



For office use only
Permit No: _____

PERMIT FOR WORK IN CITY RIGHT-OF-WAY

Contractor Information

Contact: _____

Phone: _____

Company Name: _____

Company Address: _____

Job Location: _____

Description of Work:

The Applicant agrees to abide by the PERMIT PROVISIONS AND CONDITIONS OF ISSUANCE included as part of this permit.

Applicant Signature

Date

Office entry only below this line

Permit Conditions:

Street pavement or curb opening <=100 sq ft	qty _____	x	\$250.00
Sidewalk or driveway opening <=100 sq ft	qty _____	x	\$100.00
Grass parkway opening <=50 sq ft	qty _____	x	\$ 50.00
Boring or trenching >100 lineal feet within ROW	qty _____	x	\$ 0.30

Total Permit Fee \$ _____

Date Issued

Street Commissioner Signature

cc: Applicant Forestry
 Treasurer Property File (Tax Key No: _____)

Charge to remittance account 100-261500 \$ _____
Remainder in account \$ _____

PERMIT PROVISIONS AND CONDITIONS OF ISSUANCE

Pursuant to Wisconsin Statutes, this permit is granted to allow performance of the specific work described herein. The following standard provisions and any included special provisions shall govern:

1. The Applicant agrees to indemnify and hold harmless the City of Cedarburg, its employees and its agents, from any cost, claim, suit, liability and/or award which might come, be brought, or be assessed, because of the issuance or exercise of this permit, or because of any adverse effect upon any person or property which is attributed to the partially or entirely completed works of the Applicant. Accomplishment of the permitted work, or any part thereof, by or on behalf of the Applicant shall bind such Applicant to abide by this permit and all its conditions and provisions.
2. The permitted facilities shall, if necessary, be altered at the expense of the Applicant to permit alteration, improvement, or maintenance of roadways as may hereafter be ordered. The entire cost of constructing and maintaining the permitted facilities shall be the obligation of the Applicant unless a contract for such costs has been executed.
3. No open cutting for a crossing will be allowed where the pavement is too narrow to maintain one-way traffic at all times, unless the City of Cedarburg has granted permission for a detour. Wherever the pavement is opened, the spoil shall be hauled away and the trench shall be backfilled with ready mixed aggregate sand slurry. The pavement removed for a road crossing shall be replaced as per the City of Cedarburg specifications.
4. When one-way traffic or a detour is used, the Applicant shall provide ALL NECESSARY SIGNS, FLAGMEN AND LIGHTS required according to the "Manual on Uniform Traffic Control Devices." When a detour lasting more than one day is allowed, local newspapers shall be notified by the Applicant in advance of the work being started.
5. All disturbed areas shall be returned to their present condition or better, subject to the satisfaction of the City of Cedarburg or its representative. Access to all private drives and public street intersections shall be maintained, and all disturbed areas completely restored.
6. Any trenching, tunneling, or excavating shall be performed in accordance with the requirements of OSHA and the Wisconsin Department of Industry, Labor and Job Development, and any applicable local regulations.
7. A copy of this approval, along with any plans and special provisions, shall be available on the job site.
8. Permit Applicants seeking a refund of deposit fees shall make a request in writing following the completion of all lawn and pavement restoration.

SEC. 6-2-3 EXCAVATIONS OF STREETS, ALLEYS, PUBLIC WAYS AND GROUNDS.

