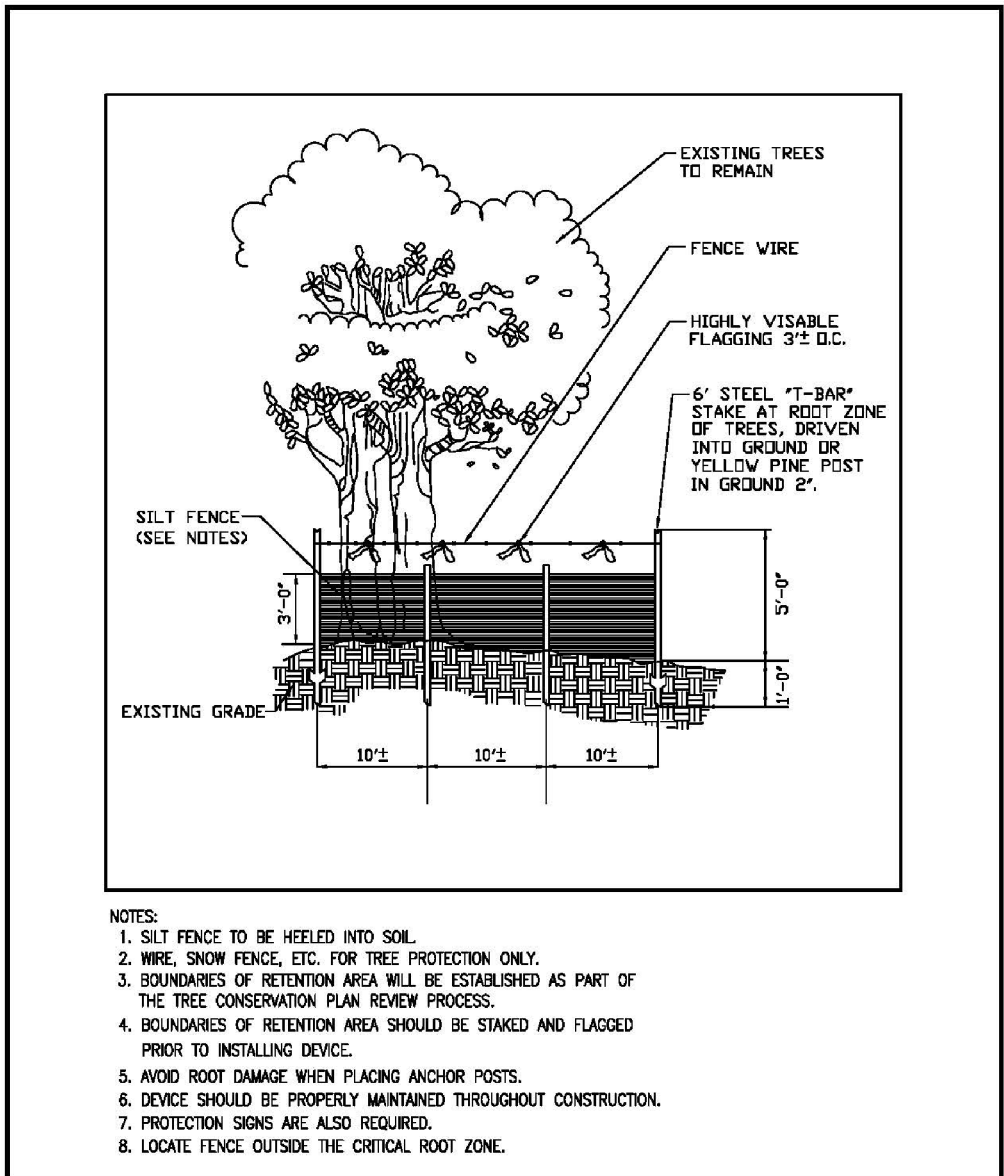
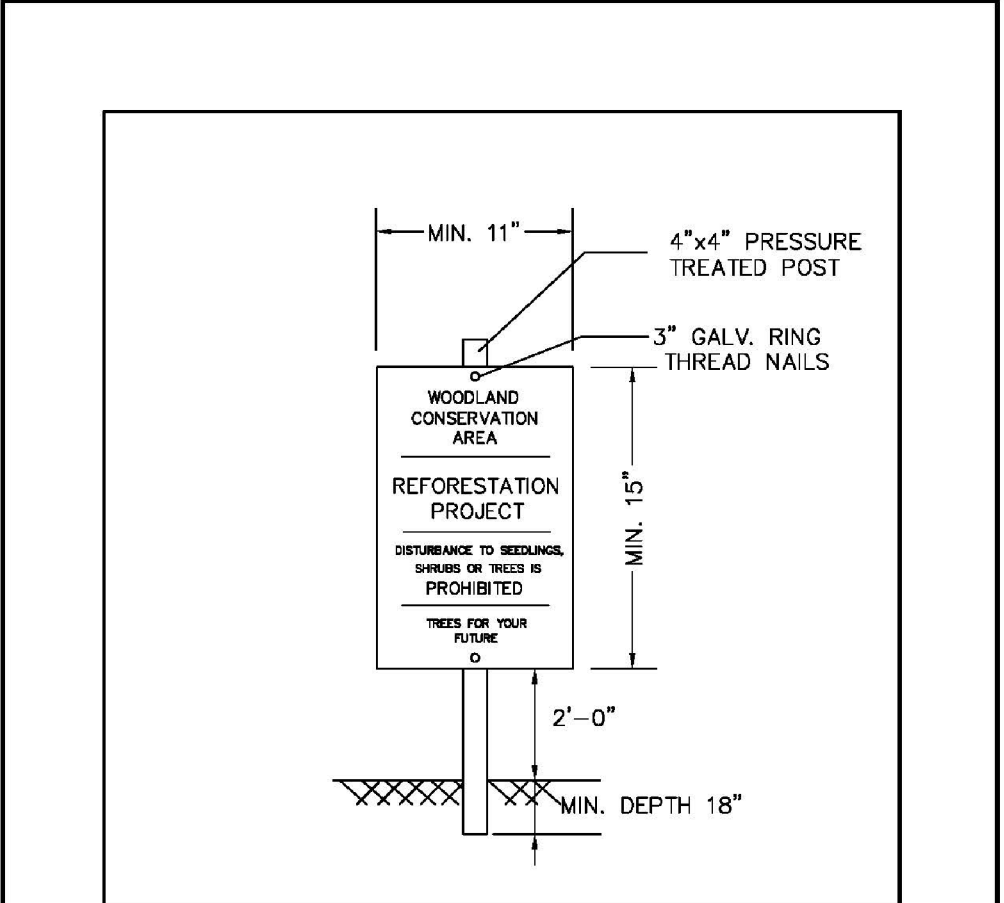


