

SECTION 19
VEGETATION PRESERVATION/REMOVAL/REVEGETATION

- 19.1 The permittee shall follow all given specifications in order to perform vegetation preservation, vegetation removal and revegetation in the areas designated on submitted plans, as approved by the Agency.
- 19.2 The permittee shall adhere to specifications in order to preserve from injury or defacement all vegetation designated to be left in the given areas shown on the plan. This work includes, but is not limited to, reducing the risk of damage during removal operations to the existing root systems, stems and scaffold branching of all said vegetation designated to be preserved. The permittee is responsible for following all revegetation specifications incorporated to achieve maximum plant survival. Permittee responsibilities shall also include effectively managing the revegetated areas by using specific plant health care techniques for three years, or as otherwise conditioned by the Agency, after final inspection. The permittee shall replace all unsatisfactory planted plants and damaged existing plants designated to be preserved or materials for up to three years, or as otherwise conditioned by the Agency, after final inspection. These specs will be imposed upon all applications where vegetation removal exceeds 20% of the total area and/or where the footprint of the structure exceeds 10,000 square foot area, or any planting done under town contract, for mitigation purposes, or on any public property under the control of the Town of Clinton.
- 19.3 Construction Methods
1. Requirements: Permittee for these purposes shall engage a Connecticut licensed arborist who shall possess a valid Connecticut pesticide license. The permittee shall provide the Agency with copies of these certificates and/or licenses.
 2. Vegetation Preservation: Permittee shall identify and mark with orange plastic flagging all large feature plants to be preserved. Applicant shall be aware of small protected plant species. The permittee shall develop a strategy to protect small forms of vegetation designated by the Agency as plants to be preserved.
 - a. Permittee shall be responsible for furnishing all protective materials like snow fence or wood cribbing needed to save critical plants designated to be preserved. All chosen said materials shall be approved by the Agency or its authorized agent before use.
 - b. The permittee shall repair any damage to vegetation designated to be "preserved". A qualified Connecticut licensed arborist shall direct all corrective pruning operations of damaged plants. Plants shall be pruned by using recognized National Arborist Association standards. All larger

pruning cuts, ½ inch diameter and larger, on the trunk and main stem shall be made not to interfere with the branch collar. All pruning cuts less than ¼ inch diameter shall be made with a sharp pair of hand pruners as close to the main stem as possible without damaging the cambium or bud.

- c. Permittee shall be responsible for replacing any plant destroyed that is designated to be preserved. The permittee shall be responsible for monetary replacement value of the said destroyed plant. The Agency or its authorized agent shall value the plant loss based on the Eighth Edition of the "Guide" for tree and landscape appraisal recognized by the Council of Tree and Landscape Appraisers in Washington, D.C.
- d. Permittee shall adhere to, but is not limited to, all vegetation preservation specifications.
- e. Any potential problems as to either suitability or availability of plant material, as noted by the contractor, are to be brought immediately to the attention of the Agency or its authorized agent.
- f. Work is to be performed by workmen familiar with planting procedures depicted on the plans and under the supervision of a qualified foreman.
- g. The permittee shall be solely responsible for the full extent of work requirements involved, including but not limited to the potential need for storing and maintaining plants temporarily and/or rehandling plants prior to final installation.
- h. Loam shall be "fine sandy loam" or a "sandy loam" determined by mechanical analysis and based on the "USDA classification system". It shall be of uniform composition, without admixture of subsoil. It shall be free of stones greater than two inches (2"), lumps, plants and their roots, debris and other extraneous matter.
- i. Peat, humus, and other additives shall be used to counteract soil deficiencies as recommended by a soil analysis and as supplements for the planting soil mix as specified.
- j. Peat moss shall be composed of the partly decomposed stems and leaves of any of several species of sphagnum moss. It shall be free from wood, decomposed colloidal residue and other foreign matter. It shall have an acidity range of 3.5 pH to 5.5 pH. Its water absorbing ability shall be a minimum of 100% by weight on an oven-dry basis.
- k. Humus shall be natural humus, reed peat or sedge peat. It shall be free from excessive amounts of zinc, low in wood content, free from hard lumps and in a shredded or granular form. The acidity range shall be

approximately 5.5pH to 7.6 pH. The minimum water absorbing ability shall be 200% by weight on an oven-dry basis.