- (a) **Permit Required.** No person, partnership or corporation, or their agents or employees or contractors, shall excavate in or disturb the surface of any public street, public alley, public way, public ground, public sidewalk or City-owned easement within the City of Cedarburg without a permit from the City Engineer.
- (b) **Application for Permit.** The application for a permit shall be in writing and signed by the applicant or his agent. The applicant shall submit to the City Engineer, at the time the permit is applied for, sufficient information relating to the work to be done including the general location and nature of the work and the method applicant proposes to use in doing the work. The City Engineer shall determine if sufficient information is submitted.
- (c) **Exception.** The provisions of this Section shall not apply to City excavation work done under the direction of the Director of Engineering and Public Works.
- (d) **Validity of Permit.** Permits shall be valid for a period of ninety (90) days from the date of approval. Any person or utility who has been granted a permit to excavate in the public right-of-way or to disturb the same shall perform such work in such manner and in such time as the Director of Engineering and Public Works shall direct and shall restore the surface of the public right-of-way pursuant to the requirements of this Section and Section 6-2-4.
- (e) **Excavations by Public Utilities.** Any public utility having a franchise to lay pipe in or near the public way shall, before excavation or disturbing any portion of the public right-of-way, give written notice and present plans thereof to the City Engineer in such form as the Director of Engineering and Public Works may prescribe.
- (f) **City Standards.** All street work shall be performed in accordance with the current standard specifications for street openings. Any damaged curb and gutter, sidewalk or grass-covered area shall be restored to the condition prior to damage. All provisions of City Policy PR-6 "Protection of Public Trees During Construction" shall apply.
- (g) **Permit Fee and Deposit.** (Ord. 2019-02)
 - (1) The following fees shall be submitted with applications for permits under this Section:
 - a. Opening street pavement or curb
(not-to-exceed 100 square feet) \$250 per street opening
 - b. Opening sidewalk or driveway
(not-to-exceed 100 square feet) \$100 per sidewalk opening
 - c. Opening grass parkway
(not-to-exceed 50 square feet) \$50
 - d. Boring or trenching in excess of 100 lineal
feet within the street right-of-way \$0.30 per lineal foot plus
excavation fees per a., b., and c. above
- (h) **Insurance Required.** A permit shall be issued only upon condition that the applicant submit to the City Engineer satisfactory written evidence that applicant has in force and will maintain during the time the permit is in effect public liability insurance in an amount

prescribed by the City's Schedule of Insurance Requirements. The policy shall name the City of Cedarburg as the third-party insured and shall be subject to approval by the City Attorney.

(i) **Bond.**

- (1) Before a permit for excavating or opening any street or public way may be issued, the applicant shall sign a statement that he will indemnify and save the City of Cedarburg and its officers from all liability for accidents and damage caused by any of the work covered by his permit, and that he will fill up and place in good and safe condition all excavations and openings made in the street, and will replace and restore the pavement over any opening he may make as near as can be to the state and condition in which he found it, and keep and maintain the same in such condition, normal wear and tear excepted, to the satisfaction of the City Engineer for a period of one (1) year, and that he will pay all fines of forfeitures imposed upon him for any violation of any rule, regulation or ordinance governing street openings or drain laying adopted by the Common Council and will repair any damage done to existing improvements during the progress of the excavation in accordance with the ordinances, rules and regulations of the City. Such statement shall also guarantee that, if the City shall elect to make the street repair, the person opening the street will pay all costs of making such repair and of maintaining the same for one (1) year.
- (2) Faulty work or materials shall be immediately replaced by the permittee upon notice by the City. Failure to correct deficiencies shall result in a one (1) year revocation of the right to obtain a street opening permit. The City shall repair the deficiencies and bill the permittee for all labor, materials and equipment used plus twenty percent (20%) for administration.
- (3) The person who does such restoration shall be responsible therefore for one (1) year from the date of the completion of the work and shall file a written guarantee or surety bond to that effect with the City in the amount of Ten Thousand Dollars (\$10,000.00).
- (4) Whenever the City Engineer shall find that any such work has become defective within one (1) year of the date of completion, he shall give written notice thereof to the contractor or to his surety stating the defect, the work to be done, the cost thereof and the period of time deemed by the City Engineer to be reasonably necessary to complete said work. After receipt of such notice, the contractor or the surety must, within the time specified, repair the defect or indemnify the City for the cost of doing the work as set forth in the notice.
- (5) An annual bond may be given under this Section covering all excavation work done by the principal for one (1) year beginning at the start of the project, which shall be conditioned as specified above and in the amount equal to one hundred percent (100%) of the project bid amount.

SEC. 6-2-4 REGULATIONS GOVERNING EXCAVATIONS AND OPENINGS.