Sheet No. **1 of 2**

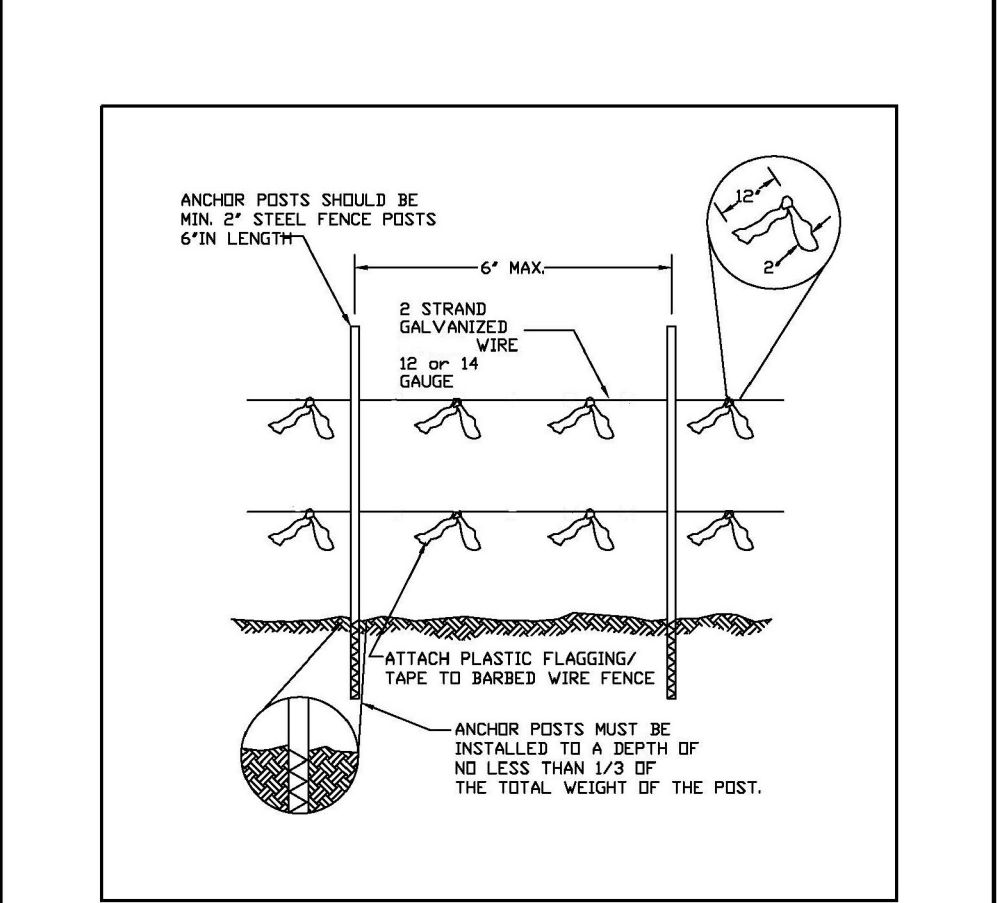


TYPE 4 (TEMPORARY) TREE PROTECTION FENCE COMBINATION SILT FENCE & TREE PROTECTION



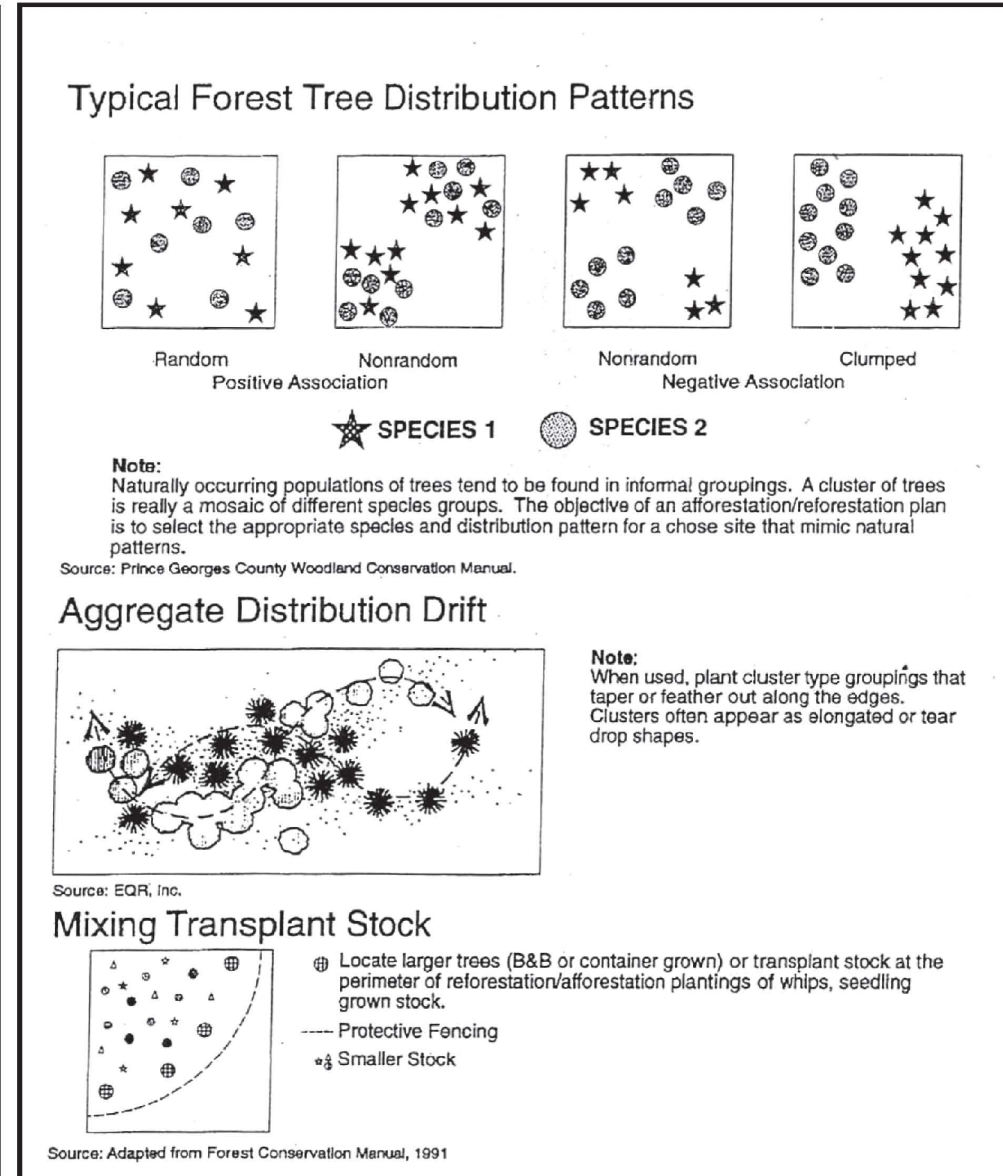
- NOTES:
1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 2. SIGNS SHOULD BE PROPERLY MAINTAINED.
 3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.
 4. SIGNS SHOULD BE POSTED TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL FROM ALL DIRECTIONS.
 5. SIGNS SHOULD BE INSTALLED AT SAME TIME AS TREE PROTECTION DEVICE.
 6. LOCATE SIGNS APPROXIMATELY EVERY 50 FEET ALONG FENCING.
 7. SIGNS SHOULD BE IN PLACE IMMEDIATELY FOLLOWING STAKE OUT OF L.O.D., AND REMAIN IN PLACE IN PERPETUITY.