- l. Planting loam for general planting of species shall have a true pH value of 5.5 to 6.5. If it has not, it shall be amended by the contractor, at his own expense, to the proper pH range by mixing with dolomitic limestone or sulfate.
- m. Planting guidelines of the grower and/or Connecticut licensed arborist shall be followed. Locations for all shrub planting areas shall be shown on submitted plans. Planting pits shall be excavated with vertical sides. Pits shall be at least one foot (1') greater in diameter than the containerized root zone of the plants and at least six inches (6") deeper than the root system of the plants. Planting soil mix as specified shall be prepared and backfilled as directed.
- n. All roots in the containers for container grown plants must be damp and thoroughly protected from sun and wind from the beginning of the digging operation, during transportation and on the ground until the final planting.
- o. The species shall be planted in the center of the holes and at the same depth as they previously grew. If the roots are slightly root bound then the contractor is responsible for cutting and pulling apart roots while planting. At no time should the plant root systems be exposed to long periods of air. If the plants are too root bound to amend, new plants will be required at the discretion of the Conservation Commission. Planting soil mix shall be backfilled in layers of not more than four inches (4") and each layer watered sufficiently to settle before the next layer is put in place. Enough planting soil mix shall be used to bring the surface to finish grade when settled. A saucer shall be formed around each plant at a depth of four inches (4") for plants. All plants shall be watered immediately following planting and thereafter shall be inspected frequently for watering needs and watered, as required, to provide adequate moisture in the planting pit. No staking is required.
- p. Mulch material shall be placed over entire saucer areas of individual shrubs to a depth of two inches (2") after settlement, not later than one (1) week after planting. No mulch shall be applied prior to the first watering of plant materials.
- q. Mulch shall be pine bark mulch aged a minimum of six (6) months and not longer than two years.
- r. The permittee shall be responsible to furnish and supply water to the site. All trees injured or damaged due to the lack of water, or the use of too much water, shall be the applicants' responsibility to correct. Water shall

be free from impurities injurious to vegetation. Anti-desiccant shall be applied to all plants prior to planting as directed by a Connecticut licensed arborist or engineer.

- s. In the event that rock or underground construction work or obstructions are encountered in any plant pit, alternative locations may be selected by the Agency or its authorized agent.
- t. Fertilizer shall be provided for each plant through the use of slow- release fertilizer two (2) times up to one (1) year after planting. The entire fertilization program for plants including and associating with existing plants to be preserved, shall be through shallow root liquid fertilization with slow-release nitrogen combined with a root promoter. The permittee shall use soil injection techniques with liquid fertilizers as an efficient and beneficial method of supplying nutrients to the site plants. The fertilizer shall be mixed with water and injected into the soil under pressure using a hydraulic application and a feeding needle in the spring and fall. This application technique shall be done efficiently in order to provide required nutrients to every planted species. A formal written report shall be submitted to the Agency or its authorized agent after every application of fertilizer.

1. Spring Rate: 20-5-5, 30-10-10, 28-9-9

2. Fall Rate: 3-20-45, 5-30-40, 5-30-25

19.4 IPM (Integrated Pest Management Program)

1. Plant Health Care incorporates an Integrated Pest Management Program. The permittee must implement this program to help monitor health and vigor of all plants up to one (1) year after planting. One visit per every winter month and two visits per every summer month are mandatory. Permittee must take corrective action on the site at the time of the visit to culturally tend plants and suppress all insect and disease pests. The permittee shall provide that all plants have continual protection. A formal written report shall be submitted to the Agency's authorized agent after every inspection/treatment visit.
2. Aside from IPM, Plant Health Care includes keeping the plants in a healthy growing condition and shall include, but is not limited to, watering, weeding, cultivating, resulting, removal of dead material, resetting plants to proper grades or upright position and maintaining the plant saucer for water retention.

