



## COMMISSION POLICY

### Vegetation Management Policy

Category: <b>Electric</b>	Subcategory: <b>Maintenance</b>	Policy Number: <b>4.3.301</b>
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### **Section I – Introduction**

This policy was developed to be used as a guide by Grand Rapids Public Utilities (GRPU) personnel, contractors, and customers to provide direction on how vegetation will be managed around GRPU-owned overhead and underground power lines.

### **1. Definitions**

The following terms when used in this Policy have the meanings given below:

**Clearance:** Proper separation between power lines and any part of a tree.

**Customer:** Any individual, partnership, association, firm, public or private corporation or governmental agency having GRPU's electric service at any specified location.

**Danger Tree:** A tree which is dead, dying, or damaged, or has significant potential to fall over, and if the tree falls it would make contact with an overhead power line that affects more than one GRPU customer.

**Electric Service:** The conductors and equipment connecting the serving utility, GRPU, to the wiring system of the premises served.

**GRPU:** Grand Rapids Public Utilities, a municipal utility established under M.S.A. 412.321 – 412.391 providing electric, water and wastewater utility services.

## **2. Vegetation Management**

### **a. Purpose**

One of the most common causes of electrical outages is trees contacting overhead power lines. GRPU strives to maintain proper clearances between trees and overhead power lines to increase electric service reliability to our customers. Clearances are also maintained for customer and personnel safety, as trees contacting electrical lines can cause electrical shock and create the potential for fires. GRPU also requires access to their equipment within right of ways, easements, and individual customer services.

### **b. General**

Proper clearances are designated in Exhibit A of this policy. GRPU personnel, contractors, and customers shall trim or remove vegetation in accordance with Exhibit A, Vegetation Control Specifications for Electrical Distribution Line Right of Ways. Clearances shall be maintained in accordance with Section 4.4 of Exhibit A. Clearances around higher voltages are greater due to increased danger of trees contacting these lines which generally affect more customers if contact is made. Clearances for low voltage power lines are lower due to reduced risk of contact with these lines, which generally do not cause significant outages if contact is made with trees.

### **c. City of Grand Rapids Aligned Goals and Environmental Stewardship**

The City of Grand Rapids has been a designated Tree City USA since 1987 which encourages maintenance and growth of good quality tree cover within urban areas. GRPU aligns themselves with the goals of this program especially if trees are planted or replanted around power lines after tree trimming and removal activities. If trees are replanted in the vicinity of overhead power lines by GRPU, they will be slow growing, shorter trees that are wind resistant.

GRPU will perform regular vegetation trimming versus removal if possible in order to maintain proper tree cover aesthetics. By maintaining clearances in Exhibit A, electric outages can often be minimized without having to completely remove the trees. Consideration will also be given to the type of tree that is trimmed versus removed. Fast growing trees generally cause more issues with power line contacts and are not resistant to higher winds. These trees will be removed if possible to prevent fast regrowth and outages caused by trees.

### **d. Access**

In order to maintain the clearances around power lines, GRPU requires access to their electrical equipment within right of ways, easements, and services feeding individual customers. A minimum of 10 feet of ground clearance along power lines shall be maintained for proper equipment access these areas. Power lines running along roads and alleyways generally serve as this access and no additional clearance is required other than clearance from overhead power lines. GRPU will work with customers to maintain access to GRPU-owned equipment installed on customer property.

### e. Danger Trees

Trees that qualify as Danger Trees, as defined in Section 1, shall be removed at the expense of GRPU. Customers may notify GRPU of the presence of a danger tree, or GRPU personnel may also make the same request.

GRPU designated personnel shall inspect each Danger Tree and make the determination of the tree needs to be removed. The tree stump and root ball will not be removed unless it poses a significant safety hazard or is next to a roadway or alleyway.

If the tree does not qualify as a Danger Tree and is on a customer's property, the customer shall be notified it is their responsibility to remove the tree if they want to do so. GRPU will work with the customer to drop or cover up electrical lines to minimize the risk of damage to their property and damage to their electric service should they choose to remove the tree.

### f. Customer and Contractor Tree Removal

When customers or contractors choose to remove vegetation that is not the work of GRPU or a GRPU contractor, GRPU personnel will work with the customer or contractor to drop overhead electrical lines or place coverup on these lines if the tree may contact these lines during removal. If there is not significant cost to GRPU, the customer or contractor shall not be charged for this work in order to encourage customers and contractors to work with GRPU while removing the vegetation and to minimize danger of contact with overhead lines.

