing easements; and location and size of sewer and waterlines, drainage ways, power poles, and other utilities.
 - e. Location of existing structures, identifying those to remain in place and those to be removed.
 - f. Dimensioned lot design and layout, showing proposed setbacks, landscaping, buffers, driveways, lot sizes, and relationship to existing or proposed streets and utility easements.
 - g. Existing development and natural features for the site and adjacent properties, including those properties within one 100 ft of the proposal, showing buildings, mature trees, topography, and other structures.
 - h. Elevation and location of flood hazard boundaries.
 - i. The location, width, name, and approximate centerline grade and curve radii of all streets; the relationship of all streets to any projected streets planned by the City;

indication as to whether roads will continue beyond the plat; and existing and proposed grade profiles.

- j. Lot and block numbers.
 - k. For middle housing land divisions:
 - i. separate utility connections for each dwelling unit;
 - ii. proposed easements necessary for each dwelling unit on the plan for:
 - 1) Locating, accessing, replacing and servicing all utilities;
 - 2) Pedestrian access from each dwelling unit to a private or public road;
 - 3) Any common use areas or shared building elements;
 - 4) Any dedicated driveways or parking; and
 - 5) Any dedicated common area.
6. A conceptual plan shall be provided for complete subdivision or partitioning of the property, as well as any adjacent vacant or underutilized properties, so that access issues may be addressed in a comprehensive manner. The concept plan shall include documentation that all options for access have been investigated including shared driveways, pedestrian accessways, and new street development.
 7. A detailed narrative description demonstrating how the proposal meets all applicable provisions of this title and Title 19.
 8. Plans and drawings as necessary to demonstrate compliance with all applicable provisions of chapters of this title and Title 19.
 9. A drainage summary report and plan that demonstrates estimated pre- and post-development flows, stormwater collection and management measures, and proposed discharges.
 10. Proposed deed restrictions, if any, in outline form.
 11. Improvements to be made by the developer and the approximate time such improvements are to be completed. Sufficient detail regarding proposed improvements shall be submitted so that they may be checked for compliance with the objectives of this title, State law, and other applicable City ordinances. If the nature of the improvements is such that it is impractical to prepare all necessary details prior to approval of the preliminary plat, the additional details shall be submitted with the request for final plat approval.
 12. Location plan drawn to an appropriate scale (on paper no larger than 8½ by 11 inches) showing nearest cross streets, drives opposite the site, and location of buildings and parking areas on adjoining lots.

Application Procedures

1. A preapplication conference with City staff is highly recommended.
2. Appointments may be made for review of preliminary plat requirements through the Planning Department in advance of formal submission.
3. The Planning Department coordinates with appropriate City departments, the Fire District, and other involved agencies as needed.
4. Applications will be screened for completeness at the time of submission. Incomplete applications will not be accepted.

Please contact Milwaukie Planning staff at 503-786-7630 or planning@milwaukieoregon.gov with any questions or help with this form.

Paul H. Roeger
Applicant Name

Paul McLoey
Applicant Signature

3-7-23
Date

Waived Items

Milwaukie Planner Signature

Date



TERAGAN
& ASSOCIATES, INC.
ARBORICULTURAL CONSULTANTS

TREE PROTECTION PLAN

for

INTEGRITY HOMES NW | SE 52ND AVE

Submitted by

Peter van Oss PN-8145A

Date Thursday, January 19, 2023

Teragan and Associates, Inc.
Arboricultural Consultants
3145 Westview Circle, Lake Oswego, OR 97034
503-697-1975 | info@teragan.com

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Summary

Teragan and Associates has been contracted with Integrity Homes NW to provide arboricultural consulting services. This report is the tree plan for the demolition and construction phase of the proposed project. The tree plan meets the recommendations and requirements of the City of Milwaukie Code.

Background

The plans propose the deconstruction of the existing home and the construction of two new multi-family homes. This tree plan is written in accordance with the City of Milwaukie Code Chapter 16.32 TREE CODE. This tree plan covers the proposed removals, soil protection during demolition and construction, tree protection of the proposed retained trees, and mitigation requirements.

Tree Inventory

I completed the inventory during the site visit on January 10th, 2023. The tree diameters were recorded using a diameter tape. The health and conditions of the trees are determined by the plant species profiles compared to the current condition the trees present. Attributes that can negatively impact the ratings are growing conditions, bark inclusions, broken branches, poor vigor...etc. All trees are tagged with aluminum tags that have the corresponding numbers scribed on them except for trees that were not accessible due to accessibility restrictions.

Purpose and Use of the Report

The purpose of this report is to establish tree protection measures that will need to be adhered to during the construction project to ensure a positive outcome of the retention efforts. This report may be used by the owner to establish a communication between the City of Milwaukie – Planning Department, contractors, and sub-contractors regarding the tree protection efforts of the project.

Limits of the Report

The trees were visually assessed from the ground only. No tools were used to assess any of the tree parts. The site was surveyed by CMT Surveying, and the site improvements were not staked out at the time of my site visit. The impacts of the proposed site development in regard to the existing trees onsite were determined by comparing the landmarks to the provided plans and sketches. Final building plans were not available at the time of the establishment of this tree plan. The location of the building footprint is established via communications with the builder who provided building dimensions and the setbacks.

The trees were inventoried using a Trimble DA2 GNNS Receiver and the data was collected using GIS software. The GPS accuracy was between two and three and a half feet at the time of the inventory. The plans provided in this report are for reference only and should not be used for architectural, engineering, or building purposes.

Observations

Most of the trees that are located along the north and east sides of the property are in the public ROW according to the survey plans provided by CMT Surveying. The trees that are directly onsite are proposed for removal due to the anticipated impacts from the construction and to allow for the new frontage and associated landscaping. Several of the trees onsite are considered nuisance species in most municipalities in the Portland Metro area and there are several trees that are in very poor condition. These trees are not included in the canopy calculations and are recommended to be removed using the Type I procedure.

Since most of the trees are located in the right of way, they are not eligible for onsite canopy calculations and only the trees that are directly onsite are used for the canopy calculations. This tree plan is the basis for the site improvements and may need to be amended once the final building plans have been created.

Canopy Coverage

The following calculations show the removal of the canopy coverage and existing canopy coverage retention. The total site without the ROW equals 12400 SF. The total canopy area for the proposed removals of onsite trees is 2510 SF. $2510/12400=0.224$ (20.24%).

The required square footage of canopy coverage at maturity is 40%. The retained canopy credit equals 3298.67 SF. $3298.67/12400=0.226$ (22.6%).

40% of the required tree canopy equals 4960 SF of mature canopy. $4960-3298.67=1661.33$, 1661.33 SF of canopy coverage is required to meet the 40% minimum canopy coverage standard. It is recommended that one large canopy at maturity is planted with a mature canopy of 1963 SF or two medium trees with a mature canopy of 962 SF.

Since the total existing canopy coverage retained is less than 30% a mitigation fee in accordance with the master fee table is applicable for the site. The inventory spreadsheet attached in Appendix D shows the details for the individual trees including the mitigation fee calculation.

Tree Protection During Construction

Trees that are retained should be protected at the recommended distance of 6 inches per diameter inch of the trees. This means that the soil disturbance should be 6 inches per diameter inch away from the tree in circumference of the tree.

It is important to note that some of the fencing is within the measurement of 6X the diameter. The project arborist shall be notified if ground disturbance takes place near 10X, a distance measured at a rate of ten inches per diameter inch of the tree, measured from the face of the trunk. The project arborist must oversee the ground disturbing activities when they take place.

Trees with low canopies should be pruned prior to the start of the project to ensure that there is enough clearance for the equipment being used. Care must be taken to prevent damages to any of the tree parts including the roots, tree trunk, scaffold, and secondary branches (canopy of the tree).

Demolition of the existing structure should be completed in a manner that avoids placing materials outside of the existing buildings footprint. Removal of the foundations shall be performed in a manner that avoids movement of the soil by solely removing the concrete material. It is recommended that an excavator with a toothless bucket is used, and the excavator is equipped with a thumb clamp to allow for the removal of individual building materials without the need to scrape or dig the soil. Flat work must be removed by carefully lifting the material without the disturbance of the subgrade.

New utility lines are recommended to be designed to be installed outside of the tree protection zones of the trees measured at 12X the diameter where possible.

The attached existing conditions plan provided by CMT Surveying has been marked up to scale. The blue circles indicate the tree protection zone at 12X the diameter and the orange circles indicate the tree protection zones at 6X the diameter. Areas that require the supervision by the project arborist have been marked. It is recommendable to coordinate the oversight appropriately to ensure availability and to minimize the time needed to complete the oversight.

Additional Tree Protection Mitigation in Appendix E

Soil Volume Standards

16.32.042 G.2 Performance Path for Soil Volume.

Since the existing building is facing SE 52nd Ave and the proposed layout of the new structures is to face SE Jackson Street, the mitigation trees are recommended to be in the location where the shed, existing garage and asphalt driveway are located. (See Appendix C for Details).

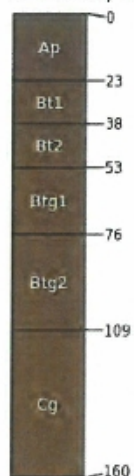
The soil type in the location of the proposed mitigation planting locations is 71A: Quatama loam, 0 to 3% slopes. The soil is described as fine-loamy, mixed, super-active, mesic, Aquultic Haploxeralfs.