19.5 Winter Injury

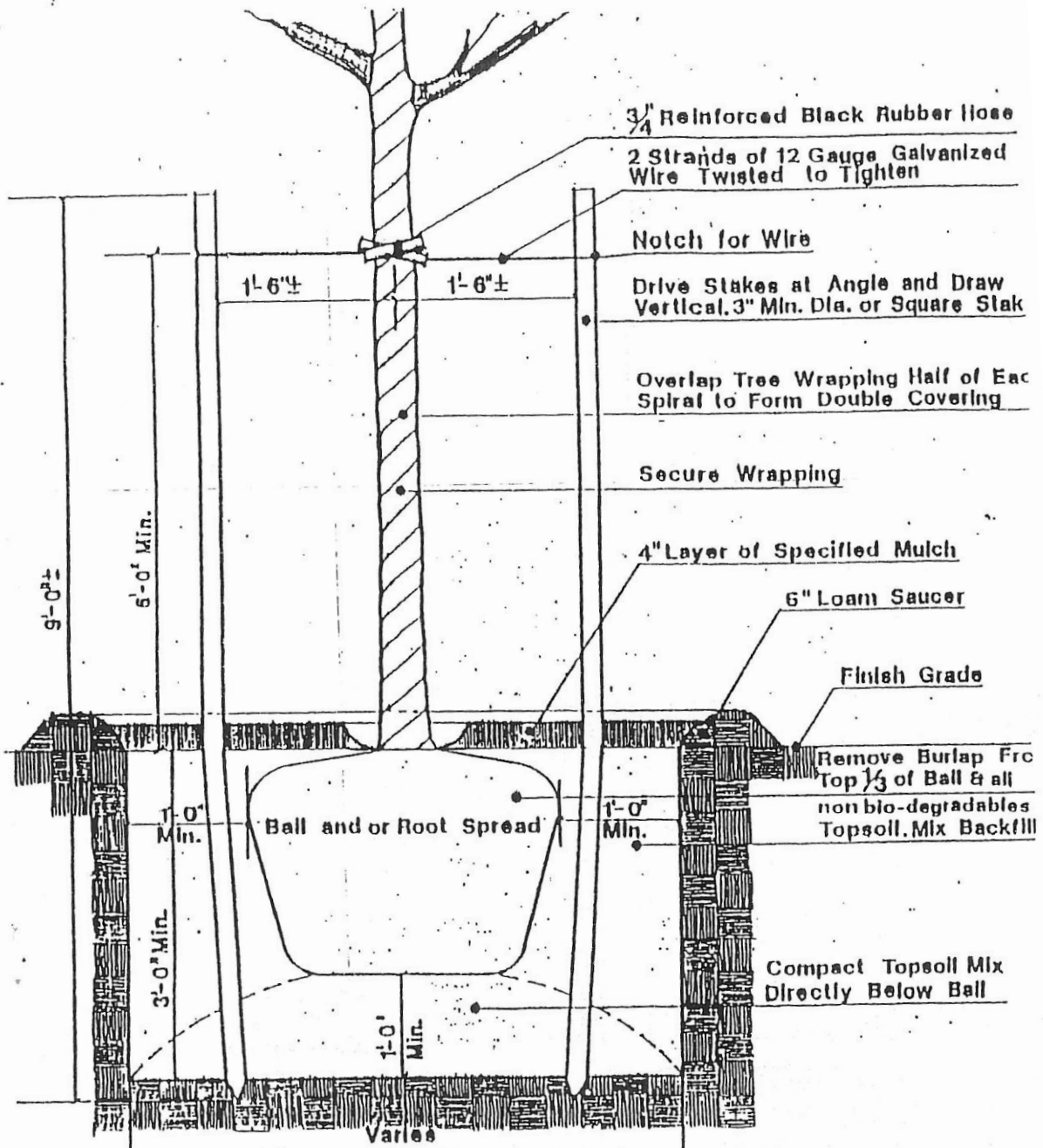
1. The permittee shall be responsible for monitoring for at least three types of winter injury which may appear by spring:
 - a. Cold Temperature Injury: Caused by very low temperatures or rapid drops in temperature during the winter. Symptoms are splitting bark (especially on the southwest side), dieback or sudden wilt. Wilt may not occur until the first hot spell in June.
 - b. Winter Drying: Evergreens may lose excessive amounts of water when warm windy conditions exist while the ground is frozen. Symptoms appear as browning of the leaves from the margin towards the veins. This will be accentuated by salt sprays.
 - c. Spring Frosts: Actively growing plants are damaged by rapid drops in temperature to below freezing. Flowers are killed first and lost for the season. Leaves may be killed or injured. Killed leaves/buds will rebud quickly if the plant is vigorous. Injury symptoms include cupping, crinkled, tattered, twisted or shot holes in leaves.

19.6 Guarantee

1. Plants shall be guaranteed for a period of three (3) years after the initial acceptance by the Agency. The permittee will be responsible for the maintenance for the new plantings beginning at the date of the initial acceptance and counting through the guarantee period. At the end of the guarantee period the permittee shall request a final inspection from the Agency or its authorized agent. At this time, all plants shall be alive and in a normal health condition. All plants not showing 75% healthy growth will be removed and replaced by the applicant. The 75% requirement shall be based on the number of healthy leaves and limbs on the plant as determined by the Agency's authorized agent.

