This manual supersedes all previous manuals and guidelines for line clearance and vegetation management work at Lenoir City Utilities Board. February 2016
About This Guideline

The following information is intended as a CONTRACTOR’s guide to the effective implementation of the LCUB Distribution Vegetation Management Program. Each tree and tree species has its own unique growth pattern, condition, proximity to conductors, structures and other obstacles, requiring the exercise of professional judgment in implementing the guidelines.

These guidelines apply to vegetation management of the LCUB distribution system including voltages from 600 to 14,400 Volts. They are not intended as personal safety guidelines.

(1) Introduction
A copy of these Guidelines and the book “Pruning Trees Near Electric Utility Lines” by Dr. Alex L. Shigo or a copy of the International Society of Arboriculture (ISA) “Best Management Practices-Utility Pruning of Trees” shall be kept on each crew truck/work location.

The Distribution Vegetation Management Program (hereinafter called the "Program") objective is to help maintain safe, reliable and least cost electric service, while complying with all regulatory requirements. The Program helps achieve this overall objective by efficiently managing vegetation to reduce outage risk. Left unmanaged, trees and other vegetation can become a leading source of power interruptions during non-storm events and can delay outage restoration associated with major and minor weather events. The Distribution Vegetation Management Program strategy focuses on those maintenance activities that help reduce tree-caused outage risks associated with trees that grow into lines, and affect risks associated with trees that break and fall onto lines.

The objectives of the Program are to be achieved while maintaining positive customer relations and utilizing sound environmental practices. LCUB, and or its designated representative is responsible for program oversite.

(2) Line Clearance Guidelines

(A) Pruning and Removal Guidelines

All tree pruning shall be governed by approved principles of modern arboriculture and shall adhere to industry standards, including, ANSI A-300 and Z-133 standards and the natural pruning method. LCUB representatives, in cases, can grant exceptions to these pruning standards where mechanical trimming equipment is used. Pruning shall be done in a manner that protects current tree health and with regard for future growth and development.

(B) Voltages

1. Vegetation management for voltages of (69,000) volts and higher are considered to be Transmission voltages and are deferred to the Transmission Program.
2. Vegetation management for distribution lines energized at 14.4 kV and below are maintained by this Program. Primary voltages range from 600 to 14,400 Volts, and are further defined as follows: Backbone consists of (3) energized conductors, and Lateral consists of (1) or (2) energized conductors. Conductors with voltages of less than 600 Volts are considered Secondary voltage. The neutral wire has the potential to carry
primary voltage, which CONTRACTOR shall take into consideration when clearing primary lines.

(C) Clearance for Primary voltages

1. **Side Clearance**: For primary conductors, side clearance to be achieved at the time of maintenance is ten (10) feet from the closest conductor (see Figure 1 and Figure 2).

2. **Under Clearance**: Trees greater than 6 inches in diameter at breast height (DBH) shall be pruned to achieve a minimum clearance of twelve (12) feet below the primary conductor(s) (see Figure 1 and Figure 2).

3. **Overhang on Backbone**: Backbone lines shall be trimmed vertically to remove overhanging limbs to a minimum of twenty (20) feet above the conductor(s) or as high as reasonably possible using a standard sixty-five (65) to seventy-five (75) foot bucket truck. Optimal clearance on backbone lines shall be considered the removal of all overhang (see Figure 1 and Figure 2).

4. **Overhang on Laterals**: Lateral lines shall be trimmed vertically to remove overhanging limbs to a minimum of twenty (20) feet above the conductor(s) or as high as reasonably possible using a standard sixty-five (65) to seventy-five (75) foot bucket truck (see Figure 1 and Figure 2).

---

**Figure 1. Pruning Examples.**
5. Any tree affecting or potentially affecting a primary distribution line shall be trimmed to help maintain reliable service. The following factors are considered during the clearance process: The natural growth rate per species; The re-growth rate of the tree species (how fast the branches grow back after pruning); The wood strength of the tree species (what is the chance of the branch breaking under the load of strong wind, snow, ice); the voltage conducted by the line (the risk presented by the branch contacting the line; the higher the voltage, the greater the risk); branches rubbing insulated wires and broken or hanging tree branches.