### g. Emergency Tree Trimming and Removal

Vegetation interfering with providing power to customers shall be cleared as quickly as possible and may result in debris being left on site. The removal of the debris will be coordinated as soon as practical following the restoration of power.

  
GRPU Commissioner

  
GRPU Commissioner

### POLICY HISTORY:

Adopted: for consideration on November 9, 2022

Revision:

## EXHIBIT A

VEGETATION CONTROL SPECIFICATIONS FOR ELECTRICAL DISTRIBUTION LINE  
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## 1. GENERAL INFORMATION

### 1.1. Scope

The right-of-way shall be free of all obstructions which interfere with the construction and operation of the electric power line. The work shall be completed in conformance with these Specifications. GRPU personnel, contractors, and customers, herein known as "responsible party" shall observe all conditions applicable to any particular description or tract of land. The Responsible Party shall also observe all relevant laws and regulations applicable to his operations.

### 1.2. Definitions

#### 1.2.1 Desirable Species

Those plants which at maturity will not reach a height that will endanger the line and those which will provide food cover for wildlife. Specific species which have been identified as desirable species are listed in Section 4.

#### 1.2.2 Tree

A woody plant normally maturing at 20 feet or more in height and achieving a diameter of at least 4 inches or more at a height of 4 1/2 feet above ground (diameter breast height).

#### 1.2.3 Danger Trees

Danger trees are defined as dead, dying, diseased, and/or leaning trees growing outside of the recommended right-of-way width which may conflict with the conductors or structures (poles and hardware) when such trees fall in the direction of or otherwise endanger the line.

#### 1.2.4 Brush or Shrub

A woody plant normally maturing less than 20 feet in height with generally bushy appearance because of its several erect, spreading, or prostrate stems. It usually attains a diameter of less than 4 inches at breast height.

#### 1.2.5 Slash

Branches and tops less than 4 inches in diameter within the right-of-way boundaries.

#### 1.2.6 Debris

Scattered logs, uprooted stumps, and/or trees or other foreign material located within the right-of-way boundaries.

#### 1.2.7 Clear Cutting

Cutting and/or removal of all woody vegetation within the right-of-way boundaries; i.e., trees, shrubs, fallen logs, uprooted stumps, etc.

#### 1.2.8 Selective Cutting

Removal from within the right-of-way boundaries of only that vegetation which would potentially interfere with the construction and/or operation of the transmission or distribution line or is undesirable for wildlife food or habitat.

#### 1.2.9 Keep Off

Areas which the Responsible party must not enter until he has received written permission from the Owner.



#### 1.2.10 General Construction Area

Areas such as structure sites, staging areas, access roads, or other locations where construction activities and movement of traffic will take place. Structure sites include the entire width of the right-of way.

#### 1.2.11 Owner

The Grand Rapids Public Utilities Commission.

#### 1.2.12 Authorized Owner Representative

Persons whose names have been certified in writing to the Responsible Party by the Grand Rapids Public Utilities General Manager as having the authority to act for the Owner in regard to the work.

#### 1.3. Route Maps

General location of the right-of-way shall be indicated on drawings supplied by the Owner.

#### 1.4. Width of Vegetation Control Operations

Prior to beginning work, the Responsible Party shall delineate the edges of all areas where vegetation control operations will occur. This delineation shall be accomplished with flagging or other markings approved by the Owner. After an area is delineated, the Owner's representative will review the markings in the field. No work is to occur until the Owner has reviewed and approved the markings.

#### 1.5. Landowner Contacts

The Responsible Party shall contact all landowners prior to entering and/or performing work on their property and maintain a log of such contacts. Upon request by an authorized Owner representative, the Responsible Party shall furnish a summary of all landowner contacts for a particular line, feeder, or area.

#### 1.6. Work Progression

The Responsible Party shall work progressively along the line and shall complete all work in a given portion of the line before starting work in another portion.

#### 1.7. Stream Crossings

Existing Bridge or culvert crossings are to be utilized for all stream crossings.

#### 1.8. Pipelines

If it becomes necessary to cross any pipeline with equipment, it shall be the responsibility of the Responsible Party to obtain the necessary permission for such crossing from the appropriate pipeline companies. The Responsible Party shall hold the Owner harmless from all claims resulting from such crossings.

#### 1.9. Guy Anchors

Responsible Party shall maintain an area of 10 feet (or as otherwise designated by the authorized Owner representative) on all sides of guy wires, guy anchors and structure braces devoid of trees, shrubs, brush and other types of woody vegetation.