19.7 Details

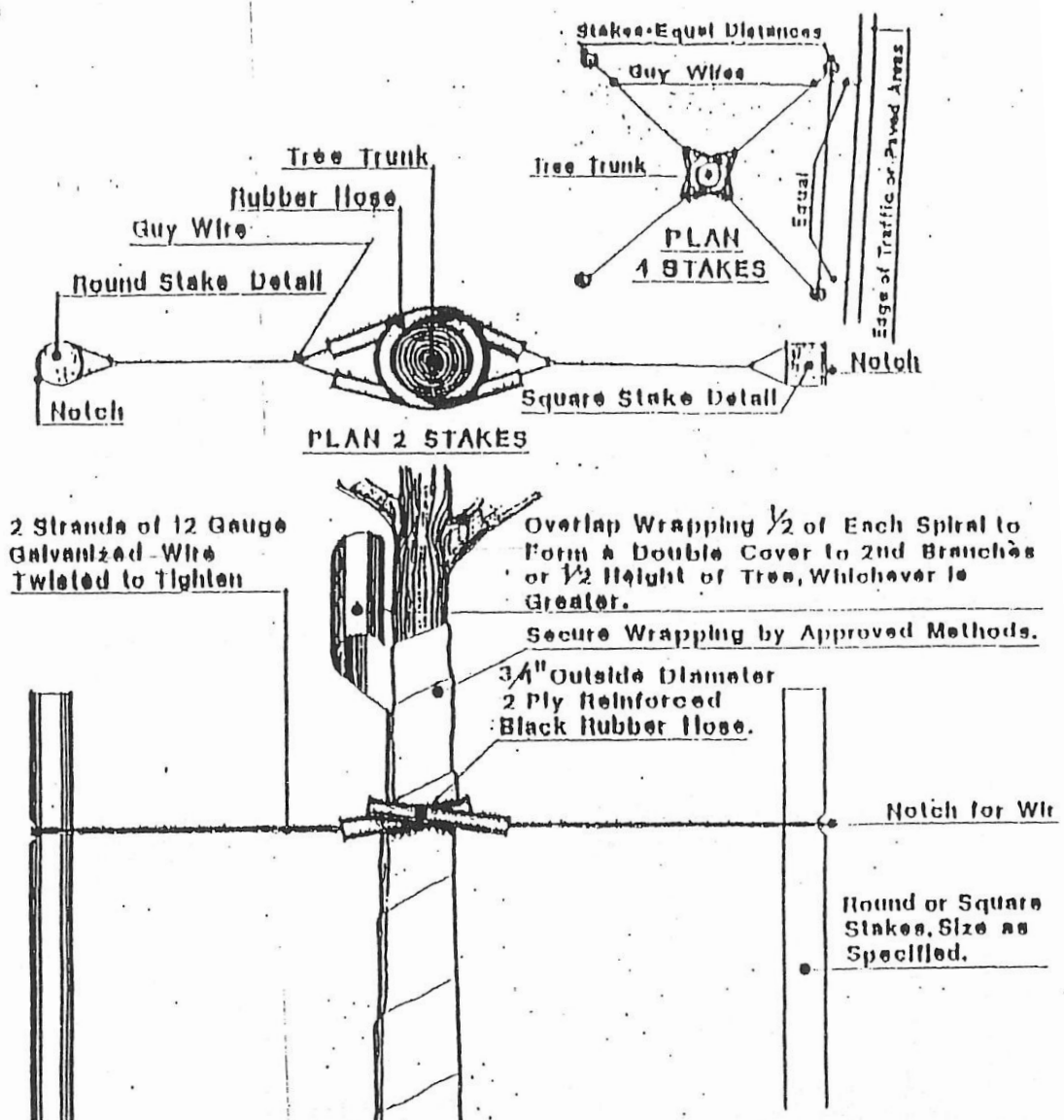
1. Staking & Planting Detail – see sketch
2. Guying for Deciduous and for Evergreen Trees – see sketch
3. Guy Wire Attachment, Wrapping & Staking Detail – see sketch



STAKING & PLANTING DETAIL

Provide 2 Stakes for Trees Up to 3 1/2" Callber
 " 4 " " " 3 1/2" Callber and Above

No Scale.



1. Trees Up to and including 3 1/2" Caliber Require 2 Stakes on Opposite Sides of Tree Parallel to Street, Curb, Pavement Edges and/or Grades.
2. Trees Over 3 1/2" Caliber Require 4 Stakes as Shown; Equally Space at Each Corner of the Plant Pit.
3. Stakes Shall be of Constant Size and Form and Shall be 6'-0" Above Finish Grade, Minimum.

GUY WIRE ATTACHMENT, WRAPPING & STAKING
DETAIL

No Scale