6. The pruning clearances in subsection (2)(C) are minimum clearances that should be established between the vegetation and the energized conductors and associated live parts where practicable. Vegetation management practices may make it advantageous to obtain greater clearances than those listed. In the event that the specific trimming conflicts with any other materials within this section, the strictest rules shall apply.

7. Notwithstanding any provision to the contrary in this section (2), mature trees whose trunks or limbs have sufficient strength and rigidity to prevent the trunk or limbs from damaging the conductor under reasonably foreseeable wind and weather conditions are exempt from the minimum clearance requirements in this section (2).

8. Low-growing species that will not obtain a maximum mature height that will interfere with line operations or performance should be left to occupy the rights of way.

9. Minimum clearances may be subject to limitations of right-of-way width or legal access.

10. All dead wood shall be removed when it is a risk to conductors or when the LCUB directs the CONTRACTOR to do so.

(D) Clearance considerations for Secondary Conductors, (600) volts or less

Secondary conductors shall not be maintained as part of routine circuit maintenance (e.g. firm price work) unless requested and authorized by LCUB. During the course of routine maintenance, secondary wires identified by the firm price CONTRACTOR as an imminent outage threat or safety risk shall be submitted to the LCUB representative for review. In the event secondary wires are maintained, the following shall apply:

1. Open Wire secondary shall be cleared to the same standards as lateral primary conductors.
2. Triplex, street light and service lines shall be cleared only to remove hard contact, or deflection of the line’s intended path.
3. All dead wood shall be removed when it is a risk to conductors or when the LCUB directs the CONTRACTOR to do so.

(E) Clearance considerations for other electrical equipment
1. The neutral wire has the potential to carry primary voltage, which CONTRACTOR shall take into consideration when clearing primary lines.
2. Guy Wires and poles (without sensitive hardware) shall be cleared on a case by case basis as determined necessary during field inspection, to free them from weight, strain, or displacement caused by contact with trees.
3. All vegetation around poles with sensitive hardware (e.g. transformers, switches, reclosers, capacitor banks, etc.) shall be removed at ground level for a distance of ten (10) radial feet. Exceptions shall be made for low-growth and ornamental trees, and landscaped properties.
4. All dead wood shall be removed when it is a risk to conductors or when the LCUB directs the CONTRACTOR to do so.

(F) Removal Considerations for trees greater than 6” DBH
Tree removals shall not be performed by firm price tree crews unless requested and authorized by LCUB, in which case current unit rates will apply. During the course of routine firm price maintenance, the CONTRACTOR shall submit potential removals to the LCUB representative for review. LCUB at its discretion may elect to perform the identified removal(s) with existing time and material crew(s) or authorize the firm price CONTRACTOR to remove the tree(s) at applicable unit rates. In either case, the tree CONTRACTOR shall consider the following criteria in determining appropriate tree removals:
1. Removal – Cutting the tree trunk at ground level, with or without stump removal. No stumps will be removed without the full approval of the LCUB representative. Trees six (6) inches or less in diameter that will require pruning in future years shall be removed from the ROW, with the exception of low-growing trees (e.g. dogwoods, redbuds, or ornamental trees) and landscape quality trees six (6) inches or less in diameter, which shall only be removed at the direction of LCUB. All stumps of deciduous woody vegetation must be treated with a suitable chemical herbicide to prevent sprouting and new growth. All trees larger than six (6) inches in diameter located in the ROW shall only be removed at the approval of LCUB.
2. If the amount of tree crown to be removed in order to obtain adequate clearance will have an adverse impact on the overall long term health of the tree, the tree will be considered for removal.
3. Tall-growing trees within the width of the right-of-way shall be considered for removal.
4. Hazard trees that pose a risk to the utilities overhead facilities shall be considered for removal. Hazard tree conditions could include, but are not limited to the following symptoms: Dead or dying, severe lean, weak branches, root failures, cankers, conks or internal decay.
5. All removed trees should be cut as close to the ground as practical and chemically treated to prevent resprouting.
6. Trees where the cost of removing is equal to or less than the cost of trimming shall be considered for removal.