#### 1.10. Energized Lines and Substations

When working on or near energized facilities, the Responsible Party shall take or use all necessary precautions to prevent any outages and/or damage to facilities. The Responsible



Party shall not perform any work within the confines of a substation unless an authorized Owner representative is present at all times.

#### 1.11. Notification of Work Locations

The Responsible Party must notify the Owner dispatcher and/or appropriate personnel prior to and upon completion of work on a daily basis. Notification shall include specific work locations(s) identified by line number, structure number, and/or road location.

#### 1.12. Right-of-Way Inspection

Responsible Party's work shall at all times be subject to inspection by the Owner and public authorities. Responsible Party shall notify the Owner of any proposed changes in daily crew assignments or working hours sufficiently in advance so that suitable inspection can be provided by the Owner.

#### 1.13. Established Land Survey Corners

It will be the Responsible Party's responsibility to properly preserve all established corners or other permanent landmarks, which may be encountered in the maintenance, clearing, or re-clearing operations. Destruction of such landmarks will require additional surveys for reestablishment of same, for which Responsible Party will be liable.

#### 1.14. ANSI Standard

The Responsible Party shall comply with the latest revisions in the Z-133.1 American National Standard for Tree Care Operations - Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush - Safety Requirements.

### 2. GENERAL CLEARING AND RE-CLEARING GUIDELINES

All work to be performed under the supervision of the Responsible Party shall be conducted in a manner such that all phases of the clearing and re-clearing work shall progress concurrently; i.e., cutting, disposal, and final cleanup. Clearing and re-clearing shall be performed in a manner, which will maximize preservation of natural beauty and conservation of natural resources and minimize adverse effects of the landscape or silting of streams. For areas where the entire width of the right-of-way traverses vegetation types such as low-growing brush, muskeg swamps, or black spruce bogs or when crossing a deep valley or ravine, the right-of-way clearing, re-clearing, and the maintenance activities shall be reduced in width as designated by the Owner. Also, where selective cutting may be beneficial, this type of clearing and re-clearing will be accomplished as designated by the Owner.

#### 2.1. Field Locations

If requested, field survey stakes designating the centerline of the right-of-way will be established by the Owner. All survey stakes designating points on tangents and points of intersection shall be preserved by the Responsible Party. Should any of these stakes be removed or destroyed by the Responsible Party, they will be replaced by the Owner at the Responsible Party's expense.

#### 2.2. Right-of-Way

When access roads are necessary, they will be constructed at an angle to avoid a vista down the right-of-way (see Section 4.2). All access roads will be located to minimize destruction of desirable plants and damage to cultivated fields. The location of access roads will be designated by the Owner.

## 2.3. Cutting Procedures

### 2.3.1 Selective Cutting

Selective cutting will be accomplished in specific areas so noted on the Owner drawings or as designated by an authorized Owner representative generally in areas of high public exposure including the U.S. highways, heavily traveled state and county roads, streams, lakes, and wildlife travel lanes such that a natural vegetative screen remains (Section 4.2). A list of native plant species which could remain in these areas is shown in Section 4.

### 2.3.2 Stump/Stubble Height

All trees and other woody vegetation shall be cut such that pointed spikes are eliminated. No stumps or stubble shall be left standing higher than 3 inches above ground unless otherwise designated by an authorized Owner representative. (Stump height to be measured on high side of sloping terrain.)

### 2.3.3 Mechanical Clearing and Re-clearing

Clearing and re-clearing will be permitted by mechanical operation unless otherwise specified. Generally, shearing will be restricted to slopes less than 15 degrees. Before any rolling or brush chopping will be permitted, written approval must first be obtained from the Owner. When this cutting procedure is approved, all trees 4 inches or greater in diameter breast height must first be removed. After any mechanical operation, the Responsible Party shall, to the satisfaction of the Owner, restore the natural contours existing prior to the start of work.

## 2.4. Disposal Procedures

Generally, all trees, brush and other debris shall be removed by the Responsible Party and hauled away to an approved disposal site or incinerator. Alternatively trees, brush, and other debris may be disposed of in accordance with the procedures outlined below. No slash and/or debris left on the right-of-way shall be greater than 1 inch in diameter and/or 4 feet in length or as otherwise specified by the contract documents.