REFORESTATION AREA SIGN

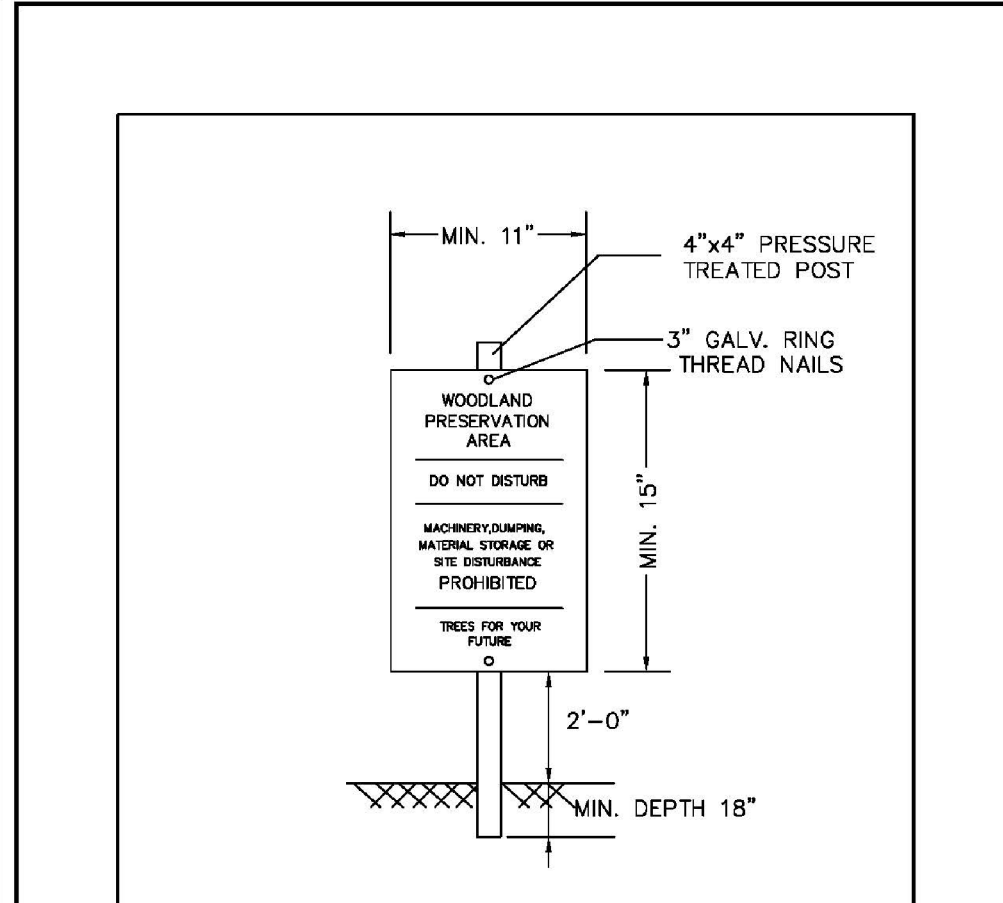


- NOTES: (MUST BE INCLUDED WITH DETAIL)
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED.
 4. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS.
 5. ANCHOR POSTS SHOULD BE INSTALLED TO A DEPTH OF NO LESS THAN 1/3 OF THE TOTAL WEIGHT OF THE POST.
 6. PROTECTIVE SIGNS ARE ALSO REQUIRED.