(G) Brush considerations
1. Brush is defined as any tall growing tree that is less than six (6) inches DBH that will grow to a sufficient height as to contact the primary conductors. Brush also includes vines growing on or around LCUB’s overhead facilities.
2. Trees within ten (10)-feet of ROW centerline and less than six (6)-inches in diameter are to be removed during regular schedule maintenance without any additional permission from LCUB. Stumps of removed trees are to be treated with herbicide to prevent resprouting.
3. Brush that has been planned to be removed shall be basal treated or cut as close to ground level as practical and chemically treated to prevent resprouting.
4. Vines shall be cut off approximately one foot above ground level. All vines shall be treated with herbicides below the cut.
5. Second growth from stumps cut on previous pruning cycles shall be removed if it has been planned.

(H) Debris disposal
1. Unless specified otherwise, CONTRACTOR shall dispose of all debris resulting from scheduled maintenance work. Wood too large to be chipped shall be cut into fireplace lengths (approximately 18” lengths) and stacked on-site unless the homeowner requests the wood to be removed.
2. CONTRACTOR shall remove all debris produced from scheduled maintenance within one (1) business day (weather permitting), unless property owner gives consent to leave debris.
3. Disposal of chips, wood and brush is the responsibility of the CONTRACTOR.
4. Any debris resulting from outages and/or storms will be left on site.

(I) Herbicide treatment
1. The CONTRACTOR shall provide all necessary herbicide products and comply with applicable Laws regarding the application, storage and handling.
2. The CONTRACTOR shall use the most effective herbicide available for any given situation to prevent regeneration of vegetation and subject to approval by LCUB. The applicable MSDS shall be submitted as part of the approval process. Herbicides shall be applied according to manufacturer instructions. Consideration must be given to the surrounding vegetation and soil conditions to prevent damage to other growth or surface water or ground water.
3. CONTRACTOR shall warranty herbicide treatment for one (1) year after application and remedy any new growth identified.

(4) Outage/Storm Response

(A) On-Call/Call Out
1. In the event of an emergency and when specifically requested by LCUB, CONTRACTORS shall provide crews to perform work after hours and on week-ends and holidays, as necessitated by the emergency. Work that is unrelated to the restoration of reliable electric service shall not be performed. On such emergencies, only essential work (i.e. no chipping of brush) shall be done per tree as required to restore electric service rapidly.
2. If necessary a Vegetation Management Supervisor will report to dispatch headquarters to aid in the dispatching of tree crews.
3. Improper pruning during outage/storm response work may occur due to unsafe conditions.
4. Fallen trees, broken limbs and all trimmings and cut vegetation associated with service restoration are left on site. Crews shall not inform customers that LCUB will return at a later day to clean up the trimmings and cut vegetation.
(5) Customer Request Process

(A) Customer requests

1. Customer requests generated from LCUB’s call center or other designated source are managed by the vegetation management staff. Customer requests can include but are not limited to: Trim for Line Clearance; Customer Assisted Removal; Check for Drop Service; Pickup Brush.
2. Customer requests will be inspected and the customer will be notified with the specific action that will be taken.
3. Under some circumstances, a customer request may be answered by a standard letter.
4. Response time to customer requests will vary depending on the number of requests in the system and the type of work required.
5. When necessary and with customer consent, brush will be left on-site.
6. For customer requested assistance for tree removal, any tree(s) to be removed by customer will have all overhang removed and ten feet (10’) of clearance from all energized conductors will be provided.

