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PROGRESS ENERGY
TRANSMISSION DEPARTMENT
TRANSMISSION PROJECTS SECTION

CONSTRUCTION SPECIFICATION
T4 SPECIFICATION
SECTION 15
RIGHT-OF-WAY PREPARATION

Part 1
Right-of-Way Clearing

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SEE NEXT PAGE FOR ALL REVISIONS TO THIS DOCUMENT

**PROGRESS ENERGY
TRANSMISSION DEPARTMENT
TRANSMISSION PROJECTS SECTION**

**CONSTRUCTION SPECIFICATION
T4 SPECIFICATION
SECTION 15
RIGHT-OF-WAY PREPARATION**

**Part 1
Right-of-Way Clearing**

REVISIONS

<u>Revision #</u>	<u>Date</u>	<u>Prepared By</u>	<u>Approved By</u>	<u>Page(s) Affected</u>
1	5/23/01	Paul Cox	Tommy Barbour	(Sect. 4.12.1) changed minimum time to stabilize soil from 30 days to 15 days.
2	3/21/05	Eddie Taylor		Sections: <u>2.0. 3.2. 5.1.5. 6.1. and 6.2</u> <u>2.0 Definitions</u> <u>3.2 Other Services under Materials and Services Furnished by Company</u> <u>5.1.5 General under Clearing details</u> <u>6.1 Clearing Methods under Clearing and Disposal Methods</u> <u>6.2 Disposal Methods under Clearing and Disposal Methods</u>
3	4/20/05	Eddie Taylor		Section 6.2.2 – Chipping (Removed 3 inch diameter and 3 foot length wording for woody vegetation remaining in Right of Way.
4	3/29/06	Eddie Taylor		Section 4.12 - Erosion Control. Revised 15 working days as the limit for establishing ground cover on slopes exposed during right of way clearing activities to 21 calendar days.

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**PROGRESS ENERGY CAROLINAS
RIGHT-OF-WAY CLEARING
GENERAL SPECIFICATIONS
DATED APRIL 2003**

1.0 PURPOSE

The following specifications are for initial right-of-way clearing associated with the construction of transmission lines on the Progress Energy Carolinas system. These specifications should serve as guidelines for clearing and removing trees, brush, and other woody vegetation growing on the transmission right-of-way. Clearing should minimize erosion, not impede line construction activities, and leave the corridor with an acceptable appearance. The specifications are not intended to cover all details but should serve as guidelines for the clearing operations.

2.0 DEFINITIONS

- 2.1 Initial Clearing** - Applies to transmission line right-of-way being cleared for the first time.
- 2.2 Company** - Progress Energy Carolinas
- 2.3 Contractor** - Right-of-way clearing contractor.
- 2.4 Designated Representative** - An authorized representative of Company acting as a liaison between the Company and the Contractor regarding all clearing activity. This representative will inspect and review the Contractor's clearing operations to assure that this procedure's intent is followed.
- 2.5 Environmental Law** - Any federal, state or local law, statute, ordinance, rule, guideline, judicial or administrative order or other public authority now in effect or hereafter enacted relating to (1) the regulation or protection of human health, safety, occupational safety and health, the environment or natural resources or (2) any Regulated Substance.
- 2.6 Release(s)** - With respect to any substance or material, means any spilling, leaking, pumping, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of such substance into the environment, or any other act or event the occurrence of which would require containment, remediation, notification or similar response under any law.
- 2.7 Regulated Substance** - Any chemical, material, substance or waste the exposure to, access to or management of which is now or hereafter prohibited, limited or regulated by any law or governmental unit.
- 2.8 Vista Screen** - Areas of naturally occurring or planted vegetation designated by the Company which will be selectively cleared and trimmed to reduce the visual impact of transmission line corridors.
- 2.9 Clearing Plan** - Drawings and data furnished by the Company specifying location and type of clearing.

- 2.10 Danger Trees** - Trees outside the initially cleared right-of-way whose height plus five feet equals or exceeds the distance from the tree's base to the nearest conductor or a point on the ground directly underneath the nearest conductor.
- 2.11 Erosion Control Plan** - Drawings and data prepared by the Company outlining erosion and sedimentation control measures for individual transmission projects. These plans must be approved by the appropriate regulatory authority in either North Carolina or South Carolina.
- 2.12 Buffer Zone** - The strip of land adjacent to a lake or natural water course, the width of which is measured from the water's edge to the nearest edge of the cleared area, containing selectively cut natural vegetation and supplemented with a small debris barrier to contain visible siltation between the zone of natural vegetation and the cleared area.
- 2.13 Selective Clearing** - Clearing only that woody vegetation which would hamper construction activities or pose an immediate threat to the transmission line.
- 2.14 Work Area** - The immediate work area, such as each tract of woods which is cleared continuously without moving equipment or labor to another location. This does not necessarily include the entire line length.
- 2.15 Individual Tree** - A tree (greater than 2 inches in diameter and 15 feet in height) which must be treated separately after cutting from most other trees during the clearing operation. These trees usually occur in hedge or fence rows, pastures, yards, etc.
- 2.16 Woody Vegetation** - Any tree trunk, limb, branch, or part thereof. Includes all brush, refuse, or debris.

