

12/18/2015

Standard Supplemental Specifications for the Construction of Public Infrastructure
in the City of Minneapolis

DIVISION S – GENERAL SPECIAL PROVISIONS

MPRB Forestry - Tree Planting Supplement

MPRB Forestry Tree Removal, Pruning, or Planting Permits

A permit is required to remove, prune or plant a tree on any City owned property. Tree removal and planting approved by MPRB Forestry through formal City Review shall constitute compliance. Application for tree removal, pruning and planting permits shall be requested by contacting MPRB Forestry at 3800 Bryant Ave S., Minneapolis- Telephone # (612)-499-9233. All tree work within the public right of way must be done by a Minneapolis Licensed Tree Contractor. The Inspections office maintains a listing of all contractors who are properly licensed. To obtain a list of Minneapolis Licensed Tree Contractors call 311 or visit <http://www.minneapolismn/licensing/treeservicecontractors>. The City Code pertaining to Tree removal and pruning reads as follows: PB10-9. - Damaging trees: No person shall remove, destroy, cut, deface, trim or in any way injure or interfere with any tree or shrub on any of the avenues, streets or public grounds, including parks and parkways, without a permit from the general superintendent of parks. (Code 1960, As Amend., § 1020.090)

Species selection shall be approved by MPRB Forestry to be compatible with site characteristics and species diversity guidelines.

Diversity Guidelines

No more than (5) trees per genera may be represented on one block.

Ex. >5 trees = min. 2 genera, >10 trees = min. 3 genera.

No more than **two** genera from the Asian Longhorn Beetle preferred host list may be represented on one block. (Birch, Buckeye, Maple, Elm, Plane tree)

MPRB Forestry will furnish a list of overrepresented genera based on neighborhood. Selections in those genera should not be used.

Tree Spacing

Preferred tree spacing should equal the crown spread for the selected variety.

Minimum tree spacing should be 3/4 of the crown spread for the selected variety.

Ex. Anticipated Crown spread for variety = 40' x ¾ = 30' (min. on center spacing between trees).

12/18/2015

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Minimum clearances

Existing Element	Min. Distance from Tree OC
Curb	24"
Building Facade	48"
Bike Rack	5'
News rack, trash can , utility box	5'
Crosswalk	7'
Fire hydrant	10'
Street light base	12'
Pedestrian level light base	10'
Utility pole	10'
Pedestrian Walkway (through walk zone)	6'
Outer edge of an entrance or doorway	24"
Bus stop	clear of bus loading zone
Transit shelter	5'
Loading Zone	clear of loading zone (reviewed on a case-by-case basis)
Stop Sign, Traffic Signal	20'
Parking Meter	5'
Distance to cross street	40' approaching corner, 20' non-approaching corner
Distance to alleys and driveways	6'

Concrete work around existing Public trees shall follow this guideline listed below:

Trees are a valuable resource in Minneapolis. As much care as possible must be taken to minimize the negative impact of construction activities to trees.

Tree Roots: No living trees shall be removed without written permission of the Minneapolis Park and Recreation Board (612) 499-9233, with the exception that any roots of such living trees that interfere with installing the sidewalk on proper grade shall be removed as part of the grading work. The contractor shall remove all roots within the area defined as six and one half (6-1/2) inches below the top of the new finished sidewalk grade, by severing them off cleanly with a sharp axe, or by grinding them off using a root grinding machine. Removal of roots larger than 2" requires inspection by MPRB Forestry (612)-499-9233.

Tree Rings (Arcs): When trees exist within the boulevard or at the back of the sidewalk tree rings must be installed in the public sidewalk in accordance with the following parameters. See Standard Plate 4005, Tree Ring Installation Guide for more details. Tree Size: Small less than 8", Diameter Medium 8" to 20" in Diameter, Large Greater than 20" in Diameter. Tree size is measured at 4.5' above the ground level (MNDOT specification 2572.3 A).

Tree Distance from Sidewalk Edge, Measured from nearest point of the base of tree to the normal sidewalk edge, at ground level:

Ring Depth: The distance measured from the normal sidewalk edge to the point of the ring arc perpendicular to the base of the tree. All ring depth dimensions assume that the remaining width of the sidewalk will be at least four feet. **Ring Arcs:** All ring arc lengths will be a minimum of six times the depth of the ring. Maximum ring arc length will be 18' (approximately three typical sidewalk section lengths) for a large tree, or greater, if approved by the Sidewalk Inspector.

Small Tree

- Greater than 18", No ring
- Less than 18", 1' ring.

Medium Tree

- Greater than 18" Breakout ring
- 12" to 18", 1' ring
- Less than 12", 1' to 1.5' ring

Large Tree

- Greater than 18", 1' ring
- 12" to 18", 1.5' to 2' ring
- Less than 12", 2' ring

S-31 (2571) PLANT INSTALLATION AND ESTABLISHMENT

2571.2.K.2.b If planting stock larger than 3" is installed the contractor shall provide an irrevocable letter of credit or post a refundable deposit of \$600.00 per tree, valid for the establishment period of 1 year/ caliper inch. Example 4" caliper stock = 4 year establishment period. In the event the tree develops more than 30% crown decline during the establishment period MPRB Forestry will replace the tree using the deposit. This does not include decline resulting from mechanical injury, or loss due to impact or vandalism. Unused deposits will be returned at the end of the establishment period. The establishment period will commence on the planting date.