### 2.4.1 Lopping and Scattering of Slash

In areas approved by the Owner, lopping and scattering of slash may be accomplished such that slashing shall not exceed 30 inches in height. The method of disposal shall be limited to the outer one third area of the right-of-way. In such areas, all logs shall be neatly piled along the edge of the right-of-way (Section 4.3). Lopping and scattering of slash will generally not be approved within sight of any residence or business.

### 2.4.2 Chipping

In areas approved by the Owner, where practical, chips shall be disposed of within the right-of-way limits. Chips shall not accumulate to depths greater than 12 inches. Chipping shall be accomplished in such a manner that no chipped material will enter any open water, accumulate in branches of existing trees, or bury desirable low-growing shrubs.

### 2.4.3 Brush and/or Slash Piles

Where designated by the Owner, all brush and/or slash shall be piled and left at least 10 feet from the edges of the right-of-way. Brush, slash, and/or debris piles shall not exceed the following dimensions: length - 15 feet, width -15 feet, height - 6 feet (section 4.3).

### 2.4.4 Corduroy

In some swamp areas where the stumpage is the property of the Owner, the Responsible Party may dispose of some or all of the trees and slash by placing trees, slashing, etc. perpendicular to the right-of-way and packed down to a maximum height of 18 inches by running over this material with crawler type equipment. All material must be located within the outer one third of the right-of-way. The outermost 10 feet, however, must be clear of all slashing. No corduroying will be permitted within the General Construction Area (Section 4.3).

#### 2.4.5 Salvage of Timber and Firewood

All trees and firewood to be salvaged shall be trimmed flush to the trunk and neatly piled along the edge of the right-of-way in lengths as specified by the Owner (Section 4.3). Log piles shall not exceed 3 feet in height and shall not extend out into the right-of-way by more than 20 feet. At no time will log piles obstruct trails, access roads, and the general Construction area, or be piled up against standing trees on the edge of the right-of-way.

No wood material over 6 inches in diameter shall be destroyed without first having been offered to the adjacent property owner, the Owner or the public (in that order of preference) by the Responsible Party for use as firewood in accordance with the intent of Minnesota Statutes 116F.30.

### 3. GENERAL REMOVAL AND PRUNING GUIDELINES

#### 3.1. General Procedures

##### 3.1.1 Minimum Clearances

The Responsible Party shall provide minimum clearance from conductors by line voltage levels as provided in the Required Minimum Tree Clearance of Conductors for Various Distribution Voltages in Section 4.4, or as recommended by an authorized Owner representative.

##### 3.1.2 Remove Rather than Prune

The Responsible Party shall remove rather than prune or trim trees to meet minimum overhead clearance specifications whenever possible.

##### 3.1.3 Written Permissions

The Responsible Party shall obtain proper authorization (preferably written) from the landowner before removing or pruning trees. Copies of all authorization forms shall be provided to the Owner.

##### 3.1.4 Refusals

All property owner refusals resulting in inadequate clearance shall be documented on a Right-of-Way Vegetation Refusal Report to be completed by the Responsible Party to the satisfaction of the Owner and given to the authorized representative.

##### 3.1.5 Special Removals and Pruning

When a property owner or adjacent landowner requests or requires the Responsible Party to do special removal and/or pruning work, the Responsible Party shall notify the authorized Owner representative for authorization prior to beginning any such work.

##### 3.1.6 Compliance and Disease - Wood Disposal

Trees removed or pruned shall be disposed of in compliance with all laws, regulations, and ordinances. Additional precautions and methods shall be taken to ensure that diseased trees are handled in a manner which will prevent the spread of the infecting agent.

### 3.1.7 Daily Disposal

All removed and pruned material shall be disposed of within three working days to the Owner's satisfaction unless otherwise agreed to by the Owner or property owner.

### 3.1.8 Firewood Cutting

Only upon approval from an authorized Owner representative shall wood be cut in firewood lengths.

## 3.2. Removal Procedures

### 3.2.1 Removal Conditions

The Responsible Party shall remove rather than prune or trim trees when the following conditions exist: dead, dying, diseased, leaning, or seriously defective trees and specific danger trees which may conflict with the conductors or structures or otherwise endanger the line.

### 3.2.2 Joint Agreement on Danger Trees

Danger trees shall be removed after joint agreement and understanding is reached by the Responsible Party and the authorized Owner representative.

### 3.2.3 Felling

Trees shall be felled away from the conductors whenever possible.

### 3.2.4 Cut Stumps

The cut stumps shall not be more than 3 inches above ground and flush with the grade whenever possible. It is Owner's policy not to remove stumps. Deviations from this policy shall be approved by an authorized Owner representative.