3.0 MATERIALS AND SERVICES FURNISHED BY COMPANY

3.1 Materials

3.1.1 The Company will furnish the Contractor with copies of Access Road Maps, Plan & Profile drawings, regulatory permits, Right-of-Way Preparation Specifications, Right-of-Way maps, Weekly Progress Report Forms, inventory forms, and a Right-of-Way Clearing Plan designating where various types of clearing apply. The Company will identify wetland areas on the Plan and Profile as well as the Clearing Plan. The Plan & Profile drawings and maps that are furnished to the Contractor are for orientation purposes only and do not represent conditions that might exist when clearing begins.

3.1.2 Permission to clear right-of-way parcels will be furnished in writing as the property is released. Parcels released will be identified from property line to property line based on the center line station number and as shown on the Right-of-Way map. The Contractor shall not enter upon any property until written notification is released.

3.2 Other Services

3.2.1. Replacement of Survey - Survey stakes are required to locate the center line, establish right of way clearing limits, and correlate locations on the Plan and Profile drawings. Survey flagging is required to identify and mark danger trees and locate wetlands and stream boundaries. The Contractor shall preserve all survey center line control points including Points on Tangent (POT's) and Points of Intersection (PI's) and protect all

flagged stakes during clearing operations. The Contractor will be responsible for the replacement cost of POT and PI markers if they have been moved or destroyed due to carelessness. If the survey stakes have deteriorated or been removed before clearing, the Contractor shall notify the Designated Representative and if the Designated Representative concurs that the survey is destroyed beyond recognition, the Company will replace the survey. If Contractor fails to have the Designated Representative confirm that the survey is destroyed, the survey will be replaced at the Contractor's expense.

3.2.2 Inspection and Inventory - Inspections for procedure compliance will be in three to five mile sections when the clearing is completed on any section. An inventory and inspection will be made at the convenience of the Designated Representative together with a Contractor's representative. The Designated Representative may request the Contractor to furnish a crew that will accompany him on inspections and inventories. If the right-of-way clearing was not performed to specifications, the Contractor shall be notified and required to begin corrections within five (5) days after notification and continue until completion.

4.0 CONTRACTOR RESPONSIBILITIES

4.1 General - The Contractor is responsible for the right-of-way until completion and final acceptance by the Company. The Contractor shall take all precautions necessary and shall bear all risk of loss or damage. The Contractor will furnish all necessary equipment, tools, labor, transportation, and supervision to clear the right-of-way according to these specifications. The Contractor shall confine all activities, including equipment storage, to the right-of-way limits except for cutting danger trees. The Contractor shall comply with all restrictions in the right-of-way release letters furnished by the Company.

4.2 Relations with the Public - The manner in which the Contractor deals with people and their properties while performing this work is extremely important to the Company. Therefore, the Contractor and the Contractor's representatives shall manifest a spirit of friendliness and cooperation when dealing with property owners and the general public while performing work under this specification.

4.3 General Safety - Extreme care and diligence shall be exercised by the Contractor to assure the safety of persons, animals, and property. If at any time the Designated Representative determines that Contractor's methods or equipment are inadequate for securing the safety of the Contractor's or the Company's employees or the public, the Designated Representative may direct the Contractor to change or increase safety. The Contractor shall improve methods as deemed appropriate by the Designated Representative without additional cost to the Company, so as to assure compliance with the Company's safety concerns. Failure of the Designated Representative to make this demand shall not relieve the Contractor of any obligation to ensure the safe conduct of its work.

The Contractor shall maintain all lights, guards, signs, temporary passages, or other precautions necessary for the safety of all persons. The Contractor shall abide by all safety rules and construction conditions required by governmental authorities and other entities, including railroads, so the public is safeguarded from accidents and delays. Guards and flags required by governmental or railroad authorities shall be provided at the Contractor's expense, unless directed otherwise by the Designated Representative.