(6) Notification Process

(A) Landowner Notification

1. LCUB will not be obligated to, but may, notify the property owner prior to standard reasonable tree trimming for trees within the normal clearance zone.
2. The CONTRACTOR will attempt to notify the landowner prior to trimming trees that are outside the normal clearance zone, except where these trees are obviously on unoccupied land or wood lots.
3. The CONTRACTOR will notify the landowner (except under emergency conditions) prior to any cut-down, removal or replacement of trees.
4. CONTRACTOR shall notify the property owner and/or LCUB representative if they discover a tree displaying hazardous defects not limited to butt decay; poor root anchorage, severely leaning trees; or lightning, insect, disease, vehicle, or animal damage. LCUB representative must authorize any tree removal greater than six (6) inches in diameter prior to removal.
5. LCUB strives to maintain good public relations with property owners, municipalities, government agencies and private CONTRACTOR firms or individuals. CONTRACTOR’s actions reflect on LCUB. CONTRACTOR should give diligent consideration to the interests of the property owners, tenants, and general public.
6. CONTRACTOR shall notify LCUB immediately of any objection by a property owner or public authority to the work proposed to be performed by CONTRACTOR.
7. Complaints of any nature will receive immediate attention by CONTRACTOR. In the event CONTRACTOR is unable to resolve any complaints, LCUB may choose to do so, even where resolution may be binding upon CONTRACTOR.
8. For regularly schedule maintenance, customers may be notified by LCUB in person or by phone in situations where there were previous issues with a particular customer. The CONTRACTOR is responsible for notifying property owners by door card with appropriate contact number, prior to performing any work. Questions regarding the scheduled work will be answered at this time. Notice to affected property owners or occupants will occur at least three (3) days, but not more than seven (7) days, prior to performing planned vegetation maintenance. Alternative notification methods may be used by LCUB, which include direct mail, postcard or bill insert.
9. LCUB and or its representative must secure signed permission to remove any tree equal to or greater than six (6) inches DBH.
10. If vegetation management is necessary and the landowner refuses permission, the concern will be addressed by LCUB and or its representative.

(B) Public notification

1. LCUB may provide if necessary, written notice of any pending vegetation management activities to a primary contact for each county and municipality affected. The primary contact shall be selected by mutual agreement between LCUB and the highest elected official, or if no elected official, then the highest appointed official, of the county and municipality.
2. Notice shall be made in writing to the primary contact designated under subsection above (6)(B)1, at least two (2) months in advance of the planned vegetation management. This notice shall include the planned dates and locations of the vegetation management.

(7) CONTRACTOR Guidelines

(A) Appearance and Conduct

All contract line clearance workers shall maintain professional appearance and conduct and shall adhere to the following guidelines. The following guidelines are neither intended to be nor should they be considered to be inclusive. The CONTRACTOR:

1. Shall be courteous to customers at all times;
2. Shall not engage in "horseplay" while on the job;
3. Shall not use language that is profane, boisterous, derogatory, racial, or of an ethnic nature;
4. Shall not display sexually suggestive objects or pictures, such as t-shirts, magazines, calendars or posters;
5. Shall not use customers' property (i.e. patios, picnic tables, etc.) for breaks;
6. Shall not leave refuse from lunches, etc. on private or public property;
7. Shall not enter the customer's house;
8. Shall refrain from climbing over or standing on any fence, garage, tool shed, etc. unless absolutely necessary to access work and only when it can be done safely and without damaging customers' property;
9. Shall not solicit private work, including tree work, while performing work pursuant to this Contract;
10. Shall not obligate LCUB to make any payments to another party, nor make any promises or representations of any nature to another party for or on behalf of LCUB;
11. Shall maintain neat appearance at all times and;
12. Shall wear clothing and hard hat displaying CONTRACTOR's color and/or emblem.

(B) Supervision

1. The CONTRACTOR shall ensure that it has adequate supervisory personnel on the property to ensure that all of the CONTRACTOR's crews on the property are properly supervised. CONTRACTOR's personnel shall provide the interaction and communication with LCUB as required by this Contract. Such supervisory personnel shall be called "General Foremen" in these guidelines.
2. CONTRACTOR is required to have a Certified Arborist through the ISA, on site or readily available at the request of LCUB..