Quatama (85%)

[Valley Terrace Group](#)

Aquultic Haploxeralfs

Moderately well drained

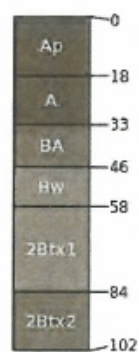


Delena (4%)

Humic Fragiaquepts

Poorly drained

Hydric: Yes



The soil class is considered prime farmland and the soil has an available water storage of 18.08cm. The annual min. water table depth is 76cm. The soils are typically considered great from an arboricultural perspective. There is more than 3-feet of soil depth available in the area.

To prevent soil compaction beyond what might be existing due to the existing structures and driveway, it is recommended to leave the foundations and flatwork in place as long as possible. The driveway and concrete slab of the garage are recommended to be used as material and equipment storage.

Once the demolition of the existing structures and landscape features have been completed the soil should be tested at a laboratory to determine the actual values of the nutrients, Cation Exchange Capacity, PH levels, and potential contaminants that may be present in the soil. Based on the results of the laboratory testing, the proper amelioration of the soil can be established.

Prior to planting, the soil density should be tested to determine if the soil is compacted and/or suitable for planting. If it is determined that the soil is compacted it is recommended that the soil is fractured with the use of pneumatic excavation equipment such as an Airspade. The compacted soil should be ameliorated with organic nutrient rich, coarse mulch, or woodchips at a ratio of 1:1 to mitigate the compacted soil structure and open the pours.

For the street trees planted in the right of way it is recommended that the planter areas are constructed according to the projected root structure for the tree species at maturity. The use of structural soil in the planter areas are recommended to allow for the trees to grow their roots to maturity. Once the final layout of the proposed site improvements are established, the proper planting hole volume can be calculated including the structural soil calculations.

Depending on the results of the laboratory testing, topsoil replacement may be needed if it is determined that the available nutrients, cation exchange capacity, and PH levels are outside of the acceptable thresholds. Establishing large planter beds that extend to the edge of the dripline of the trees, when the trees are mature is recommendable. The soil surrounding the tree should be covered with woodchips or nutrient rich organic material.

Mitigation Trees

Mitigation trees should be chosen from the City of Milwaukie Tree Crown Area Reference List (See Appendix F)

Conclusion

It is in my professional opinion that the tree protection measures set forth in this tree plan will suffice in the protection of the trees during construction. It is important to adhere to the standards in this report to ensure that the retention goals are successful.

Please feel free to contact me with any questions or concerns.

Sincerely,

Peter van Oss

Senior Associate

ISA Certified Arborist PN-8145A

Tree Risk Assessment Qualified

ASCA Member

Enclosures:

- Appendix A: Certification of Performance
- Appendix B: Assumptions and Limiting Conditions
- Appendix C: Site Plan Fencing Placement and Proposed Removals
- Appendix D: Inventory
- Appendix E: Tree Protection Standards
- Appendix F: Tree Crown Area Reference List
- Appendix G: Tree Protection Signage

Appendix A: Certification of Performance

I, Peter van Oss, certify that:

- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately. The extent of the evaluation or appraisal is stated in the attached report and the Terms of the Assignment.
- I have no current or prospective interest in the vegetation or the property that is subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions and conclusions stated herein are my own and are based on current professional procedures and facts.
- My analysis, opinions and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated in the report.
- My compensation is not contingent upon reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member of, and certified as an arborist by the ISA. I have been involved in the arboricultural field in a full- time capacity for a period of 16 years.

Appendix B: Assumptions and Limiting Conditions

1. A field examination of the site was made. My observations and conclusions are as of that date.
2. Care has been taken to obtain all information from a reliable source, however the arborist can neither guarantee nor be responsible for accuracy of information provided by others.
3. Unless stated otherwise, information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection. The inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee that problems or deficiencies of the subject tree may not arise in the future.
4. This report and any values/opinions expressed herein represents my opinion as an arborist. Inaction on the part of those receiving the report is not the responsibility of the arborist.
5. Loss or alteration of this report invalidates the entire report.
6. Any legal description provided to the consultant/ appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
7. The consultant/ appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment for such services.
8. Possession of this report does not imply right of publication or use for any other purpose by any other than the person to whom it is addressed, without the prior expressed written consent of the consultant/ appraiser.

Appendix E: Tree Protection Specifications

It is critical that the following steps be taken to ensure that they are retained and protected.

Before Construction Begins

2. Notify all contractors of the tree protection procedures. For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection. It can only take one mistake with a misplaced trench or other action to destroy the future of a tree.

- a. Hold a Tree Protection meeting with all contractors to fully explain goals of tree protection.
- b. Have all subcontractors sign memoranda of understanding regarding the goals of tree protection. Memoranda to include penalty for violating tree protection plan. Penalty to equal appraised value of tree(s) within the violated tree protection zone per the current Trunk Formula Method as outline by the Council of Tree & Landscape Appraisers current edition of the *Guide for Plant Appraisal*.
- c. Trees that require pruning to provide clearance shall be pruned prior to the start of the project to avoid damaged to the tree parts. The pruning shall adhere to ANSI a300 standards, and the project arborist should be onsite to oversee the activities.

3. Fencing.

- a. Establish fencing around each tree or grove of trees to be retained as shown on the tree protection site plan.
- b. The fencing is to be put in place before the ground is cleared to protect the trees and the soil around the trees from any disturbance at all. Exception is if trees are to be removed that are located within the tree protection zones, they should be removed prior to installing the tree protection fencing without the use of mechanized wheeled or tracked equipment.
- c. Fencing is to be placed at the edge of the root protection zone as shown on the Tree Protection Plan (Appendix C). Root protection zones are established by the project arborist based on the needs of the site and the tree to be protected.
- d. "Protection fencing consisting of a minimum 4-foot-high metal fencing, secured with 6-foot metal posts shall be established at the edge of the root protection zone and permissible encroachment area on the development site. Existing structures and/or existing secured fencing at least 3.5 feet tall can serve as the required protective fencing." If construction fencing is used it is recommended that the panels are secured to prevent movement of the fencing during construction.
- e. Fencing is to remain in the position that is established by the project arborist and not to be moved without written permission from the project arborist until the end of the project.

4. Signage

- a. All tree protection fencing should have signage clearly indicating that the area is a vegetation protection zone. (Signage is included in the Tree Protection Fencing application).
- b. Signage should be placed as to be visible from all sides of a tree protection area and spaced every 35 feet.

During Construction

5.1 Protection guidelines within the Root Protection Zone

- a. No traffic shall be allowed within the root protection zone. No vehicle, heavy equipment, or even repeated foot traffic.
- b. No storage of materials including but not limited to soil, construction material, or waste from the site.
- c. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
- d. Construction trailers are not to be parked / placed within the root protection zone without written clearance from the project arborist.
- e. No vehicles shall be allowed to park within the root protection areas.
- f. No activity shall be allowed that will cause soil compaction within the root protection zone.

6. Tree protection. Retained trees shall be protected from any cutting, skinning, or breaking of branches, trunks, or roots. The project arborist shall be onsite to observe ground disturbance within 10X the diameter of the tree.

7. Root pruning. Any roots that are to be cut from existing trees that are to be retained, the project consulting arborist shall be notified to evaluate, document, and oversee the proper cutting of roots with sharp cutting tools. Cut roots are to be immediately covered with soil or mulch to prevent them from drying out.

8. Grade changes. No grade change should be allowed within the root protection zone.

9. Root protection zone changes. Any necessary deviation of the root protection zone shall be cleared by the project consulting arborist in writing.

10. Watering. Provide water to trees during the summer months as needed. Tree(s) that will have had root system(s) cut back will need supplemental water to overcome the loss of ability to absorb necessary moisture during the summer months.

11. Utilities. Any necessary passage of utilities through the root protection zone shall be by means of tunneling under roots by hand digging or boring.

12. Re-inspection of fencing. Tree protection fencing is subject to inspection by the city. The project arborist highly recommends monthly inspections of tree protection fencing to ensure compliance with the permit and protection of the trees.

After Construction

14. Fences are to remain standing until the completion of the project.
15. Carefully landscape around the tree. Do not allow trenching within the root protection zone which still exists even though the tree protection fencing has been removed for landscape installation. Carefully plant new plants within the root protection zone. Avoid cutting the roots of the existing trees.
16. Do not plan for irrigation within the root protection zone of existing trees unless it is drip irrigation for a specific planting or cleared by the project arborist.
17. Provide for or ensure that adequate drainage will occur around the retained trees.
18. Pruning of the trees should be completed as one of the last steps of the landscaping process before the final placement of trees, shrubs, ground covers, mulch, or turf.
19. Trees that are retained may need to be fertilized as called for by the project arborist if acceptable thresholds are exceeded when determined by use of laboratory testing.