S-32 (2572) PROTECTION AND RESTORATION OF VEGETATION Tree Protection

2572.3. A.1 Tree protection has two primary functions for all existing trees within a construction zone of any type: (1) to avoid physical damage from contact by equipment, materials, and activities; (2) to preserve roots and soil conditions in an intact and non-compacted state. MPRB approved tree protection must be specified for all existing trees within construction limits that are to be retained. Tree Protection Plan and/or Landscaping Management Plan will be required of all major Site Plan Reviews and Construction projects within the City of Minneapolis. At the MPRB Forestry discretion, a Tree Protection Plan/Landscape Management Plan may be required for small projects due to extenuating circumstances.

Tree Protection Zone (TPZ) is a restricted area around the base of the tree with a minimum radius of 1 foot for each inch DBH (Diameter at Breast Height - the diameter of a tree measured at 4.5 feet above grade) enclosed by fencing. The fence shall enclose the entire area of the TPZ of the tree(s) to be protected for the duration of the construction project.

Where a TPZ is limited by trees in pavement trunk protection (boards tied around tree trunk) shall be installed to protect against mechanical injury. The boards will reach from grade to 8' or height of lowest branches whichever is least. For trees situated within a boulevard or near a sidewalk or driveway, only the planting strip and yard side of the TPZ shall be enclosed with the required protective fencing. Paved surfaces may be excluded from the TPZ. Modified Tree protection zones may be specified by MPRB Forestry based on specific site restrictions.(see Standard Plate FORE 0001).

All trees to be preserved shall be protected with four (4) foot high fencing. Fencing is to be mounted on heavy duty steel T-posts driven into the ground to a depth of at least one (1) foot, six (6) inches (18" minimum) and no more than eight (8) foot spacing, whenever feasible. A weatherproof Tree Protection Zone sign shall be prominently displayed on each fence at 50- foot intervals (or wherever feasible) on the tree protection fencing. The sign shall be a minimum 8.5 inches by 11 inches.

2752.3. A.5 -Remove and replace 2752-1 with MPRB supplement table

TREE SIZE	MINIMUM UNDISTURBED RADIUS	MINIMUM BORE DEPTH
Less than 3" feet	3 feet	3 feet
3" through 8"	6 feet	3 feet
8" through 14"	8 feet	4 feet
Larger than 14"	10 feet	4 feet

Utility conduits shall be installed under or behind sidewalks and not in the boulevard between the sidewalk and curb, wherever possible

S-39

ROW TREE PLANTING ROW - Tree Planting Typologies and Requirements

A. Continuous Open Boulevard - Highest Priority for Minneapolis Streetscapes

With a goal of installing large growing canopy trees, new construction should include providing a minimum continuous open boulevard width of 8 feet. The recommended width for boulevard tree planting is at least 8.5 feet wide (face of curb to edge of sidewalk). The minimum width for any tree planting shall be 4.5 feet (face of curb to edge of sidewalk), widths from 4.5 feet to 5.4 feet (face of curb to edge of sidewalk) will be limited to small growing tree selections only. Where continuous open boulevard spaces are designed, the top 24 inches shall be viable soil (MnDOT Topsoil A or MPRB Forestry approved equivalent).

B. Open Planting Spaces - Second Priority for Minneapolis Streetscapes

Where design does not allow a continuous open boulevard, open planting spaces in hardscape should have a minimum opening of 125 square feet per tree, and a minimum width of 5 feet. Where open planting spaces are designed, the top 24 inches shall be viable soil (MnDOT Topsoil A or MPRB Forestry approved equivalent).

C. Engineered Root Space - Third Priority for Minneapolis Streetscapes

Where continuous open boulevard or open planting spaces cannot be incorporated, an approved engineered root space of 500 cubic feet per tree shall be required with a minimum serviceable opening of 5 feet by 5 feet. Engineered root space profile must have a minimum width of 5 feet, minimum depth of 3 feet, and maximum depth of 4 feet. Designs that include continuous engineered root zones and enhance stormwater infiltration are preferred.

Tree grates are discouraged, but may be allowed with the mutual consent of MPRB Forestry and Minneapolis Public Works, and may only be approved in conjunction with Engineered Root Space. In all cases, continuous open boulevards and open planting space alternatives shall be considered prior to the approval of tree grates. Utilizing permeable pavement or pavers does not preclude the requirement for Engineered Root Space.

Types of engineered root space include:

- Suspended Pavement Systems

- Systems that suspend pavement and are filled with uncompacted planting soil

- Structural Soil

- Rock Based Structural Soil

- Sand Based Structural Soil

- Or other approved structural soil mix

Structural soils are compacted to support pavement and allow root growth through connected voids between particles. Where structural soil is used a minimum 3' diameter column of planting soil (MnDOT Topsoil A or equivalent) with a minimum depth of 2' shall be placed on tree center(s). See Engineered Root Space standard plate.