4.4 Safety Procedures Involving Overhead Lines - The Contractor shall prevent trees and brush from touching existing overhead lines and is held responsible for informing personnel of the hazards involved. Should a Company electric line or any electric equipment be damaged or service

interrupted by the Contractor's activities, the Contractor shall immediately cease all activities in the area and notify the Designated Representative to report the location of the damage. If the Designated Representative is not available, the Contractor shall immediately report the accident to the Company Customer Service Center, Power Outage Reporting Line, at 1-800-419-6356. Failure to notify the Designated Representative or the Company Customer Service Center of this damage may result in a repair delay and a commensurate increase in the Contractor's liability. The Contractor shall not proceed with work until specifically directed by the Designated Representative.

- 4.5 General Environmental** - The Contractor shall comply with all Environmental laws.
- 4.6 Solid Waste** - The Contractor shall keep the premises free from solid waste at all times and shall provide suitable containers on all equipment for solid waste disposal.
- 4.7 Releases** - The Contractor shall not release any regulated substance on Company property or right-of-way or on any roadways leading to or from Company property or right-of-way. In the event the Contractor releases any material or substance on Company property or right-of-way, the Contractor immediately shall notify the Designated Representative and remediate the release pursuant to all applicable Environmental Laws and to Company's direction and reasonable satisfaction.
- 4.8 Permits** - The Contractor is responsible for obtaining all work permits and posting notices concerning the actual clearing at highways, railroads, waterways, pipelines, cables, etc. The Company will obtain the necessary regulatory permits and construction notices required for the transmission line's completed construction. Regulatory permit conditions will supersede these specifications and shall be followed.
- 4.9 Ingress and Egress** - The Contractor shall confine all activities to public roads and the Company's land or rights-of-way. The Company shall provide ingress and egress to a transmission line right-of-way from a public road and then up and down the right-of-way insofar as possible. A vista screen or buffer zone may be provided at specified road or water crossings. In these vista screens and buffer zones, the Contractor shall use only a route designated by the Designated Representative or not traverse the area. If the Contractor desires to approach the right-of-way by private property (such as driveways, farm lanes, or roads), the Contractor shall secure prior permission from the individual property owners. No access shall be cut from limited or controlled access roads or highways such as an interstate highway. The Contractor shall use the substation access road for all access to substations unless prior approval for other access is obtained from the Designated Representative.
- 4.10 Property Damage**
- 4.10.1** Extreme care and diligence will be exercised by the Contractor to assure that property damage is kept to an absolute minimum. The Contractor shall be responsible for taking all necessary precautions to prevent damage or injury to the property or efforts of the Company or other contractors. The Contractor, at the Contractor's own expense, shall repair or replace any such damage.
- 4.10.2** Should a property owner make a complaint resulting from acts or omissions of the Contractor, the Contractor shall, at the Contractor's sole expense, repair the damaged property to its original condition or to the property owner's satisfaction or shall otherwise make a settlement and obtain a release within ten (10) calendar days. If this is not done,

the Company may settle the complaint and deduct the amount from the Contractor's payments.

4.10.3 The Contractor shall do no more crop damage on the right-of-way than is absolutely necessary. Extreme care and diligence must be exercised to assure that crop damage is kept to an absolute minimum. The Contractor is to notify the Designated Representative of all crop damage on a right-of-way, and the Company shall settle any claim for that damage with property owner. If, in the opinion of the Company, the damage on the right-of-way is excessive and needless, then the Contractor will be held responsible. Otherwise, the Company is responsible for normal crop damage.

4.10.4 The Contractor shall be held solely responsible for any and all damage claims off the right-of-way. Any damage to culverts, driveways, roadways, bridges, or buildings incurred during right-of-way clearing, either directly or indirectly by Contractor's operations, shall be promptly repaired at the Contractor's expense. All such repair work shall restore the damaged property to its original condition or to the property owner's satisfaction. The Contractor is responsible for keeping the private roadways accessible during clearing operations when used by the Contractor's employees.

4.11 Clean Up

4.11.1 The Contractor shall clean up and restore all property in the work area to original condition or to the Designated Representative's satisfaction (on and off the right-of-way) immediately upon completion of the work in each work area. Work areas will be specified by the Designated Representative. Each area must meet the Designated Representative's acceptance before final payment for that area will be made. If the Contractor fails to maintain a clear work area or to promptly clean up and restore property after the completion of work, the Company may perform or arrange to have performed the clean up and restoration. If the Company incurs any cost in performing this work, that cost times a factor sufficient to cover the Company's applicable administrative and general overhead costs shall be paid to the Company by the Contractor or deducted by the Company from any amount owed to the Contractor.

4.11.2 Any temporary buildings, embankments, cofferdams, etc. built for clearing purposes shall be removed by the Contractor upon completion of all work. The Contractor shall fill all excavations as directed by the Designated Representative and shall remove all equipment. The Contractor shall dispose of all refuse materials at locations approved by Designated Representative. Concrete refuse shall not be dumped in ditches, whether public or private.