City of Milwaukie Tree Crown Area Reference List

*For trees not listed below, contact the city for a crown area value
Revised 05/26/2022

Rare, Threatened or Notable Species	Contact City to discuss removal
Invasive Species	Do not plant - Required Removal
Potential Nuisance Species	Not recommended for planting

Scientific Name	Common Name	Family	Growth Type	Species Type	Approved Street Tree/Shrub	Native Tree	Drought Tolerant	Molt Soil	Utility Safe	Mature Height (feet)	Mature Width (feet)	Mature Crown Area (sq ft)	75% Crown Area (Dev Tree Code Planting Standard)	Average Annual Growth Rate	Estimated Longevity
<i>Abelia grandiflora</i>	Glossy Abelia	Caprifoliaceae	Shrub	Deciduous	No	No	No	No	No	6	6	25	21	12-24 inches	<20 years
<i>Abies amabilis</i>	Silver Fir	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	100	15	177	132.75	12-24 inches	>150 years
<i>Abies concolor</i>	White Fir	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	120	15	177	132.75	12-24 inches	>150 years
<i>Abies balsamea</i>	Fraser Fir	Pinaceae	Tree	Evergreen	No	Yes	Yes	No	No	40	20	314	235.5	24-36 inches	>150 years
<i>Abies grandis</i>	Grand Fir	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	200	20	314	235.5	12 inches	>150 years
<i>Abies procera</i>	Spanish Fir	Pinaceae	Tree	Evergreen	No	Yes	Yes	No	No	65	30	207	530.25	4-6 inches	>150 years
<i>Acer campestre</i>	Noble Fir	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	200	20	314	235.5	24-36 inches	>150 years
<i>Acer glabrum</i>	Hedge Maple	Sapindaceae	Tree	Deciduous	No	No	No	Yes	Yes	35	25	491	368.25	12 inches	40-150 years
<i>Acer glabrum</i>	Queen Elizabeth Hedge Maple	Sapindaceae	Tree	Deciduous	No	No	No	Yes	Yes	50	25	491	368.25	12 inches	40-150 years
<i>Acer glabrum</i>	Japanese Snakebark Maple	Sapindaceae	Tree	Deciduous	No	No	No	Yes	Yes	35	35	962	721.5	24 inches	40-150 years
<i>Acer glabrum</i>	Vine Maple	Sapindaceae	Both	Deciduous	Yes	Yes	Yes	Yes	Yes	25	20	314	235.5	24 inches	40-150 years
<i>Acer glabrum</i>	Scarlet Seminal Maple	Asteraceae	Tree	Deciduous	No	Yes	Yes	Yes	Yes	40	20	314	235.5	24 inches	40-150 years
<i>Acer glabrum</i>	Paperbark Maple	Asteraceae	Tree	Deciduous	No	Yes	Yes	Yes	Yes	25	15	177	132.75	24 inches	40-150 years
<i>Acer glabrum</i>	Bigleaf Maple	Asteraceae	Tree	Deciduous	Yes	Yes	Yes	No	No	75	30	207	530.25	36 inches	>150 years
<i>Acer glabrum</i>	Boxelder	Asteraceae	Tree	Deciduous	No	Yes	Yes	No	No	40	30	207	530.25	36 inches	>150 years
<i>Acer glabrum</i>	Green Column Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	50	20	314	235.5	12-24 inches	50-150 years
<i>Acer glabrum</i>	Japanese Maple	Asteraceae	Both	Deciduous	Yes	No	Yes	Yes	Yes	25	30	207	530.25	12-24 inches	50-150 years
<i>Acer glabrum</i>	Norway Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	45	15	177	132.75	12 inches	50-150 years
<i>Acer glabrum</i>	Parkway Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	25	15	177	132.75	24 inches	50-150 years
<i>Acer glabrum</i>	Crimson Sentry Maple	Asteraceae	Tree	Deciduous	No	Yes	Yes	No	No	50	40	1257	942.75	36 inches	50-150 years
<i>Acer glabrum</i>	Emerald Queen Norway	Asteraceae	Tree	Deciduous	No	Yes	Yes	Yes	Yes	25	25	491	368.25	12-24 inches	50-150 years
<i>Acer glabrum</i>	Globe Norway Maple	Asteraceae	Tree	Deciduous	No	Yes	Yes	Yes	Yes	25	25	491	368.25	12-24 inches	50-150 years
<i>Acer glabrum</i>	Sycamore Maple	Asteraceae	Tree	Deciduous	No	Yes	No	No	No	40	20	491	368.25	36 inches	50-150 years
<i>Acer glabrum</i>	Red Maple	Asteraceae	Tree	Deciduous	No	Yes	Yes	No	No	65	40	1257	942.75	36 inches	50-150 years
<i>Acer glabrum</i>	Armstrong Red Maple	Asteraceae	Tree	Deciduous	No	Yes	Yes	No	No	50	15	177	132.75	36 inches	50-150 years
<i>Acer glabrum</i>	Bowhall Maple	Asteraceae	Tree	Deciduous	No	Yes	Yes	No	No	50	15	177	132.75	24 inches	50-150 years
<i>Acer glabrum</i>	Frankred	Asteraceae	Tree	Deciduous	No	No	No	No	No	45	35	962	721.5	24 inches	50-150 years
<i>Acer glabrum</i>	Karpick Red Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	45	35	962	721.5	24 inches	50-150 years
<i>Acer glabrum</i>	Silver Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	100	40	1257	942.75	36 inches	50-150 years
<i>Acer glabrum</i>	Sugar Maple	Sapindaceae	Tree	Deciduous	No	No	No	No	No	50	35	962	721.5	24-36 inches	>150 years
<i>Acer glabrum</i>	Bonfire Sugar Maple	Sapindaceae	Tree	Deciduous	No	No	No	No	No	65	35	962	721.5	24 inches	100-175 years
<i>Acer glabrum</i>	Commemorative Maple	Sapindaceae	Tree	Deciduous	No	No	No	No	No	50	35	962	721.5	24 inches	50-150 years
<i>Acer glabrum</i>	Green Mountain Sugar Maple	Sapindaceae	Tree	Deciduous	No	No	No	No	No	40	35	962	721.5	24-36 inches	50-150 years
<i>Acer glabrum</i>	Shantung Maple	Sapindaceae	Tree	Deciduous	No	No	No	No	No	25	30	207	530.25	24-36 inches	50-150 years
<i>Acer glabrum</i>	Kelbloom Pacific Sunset Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	35	25	491	368.25	24 inches	50-150 years
<i>Acer glabrum</i>	Warrenred Pacific Sunset Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	30	25	491	368.25	24 inches	50-150 years
<i>Acer glabrum</i>	Autumn Blaze Maple	Asteraceae	Tree	Deciduous	No	No	No	No	No	55	30	207	530.25	24 inches	50-150 years
<i>Acer glabrum</i>	California Buckeye	Hippocastanaceae	Both	Deciduous	No	No	No	No	No	30	40	1257	942.75	24 inches	50-150 years
<i>Acer glabrum</i>	Bronze Birch	Hippocastanaceae	Tree	Deciduous	No	No	No	No	No	50	35	962	721.5	24 inches	50-150 years
<i>Acer glabrum</i>	Common Horsechestnut	Hippocastanaceae	Tree	Deciduous	No	No	No	No	No	50	50	1963	1472.25	24 inches	50-150 years
<i>Acer glabrum</i>	Trident Maple	Simarubaceae	Tree	Deciduous	No	Yes	No	No	No	30	20	314	235.5	24 inches	50-150 years
<i>Acer glabrum</i>	Mincas Silk Tree	Fabaceae	Tree	Deciduous	No	Yes	No	Yes	No	30	15	177	132.75	24 inches	50-150 years
<i>Acer glabrum</i>	White Alder	Betulaceae	Tree	Deciduous	Yes	Yes	Yes	No	No	50	50	1963	1472.25	50-70 years	50-70 years
<i>Acer glabrum</i>	Red Alder	Betulaceae	Tree	Deciduous	Yes	Yes	Yes	No	No	50	50	207	530.25	8 inches	40-150 years
<i>Acer glabrum</i>	Saskatoon Serviceberry	Rosaceae	Shrub	Deciduous	Yes	No	No	Yes	Yes	15	15	177	132.75	24 inches	>150 years
<i>Acer glabrum</i>	Monkey Puzzle Tree	Araucariaceae	Tree	Evergreen	No	Yes	No	No	No	80	30	207	530.25	24 inches	>150 years
<i>Acer glabrum</i>	Pacific Madrone	Ericaceae	Tree	Evergreen	Yes	No	No	No	No	85	50	1963	1472.25	24 inches	>150 years
<i>Acer glabrum</i>	Compact Strawberry Madrone	Ericaceae	Shrub	Evergreen	Yes	No	No	Yes	Yes	10	10	79	59.25	24 inches	>150 years
<i>Acer glabrum</i>	Manzanita	Ericaceae	Shrub	Evergreen	Yes	No	No	Yes	Yes	5	5	20	15	24 inches	>150 years
<i>Acer glabrum</i>	Fairywren	Amnaceae	Both	Deciduous	No	Yes	Yes	Yes	Yes	20	15	177	132.75	24 inches	>150 years
<i>Acer glabrum</i>	Japanese Laurel	Garryaceae	Shrub	Evergreen	Yes	No	Yes	Yes	Yes	8	5	20	15	24 inches	>150 years
<i>Acer glabrum</i>	Coyote Bush	Asteraceae	Shrub	Evergreen	Yes	Yes	Yes	Yes	Yes	6	6	29	21.75	24 inches	>150 years
<i>Acer glabrum</i>	Magellan Barberrry	Berberidaceae	Shrub	Evergreen	No	No	No	No	No	9	9	64	48	24 inches	>150 years
<i>Acer glabrum</i>	Barberrry	Berberidaceae	Shrub	Evergreen	No	No	No	No	No	9	11	95	71.25	24 inches	>150 years
<i>Acer glabrum</i>	Paper Birch	Betulaceae	Tree	Deciduous	No	No	No	Yes	No	65	25	491	368.25	36 inches	>150 years
<i>Acer glabrum</i>	European White Birch	Betulaceae	Tree	Deciduous	No	No	No	Yes	No	50	20	314	235.5	36 inches	>150 years

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Revised 05/26/2022



Rare, Threatened or Notable Species Contact City to discuss removal
Invasive Species Do not plant - Required Removal
Potential Nuisance Species Not recommended for planting