- (a) **Frozen Ground.** No openings in the streets, alleys, sidewalks or public ways shall be permitted between December 1st and April 1st except where it is determined by the City Engineer to be an emergency excavation or authorized Public Works Department projects.
- (b) **Notification to Property Owners.** Any person who is granted a permit hereunder shall notify all property owners identified by the City Engineer or his designate as affected by this excavation. The notice shall be given in writing at least forty-eight (48) hours in advance of such excavation, except in emergencies as identified by the City Engineer, in which case the City Engineer may waive this requirement. When the operations will result in the loss of any utility service to private properties, the private properties shall be notified in writing or by personal contact at least forty-eight (48) hours prior to the loss of service, unless the operations are part of an emergency excavation as defined in Sec. 6-2-4(i).
- (c) **Protection of Public.**
 - (1) Every opening and excavation shall be enclosed with sufficient barriers, signing, and such other traffic control devices as may be required by the Engineer, and in accordance with Section VI of the Manual of Uniform Traffic Control Devices. Sufficient warning lights shall be kept on from sunrise to sunset. No open flame warning devices shall be used. Except by special permission from the City Engineer, no trench shall be excavated more than two hundred fifty (250) feet in advance of pipe or conduit laying nor left unfilled more than five hundred (500) feet from where pipe or conduit has been laid.
 - (2) All necessary precautions shall be taken to guard the public effectively from accidents or damage to persons or property through the period of the work. Each person making such opening shall be held liable for all damages, including costs incurred by the City in defending any action brought against it for damages, as well as cost of any appeal, that may result from the neglect by such person or his employees of any necessary precaution against injury or damage to persons, vehicles or property.
 - (3) Unless otherwise approved, a minimum of one (1) lane of traffic in each direction shall be provided. Every effort shall be made on the part of the permittee to provide reasonable access to all properties adjacent to his project. In the event traffic is limited to less than one (1) lane in each direction, a flagman or temporary traffic control signal shall be provided so as to safely cycle traffic in each direction past the work area.
 - (4) The permittee shall perform the work in such a manner so as not to disrupt the flow of traffic in the area or endanger the safety of workmen or passersby. It shall be the responsibility of the permittee to prevent traffic backup during construction operation. The permittee shall notify the Police Department twenty-four (24) hours prior to commencement of excavation of the location and extent of the excavation, unless the excavation is an emergency excavation as identified in Section 6-2-4(c).

- (d) **Standard Specifications.** Pavement removal, excavations, backfilling and pavement replacement shall be performed pursuant to standard specifications on file with the City Engineer.
- (e) **Emergency Excavation.** In the event of an emergency, any person, firm or corporation owning or controlling any sewer, gas main, water main, conduit or other utility in or under any public street, alley easement, way or ground and his agents and employees make take immediate proper emergency measures to remedy dangerous conditions for the protection of property, life, health or safety without obtaining an excavation permit, provided that such person, firm or corporation shall apply for an excavation permit not later than the next business day and shall notify the Police Department immediately.
- (f) **Excavation in New Streets Limited.** Whenever the Board of Public Works determines to provide for the permanent improvement or repaving of any street, such determination shall be made not less than thirty (30) days before the work of improvement or repaving shall begin. The City Engineer shall notify in writing each person, utility or other agency owning or controlling any sewer, water main, conduit or other utility in or under said street or any real property abutting said street, prior to advertising for bids for such work, and that all such excavation work in such street must be completed within thirty (30) days. After such permanent improvement or repaving, no permit shall be issued to open or excavate said street for a period of five (5) years after the date of improvement or repaving unless, in the opinion of the City Engineer, conditions exist which make it absolutely essential that the permit be issued. Every effort shall be made to place gas, electric, telephone and television cable lines in street parkways.

CITY OF CEDARBURG

CONCRETE CONSTRUCTION SPECIFICATIONS

**NO CONCRETE WORK SHALL BE PERMITTED WITHIN PUBLIC RIGHT OF WAY
BETWEEN NOVEMBER 15 AND APRIL 1 OF THE FOLLOWING YEAR**

A. Concrete Construction.

Sidewalks are to be poured 5" thick except at driveways, where it shall be 7" thick. Sidewalks are to be placed on an obstruction-free, three inch thick, compacted $\frac{3}{4}$ inch traffic bond base.

Drive approaches are to be poured 7" thick. If the approach is poured in an area that does not have existing sidewalk, the approach shall be 7" thick to the property line as determined by the City Engineer. In residential areas, if a new approach abuts existing sidewalk, only defective sections of walk, as determined by the City Engineer, need to be replaced.

The contractor shall place a two inch diameter, schedule 40 PVC conduit behind the curb prior to pouring the new approach. The conduit shall extend two feet beyond both edges of the approach and shall be capped on the ends.