(C) Identification

All General Foreman and Crew Forman shall possess identification stating employee name, employer, as well as LCUB Vehicle Magnets or truck decals stating the CONTRACTOR is providing vegetation management services for LCUB.
(D) Employment expectations

1. CONTRACTOR shall conduct pre-employment and random drug and alcohol screening to detect the presence of amphetamines, cocaine, marijuana, opiates, and phencyclidine, at no additional cost to LCUB.
2. CONTRACTOR shall conduct pre-employment background check for felony criminal convictions and motor vehicle violations for all states of residency within the past five (5) years, at no additional cost to LCUB.
3. At least one crew member per crew must speak English fluently.

(E) Vehicles

1. All vehicles and equipment shall be in good working condition, kept clean and organized at all times, maintaining a professional appearance. All trucks shall clearly display CONTRACTOR markings and vehicle numbers. Truck numbering should be visible from both side and the back. Also, the numbering should be large enough to be legible from a distance commonly encountered in traffic, i.e., several car lengths or across a four-lane intersection.
2. Each General Foreman and Crew shall be equipped with a cell phone at no additional cost to LCUB.
3. Cones will be placed at a highly visible area (street intersections, driveways, alleys, etc.) when a crew’s work location is not readily detectable.

(F) Time Fulfillment

1. All work shall be performed Monday through Friday, except under special circumstances as agreed by LCUB. The CONTRACTOR and LCUB shall mutually agree to the working hours. Any approved overtime for time and material crews shall be paid at the rates set forth in contract, depending on the circumstances, by LCUB for any work performed in excess of 40 hours per week.
2. While on stand-by, crew(s) shall be dumping chips, fueling trucks, maintaining chainsaws, and engaging in other productive duties. **Crews sitting for the 2-hour show up time shall not charge time towards their perspective equipment.**
3. Holidays - CONTRACTOR may, upon receipt of permission from LCUB, work at straight time on any LCUB-observed holiday.

(G) Certification and permits

The CONTRACTOR shall acquire all certifications and permits required by local, county, municipality, state, tribal and federal agencies in which the CONTRACTOR’s crews will be performing work pursuant to this Contract.

(H) Refusal/Access

1. In the event that the CONTRACTOR encounters conditions prohibiting performance of Work, the crew foreman will make, and document on Work Log, all reasonable efforts to secure access. CONTRACTOR shall notify LCUB after all reasonable efforts to secure access have failed. A locked gate shall not, in and of itself, constitute “No Access”. CONTRACTOR shall not be entitled to additional compensation for No Access.
2. In the event that a property owner refuses access to the work scheduled, the crew foreman will notify LCUB and move on to the next job site. Work will not be performed until LCUB has notified the CONTRACTOR that access has been granted.

(I) Reporting

The CONTRACTOR shall collect and report key aspects of the vegetation management program to document program performance and provide information necessary for ongoing program management including:

1. Weekly timesheets
2. Daily Crew Locations
3. A record of any safety hazards encountered
4. Any unexpected occurrence or accident resulting in death, life-threatening or serious
   injury to a person assigned to perform vegetation management activities or the public.
5. Additional documentation as requested by LCUB

(J) Contact information

LCUB and the CONTRACTOR shall provide each other as needed, a list of all Vegetation
Management personnel, and the phone numbers where each can be contacted, including
pagers/beepers/cell phones.

(K) Communication

1. During the progress of the work, CONTRACTOR shall provide crew locations to LCUB
   staff as requested. In the event the CONTRACTOR plans to deviate from the normal
   work schedule, e.g. leaving the job site or starting location due to inclement weather or
   other cause, the foreman shall notify the appropriate personnel immediately.
2. Contractor's foreman is to notify LCUB representative immediately if crew personnel
   contact the line with tool, limb, or tree or if any electrical facility is damaged in any way.
3. Contractor is to notify LCUB representative of any injury requiring medical attention.
4. Contractor is to notify LCUB representative immediately if any public safety
   threat/condition or line defect is found while performing the work. Examples include but
   are not limited to climbable trees, with potential for children to contact electric facilities, or
   tree houses.