Scientific Name	Common Name	Family	Growth Type	Species Type	Approved Street Tree/Shrub	Native Tree	Drought Tolerant	Moist Soil	Utility Safe	Mature Height (feet)	Mature Width (feet)	Mature Crown Area (sq ft)	75% Crown Area (Dey Tree Code Planting Standard)	Average Annual Growth Rate	Estimated Longevity
<i>Betula nana</i>	Virginia Round-leaf Birch	Betulaceae	Tree	Deciduous	No	No	No	Yes	No	50	20	314	235.5	24-36 inches	40-150 years
<i>Betula utilis</i> var. <i>var. nemunomi</i>	White Barked Himalayan Birch	Betulaceae	Tree	Deciduous	No	No	No	Yes	No	65	30	707	530.25	24-36 inches	40-150 years
<i>Calocedrus decurrens</i>	Incense Cedar	Cupressaceae	Tree	Evergreen	No	No	Yes	No	No	90	15	177	132.75	12-24 inches	>150 years
<i>Cercidiphyllum japonicum</i>	Japanese Camellia	Theaceae	Shrub	Deciduous	No	No	No	No	No	15	10	79	59.25		
<i>Carpinus betulus</i> 'Fastigiata'	Pyramidal European Hornbeam	Betulaceae	Tree	Deciduous	Yes	No	No	Yes	No	35	25	491	368.25	24 inches	50-150 years
<i>Carpinus betulus</i> 'Frans Fontaine'	Frans Fontaine Hornbeam	Betulaceae	Tree	Deciduous	Yes	No	No	Yes	Yes	30	10	79	59.25		
<i>Carpinus cordata</i>	American Hornbeam	Betulaceae	Tree	Deciduous	No	No	Yes	Yes	Yes	35	30	707	530.25	12-24 inches	50-150 years
<i>Carpinus japonica</i>	Japanese Hornbeam	Betulaceae	Tree	Deciduous	Yes	No	Yes	Yes	Yes	30	25	491	368.25		
<i>Carya illinoensis</i>	Pecan	Juglandaceae	Tree	Deciduous	No	No	Yes	No	No	100	50	1983	1472.25		
<i>American Chestnut</i>															
<i>Gastonia mollis</i>	Chinese Chestnut	Fagaceae	Tree	Deciduous	No	No	Yes	No	No	50	40	1257	942.75		
<i>Castanea nigrescens</i>	Southern Catalpa	Bignoniaceae	Tree	Deciduous	No	No	Yes	No	No	40	40	1257	942.75		
<i>Castanea nigrescens</i>	Coastal California Lilac	Rhamnaceae	Shrub	Evergreen	Yes	No	Yes	No	Yes	30	10	79	59.25		
<i>Ceanothus spp.</i>															
<i>Celtis occidentalis</i>	Doedar Cedar	Platanaceae	Tree	Evergreen	No	No	Yes	No	No	70	40	1257	942.75		
<i>Celtis occidentalis</i>	Atlas Cedar	Platanaceae	Tree	Evergreen	No	No	Yes	No	No	60	30	707	530.25		
<i>Celtis occidentalis</i>	Hackberry	Ulmaceae	Tree	Deciduous	Yes	No	Yes	No	No	65	40	1257	942.75	24-36 inches	50-150 years
<i>Celtis occidentalis</i>	Japanese Plum Yew	Cephalotrichaceae	Both	Evergreen	Yes	No	Yes	No	Yes	5	5	20	15		
<i>Cephalotaxus fortunei</i>	Katsura Tree	Cercidiphyllaceae	Tree	Deciduous	Yes	No	No	Yes	No	40	35	962	721.5	12 inches	50-150 years
<i>Cercidiphyllum japonicum</i>	Eastern Redbud	Fabaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	25	20	707	530.25		
<i>Cercis canadensis</i>	Western Redbud	Fabaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	15	10	79	59.25		
<i>Cercis canadensis</i>	Judas Tree	Fabaceae	Tree	Deciduous	No	No	Yes	No	No	40	30	707	530.25		
<i>Cercis glabra</i>	Port Orford Cedar	Cupressaceae	Tree	Evergreen	No	No	No	Yes	No	50	15	177	132.75	24 inches	>150 years
<i>Chamaecyparis lasiocarpa</i>	Alaska Yellow Cedar	Cupressaceae	Tree	Evergreen	Yes	No	No	Yes	No	60	30	707	530.25	12-24 inches	>150 years
<i>Chamaecyparis obtusa</i> 'Gracilis'	Slender Hinoki Cypress	Cupressaceae	Both	Evergreen	Yes	No	No	Yes	No	15	6	29	21.75	12 inches	>150 years
<i>Chamaecyparis obtusa</i>	Sawara Cypress	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	160	15	177	132.75		
<i>Chamaecyparis pisifera</i>	Chinese Fringetree	Oleaceae	Tree	Deciduous	Yes	No	Yes	Yes	Yes	25	20	707	530.25		
<i>Chionodoxa rubra</i>	White Fringetree	Oleaceae	Tree	Deciduous	Yes	No	Yes	Yes	Yes	20	15	177	132.75		
<i>Chionodoxa rubra</i>	Mexican Orange	Rutaceae	Shrub	Evergreen	Yes	Yes	No	Yes	Yes	8	6	30	37.5		
<i>Chionodoxa rubra</i>	Rockrose	Cistaceae	Shrub	Evergreen	Yes	No	Yes	No	Yes	6	8	50	37.5		
<i>Citrus spp.</i>	Peanut Butter Tree	Verbenaceae	Both	Deciduous	No	No	Yes	No	Yes	15	10	79	59.25		
<i>Citrus spp.</i>	Eddie's White Wonder Dogwood	Cornaceae	Tree	Deciduous	No	No	Yes	Yes	Yes	25	20	314	235.5		
<i>Citrus spp.</i>	Eastern Flowering Dogwood	Cornaceae	Tree	Deciduous	Yes	No	Yes	Yes	Yes	25	30	707	530.25		
<i>Cornus florida</i>	Kousa dogwood	Cornaceae	Tree	Deciduous	Yes	No	No	Yes	Yes	25	15	177	132.75	24 inches	50-150 years
<i>Cornus kousa</i>	Chinese Dogwood	Cornaceae	Tree	Deciduous	Yes	No	No	Yes	Yes	25	15	177	132.75	24 inches	50-150 years
<i>Cornus mas</i>	Cornelian Cherry Dogwood	Cornaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	20	15	177	132.75	24 inches	50-150 years
<i>Cornus nutallii</i>	Pacific Dogwood	Cornaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	20	15	177	132.75	24 inches	50-150 years
<i>Cornus sericea</i>	Redtwig Dogwood	Cornaceae	Shrub	Deciduous	Yes	Yes	Yes	Yes	Yes	20	10	79	59.25	24 inches	50-150 years
<i>Cornus sericea</i>	Yellowtwig Dogwood	Cornaceae	Shrub	Deciduous	No	No	Yes	Yes	Yes	6	6	28	21		
<i>Cornus s. 'Ruxton'</i>	Stellar Pink Dogwood	Cornaceae	Tree	Deciduous	No	No	No	Yes	Yes	15	15	177	132.75	24 inches	50-150 years
<i>Corylus cornuta</i>	Braided Hazelnut	Betulaceae	Tree	Deciduous	Yes	No	No	No	Yes	10	10	79	59.25	12 inches	50-150 years
<i>Corylus cornuta</i>	Willowleaf Cocomelon	Rosaceae	Shrub	Deciduous	No	No	Yes	No	Yes	20	6	6	24-36 inches	24 inches	40-150 years
<i>Corylus heterophylla</i>	English Hazelnut	Rosaceae	Tree	Deciduous	No	No	Yes	No	Yes	25	15	177	132.75	24 inches	40-150 years
<i>Cranogonon phaneropyrum</i>	Washington Hawthorne	Rosaceae	Tree	Deciduous	No	No	No	No	No	30	25	491	368.25	24 inches	50-150 years
<i>Cranogonon s. 'Imoli'</i>	Lavalle Hawthorne	Rosaceae	Tree	Deciduous	No	No	No	No	No	25	15	177	132.75	24 inches	50-150 years
<i>Cryptomeria japonica</i>	Japanese Cedar	Taxodiaceae	Tree	Evergreen	Yes	No	No	Yes	No	50	20	314	235.5	24 inches	50-150 years
<i>Cunninghamia lanceolata</i>	China Fir	Coniferales	Tree	Evergreen	Yes	No	Yes	No	No	50	30	707	530.25		
<i>Cupressus parlati</i>	Leyland Cypress	Cupressaceae	Tree	Evergreen	Yes	No	No	No	No	50	20	314	235.5	36 inches	40-150 years
<i>Cupressus arizonica</i>	Arizona Cypress	Cupressaceae	Tree	Evergreen	Yes	No	No	No	No	50	20	314	235.5		
<i>Cupressus bakeri</i>	Baker Cypress	Cupressaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	50	35	962	721.5		
<i>Cupressus lasiocarpa</i>	Cedar-of-Goa	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	No	100	35	962	721.5		
<i>Cupressus sempervirens</i>	Mediterranean/Italian Cypress	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	No	60	6	6	21		
<i>Cupressus sempervirens</i> 'Siralca'	Columnar Italian Cypress	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	No	40	3	7	5.25		
<i>Davallia trichomanes</i>	Dove Tree	Nyctaginaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	60	35	962	721.5		
<i>Elaeagnus argentea</i>	Paper Bush	Thymelaeaceae	Shrub	Deciduous	Yes	No	Yes	No	Yes	6	6	28	21		
<i>Elaeagnus argentea</i>	Silverberry	Flacagnaceae	Tree	Evergreen	No	Yes	No	Yes	Yes	6	6	28	21		
<i>Eucornia ulmoides</i> 'Eucornia'	Hardy Rubber Tree	Eucorniaceae	Tree	Deciduous	Yes	No	Yes	No	No	60	40	1257	942.75	36 inches	40-150 years
<i>Eucornia ulmoides</i> 'Microphyllus'	Bow-leaf Eucornia	Celastraceae	Shrub	Evergreen	Yes	No	Yes	Yes	Yes	3	3	7	5.25		