4.12 Erosion Control

4.12.1 Visible off-site sedimentation is prohibited. The Contractor is responsible for implementing sufficient erosion control measures to contain sedimentation as recommended in the *North Carolina Erosion and Sedimentation Control Planning and Design Manual* or the *South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbing Activities*. A ground cover sufficient to prevent erosion of any graded or exposed soil shall be provided within 21 calendar days after soil distributing activities are completed. Any damage to slopes or terraces, on or off the right-of-way, shall be repaired immediately to prevent erosion or the likelihood of erosion. Particular care shall be taken before leaving each work area to maintain all existing drains and ensure that drainage is provided so that water does not stand on the right-of-way or properties adjacent to the right-of-way. Where specified by Designated Representative, portions of the right-

of-way shall be seeded according to the *North Carolina Erosion and Sedimentation Control Planning and Design Manual* or the *South Carolina Erosion and Sediment Control Practices for Developing Areas*.

- 4.12.2** The Contractor's equipment and clearing method shall not cause excessive damage to the right-of-way, including rutting and displacing the topsoil. If the Designated Representative determines that excessive damage is occurring, the Contractor will be held responsible to correct and prevent further damage. The Contractor may be required by the Designated Representative to make an equipment or operator change, hand clear as described in Section 6.1.2, or suspend clearing operations in those areas until heavy equipment operation can be resumed without causing excessive damage.
- 4.12.3** The Contractor shall conduct its operations in compliance with all measures outlined in the Erosion Control Plan approved by the appropriate regulatory agency in either North Carolina or South Carolina. A copy of the approved Erosion Control Plan will be provided to the Contractor by the Company. The Contractor shall keep a copy of the approved Erosion Control Plan on site at all times.
- 4.12.4** During clearing activities, the Designated Representative will make periodic inspections of the erosion control measures outlined in the Clearing Plan and the approved Erosion Control Plan. Erosion control is the responsibility of the Contractor and is to be undertaken at the Contractor's expense. If the Contractor has failed to implement the measures adequately, the Contractor will be held responsible for correcting the noncompliance to the Designated Representative's satisfaction.

4.13 Fences

- 4.13.1** The Contractor shall respect the private ownership of fences. The Contractor shall not cut any temporary opening or take down any portion of a fence until the property owner or tenant has been contacted and arrangements made for a temporary fence opening. All gates, including any installed on Company property, shall be closed when not in use. The Contractor is responsible for and shall ensure that all fences confining livestock are maintained so that the livestock cannot escape.
- 4.13.2** The Contractor shall maintain or replace all existing fences with like material at the same location, regardless of fence condition prior to clearing. This maintenance or replacement shall extend completely across the right-of-way including the danger tree areas. When trees supporting a fence are cut, the fence will be removed from trees, and trees cut not to exceed four (4) inches from the ground's surface. The Company will reimburse the Contractor for the purchase and installation of pressure treated wood or steel posts at an established rate. No allowance will be made for posts cut in woods. When work is completed, all temporary openings or gates made or installed by the Contractor shall be removed and the fence opening permanently closed, utilizing like material and construction. The Contractor shall notify the Designated Representative as soon as the opening is closed and the designated Representative shall inspect and approve the closure.

When specified by the Company, the Contractor will install gates in maintained fences crossing the right-of-way according to Company Specification Drawing T4-D27.1. All gate materials will be furnished by the Company. The Contractor will be responsible for all materials issued.

4.13.3 When required by the Company during 500 kV clearing operations, the Contractor shall install steel fence posts in existing fences according to Company Specification Drawing T4-D27.2. The Company will furnish the Contractor with 8-foot-long galvanized steel posts with metal clips. For fences crossing the right-of-way, a minimum of two steel posts will be installed approximately 50 feet on each side of the centerline. For fences that generally parallel the right-of-way, steel posts will be installed approximately 100 feet apart. All posts installed will be leveled with existing posts either by driving down or driving down to refusal and cutting. The Contractor will be responsible for each post furnished by the Company.

5.0 CLEARING DETAILS

The following clearing specifications are expected to be performed by the Contractor on each clearing project.