(L) System Awareness

1. The CONTRACTOR shall at all times be aware of the nature and characteristics of the
   electric facilities, including circuit voltage. It is understood that all circuits shall remain
   energized during the performance of work. Any exceptions must be authorized and
   scheduled by LCUB. If in the judgment of the CONTRACTOR's general
   foreman-supervisor, it is hazardous to prune or remove trees with the circuits energized,
   the CONTRACTOR must contact an authorized LCUB representative. If appropriate
   LCUB will provide the necessary protective materials or de-energize circuits to ensure the
   safe pruning or removal of the tree(s).
2. Should the CONTRACTOR knock down or come into contact with conductors (power
   lines), the CONTRACTOR shall immediately notify LCUB and take the necessary
   protective measures. All CONTRACTOR-caused electric service interruptions are
   subject to repair at the CONTRACTOR's expense. This includes any damage to
   customers' property, including any electrical damage.
3. In the event a CONTRACTOR becomes aware of any broken, damaged, loose or faulty
   line facilities in the normal course of its line clearance performance, the CONTRACTOR
   shall promptly notify LCUB as to the exact location(s) and nature of the condition found.
4. The CONTRACTOR's Representative (i.e. Regional Manager or designated
   representative) and General Foreman shall attend meetings as scheduled by LCUB to
discuss work practices and issues.

(M) Expectations

1. The make-up of all crews, as to personnel and equipment, shall be determined by
   CONTRACTOR. CONTRACTOR shall maintain and adjust the crew size and equipment
   as necessary to complete work.
2. CONTRACTOR shall insure that crew's are being productive at all times.
3. CONTRACTOR shall perform Work as identified by LCUB. The CONTRACTOR shall
   only accept work assignments from LCUB's designated representative. The
   CONTRACTOR shall make an attempt to contact the owner at each property they have
   planned work.
4. CONTRACTOR shall, where Work is being done, provide the necessary safeguards and
   protective devices to ensure continued normal operation of the electric lines, to prevent
accidents to the public, and to protect CONTRACTOR’s employees. CONTRACTOR will comply with OSHA 1910.269 and provide documentation thereof. Also, CONTRACTOR will provide documentation of compliance with the Electrical Hazards Training requirement of OSHA 1910.331. CONTRACTOR will provide evidence of compliance with ANSI Z-133.

5. Work practices must be consistent with current ANSI A300 and as explained in International Society of Arboriculture (ISA) Utility Pruning Best Management Practices. This guide shall be read and understood by each worker who performs line clearance and will be available at each work site as a quick reference.

6. CONTRACTOR will be responsible for placing and maintaining all signs and barricades called for by local municipal regulations. All costs for such signage and barricading shall be included in firm price rates.

(N) Damages

1. Where approval of private access is given, CONTRACTOR shall bear the cost of any damage claims that may arise due to the use of such access by CONTRACTOR.

2. All ruts and damage caused by CONTRACTOR’s equipment must be repaired to the reasonable satisfaction of the property owner.

3. CONTRACTOR will be billed for any cost incurred by LCUB to repair facilities that are damaged by CONTRACTOR’s negligent action.
(8) Definitions

**basal treatment** - Herbicide application covering the entire stem to approximately 18 inches above the soil.

**brush** - a woody plant that is less than six (6) inches DBH, that is not part of an existing tree, and that may reach the conductor at maturity.

**brush work** – trimming, clearing brush and applying a herbicide to the cut stems, or only applying herbicide to brush.

**clearance** - the distance between vegetation and the conductors.

**coniferous** - any of the cone-bearing trees or shrubs, mostly evergreens.

**DBH** - "diameter at breast height" – the diameter of individual tree trunks or individual stems of brush measured at a point 4.5 feet above the ground.

**deciduous** - any perennial plant that sheds its leaves annually at the end of a growing season.

**demand tree trimming** - trimming or removing trees on a customer requested or emergency basis. Also may include tree work associated with line construction projects. This is typically required when trees have grown into the conductors, or are close to the conductors, and have created a potentially dangerous situation. This may also include special trimming or chipping work when requested by the Utility. Customer requested only Utility authorized representatives may assign demand tree work.

**directional pruning** - a form of natural pruning used to encourage tree regrowth away from the conductor. It is accomplished by removing limbs growing toward the conductors entirely at the branch collar near the trunk of the tree, or by pruning to lateral branches that are at least one-third the diameter of the limb being cut and are growing away from the conductor.