Curb and gutter may be sawed at the required opening prior to removal except that any section of less than 3' must be removed to nearest joint. Breaking of curb head for site access during winter months may be permitted by the City Engineer with the understanding that the entire curb and gutter section will be removed and replaced the following spring. Curb head removal by saw-cutting is permitted, at the discretion of the City Engineer and subject to procedures outlined in these specifications.

Concrete shall be air entrained (6%), maximum slump of 3 inches, shall have a minimum designed 28-day compressive strength of 3500 pounds per square inch, and a cement content of at least a six (6) bag mix. Aggregate shall conform to Section 501, 501.3.6.3.6 and Sections 501.3.6.4.5 of the State Specifications.

Concrete which has not been discharged from the truck within 1-1/2 hours or 300 drum turns after mixing shall be rejected.

NOTE: Sidewalks and driveways shall contain NO steel reinforcement bars and/or steel wire mesh.

B. Expansion Joint Filler

Expansion joint filler shall consist of a bituminous (asphalt or tar) mastic composition, formed and encased between two layers of bituminous impregnated felt. Minimum filler thickness shall be ½ inch. Minimum filler depth shall be the largest concrete thickness.

C. Finishing

After the concrete has been placed and struck off to the required elevations, the surface shall be worked by means of long-handled wood or metal floats with a circular motion until a thin uniform mortar surface is obtained. The surface shall then be finished smooth with a metal hand trowel. Immediately after the water glaze or sheen has disappeared, the surface shall again be finished smooth with a metal hand trowel operated with a circular motion.

All sidewalk edges shall be finished with an edging tool having a radius of 1/2 inch. All dummy joints shall be finished with a jointer having a radius of 1/2 inch and minimum depth of one inch.

The final surface finish shall be obtained by brushing light with a damp whitewash brush or with a floor brush having soft bristles. Any marring of the finished concrete surface before it has set will be cause for rejection and replacement of the concrete at the Contractor's expense.

D. Joints

Dummy joints for the sidewalks shall be constructed at right angles to the edge of the walk and spaced at a distance equal to the width of the sidewalk, unless otherwise directed. These joints shall be a minimum of one inch in depth and shall be 1/4 inch in width. Machine-sawed joints are permitted, provided the sawing is completed within 24 hours of placement. Hand sawing joints is not permitted.

Expansion joints shall be 1/2 inch bituminous felt expansion joint material, installed to the full depth of the concrete at the following locations:

- Between sidewalk and drive approach.
- The end of all curb and gutter radii.
- 3' from all catch basins.
- Where walk adjoins a curb.
- At intervals not to exceed 100 feet.
- Where curb ramp adjoins sidewalk.

Drive approaches, sidewalk, and curb ramps shall not be poured monolithically with curb and gutter, unless approved by the City Engineer.

E. Curing and Protection

All freshly placed concrete shall be protected from rapid drops in temperature, loss of moisture and from subsequent construction operations. No concrete shall be allowed to freeze. An approved liquid membrane-forming curing compound shall be applied to all finish concrete surfaces as soon as possible after placement. Curing compound shall have white pigmentation having AASHTO Designation M148 and be applied in two coats in directions opposite to each other. Each coat should be applied at the recommended application rate. Extreme care shall be taken so as not to injure the surface of the concrete during the process of applying curing compound.

Concrete work shall be closed to pedestrian traffic for a period of twenty-four hours and to vehicular traffic for seven days unless otherwise authorized. The Contractor shall provide and maintain sufficient barricades to effectively close the concrete work to traffic.

F. Hot Weather Work

During handling and placement, special efforts shall be directed toward the prevention of excessive loss of moisture from the concrete, loss of slump, flash setting, and the development of cold joints. Sub-grades and abutting finished concrete work shall be sprinkled or wetted just prior to placement to prevent suction of water from fresh concrete. All new work shall be carefully protected against excessively rapid drying.

The published recommended practices of the ACI and PCA shall be adhered to as they apply to the work. A set-retarding admixture may be used when approved by the Engineer.

G. Sawed Curb Head Removal

Curb head removal by sawing shall conform to the following specifications. The work shall be performed by either Interstate Sawing Company Inc or National Curb Sawing. Other contractors may perform the work upon acceptance of qualifications by the City Engineer.

No sawing shall be allowed until the condition of the existing curb and gutter is determined. Removal of the curb head is dependant on the existing integrity of the gutter that will remain.