5.1 General

- 5.1.1** No heavy equipment shall be operated off the right-of-way unless specifically authorized by the Designated Representative.
- 5.1.2** No stump removal, "blading, or other disturbance of the root mat is allowed on or off the right-of-way unless specifically authorized by the Designated Representative.
- 5.1.3** All woody vegetation within the right-of-way limits shall be cut to within four inches of the ground's surface.
- 5.1.4** Existing stump piles and logs from previous clearing or logging operations on the right-of-way shall be disposed of as specified with all other brush and debris.
- 5.1.5** No woody vegetation shall be piled, burned, or buried on Company right of way or on the right of way of any existing communication line, power line, gas line, highway right of way, or any other utility right of way.
- 5.1.6** All cut material shall be entirely removed from ditches, drains, creeks, and streams. Streams will be kept open and free-flowing at all times.
- 5.1.7** Pine brush and logs, including danger trees, shall be felled and piled such that they are not in contact with growing pine trees to help prevent the transfer of pine beetles from cut brush and logs to growing pine timber.
- 5.1.8** The Contractor shall not clear any vegetation on a highway right-of-way, or any ornamental type vegetation including trees, shrubs, fruit trees, etc. without the prior knowledge and consent of the Designated Representative. Any vegetation removed without consent shall be replaced by the Contractor at the Contractor's sole expense.
- 5.1.9** The Contractor shall cut and dispose of individual trees as directed by the Designated Representative. Individual trees cut in pastures and fields shall be completely removed so that grazing land or crops are not damaged. All foliage from wild cherry trees cut in pastures shall be immediately removed and deposited outside pasture fences.
- 5.1.10** The Contractor shall not clear or otherwise disturb the areas around substations unless specifically allowed or directed by the Designated Representative. If disturbed by the

Contractor's operation, the Contractor shall provide and plant the necessary shrubs or trees to re-establish screening or area vegetation suitable to the Company. The Contractor will not be liable for any damages if approved by the Designated Representative.

5.2 Vista Screens and Buffer Zones

- 5.2.1** Selective clearing procedures may be required at designated major road and stream crossings. The Contractor shall not perform any clearing operations in vista screens or buffer areas unless otherwise specifically instructed by the Designated Representative. The Company will identify selective clearing areas on the Plan and Profile drawings and Clearing Plans.
- 5.2.2** The felling and trimming of trees in vista screens and buffer zones will require selective clearing so that remaining vegetation will not be damaged. If the remaining vegetation is damaged or destroyed by the Contractor's clearing operation, the Contractor will provide, at the Contractor's expense, necessary planting to re-establish the screen or buffer. Access roads through selective cleared areas shall be allowed only as the Designated Representative indicates. The minimum electrical conductor clearance over vegetation in screens and buffers is specified as follows:

Voltage	Minimum Clearance	Conductor Temperature
115 kV	15 feet	212° F
230 kV	20 feet	212° F
500 kV	25 feet	212° F

Conductor height shall be determined from the maximum conductor sag curve on the Plan & Profile.

- 5.2.3** Compensation for selective clearing is based on the acreage unit extending through the selectively cleared area or as otherwise specified in the bid request.
- 5.2.4** All selectively cleared vegetation in vista screens and buffer zones shall be removed by equipment working outside those areas to ensure that the remaining vegetation is not damaged.
- 5.2.5** Where all remaining vegetation in vista screens is of such height that trimming is required, the trees shall be cut to varying heights to maintain a natural appearance.

5.3 Danger Trees

- 5.3.1** The Contractor will use a teleheight to determine danger trees to be cut. The Company will provide the horizontal distance from the survey line to the outside conductors.
- 5.3.2** Danger trees may be either hand cut or machine cut so as to minimize damage to the surrounding vegetation. The Designated Representative can require the Contractor to change the method used if the surrounding vegetation is being unnecessarily damaged.
- 5.3.3** Danger trees shall be disposed of as specified in the Clearing Plan and described in Section 6.2.
- 5.3.4** Compensation for cutting danger trees will be included in the right-of-way clearing unit. Where the woods line angles across the right-of-way, compensation will be based on the

woods line at the centerline. At isolated locations where no clearing compensation is applicable, a unit for every 100 feet along the centerline will be allowed for cutting danger trees.

6.0 CLEARING AND DISPOSAL METHODS

The clearing and disposal methods that the Contractor uses will be specified in the Clearing Plan or in the Request for Bids. The different types of methods are described below.

6.1 Clearing Methods

6.1.1 Machine Cutting - Machine cutting equipment will be used in designated areas to remove woody vegetation to within four inches of the natural ground's surface. Removal of stumps within the right of way corridor is prohibited. Machine cutting of the right of way corridor is permitted only in upland areas, outside designated wetland areas and outside the banks of defined river, stream, and creek channels. No machine cutting equipment is allowed in these areas. All areas within and directly adjacent to clearly marked designated wetland areas, rivers, streams, and creeks shall be hand cut per Section 6.1.2. This includes the banks along rivers, streams, and creeks.