## 3.3. Pruning Procedures

### 3.3.1 Natural Pruning and Drop Crotching

Natural pruning or trimming shall be used. This involves drop crotch pruning which consists of reducing tops, sides, or individual limbs and avoids cutting back to small suckers.

### 3.3.2 Directional Pruning

Directional pruning or trimming shall be used to direct or train future tree growth or sprouting away from the wires (Section 4.5).

### 3.3.3 Quantity Removed

Generally, not more than one third of the total tree crown should be removed.

### 3.3.4 Cuts

Cuts shall be made immediately above lateral branches which are no smaller in diameter than one third of the diameter of the branches being cut. Cuts shall be made flush to the parent stem, limb, or trunk, without cutting into the branch collar or leaving any protruding stubs (Section 4.6).

### 3.3.5 Natural Form and Symmetry

The Pruning Work shall preserve, where possible, the natural form of the tree, typical to the species. The symmetrical appearance shall be maintained wherever possible when reducing overall tree size. The top is to be made higher and the sides reduced in order to maintain a tree-like form.

### 3.3.7 Bark Stripping or Tearing

Limbs shall be removed with proper sequence and placement of saw cuts to prevent stripping or tearing down of bark from the remaining limb or trunk.

### 3.3.8 Hangers

All slash (branches, limbs, and tops) that hang up in the tree(s) being pruned or in adjacent tree(s) shall be removed before moving from current work site.

### 3.3.9 Climbing Aids

In residential areas, the Responsible Party shall not use climbing spurs, irons, or tree grafts on live trees unless the tree is to be removed or in an Emergency situation.

## 4. DESIRABLE SPECIES

### 4.1. TABLE 1 - DESIRABLE NATIVE PLANT SPECIES

Following are the desirable native plant species which should be encouraged on selected areas of right-of-way:

CONIFEROUS TREES	DECIDUOUS	SHRUBS (1)
Northern White Cedar	Mountain Ash ©	Red-Osier Dogwood (fc)
Red Cedar (Juniper) (f)	Blackcherry *	Other Dogwood Species
Norway pine *	Chokecherry (f)	Mountain Maple
White Pine *	Pincherry (f)	Sumac ©
White Spruce *	Hackberry	Arrowwood (f)
Ironwood *	High-Bush Cranberry (fc)	
Juneberry (f)	Hazel	
Wild Plum (f)	Honeysuckle	
Smooth Wild Rose		

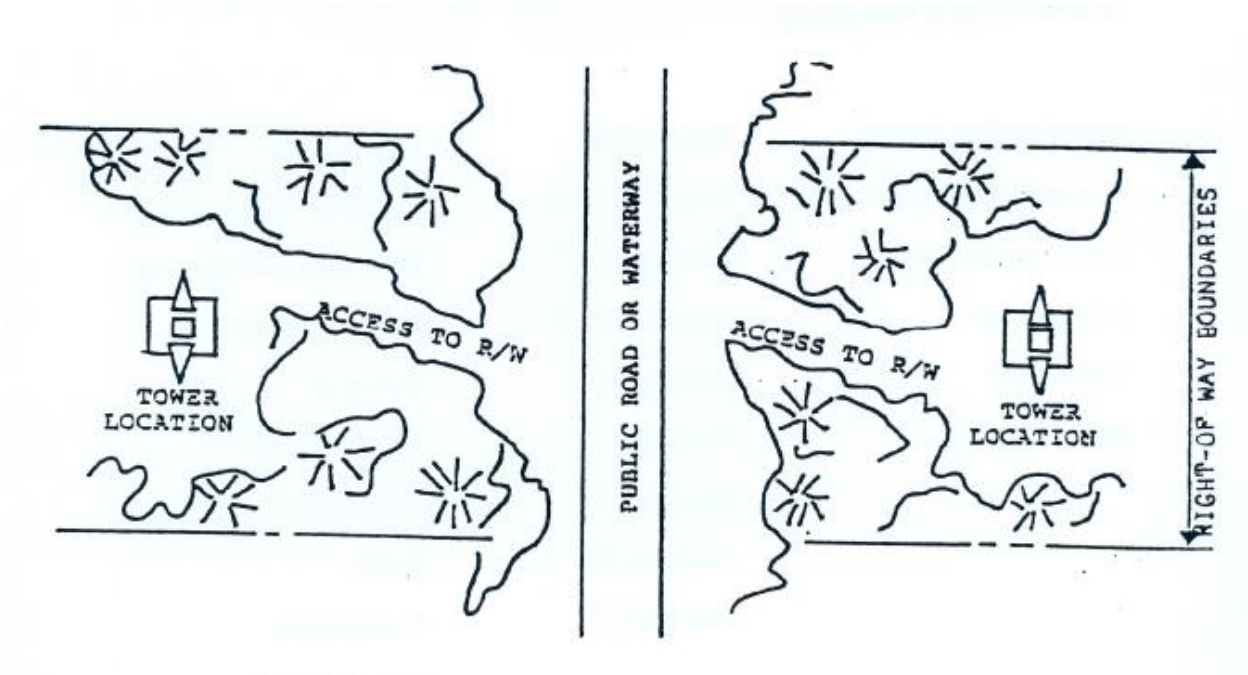
(1) Majority of shrub species listed are beneficial to white tailed deer and ruffed grouse.