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Do not plant - Required Removal
Not recommended for planting

Scientific Name	Common Name	Family	Growth Type	Species Type	Approved Street Tree/Shrub	Native Tree	Drought Tolerant	Moist Soil	Utility Safe	Mature Height (feet)	Mature Width (feet)	Mature Crown Area (sq ft)	75% Crown Area (Dev Tree Code Planning Standard)	Average Annual Growth Rate	Estimated Longevity
<i>Fagus grandifolia</i>	American Beech	Fagaceae	Tree	Deciduous	No	No	Yes	No	No	80	70	3848	2886	24 inches	50-150 years
<i>Fagus sylvatica</i>	European Beech	Fagaceae	Tree	Deciduous	Yes	No	No	Yes	No	65	40	1257	942.75	24 inches	50-150 years
<i>Fagus sylvatica 'Reveali'</i>	Rivers Purple European Beech	Fagaceae	Tree	Deciduous	No	No	No	Yes	No	50	40	1257	942.75	24 inches	50-150 years
<i>Fraxinus americana</i>	American Ash	Oleaceae	Tree	Deciduous	No	No	No	Yes	No	80	50	1963	1472.25	36 inches	>150 years
<i>Fraxinus latifolia</i>	Oregon Ash	Oleaceae	Tree	Deciduous	Yes	No	Yes	No	No	80	70	3848	2886	36 inches	50-150 years
<i>Fraxinus pennsylvanica 'Raywood'</i>	Raywood Ash	Oleaceae	Tree	Deciduous	No	No	Yes	No	No	49	25	568.25	371.5	36 inches	50-150 years
<i>Fraxinus pennsylvanica 'Palmetto'</i>	Palmetto Ash	Oleaceae	Tree	Deciduous	No	No	No	No	No	50	35	962	721.5	36 inches	50-150 years
<i>Fraxinus pennsylvanica 'Urbanite'</i>	Urbanite Ash	Oleaceae	Tree	Deciduous	No	No	No	No	No	50	30	707	530.25	36 inches	50-150 years
<i>Garrya elliptica</i>	Coast Silk-tassel	Garryaceae	Shrub	Evergreen	Yes	Yes	No	Yes	No	8	8	50	37.5		
<i>Garrya fraxinifolia</i>	Ironwood Silk-tassel	Garryaceae	Shrub	Evergreen	Yes	Yes	Yes	Yes	Yes	5	8	50	37.5		
<i>Gouardia elliptica</i>	Sisal	Eriocaulaceae	Shrub	Evergreen	Yes	Yes	Yes	Yes	Yes	3	5	20	15		
<i>Ginkgo biloba 'Autumn Gold'</i>	Autumn Gold Ginkgo	Ginkgoaceae	Tree	Deciduous	Yes	No	No	Yes	Yes	25	25	491	368.25	12-24 inches	>150 years
<i>Ginkgo biloba 'Princeton Sentry'</i>	Princeton Sentry Ginkgo	Ginkgoaceae	Tree	Deciduous	Yes	No	No	Yes	No	60	10	79	99.25	24 inches	50-150 years
<i>Gleditsia triacanthos 'Shadmaster'</i>	Shadmaster Honeylocust	Fabaceae	Tree	Deciduous	No	No	No	No	No	70	35	962	721.5	36 inches	50-150 years
<i>Gleditsia triacanthos 'Skyline'</i>	Skyline Honeylocust	Fabaceae	Tree	Deciduous	No	No	No	No	No	70	35	962	721.5	36 inches	50-150 years
<i>Gymnocladia dioica</i>	Kentucky Coffeetree	Fabaceae	Tree	Deciduous	Yes	No	Yes	No	No	40	40	1257	942.75	36 inches	50-150 years
<i>Himantoclea mollis</i>	Witch Hazel	Himantodiaceae	Both	Deciduous	No	No	Yes	Yes	Yes	15	5	20	15		
<i>Heterocentrus arbutifolium</i>	Towon	Rosaceae	Shrub	Evergreen	Yes	No	Yes	No	No	8	5	20	15		
<i>Havania dulcis</i>	Japanese Raisin Tree	Rhamnaceae	Both	Deciduous	No	No	Yes	Yes	Yes	30	20	314	235.5		
<i>Hamelia alchoris</i>	Oceanspray	Rosaceae	Shrub	Deciduous	Yes	No	No	No	Yes	15	15	177	132.75		
<i>Ilex alchoris</i>	Wilson Holly	Aquifoliaceae	Both	Evergreen	No	No	Yes	No	Yes	25	10	79	59.25	24 inches	50-150 years
<i>Ilex aquifolium</i>	English Holly	Aquifoliaceae	Both	Evergreen	No	No	Yes	No	Yes	25	10	79	59.25	24 inches	50-150 years
<i>Ilex angustifolia</i>	San Jose Holly	Aquifoliaceae	Both	Evergreen	No	No	Yes	Yes	Yes	25	10	79	59.25	24 inches	50-150 years
<i>Ilex pedunculata</i>	Perry Holly	Aquifoliaceae	Both	Evergreen	No	No	Yes	Yes	Yes	25	10	79	59.25	24 inches	50-150 years
<i>Ilex verticillata</i>	Hollyleaf Sweetgum	Saxifragaceae	Both	Evergreen	No	No	Yes	Yes	Yes	20	10	79	59.25	24 inches	50-150 years
<i>Juglans nigra</i>	Black Walnut	Juglandaceae	Tree	Deciduous	No	No	Yes	No	No	60	40	1257	942.75	24 inches	40-150 years
<i>Juglans regia</i>	English Walnut	Juglandaceae	Tree	Deciduous	No	No	Yes	No	No	75	50	1963	1472.25	24 inches	40-150 years
<i>Juniperus chinensis 'Columnaris'</i>	Chinese Blue Column Juniper	Cupressaceae	Shrub	Evergreen	No	No	Yes	No	Yes	12	5	20	15		
<i>Juniperus chinensis 'Pyramidalis'</i>	Chinese Juniper	Cupressaceae	Shrub	Evergreen	No	No	No	No	No	60	40	1257	942.75	24 inches	40-150 years
<i>Juniperus communis</i>	Common Juniper	Cupressaceae	Both	Evergreen	Yes	No	No	No	Yes	10	5	20	15		
<i>Juniperus horizontalis</i>	Western Juniper	Cupressaceae	Tree	Evergreen	Yes	No	No	No	No	80	50	1963	1472.25	24 inches	50-150 years
<i>Juniperus procumbens</i>	Creeping Juniper	Cupressaceae	Shrub	Evergreen	Yes	No	Yes	No	Yes	5	5	20	15		
<i>Juniperus sibirica</i>	Savin Juniper	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	25	10	77	57.75	24 inches	50-150 years
<i>Juniperus squarrosa</i>	Rocky Mountain Juniper	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	20	10	77	57.75	24 inches	50-150 years
<i>Juniperus stricta 'Cupressifolia'</i>	Hillside Juniper	Cupressaceae	Shrub	Evergreen	No	No	Yes	No	No	15	6	28	21		
<i>Kalmia latifolia</i>	Mountain Laurel	Ericaceae	Shrub	Deciduous	No	No	Yes	No	No	35	35	962	721.5	24 inches	50-150 years
<i>Koeleria paniculata</i>	Goldenrain Tree	Sapindaceae	Tree	Deciduous	No	No	Yes	No	No	15	12	112	84	24 inches	40-150 years
<i>Larrea arborescens</i>	Goldenrain Tree	Fabaceae	Tree	Deciduous	No	No	Yes	No	No	15	12	112	84	24 inches	40-150 years
<i>Larrea mexicanus</i>	Crape Myrtle	Lythraceae	Tree	Deciduous	Yes	Yes	Yes	Yes	Yes	25	15	132.75	132.75		
<i>Larrea occidentalis</i>	Western Larrea	Pinaceae	Tree	Deciduous	Yes	Yes	No	Yes	No	150	30	707	530.25	24 inches	>150 years
<i>Larrea tridentata</i>	Bay Laurel	Lauraceae	Tree	Evergreen	Yes	No	No	No	No	35	10	77	57.75	24 inches	50-150 years
<i>Liquidambar styraciflua</i>	American Sweetgum	Hymenellaceae	Tree	Deciduous	No	No	No	No	No	80	40	1257	942.75	24 inches	>150 years
<i>Liquidambar styraciflua 'Mouraine'</i>	Mouraine Sweetgum	Hymenellaceae	Tree	Deciduous	No	No	No	No	No	50	35	962	721.5	24 inches	50-150 years
<i>Liquidambar styraciflua 'Rotundifolia'</i>	Rotundifolia Sweetgum	Hymenellaceae	Tree	Deciduous	No	No	No	No	No	65	35	962	721.5	24 inches	50-150 years
<i>Liquidambar styraciflua 'Worpeloides'</i>	Worpeloides Sweetgum	Hymenellaceae	Tree	Deciduous	No	No	No	No	No	60	35	962	721.5	24 inches	50-150 years
<i>Liriodendron tulipifera</i>	Tulip Tree	Magnoliaceae	Tree	Deciduous	No	No	Yes	No	No	60	40	1257	942.75	36 inches	>150 years
<i>Machonia americana</i>	Amur Maackia	Fabaceae	Tree	Deciduous	No	No	Yes	No	Yes	30	25	491	368.25	36 inches	>150 years
<i>Machonia pennsylvanica</i>	Osage-orange	Moraceae	Tree	Deciduous	No	No	Yes	No	No	40	40	1257	942.75	36 inches	>150 years
<i>Magnolia acuminata</i>	Campbell's Magnolia	Magnoliaceae	Tree	Deciduous	Yes	No	No	Yes	No	65	40	1257	942.75	24 inches	50-150 years
<i>Magnolia grandiflora</i>	Edith Bogue Magnolia	Magnoliaceae	Tree	Evergreen	Yes	No	Yes	No	No	30	15	177	132.75	24 inches	50-150 years
<i>Magnolia grandiflora 'Little Gem'</i>	Little Gem Magnolia	Magnoliaceae	Tree	Evergreen	Yes	No	Yes	No	No	20	10	77	57.75	24 inches	50-150 years
<i>Magnolia grandiflora 'Jim Wilson'</i>	Mononglow Magnolia	Magnoliaceae	Tree	Evergreen	Yes	No	Yes	Yes	Yes	25	15	177	132.75	24 inches	50-150 years
<i>Machonia aquifolium</i>	Oregon Grape	Berberidaceae	Shrub	Evergreen	Yes	No	No	Yes	No	10	5	20	15		
<i>Mahonia repens</i>	Creeping Oregon Grape	Berberidaceae	Shrub	Evergreen	Yes	Yes	No	No	Yes	2	6	28	21		
<i>Malus sp. 'Pratensis'</i>	Pratensis Malus	Rosaceae	Tree	Deciduous	No	No	No	No	Yes	20	20	314	235.5	12 inches	50-150 years
<i>Malus sp. 'Red Baron'</i>	Red Baron Crabapple	Rosaceae	Tree	Deciduous	No	No	No	No	Yes	20	10	77	57.75	12 inches	50-150 years
<i>Malus sp. 'Sugar Lynce'</i>	Sugar Lynce Crabapple	Rosaceae	Tree	Deciduous	No	No	No	No	No	20	15	177	132.75	12 inches	50-150 years