The only exception for allowing machine cutting equipment within designated wetland areas or to cross defined stream and creek channels is when no other access to the right of way from upland areas is available. When access to the right of way from upland areas is impeded by designated wetlands or defined river, stream, and creek channels, approved mats or high floatation equipment must be used to navigate the wetland areas and temporary portable bridges must be used to cross defined streams and creeks. If crossing through a wetland area or over a stream or creek is required to access an upland area, prior approval from the Company's Designated Representative or Environmental Support personnel is required.

The Contractor shall at all times prevent any rutting, erosion, or disturbance of the natural root mat within the right of way corridor. All areas where the soil is exposed during the right of way clearing contract period shall be repaired within 15 days of disturbance per Section 4.12 of this specification and per Company Specification T4-15.2 (*Erosion Control Regulations for Transmission Construction*) and T4-15.3 (*Right of Way Seeding*). The Contractor shall take immediate and additional corrective action to stop sediment from leaving the site. If previously approved and installed erosion control measures are inadequate, the Contractor shall install additional measures as required to prevent soil erosion and off-site sedimentation. After permanent vegetative stabilization of the site, the Contractor shall remove all temporary measures and install permanent vegetation on those areas disturbed during the clearing process.

There shall be no grading, blading, grubbing, or dressing of the right of way that directly or indirectly results in the disturbance of the root mat. Machines utilizing a rotary chipper/cutter/grinding head shall not penetrate beneath the soil surface nor depress wood debris into the soil.

6.1.2 Hand Clearing - Chainsaws or similar hand operated equipment will be used in designated areas to remove woody vegetation to within four inches of the natural ground surface. Removal of stumps in these areas is prohibited.

6.1.3 Selective Hand Clearing - Selective hand clearing requires cutting vegetation as described in Section 6.1.2; However, only vegetation that would endanger the line, as defined in Section 5.2.2, shall be cut. All remaining low-growing trees, shrubs, vines, grasses, herbs, etc., shall be left to grow in their natural state.

No heavy equipment shall be allowed within the designated selective hand clearing areas. The ground cover, root mat, topsoil, and remaining vegetation shall be preserved at all times.

6.2 Disposal Methods

All unmulched or unchipped woody vegetation must be completely removed from the cleared right of way corridor except in designated wetland areas and along the banks of rivers, streams, and creeks. Except in the afore mentioned areas, all woody vegetation greater than 3 inches in diameter or longer than 3 feet in length permanently left within the right of way corridor will be considered a violation of contract specifications and will be removed, chipped, or mulched by the Contractor or at the Contractor's expense

6.2.1 Hauling - Permanently stacking or piling of woody vegetation within or along the edge of the right of way corridor is prohibited. All unmulched or unchipped woody vegetation greater than 3 inches in diameter or 3 feet in length must be removed from the Company's right of way and transported to an acceptable disposal site. The Contractor is responsible for locating an acceptable disposal site, providing the means of transporting, and complying with the selected site's disposal specifications. The equipment selected for transporting the woody vegetation shall not damage the Company's right of way corridor, vista screens, or buffer zones described within this document.

6.2.2 Chipping - Except in designated wetland areas and along the banks of rivers, streams, and creeks, all woody vegetation shall be chipped and spread uniformly on the right of way. No chipping shall be performed in designated wetland areas or along the banks of rivers, streams, or creeks. Chips from the chipping operation are not to be allowed to fall, be blown, deposited, allowed to drift, migrate, or otherwise enter into designated wetlands, rivers, streams, or creeks. Chipping is only allowed in upland areas where wetlands, rivers, streams, and creeks will not be adversely affected. Woody vegetation cleared from designated wetland areas or along the banks of rivers, streams, and creeks may be chipped only when transported to upland areas prior to chipping. Otherwise, the removed woody vegetation must be removed from the right of way corridor.

No woody vegetation shall remain in or across rivers, streams, or creeks. No woody vegetation shall remain immediately adjacent to rivers, streams, or creeks without prior approval of the Designated Representative. Only woody vegetation whose removal would result in significant disturbance of both the root mat and top soil or significantly alter the natural contour of a designated wetland can remain in the wetlands. Such remaining vegetation must not be left in a manner so as to impede the natural movement of water, or effectively convert a wetland area or stream into an "upland" area, and then will be allowed to remain only upon the approval of the Designated Representative. When complete removal is not practical, all hand cut woody vegetation allowed to remain within a designated wetland area must have all limbs removed and left oriented parallel to the flow or potential flow of water. Under no circumstances will the remaining woody vegetation be allowed to be stacked or piled within the designated wetland area. Also, if allowed to remain within the designated wetland area, the woody vegetation must be completely removed from the center 20 feet of the right of way or 10 feet each side of the

right of way corridor center line to allow for line construction and future maintenance access.