**drop-crotching** - is a crown reduction technique in which a tree trimmer makes proper pruning cuts at crotches, removing the larger limb and favoring the smaller. For electric line clearance, the trimmer would remove limbs growing toward the conductors and favor those growing away from the conductors. This usually results in a "V" shaped appearance of the tree crown and is frequently referred to as "V-trimming". See definition of "natural pruning" for further description.

**evergreen** - any plant that retains its leaves/needles year-round.

**foliar herbicide application** - the application of a herbicide to the leaves or needles of a target plant.

**hazard trees** - trees that are located off the right of way, have a high probability for failure and are of sufficient height to contact the conductors and/or structures and guy wires if they were to fall in that direction, and should be cleared. Conditions could include but are not limited to the following: Dead, dying or diseased, leaning trees, weak branches, shallow root system, root failure, internal decay, canker or canker root.

**herbicide** - a chemical pesticide used to control, suppress, or kill plants.

**natural pruning** - a method by which branches are cut to the branch collar at a suitable parent limb, the trunk of the tree, or an appropriately sized lateral branch. This method of pruning is sometimes called "drop-crotching", "proper pruning", the "Shigo method" or "lateral trimming."

**preventative maintenance** - trimming or removing vegetation on a systematic basis typically by, but not limited to, circuit or grid, and in a manner intended to achieve system reliability.

**pruning** - the removal of dead, dying, diseased, interfering, objectionable, and/or weak branches of trees or shrubs using proper arboricultural techniques.

**removal** - completely removing an entire tree as close as practical to ground level and applying herbicide to the cut stump when appropriate.
right-of-way - a transmission or distribution right-of-way, an easement, a utility easement, or any other corridor of land paralleling, on both sides, an overhead transmission or distribution line, and in respect of which the Utility has certain rights.

rounding over - the making of many small cuts so that a tree underneath the conductors is rounded over in a uniform curve. This creates an unhealthy tree condition and results in rapid regrowth directly back toward the electrical conductors. This is not an acceptable practice.

clearance zone – the area above, below, or adjacent to the energized conductors where tree pruning and/or removal is required per the LCUB specifications.

selective herbicide - a herbicide that, when applied to a mixed population of plants, will control specific species without injury to others.

shearing - the making of many small cuts so that a tree adjacent to the conductors is sheared in a uniform line. This is not a generally acceptable practice.

show-up site – site where CONTRACTOR crews receive work assignments.

side pruning - using natural pruning methods to cut back or removing side branches that are threatening the conductors; required where trees are growing adjacent to conductors.

stump treatment - applying an approved herbicide to the outer ring (cambium) portion of the stump to reduce or eliminate re-growth.

sucker growth - the re-growth within the tree that originates near the cuts made during the previous trimming.

the property - any work site associated with this contract.

topping - cutting back the upper crown of a tree to a uniform horizontal line, leaving multiple stubs. This is an improper and unacceptable trimming technique.

tree - a perennial plant with a woody trunk measuring at least six (6) inches DBH, and having one set of annual rings at ground level or more than one set of annual rings not separated by included bark. Trees that grow adjacent to one another and share an apparent common base completely separated by "included bark" are considered to be distinct trees. "Included bark" is bark that is included within the wood of a tree, or between the woody stems of separate trees, creating a physical separation between the trees.

single tree- A tree that splits above the ground line and has no visible included bark seam down to the ground line.

multiple trees- Any tree that splits at the ground line or any tree that splits above the ground line but has a visible included bark seam down to the ground line.
tree crown - the upper portion of the tree; the branches or leaf area.

trimming - cutting back tree branches or shrubs to shape or reduce the size of the tree or shrub.

V-trim - using natural pruning methods to cut back large portions of the upper crown of a tree. This is required when trees are located directly beneath a conductor. Also known as crown reduction pruning or drop crotching.

vegetation - all the plant (flora) life in a particular region. A plant community, assemblage, or aggregation with distinguishable characteristics.