City of Milwaukee Tree Crown Area Reference List

*For trees not listed below, contact the city for a crown area value
Revised 05/26/2022

Rare, Threatened or Notable Species Contact City to discuss removal
Invasive Species Do not plant - Required Removal
Potential Nuisance Species Not recommended for planting

Scientific Name	Common Name	Family	Growth Type	Species Type	Approved Street Tree/Shrub	Native Tree	Drought Tolerant	Moist Soil	Utility Safe	Mature Height (feet)	Mature Width (feet)	Mature Crown Area (sq ft)	75% Crown Area (Dev Tree Code Planting Standard)	Average Annual Growth Rate	Estimated Longevity
<i>Melia tozeriana</i>	Tschemskii Crabapple	Rosaceae	Tree	Deciduous	No	No	No	No	No	30	15	177	132.75	12 inches	>150 years
<i>Metopium glaberrimum</i>	Down Redbark	Tanacetaceae	Tree	Deciduous	No	No	No	No	No	70	25	491	368.25	36 inches	>150 years
<i>Moralea californica</i>	Pacific Wax Myrtle	Myricaceae	Shrub	Evergreen	Yes	No	Yes	No	Yes	25	20	314	235.5	24 inches	90-150 years
<i>Nandina domestica</i>	Heavenly Bamboo	Berberidaceae	Shrub	Evergreen	Yes	No	Yes	No	Yes	6	3	7	5.25		
<i>Nyssa sylvatica</i>	Chinese Tupelo	Nyssaceae	Tree	Deciduous	Yes	No	Yes	Yes	No	30	15	177	132.75		
<i>Nyssa sylvatica</i>	Black Tupelo/Sour Gum	Nyssaceae	Tree	Deciduous	Yes	No	Yes	No	No	35	20	314	235.5	12-24 inches	>150 years
<i>Osmanthus fragrans</i>	Sweet Olive	Betulaceae	Shrub	Evergreen	Yes	No	Yes	Yes	No	40	20	314	235.5		
<i>Osmanthus fragrans</i>	American Hophornbeam	Betulaceae	Tree	Deciduous	Yes	No	No	Yes	No	35	25	491	368.25	24 inches	50-150 years
<i>Ostrya virginiana</i>	Sourwood	Eriacaceae	Tree	Deciduous	No	No	Yes	Yes	Yes	30	15	177	132.75		
<i>Ostrya virginiana</i>	Persian Parrotia	Hamsnellaceae	Tree	Deciduous	Yes	No	Yes	No	No	50	30	707	530.25		
<i>Paederia foetida</i>	Empress Tree	Paulowniaceae	Tree	Deciduous	No	No	Yes	No	No	80	30	707	530.25		
<i>Phlox glauca</i>	Amar Cork Tree	Rutaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	30	35	962	721.5		
<i>Phlox glauca</i>	Fraser Photinia	Rosaceae	Both	Evergreen	No	No	No	Yes	Yes	20	10	77	57.75	24-36 inches	>150 years
<i>Photinia x glabra</i>	Japanese Photinia	Rosaceae	Both	Evergreen	No	No	No	No	No	25	10	77	57.75	24 inches	>150 years
<i>Picea abies</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Whitebark Pine	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Bread-crust Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	20	6	28	21		
<i>Picea canadensis</i>	Jack Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	Yes	50	20	314	235.5		
<i>Picea canadensis</i>	Lacebark Pine	Pinaceae	Tree	Evergreen	Yes	No	Yes	No	No	50	20	314	235.5		
<i>Picea canadensis</i>	Shore Pine	Pinaceae	Tree	Evergreen	No	Yes	No	No	No	45	30	707	530.25	36 inches	>150 years
<i>Picea canadensis</i>	Engelmann Spruce	Pinaceae	Tree	Evergreen	No	No	No	No	No	65	25	491	368.25	24 inches	>150 years
<i>Picea canadensis</i>	Black Hills Spruce	Pinaceae	Tree	Evergreen	Yes	No	No	No	No	40	20	314	235.5	24 inches	>150 years
<i>Picea canadensis</i>	Sitka Spruce	Pinaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	40	20				



City of Milwaukie Tree Crown Area Reference List

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 Revised 05/26/2022

Rare, Threatened or Notable Species
 Invasive Species
 Potential Nuisance Species
 Contact City to discuss removal
 Do not plant - Required Removal
 Not recommended for planting