Sawing and removal shall be done by the use of truck or rail mounted, hydraulically controlled concrete cutting equipment specifically designed for this use. The cut shall be made from the backside of the curb.

The curb cut shall be made with an ascending slope of one inch from the face to the back of the curb. The curb cut shall be made with a twelve inch taper on each side of the driveway opening. All sharp edges created by sawing shall be ground to an approximate ½ inch radius.

Existing curb joints shall be a minimum of six inches from the ends of the tapers. No joints will be permitted within the driveway tapers.

Within 24 hours of completion of the curb cut, the cut area, including the tapers shall be sealed with a clear solvent-based, VOC-compliant, silane penetrating sealer, such as SILANE 40 VOC BY Hydrozo®. An equivalent product may be used upon approval by the City Engineer.

The contractor shall notify the City Engineering Department upon completion of the curb cut and sealing. The driveway approach shall not be poured until the cut has been inspected and approved. Improper or defective curb cuts will not be accepted and will require removal and replacement of the existing curb and gutter.

**CITY OF CEDARBURG
POLICY/PROCEDURE MANUAL**

SUBJECT: PROTECTION OF PUBLIC TREES DURING CONSTRUCTION

PR-6

1) PURPOSE AND INTENT

- (a) It has been determined that trees and woodlands are an integral part of community life and an important public resource that enhances the quality of life and the general welfare of the City. It has also been determined that the City of Cedarburg and its residents would benefit by the protection of these community assets.
- (b) It has been determined that construction is one of the greatest causes of tree decline and death in urban areas. The City of Cedarburg acknowledges that conflicts between trees and construction may sometimes result in the removal of some trees. The goal of these specifications is to keep injury to trees to a minimum and allow construction projects to proceed at the same time.
- (c) Tree protection has three primary functions, 1) to keep the foliage canopy and branching structure clear from contact by equipment, materials and activities; 2) to preserve roots and soil conditions in an intact and non-compacted state and 3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and construction activities are restricted, unless otherwise approved.
- (d) This policy applies to all land disturbance and construction activity on City-owned property.

2) DEFINITIONS

All words in this policy shall have their customary dictionary definitions except as specifically defined herein. The words “shall” and “must” are mandatory, and the words “may” and “should” are permissive.

Boring: To create an underground passage. Shall be synonymous with tunneling and augering.

Canopy Dripline: Shall mean an imaginary vertical line extending from the outermost reach of branches to the ground.

Diameter at Breast Height (DBH): A standard measure of tree size. A tree trunk diameter measured at a height of four and one-half (4 ½) feet above the ground. If a tree splits into multiple trunks below the 4-½ foot mark, then the trunk is measured at its most narrow point beneath the split.

Public Right-Of-Way (ROW): Shall mean lands dedicated or otherwise opened to the public for street purposes.

Public Tree: Shall mean any tree growing within the public ROW, in City parks or on any City-owned property.

Street Tree: Shall mean any City-owned tree presently or hereafter located within the public right-of-way.

Superintendent of Parks and Forestry is designated as the “City Forester” per the meaning in § 6-4-3.

Tree Protection Zone (TPZ): Shall consist of the ground encompassing the area between the trunk and the dripline of the tree, or one linear foot away from the trunk base for every inch of DBH of the trunk, whichever is greater.

Tree Terrace: Shall mean the grass area between the sidewalk and curb located within the public ROW.

3) PLANNING

- (a) The City of Cedarburg considers trees as important assets and requires plotting tree locations on plans for all projects to assure trees are accounted for from project initiation forward.
- (b) For all projects, site plans must indicate accurately plotted trunk locations, trunk DBH's and dripline areas of all trees or groups of trees to be preserved within the construction area.

4) TREE PROTECTION ZONE (TPZ)

- (a) Each tree preserved shall have a designated Tree Protection Zone (TPZ) identifying the area sufficiently large enough to protect it and its roots from disturbance.
- (b) The TPZ shall be shown on all site plans. Unless otherwise specified, all construction activities shall occur outside of the TPZ.
- (c) Activities **prohibited** within the TPZ include:
 - 1. Parking vehicles or equipment, storage of building materials, refuse, or excavated soils or dumping of any material that may be harmful to tree health.
 - 2. Cutting of tree roots by utility trenching, foundation digging, placement of curbs and trenches, or other miscellaneous excavations without prior approval of the City Forester.
 - 3. The use of tree trunks as a backstop, winch support, anchorage, as a temporary power pole, signpost or other similar function.
 - 4. Soil disturbance or grade change.