CAROLINA POWER & LIGHT COMPANY
TRANSMISSION LINE ENGINEERING & CONSTRUCTION SECTION
TRANSMISSION LINE LOCATION & ENGINEERING UNIT

CONSTRUCTION SPECIFICATION
T4 SPECIFICATION
SECTION 15
RIGHT-OF-WAY PREPARATION

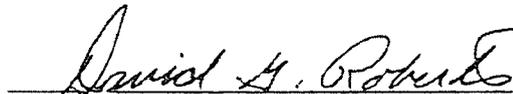
Part 2
Erosion Control Regulations
for
Transmission Construction

PREPARED BY:


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Transmission Location

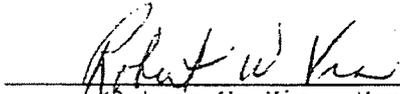
DATE: 10-17-89

APPROVAL
RECOMMENDED BY:


David G. Roberts - Manager
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DATE: 10-19-89

APPROVAL:


Robert W. Via - Manager
Transmission Engineering

DATE: 10-25-89

REVISION

DATE

PARAGRAPH

RECOMMENDED BY

APPROVED

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CAROLINA POWER & LIGHT COMPANY
T4 SPECIFICATION
OCTOBER 1989

SECTION 15
RIGHT-OF-WAY PREPARATION

Part 2
Erosion Control Regulations
for
Transmission Construction

CAROLINA POWER & LIGHT COMPANY
EROSION CONTROL REGULATIONS
FOR
TRANSMISSION LINE CONSTRUCTION
DATED OCTOBER 1989

1.0 Purpose

This specification describes erosion control measures that must be used by CP&L Construction Contractors to minimize erosion on transmission line rights of way. This specification also establishes requirements the Construction Contractor must follow in maintaining existing erosion control measures that were previously employed during clearing. The goal is to return the right of way to a condition where ground cover is provided in all disturbed areas, vista screen integrity is maintained, stream crossings are returned to their natural state, and erosion is eliminated.

1.1 Permits

Contractor is responsible for obtaining all work permits and posting notices concerning the actual construction work. CP&L will obtain the necessary government permits and construction notices required for the transmission line's completed construction. Any government permit conditions may supersede these specifications and shall be followed.

1.1.1 In North Carolina, the Contractor shall conduct all operations in compliance with all measures outlined in the Carolina Power & Light Company Erosion Control Plan for each transmission line approved by the State of North Carolina. A copy of the approved Erosion Control Plan shall be kept on site at all times as required by the N.C. Sedimentation Pollution Control Act of 1973.

1.1.2 In South Carolina, the contractor shall conduct all operations in compliance with all measures outlined in the Stormwater Management and Sediment Control Policy and Procedures Manual for Carolina Power & Light Company's Transmission and Distribution Facilities.

2.0 Seeding

All seeding referenced in this specification shall be conducted according to Carolina Power & Light Company's Construction Specification T4-15.3 Right-of-Way Seeding and shall include seed bed preparation, fertilizing, seeding, and mulching.

3.0 Stream Crossings

3.1 The contractor shall cross streams with equipment only at one crossing point. Additionally, CP&L may require the Contractor to cross streams only using portable bridges as expressed in the bid package.

- 3.2 All stream banks disturbed by equipment crossings shall be re-shaped to their natural contours and seeded immediately after the last crossing.
- 3.3 Where soil is compacted over a culvert that provides access across a stream, the Contractor shall stabilize this road so that soil does not erode into the stream. All culverts installed will be completely removed and all soil used to stabilize them will be removed from the stream channel area.
- 3.4 Some specified streams will have a barrier of natural cut vegetation which extends parallel to the stream as an erosion control measure. The Contractor shall replace any cut vegetation which was either moved or destroyed during construction activities. Where natural vegetation is left standing along a stream bank, the Contractor is specifically instructed to cross only where the least impact will result.

4.0 Roadways

- 4.1 Roadways, whether graded or compacted by Contractor equipment, shall be angled across slopes to minimize runoff.
- 4.2 Where the Contractor grades roadways that require stump removal, the stumps shall be disposed of in the same manner as the clearing debris, i.e. brush piled, hauled away, or buried.
- 4.3 As directed by the Company Agent, berms shall be installed on steep slopes to reduce the runoff volume and velocity to prevent gullyng.
- 4.4 Once construction activities are completed in a particular area, the Contractor shall restore all roadways to their natural contours and seed.
- 4.5 The Contractor shall not remove any top soil from cultivated fields or pastures. Where necessary, top soil shall be stripped, stockpiled, and redistributed over disturbed areas rather than using only excavated material.
- 4.6 Roads across cultivated fields shall be reshaped and disced. Pastures shall be reshaped and seeded.
- 4.7 Road ditches that were altered for access shall be reshaped and seeded.