(f) Conspicuous flowering shrub.

© Bright autumn or winter colors (fruit, leaves, or stems).

(\*) Areas within the right-of-way where these trees will be permitted must be approved by the Owner.

## 4.2. Figure 1 ILLUSTRATION OF SELECTIVE CUTTING

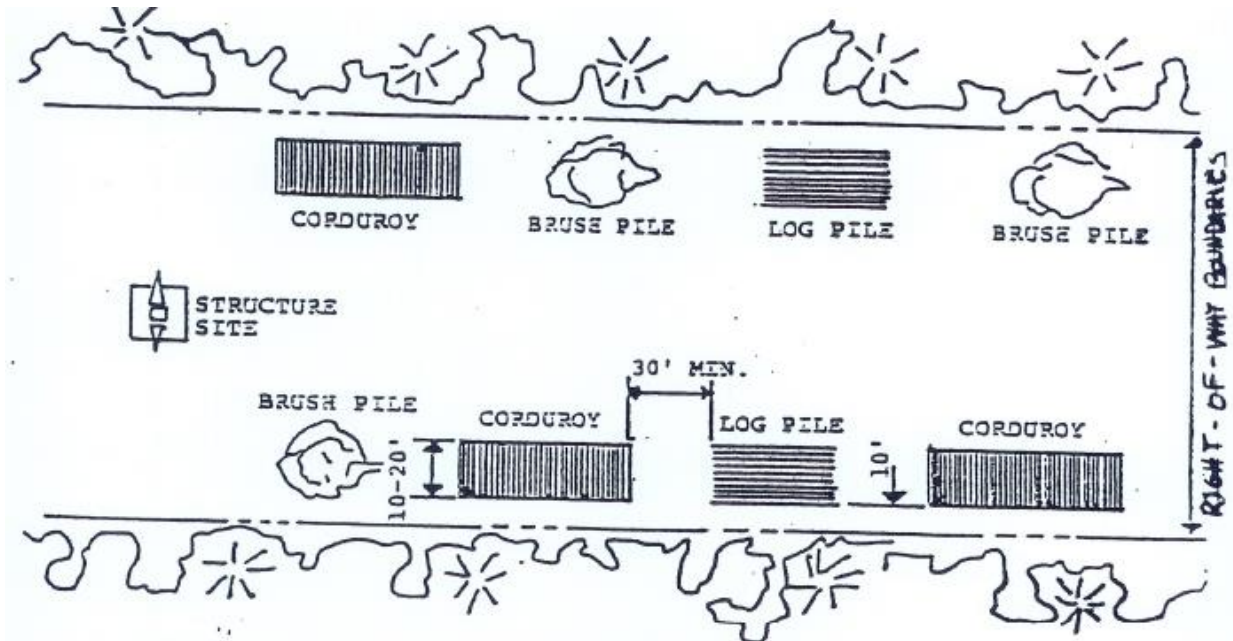


## NOTES:

1. Special instructions for selective cutting of access roads to the right-of-way are outlined in Section 2.2.
2. Cutting procedures for clearing of access roads and tower locations will be designated in the field by an Owner representative.
3. All selective cutting will be supervised by an Owner representative.
4. Length of selective cutting areas will vary depending on topography.