5) TREE PROTECTION FENCING

- (a) For City-owned trees located outside the public ROW, see Appendix A.

6) TRENCHING

- (a) **Open trenching within the TPZ of a public tree is prohibited.** In some cases, exceptions may be allowed if in the opinion of the City Forester the impact of trenching upon the tree will be negligible.
- (b) It is also recognized that there may be situations where utilities must be installed or repaired within the tree's TPZ, and trenchless excavation is not possible. In such cases work may proceed under the following conditions:
 - 1. The Assistant Engineer will determine the location and size of the pit or trench.
 - 2. Pre-construction root pruning may be required. See section eight (Root Pruning).
 - 3. All trenches/excavations shall be backfilled as soon as possible to prevent roots from drying out.

7) BORING

- (a) Any and all installations that will have impact on public trees in relation to underground utilities are subject to the review and approval of the Assistant Engineer and/or City Forester before the project starts.
- (b) When possible, a plan showing the path of the underground utility in relationship to the surrounding trees shall be submitted to the Assistant Engineer and/or City Forester **one (1) week** before any work begins for approval of utility placement and technique.
- (c) Open-cut excavation is allowed only up to the boundary of the Tree Protection Zone (TPZ). Where there is insufficient space for trenching to bypass the TPZ, boring must be used in place of trenching. See figures 1 and 2 below.
- (d) The minimum depth for boring shall be three (3) feet.

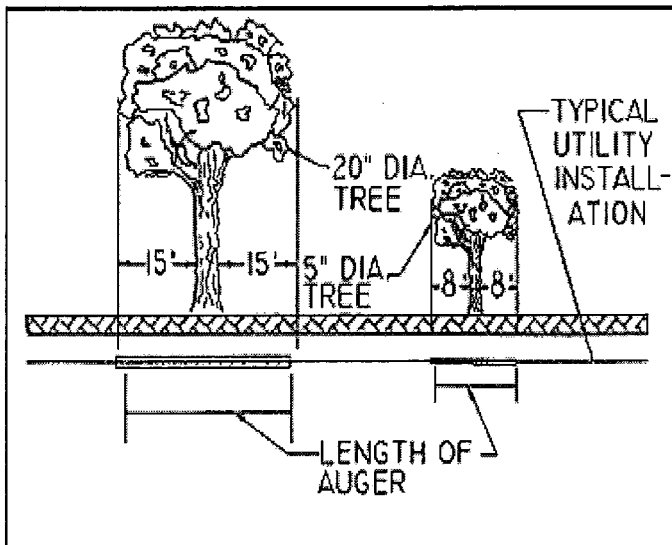


Figure 1

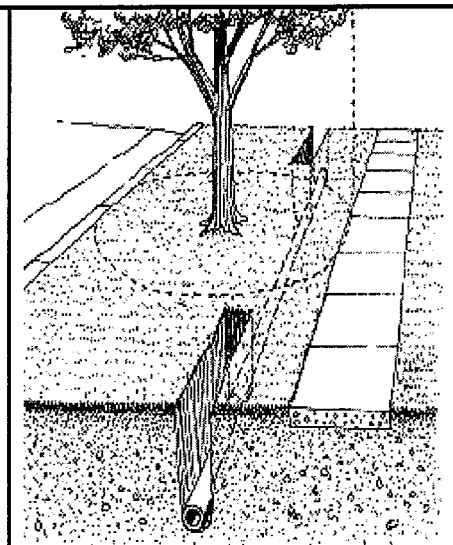


Figure 2 - Bore Method

8) PRE-CONSTRUCTION TREE PRUNING

- (a) Prior to construction various trees may need to be pruned away from structures or proposed construction activity.
- (b) Height clearance required for construction activity shall be determined by the Assistant Engineer and City Forester.
- (c) Pre-construction pruning within the public ROW shall be conducted by the Cedarburg Parks and Forestry Department or City approved contractor under the direction of the City Forester.
- (d) The City Forester shall be contacted at least **five (5) business days** prior to the set-up for any construction to discuss problems of over-hanging branches which may be damaged during construction.