5.0 Vista Screens

Particular care shall be taken with vista screens. These areas of naturally-growing vegetation are 100 feet or less in depth and extend across the entire right of way. No land disturbing activities shall take place in vista screens. Access through the vista screen shall be only at an angle so that the screening effect is maintained. The Contractor shall not cut any tree from a vista screen without the Company Agent's permission.

6.0 Structure Installation

The Contractor shall restore all graded areas to their natural contours around structure installations and seed. Particular care shall be taken to ensure adequate drainage so that water does not collect around the structure area.

7.0 Conclusion

The Contractor is required to minimize grading and rutting the right of way. Contractor is required to conduct all activities so that existing erosion control measures are not destroyed or seriously impaired. The Contractor will be held responsible for restoring all areas disturbed during construction which could result in erosion. Finally, the Contractor will be held responsible for repairing any previously established erosion control measures disturbed during construction.

Carolina Power & Light Company
Raleigh, North Carolina 27602
Transmission Line Engineering & Construction Section
Transmission Line Location & Engineering Unit

Construction Specification
T4 Specification
March 1998

Section 15
Right-of-Way Preparation

Part 3
Right-of-Way Seeding

<u>Revision</u>	<u>Date</u>	<u>Prepared by</u>	<u>Approved by</u>	<u>Page(s) Affected</u>
Original		P. A. Cox	All	

Carolina Power & Light Company
Right-of-Way Seeding
General Specifications
Dated March 1998

1.0 Purpose

The following specifications are for seeding transmission line rights-of-way. They are meant to be supplemented with specific plans and/or instructions.

2.0 General

- 2.1 No activity shall take place in vista screens, buffer zones, selectively cleared areas, etc.
- 2.2 Any damage caused by Contractor's operations shall be the responsibility of the Contractor to repair and correct to the satisfaction of the Company. This includes damages on and off the right-of-way including vista screen areas.
- 2.3 Seed bed preparation, fertilizing, seeding, and mulching shall be conducted in such a manner as to leave the right-of-way free of ruts and in a generally smooth, level condition.
- 2.4 Contractor shall furnish all fertilizer, seed, and mulch.
- 2.5 Completed work will be subject to approval by Company agent.

3.0 Seed Bed Preparation

Seed bed preparation shall be the tillage necessary to break compaction, mix fertilizer and soil when mixing is required, and provide loose soil for covering seed when it is planted by drilling or is to be covered by harrowing. Tillage shall be on the contour or across the slope where feasible. The area designated shall be thoroughly worked up with a disk or harrow (or similar equipment) to depth of 3 to 5 inches. This shall be for the designated areas except for customarily used woods roads or trails, selectively cleared areas, within 5 feet of a drainage ditch, etc.

4.0 Fertilizer

Fertilizer shall be applied uniformly at 500 lbs. of 10-10-10 or equivalent per acre. Fertilizer shall be thoroughly mixed with topsoil when mixing is required. Commercial fertilizer shall be a standard product complying with Federal and State fertilizer laws. Fertilizer shall be uniform in composition, dry, and free flowing and shall have been stored in a weatherproof place so that its effectiveness is not impaired. Fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted. Commercial fertilizer shall be delivered to the site in original, unopened containers showing weight, analysis, and name of manufacturer.

5.0 Seeding

- 5.1** Seeding may be by a drill, cultipacker seeder, or hydroseeder or by broadcasting it uniformly on the surface of the soil by other means. When sown by hand or mechanical seeder, depth shall not exceed one-fourth inch (1/4 inch). Seeding shall be performed in dry or moderately dry soil and at times when wind does not exceed a velocity of five (5) miles per hour. Seeding shall be done in such a manner that a uniform stand shall result.
- 5.2** Seeding mixture and rate of application shall be 30 lbs. tall fescue and 50 lbs. sericea lespedeza per acre. Seeding mixture may be altered to provide for better coverage to suit field conditions, with Company Agent's approval.
- 5.3** Seed shall be delivered in sealed bags showing weight, analysis, name, vendor, and germination tests. All seed should have a minimum of 85% germination rate and a maximum of 0.2% weed content. Seed which has become wet, moldy, or otherwise damaged shall not be used.

6.0 Mulch

Mulch will be used to provide necessary additional protection against erosion and/or to aid in the establishment of plant cover. Small grain straw or tame hay shall be spread uniformly so that approximately one-fourth of the ground is visible. Areas shall be mulched as soon as possible after planting, but in no case shall mulching be delayed more than 48 hours after planting.