Scientific Name	Common Name	Family	Growth Type	Species Type	Approved Street Trees/Shrub	Native Tree	Drought Tolerant	Moist Soil	Utility Safe	Mature Height (feet)	Mature Width (feet)	Mature Crown Area (sq ft)	75% Crown Area (Dev Tree Code Planting Standard)	Average Annual Growth Rate	Estimated Longevity
<i>Prunus virginiana</i> 'Canada Red'	Canada Red Improved Chokecherry	Rosaceae	Tree	Deciduous	No	No	No	Yes	Yes	25	20	314	235.5	24 inches	<50 years
<i>Prunus x hillieri</i>	Spine Cherry	Rosaceae	Tree	Deciduous	No	No	No	No	No	30	30	79	49.25	24 inches	>150 years
<i>Pseudotsuga mucronata</i>	Douglas Fir	Pinaceae	Tree	Evergreen	Yes	Yes	No	No	No	160	30	707	530.25	24 inches	>150 years
<i>Pterocarya fraxinifolia</i>	Canadian Wingnut	Juglandaceae	Tree	Deciduous	No	Yes	No	No	No	50	40	1257	942.75	24-36 inches	50-150 years
<i>Pyrus calleryana</i> 'Aristocrat'	Aristocrat Callery Pear	Rosaceae	Tree	Deciduous	No	No	No	No	No	30	25	491	368.25	24 inches	50-150 years
<i>Pyrus calleryana</i> 'Autumn Blaze'	Autumn Blaze Callery Pear	Rosaceae	Tree	Deciduous	No	No	No	No	No	35	12	113	84.75	24 inches	50-150 years
<i>Pyrus calleryana</i> 'Capital'	Capital Callery Pear	Rosaceae	Tree	Deciduous	No	No	No	No	No	40	13	177	132.75	24 inches	50-150 years
<i>Pyrus calleryana</i> 'Chanticleer' or 'Glen's Form'	Chanticleer Callery Pear	Rosaceae	Tree	Deciduous	No	No	Yes	No	No	35	25	491	368.25	24-36 inches	50-150 years
<i>Pyrus calleryana</i> 'Kodjgole'	Redspire Callery Pear	Rosaceae	Tree	Deciduous	No	Yes	No	No	No	40	25	491	368.25	24-36 inches	>180 years
<i>Quercus agrifolia</i>	Maple Leaf Oak	Fagaceae	Tree	Deciduous	No	No	Yes	No	No	65	30	707	530.25	24-36 inches	>180 years
<i>Quercus agrifolia</i>	Savooth Oak	Fagaceae	Tree	Deciduous	Yes	Yes	No	No	No	60	40	1257	942.75	24-36 inches	>150 years
<i>Quercus agrifolia</i>	Canyon Live Oak	Fagaceae	Tree	Deciduous	No	No	Yes	No	No	65	45	1790	1192.5	24-36 inches	>150 years
<i>Quercus agrifolia</i>	Scarlet Oak	Fagaceae	Tree	Deciduous	No	Yes	No	No	Yes	10	10	79	59.25		
<i>Quercus alnifolia</i>	Scrub Oak	Fagaceae	Shrub	Evergreen	Yes	No	No	Yes	Yes	5	5	20	15		
<i>Quercus agrifolia</i>	Lealner Oak	Fagaceae	Shrub	Evergreen	Yes	No	No	No	Yes	5	5	20	15		
<i>Quercus agrifolia</i>	Hungarian Oak	Fagaceae	Tree	Deciduous	Yes	No	No	No	No	70	45	2375	1781.25		
<i>Quercus agrifolia</i>	Oregon White Oak	Fagaceae	Tree	Deciduous	Yes	Yes	No	No	No	65	45	1590	1192.5	12-24 inches	50-150 years
<i>Quercus agrifolia</i>	Silverleaf Oak	Fagaceae	Tree	Evergreen	Yes	No	No	No	No	35	35	962	721.5		
<i>Quercus agrifolia</i>	Holly Oak	Fagaceae	Tree	Evergreen	Yes	No	Yes	No	No	65	50	1963	1472.25		
<i>Quercus agrifolia</i>	Pin Oak	Fagaceae	Tree	Deciduous	Yes	No	No	No	No	60	30	707	530.25		
<i>Quercus agrifolia</i>	Willow Oak	Fagaceae	Tree	Deciduous	Yes	No	Yes	No	No	55	30	787	530.25		
<i>Quercus agrifolia</i>	English Oak	Fagaceae	Tree	Deciduous	No	Yes	No	No	No	120	30	707	530.25	36 inches	>150 years
<i>Quercus agrifolia</i>	Collinart Oak	Fagaceae	Tree	Deciduous	Yes	No	No	No	No	50	15	177	132.75		
<i>Quercus agrifolia</i>	Skyrocket Oak	Fagaceae	Tree	Deciduous	No	No	No	No	No	45	15	177	132.75		
<i>Quercus agrifolia</i>	Red Oak	Fagaceae	Shrub	Deciduous	No	No	Yes	No	No	65	40	1257	942.75	24-36 inches	>150 years
<i>Quercus agrifolia</i>	Sadler's Oak	Fagaceae	Shrub	Evergreen	Yes	Yes	No	Yes	Yes	3	3	7	5.25		
<i>Quercus agrifolia</i>	Shumard Oak	Fagaceae	Tree	Deciduous	Yes	No	No	No	No	70	40	1257	942.75		
<i>Quercus agrifolia</i>	Cork Oak	Fagaceae	Tree	Evergreen	Yes	No	No	No	No	20	40	1257	942.75		
<i>Quercus agrifolia</i>	Turbinella Oak	Fagaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	25	8	50	37.3		
<i>Quercus agrifolia</i>	Huckleberry Oak	Fagaceae	Shrub	Evergreen	Yes	Yes	No	Yes	Yes	2	4	13	9.75		
<i>Quercus agrifolia</i>	Inferior Live Oak	Fagaceae	Tree	Evergreen	Yes	No	No	No	No	75	30	707	530.25	100-200 years	
<i>Quercus agrifolia</i>	Cascade	Rhamnaceae	Tree	Deciduous	Yes	Yes	Yes	Yes	Yes	25	20	314	235.5		
<i>Quercus agrifolia</i>	Pacific Rhododendron	Ericaceae	Shrub	Evergreen	Yes	No	No	No	Yes	10	15	177	132.75	12 inches	50-150 years
<i>Quercus agrifolia</i>	Western Azalea	Ericaceae	Shrub	Deciduous	No	No	No	No	No	10	8	50	37.5		
<i>Quercus agrifolia</i>	Black Locust	Fabaceae	Tree	Deciduous	Yes	Yes	No	No	No	40	25	491	368.25		
<i>Quercus agrifolia</i>	Pink Idaho Locust	Fabaceae	Tree	Deciduous	No	Yes	No	No	Yes	6	6	28	21	36 inches	50-150 years
<i>Quercus agrifolia</i>	Rosemary	Lamiaceae	Shrub	Evergreen	Yes	No	No	No	Yes	30	30	707	530.25		
<i>Quercus agrifolia</i>	Sassafras	Lauraceae	Tree	Deciduous	No	Yes	Yes	Yes	Yes	2	4	13	9.75		
<i>Quercus agrifolia</i>	Dwarf Sweet Box	Buxaceae	Shrub	Evergreen	Yes	No	No	Yes	Yes	4	3	7	5.25		
<i>Quercus agrifolia</i>	Sweet Box	Buxaceae	Shrub	Evergreen	Yes	No	No	Yes	Yes	20	20	314	235.5		
<i>Quercus agrifolia</i>	Japanese Umbrella Pine	Sciadopiaceae	Tree	Evergreen	Yes	No	No	No	No	70	20	314	235.5	36 inches	>150 years
<i>Quercus agrifolia</i>	Coast Redwood	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	No	150	60	2827	2120.25		
<i>Quercus agrifolia</i>	Giant Sequoia	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	No	40	15	177	132.75	24 inches	50-150 years
<i>Quercus agrifolia</i>	Korean Mountain Ash	Rosaceae	Tree	Deciduous	No	No	No	No	No	40	20	314	235.5	24 inches	50-150 years
<i>Quercus agrifolia</i>	Whitebeam Mountain Ash	Rosaceae	Tree	Deciduous	No	Yes	No	No	No	40	25	491	368.25		
<i>Quercus agrifolia</i>	Cardinal Royal Mountain Ash	Rosaceae	Tree	Deciduous	No	No	Yes	No	No	35	20	314	235.5	24-36 inches	50-150 years
<i>Quercus agrifolia</i>	Red Cascade Mountain Ash	Rosaceae	Tree	Deciduous	No	No	Yes	Yes	Yes	20	10	77	57.75	12-24 inches	40-150 years
<i>Quercus agrifolia</i>	Oak-leaf Mountain Ash	Rosaceae	Tree	Deciduous	No	No	No	No	No	30	20	314	235.5		
<i>Quercus agrifolia</i>	Japanese Stewartia	Theaceae	Tree	Deciduous	No	No	Yes	No	No	40	40	1257	942.75		
<i>Quercus agrifolia</i>	Japanese Pagoda Tree	Fabaceae	Tree	Deciduous	Yes	No	Yes	Yes	Yes	25	30	707	530.25	17-24 inches	40-150 years
<i>Quercus agrifolia</i>	Japanese Snowbell	Syringaceae	Tree	Deciduous	Yes	No	No	Yes	Yes	25	25	491	368.25		
<i>Quercus agrifolia</i>	Fragrant Snowbell	Syringaceae	Tree	Deciduous	Yes	No	No	Yes	Yes	5	5	20	15		
<i>Quercus agrifolia</i>	Common Snowberry	Caprifoliaceae	Shrub	Deciduous	Yes	No	Yes	Yes	Yes	25	20	314	235.5		
<i>Quercus agrifolia</i>	Japanese Tree Lilac	Tanaceae	Tree	Evergreen	Yes	No	No	Yes	Yes	25	15	177	132.75	12 inches	>150 years
<i>Quercus agrifolia</i>	English Yew	Taxaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	10	5	20	15	12 inches	>150 years
<i>Quercus agrifolia</i>	Irish Yew	Taxaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	10	5	20	15	12 inches	>150 years

City of Milwaukie Tree Crown Area Reference List

*For trees not listed below, contact the city for a crown area value
Revised 05/26/2022