9) TREE PRUNING DURING CONSTRUCTION

- (a) **Construction or contractor personnel shall not attempt tree pruning.** Only personnel approved by the City Forester can perform tree pruning operations.

10) POST-CONSTRUCTION TREE PRUNING

- (a) If corrective pruning is required due to construction damage or situations related to construction activities, post-construction pruning will be performed by the Parks and Forestry Department or City approved contractor under the direction of the City Forester.
- (b) The costs of all corrective pruning will be the liability of the contractor and billed accordingly.

11) PRE-CONSTRUCTION ROOT PRUNING

- (a) Some construction activities may require pre-construction root pruning. **Removing anchoring roots or causing injuries in anchoring roots and root flares can cause future decay and windthrow hazards.**
- (b) Pre-construction root pruning will be an option considered when root loss is unavoidable in the TPZ, and shall only be performed under the supervision of the City Forester.
- (c) If approved by the City Forester, a mechanical root cutting machine designed for such purpose may be used to cut roots. **Trenching machines are not allowed in root pruning operations.**
- (d) Areas to be root pruned will be determined by the Assistant Engineer or the City Forester.

12) ROOT PRUNING DURING CONSTRUCTION

- (a) Tree roots shall not be pruned or cut unless their removal is unavoidable or absolutely necessary.
- (b) Roots that are one (1) inch in diameter or larger needing to be pruned or removed during construction, such as trenching or excavating a boring pit, shall be cut cleanly with sharp hand tools. Make cuts flush with the side of the trench closest to the tree. There is no need to paint or treat the ends. See Figure 4 below.
- (c) Directional root pruning is recommended because it considers the tree's response to root pruning and decay. With directional root pruning, roots are cut to a large lateral, if possible, that is growing downward or in a more favorable direction.
- (d) Recommended root pruning tools:
 - 1. Scissor-type lopper
 - 2. Scissor-type pruner
 - 3. Large and small hand saws
 - 4. Axe
 - 5. 2" Wide Chisel and Mallet

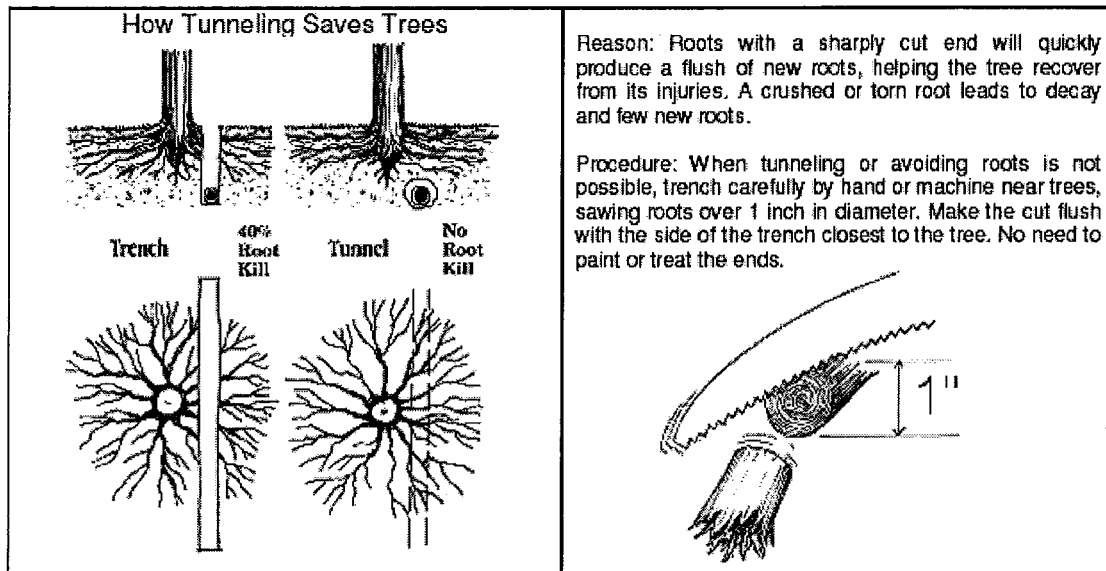


Figure 3

Figure 4 - Make Sharp Cuts

13) SIDEWALK CONSTRUCTION

- (a) All old sidewalks shall be removed prior to any root pruning.
- (b) Sidewalk removal shall be performed in a manner which prevents damage to tree branches, trunks and roots and prevents soil compaction.