## 4.3. Figure 2 METHODS OF DISPOSAL



## NOTES:

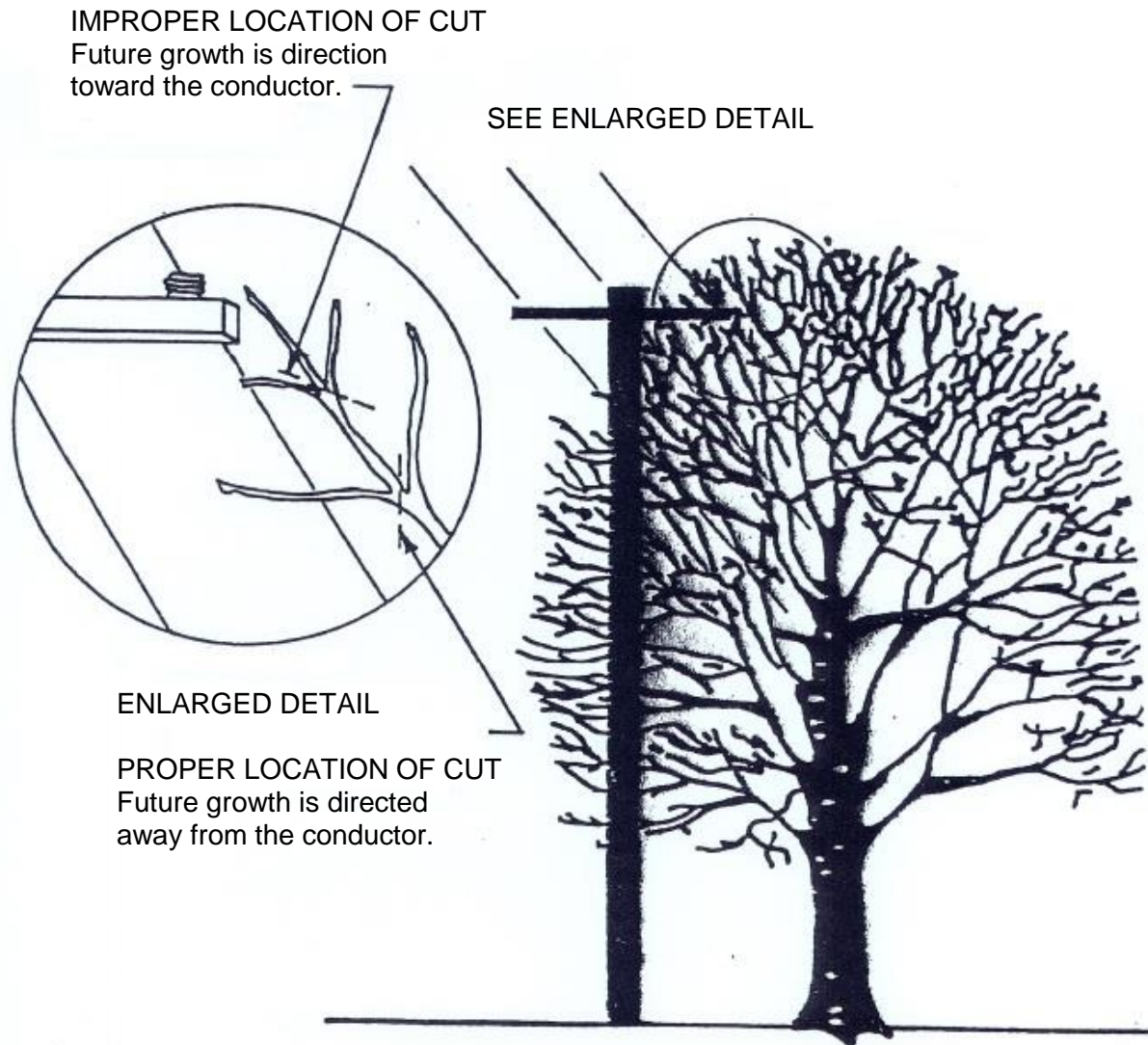
1. No logs, brush, or other material shall be piled within the General Construction Area.
2. When corduroying, all material must be perpendicular to the right-of-way and packed down to a height of 18 inches or less. See Section 2.4.5
3. When disposing of trees in tree lengths or as otherwise specified, the maximum height of the piles must not exceed three (3) feet.
4. Brush piles must not exceed fifteen (15) feet in length by fifteen (15) feet in width by six (6) feet in height.