Rare, Threatened or Notable Species
Invasive Species
Potential Nuisance Species

Do not plant - Required Removal
Not recommended for planting

Scientific Name	Common Name	Family	Growth Type	Species Type	Approved Street Trees/Shrub	Native Tree	Drought Tolerant	Moist Soil	Utility Safe	Mature Height (feet)	Mature Width (feet)	Mature Crown Area (sq ft)	75% Crown Area (Dw. Tree Code Planting Standard)	Average Annual Growth Rate	Estimated Longevity
<i>Taxus brevifolia</i>	Western Yew	Taxaceae	Tree	Evergreen	Yes	Yes	Yes	No	No	50	10	79	59.25	12 inches	>150 years
<i>Taxus chinensis</i>	Chinese Yew	Taxaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	10	15	177	132.75	12 inches	50-150 years
<i>Taxus cuspidata</i> 'Capitata'	Japanese Yew	Taxaceae	Tree	Evergreen	Yes	No	Yes	No	Yes	25	10	79	59.25	12 inches	50-150 years
<i>Thuja occidentalis</i> 'Fastigiata'	Columnar American Arborvitae	Cupressaceae	Tree	Evergreen	Yes	No	No	Yes	Yes	25	10	79	59.25	24 inches	50-150 years
<i>Thuja plicata</i>	Western Red Cedar	Cupressaceae	Tree	Evergreen	Yes	No	Yes	No	No	170	30	707	530.25	24-36 inches	>150 years
<i>Thuja plicata</i> 'Excelsa'	Excelsa Western Red Cedar	Cupressaceae	Tree	Evergreen	Yes	No	No	No	No	35	20	314	235.5	24-36 inches	>150 years
<i>Thuja plicata</i> x <i>standishii</i>	Green Glazi Arborvitae	Cupressaceae	Tree	Evergreen	Yes	No	No	No	No	60	20	314	235.5	24-36 inches	>150 years
<i>Tilia cordata</i> 'Chancalot'	Chancellor Linden	Tiliaceae	Tree	Deciduous	No	No	No	Yes	No	50	30	707	530.25	12-24 inches	50-150 years
<i>Tilia cordata</i> 'Greenspire'	Greenspire Linden	Tiliaceae	Tree	Deciduous	No	No	No	Yes	No	35	35	962	721.5	12-24 inches	50-150 years
<i>Terrapin californica</i>	California Nutmeg	Taxodiaceae	Tree	Evergreen	Yes	No	Yes	No	No	115	50	1963	1472.25	12-24 inches	50-150 years
<i>Tsuga canadensis</i>	Canada Hemlock	Pinaceae	Tree	Evergreen	No	No	Yes	No	No	70	30	707	530.25	24-36 inches	>150 years
<i>Tsuga heterophylla</i>	Western hemlock	Pinaceae	Tree	Evergreen	Yes	No	No	Yes	No	130	30	707	530.25	12 inches	>150 years
<i>Tsuga mertensiana</i>	Mountain Hemlock	Pinaceae	Tree	Evergreen	Yes	No	No	Yes	No	65	15	177	132.75	12 inches	>150 years
<i>Ulmus</i> x 'Homestead'	Homestead Elm	Ulmaceae	Tree	Deciduous	No	No	No	No	No	50	35	962	721.5	24-36 inches	>150 years
<i>Ulmus</i> x 'Framer'	Pioneer Elm	Ulmaceae	Tree	Deciduous	No	No	No	No	No	50	40	1357	942.75	24-36 inches	>150 years
<i>Umbellularia californica</i>	Siberian Elm	Ulmaceae	Tree	Deciduous	No	No	Yes	No	No	65	25	491	368.25	12-24 inches	>150 years
<i>Umbellularia californica</i>	California Laurel	Lauraceae	Tree	Evergreen	Yes	Yes	Yes	Yes	Yes	6	6	28	21	24 inches	>150 years
<i>Vaccinium corymbosum</i>	Evergreen Huckleberry	Ericaceae	Shrub	Evergreen	Yes	No	Yes	Yes	Yes	6	6	28	21	24 inches	>150 years
<i>Viburnum x bodinense</i> 'Down'	Down Viburnum	Adoxaceae	Shrub	Deciduous	No	No	Yes	Yes	Yes	10	10	79	59.25	24 inches	>150 years
<i>Viburnum dentatum</i>	David Viburnum	Adoxaceae	Shrub	Evergreen	No	No	Yes	Yes	Yes	5	5	20	15	24 inches	>150 years
<i>Viburnum tinus</i>	Laurustinum Viburnum	Adoxaceae	Shrub	Evergreen	Yes	No	No	No	Yes	3	6	28	21	24 inches	>150 years
<i>Vitex agnus-castus</i>	Chaste Tree	Lamiaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	20	10	79	59.25	24 inches	>150 years
<i>Zelkova serrata</i> 'City Sprite' / 'Wineloss'	City Sprite/Wineloss Zelkova	Ulmaceae	Tree	Deciduous	Yes	No	Yes	No	Yes	20	18	254	190.5	24 inches	50-70 years
<i>Zelkova serrata</i> 'Village Green'	Zelkova Village Green	Ulmaceae	Tree	Deciduous	Yes	No	No	Yes	No	65	50	1963	1472.25	24 inches	50-150 years
<i>Zelkova serrata</i> 'Green Vase'	Zelkova Green Vase	Ulmaceae	Tree	Deciduous	Yes	No	No	Yes	No	65	50	1963	1472.25	12-36 inches	50-150 years
<i>Zelkova serrata</i> 'Muschini'	Columnar Zelkova	Ulmaceae	Tree	Deciduous	Yes	No	Yes	No	No	40	15	177	132.75	12-36 inches	50-150 years

VEGETATION/TREE PROTECTION ZONE

**DO NOT REMOVE OR ADJUST THIS FENCING.
THE FENCE LOCATIONS ARE APPROVED TO PROTECT
VEGETATION AND TREES.**

Please contact the Code Enforcement Specialist and project arborist, if alterations to the approved location of the protection fencing are needed.



Project Arborist: TERAGAN & ASSOCIATES, INC 503-697-1975



ObjectID	Common and Scientific Name	DBH	Condition Health	Condition Structure	Crown Radius	Existing Tree Canopy SF	Mature Crown Area SF	Construction Impact Tolerance	Native Soil Condition	Status	Permit Status	Onsite Tree	Non Exempt Onsite Tree Removal	Existing Canopy Retained Credit	Tree Removal Fee per Diameter Inch	Estimated Permit Fees ROW Trees	Field Notes/ Comments
1	Kousa-dogwood (Cornus kousa)	14	Poor	Failed/Falling	5	78.54	177	Moderate	Undisturbed	Proposed Removal	Type 1	78.54				\$0.00	topped tree, fungal disorder on trunk very large cuts made.
2	magnolia (Magnolia spp)	9	Poor	Failed/Falling	5	78.54	177	Moderate	Undisturbed	Proposed Removal	Type 1	78.54				\$0.00	topped tree, fungal disorder on trunk very large cuts made.
3	pin-oak (Quercus palustris)	23	Fair	Fair	15	706.86	707	Moderate	Undisturbed	Protected Tree	Type 1			353.43		\$0.00	heading cuts, thick crown, leaning trunk
4	European-birch (Betula pendula)	13	Fair	Fair	10	314.16	314	Good	Undisturbed	Nuisance	Type 1					\$0.00	3 feet from water meter
5	European-birch (Betula pendula)	6	Poor	Poor	7	153.94	314	Good	Undisturbed	Nuisance	Type 1					\$0.00	3 feet from water meter, failed top, bbb
6	English-walnut (Juglans regia)	18	Good	Poor	25	1963.49	1277	Good	Undisturbed	Protected Tree	Type 2	1963.49		2945.24		\$0.00	codominant at ground level.
7	western-red-cedar (Thuja plicata)	15	Good	Fair	7	153.94	707	Good	Undisturbed	Proposed Removal	Type 2				\$150.00	\$2,250.00	overgrown hedge
8	western-red-cedar (Thuja plicata)	4	Good	Fair	7	153.94	707	Good	Undisturbed	Proposed Removal	Type 2				\$60.00	\$240.00	overgrown hedge
9	European-birch (Betula pendula)	12	Good	Fair	7	153.94	314	Good	Undisturbed	Nuisance	Type 1					\$0.00	
10	European-birch (Betula pendula)	12	Good	Fair	8	201.06	314	Good	Undisturbed	Nuisance	Type 1					\$0.00	
11	European-birch (Betula pendula)	6	Good	Fair	8	201.06	314	Good	Undisturbed	Nuisance	Type 1					\$0.00	
12	western-red-cedar (Thuja plicata)	4	Good	Good	4	50.27	707	Good	Undisturbed	Proposed Removal	Type 2				\$60.00	\$240.00	overgrown hedge
13	western-red-cedar (Thuja plicata)	7	Good	Good	4	50.27	707	Good	Undisturbed	Proposed Removal	Type 2				\$80.00	\$560.00	overgrown hedge
14	western-red-cedar (Thuja plicata)	11.5	Good	Good	4	50.27	707	Good	Undisturbed	Proposed Removal	Type 2				\$100.00	\$1,150.00	overgrown hedge
15	western-red-cedar (Thuja plicata)	5	Good	Good	4	50.27	707	Good	Undisturbed	Proposed Removal	Type 2				\$80.00	\$400.00	overgrown hedge
16	western-red-cedar (Thuja plicata)	17	Good	Good	10	314.16	707	Good	Undisturbed	Proposed Removal	Type 2				\$150.00	\$2,250.00	
17	western-red-cedar (Thuja plicata)	15	Good	Good	10	314.16	707	Good	Undisturbed	Proposed Removal	Type 2						
18	sweetgum (Liquidambar styraciflua)	26	Fair	Fair	20	1256.64	1257	Good	Undisturbed	Nuisance	Type 1						
19	yew (Taxus spp)	20	Good	Good	10	314.16	177	Moderate	Undisturbed	Proposed Removal	Type 1	314.16	314.16				large pruning cuts on the east side at the base of the tree
20	hemlock (Tsuga canadensis)	20	Good	Fair	15	706.86	707	Moderate	Undisturbed	Proposed Removal	Type 2	706.86	706.86				20% canopy missing due to snow damage se side of the tree
21	white pine (Pinus strobus)	32	Fair	Poor	15	706.86	1257	Moderate	Undisturbed	Proposed Removal	Type 1	706.86	706.86				large codominant scaffold toward the home with cavity near the trunk, 18 inch scaffold branch removed on the west side
22	western-red-cedar (Thuja plicata)	24	Good	Fair	10	314.16	707	Moderate	Undisturbed	Protected Tree	Type 2	314.16	314.16				
23	red maple (Acer rubrum)	14	Good	Poor	7	153.94	1257	Moderate	Undisturbed	Protected Tree	Type 2	153.94	153.94				Shared Tree
24	western-red-cedar (Thuja plicata)	39	Good	Good	17	907.92	707	Moderate	Undisturbed	Protected Tree	Type 2	4630.70	2510.13	3298.67		\$0.00	Neighbor tree

Property Total SF 12400
 Onsite Non Exempt Removals 2510.13
 % of total canopy proposed for removal 20.24%
 Total retention tree canopy in SF 3298.67
 Percentage existing canopy retained 26.60%
 40% of property total in SF 4960
 Mitigation Fee for Preservation of less than 30% in Accordance with the Master Fee Schedule for every 7.5% \$4,000.00
 Mitigation Planting Required to Meet 40% in SF at mature canopy 1661.33
 Recommended Trees to be Planted 1 large = 1963 SF or 2 medium = 962 SF
 Fee in Lieu of Planting \$5 per SF \$8,306.65