- (c) Unless other specifications apply, roots are then to be manually pruned with hand tools and not deeper than **nine (9) inches below** the finished grade of the new walks, and not more than **five (5) inches from the edge** of the new walk.
- (d) - In some cases, as determined by the Assistant Engineer or City Forester, a slip or thin form shall be required and soil disturbance in the tree terrace shall be limited to not more than one (1) inch beyond the edge of the new walk. See sections 11 and 12 (Root Pruning).

14) CURB AND GUTTER CONSTRUCTION

- (a) The root system on the curb side shall not be cut more than **two (2) inches behind** the back edge of the new curb, and not more than **eighteen (18) inches in depth**.
- (b) In some cases, as determined by the Assistant Engineer or City Forester, the root system on the curb side shall not be cut more than one (1) inch from the back edge of the new curb, and a ¼ inch or thin form, or slip form paver shall be required.
- (c) When constructing or replacing driveways or driveway approaches, roots **shall not** be cut by means of mechanical root cutting machines. If root removal is essential to driveway replacement, roots shall be manually pruned with hand tools. See sections 11 and 12 (Root Pruning).

15) BACKFILLING

- (a) The top eight (8) inches of all excavations in the tree terrace and in all boulevard medians shall be backfilled **ONLY** with clean, topsoil.
- (b) No concrete, slurry, gravel, stone, sand, or other such materials shall be used for backfill.
- (c) Restoration shall be to the original grade unless otherwise specified.

16) DAMAGE TO TREES AND SHRUBS

- (a) Damage to City-owned trees, shrubs, and other plant material due to contractor negligence or accident shall be repaired only by the Cedarburg Parks and Forestry Department or City approved contractor.
- (b) The costs of all such repairs, removals, replacements, and an amount of value lost will be the liability of the contractor and billed accordingly. The amount of value lost will be determined by the City Forester in accordance with guidelines set forth in the Guide for Plant Appraisal, 9th Edition, using the most appropriate appraisal method.

APPENDIX A – TREE PROTECTION FENCING

TREE PROTECTION FENCING

- (a) To protect and preserve the trees, as identified on the site plan or by the City Forester, the contractor shall install protective fences outside the Tree Protection Zone (TPZ) of the tree(s).
- (b) Fencing shall be installed to completely surround the limits of the TPZ. See Figure 5.
- (c) Tree protection fences shall consist of orange plastic web snow/construction fencing, four (4) feet in height.
- (d) If fencing must be located on paving or concrete that will not be demolished, an appropriate grade level concrete base should be used to support the posts.
- (e) Tree fences shall be erected prior to any site activity and shall remain in place until its removal is authorized by the City Forester or Assistant Engineer.
- (f) A “Warning” sign shall be prominently displayed at fifty (50) foot intervals on a protective fence. The sign shall be a minimum of 8.5 inches x 11 inches and clearly state the following:

TREE PROTECTION ZONE
This Fence Shall Not Be Removed

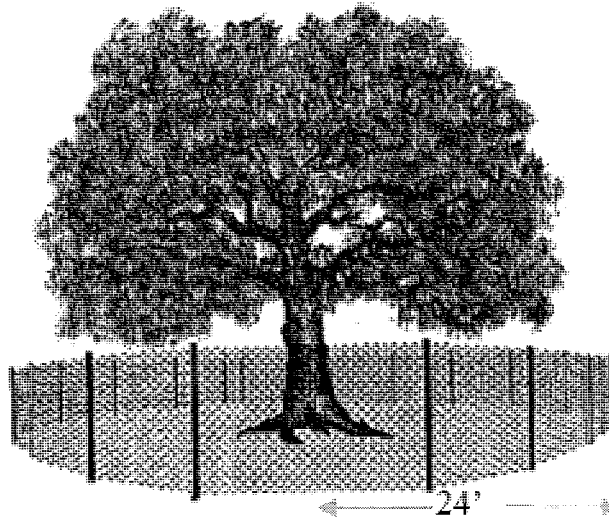


Figure 5. A 24 inch DBH tree would have a Tree Protection Zone (TPZ) extending 24 feet from the trunk.

Adopted: 1/30/2006