#### 4.4. REQUIRED MINIMUM TREE CLEARANCE OF CONDUCTORS FOR VARIOUS DISTRIBUTION VOLTAGES

Trimming type	Services to business/residence zero to 600 volts	Secondaries from pole to pole zero to 600 volts	Primary cables 1000 volts to 23,000 volts
Top clearance	1 foot	3 feet	10 feet*
Side clearance	1 foot	3 feet	6 feet
Overhang clearance	1 foot	3 feet	15 feet

\* Remove if possible

## 4.5. FIGURE 3 DIRECTIONAL PRUNING

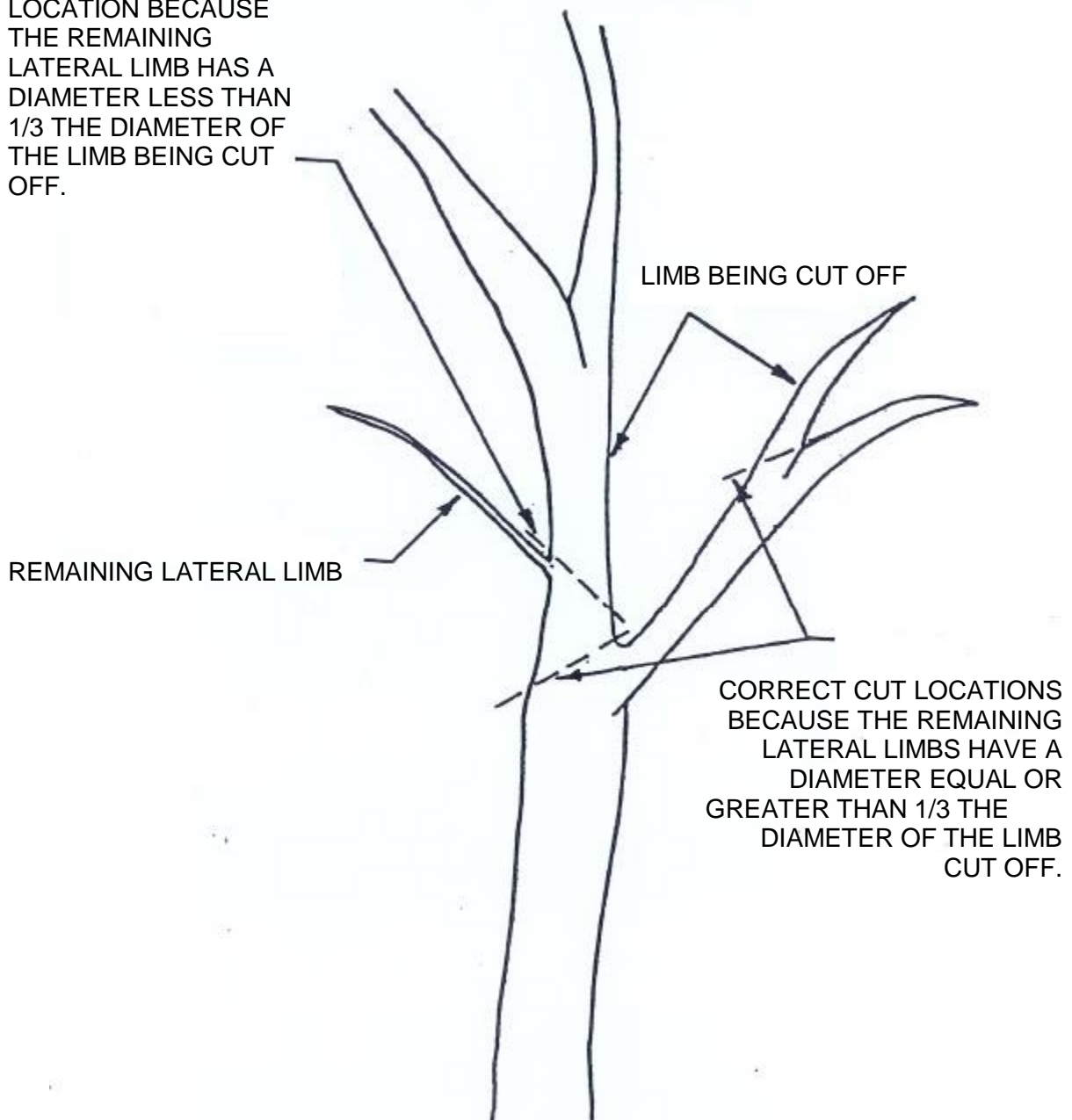


DIRECTIONAL PRUNING

(TO DIRECT GROWTH AWAY FROM WIRES)

#### 4.6. PRUNING PROCEDURES

INCORRECT CUT LOCATION BECAUSE THE REMAINING LATERAL LIMB HAS A DIAMETER LESS THAN  $\frac{1}{3}$  THE DIAMETER OF THE LIMB BEING CUT OFF.



#### PRUNING PROCEDURES (CUTS)