TYPE 2 (TEMPORARY) TREE PROTECTION FENCE FOR REFORESTATION AREAS

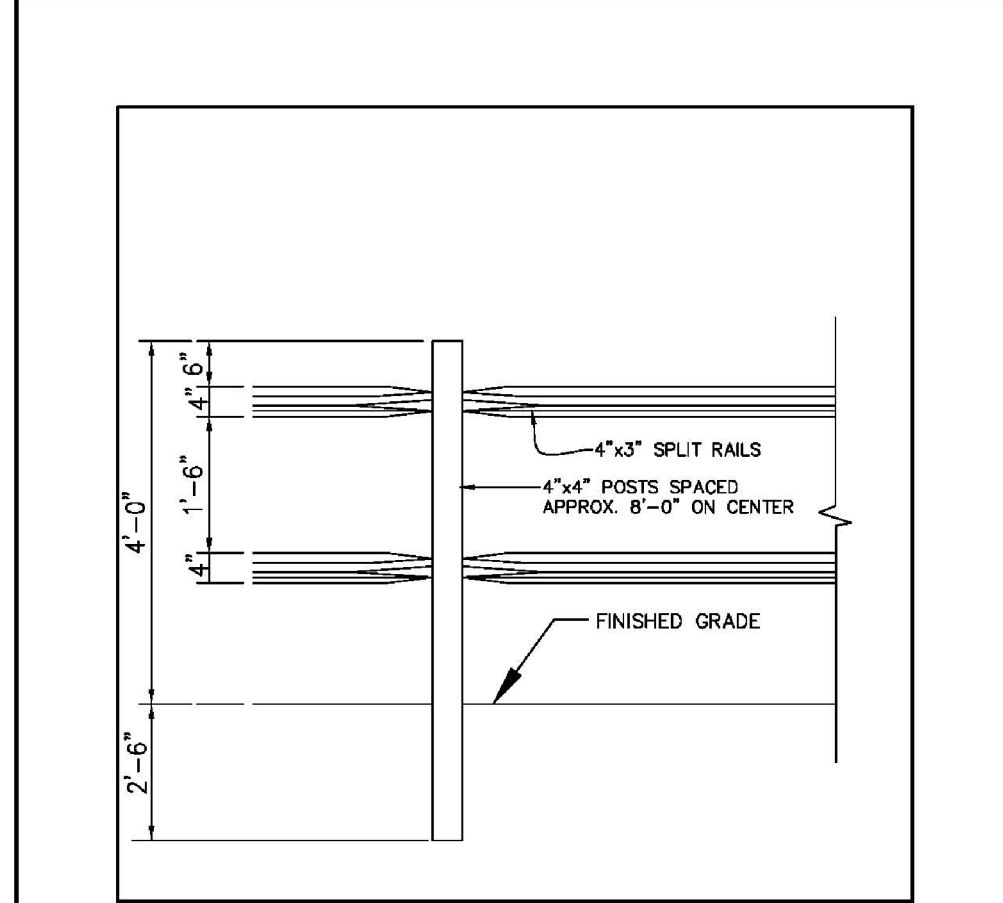


Typical Forest Tree Distribution Patterns



- NOTES:
1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 2. SIGNS SHOULD BE PROPERLY MAINTAINED.
 3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.
 4. SIGNS SHOULD BE POSTED TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL FROM ALL DIRECTIONS.
 5. SIGNS SHOULD BE INSTALLED AT SAME TIME AS TREE PROTECTION DEVICE.
 6. LOCATE SIGNS APPROXIMATELY EVERY 50 FEET ALONG FENCING.
 7. SIGNS SHOULD BE IN PLACE IMMEDIATELY FOLLOWING STAKE OUT OF L.O.D., AND REMAIN IN PLACE IN PERPETUITY.

WOODLAND PRESERVATION AREA SIGN

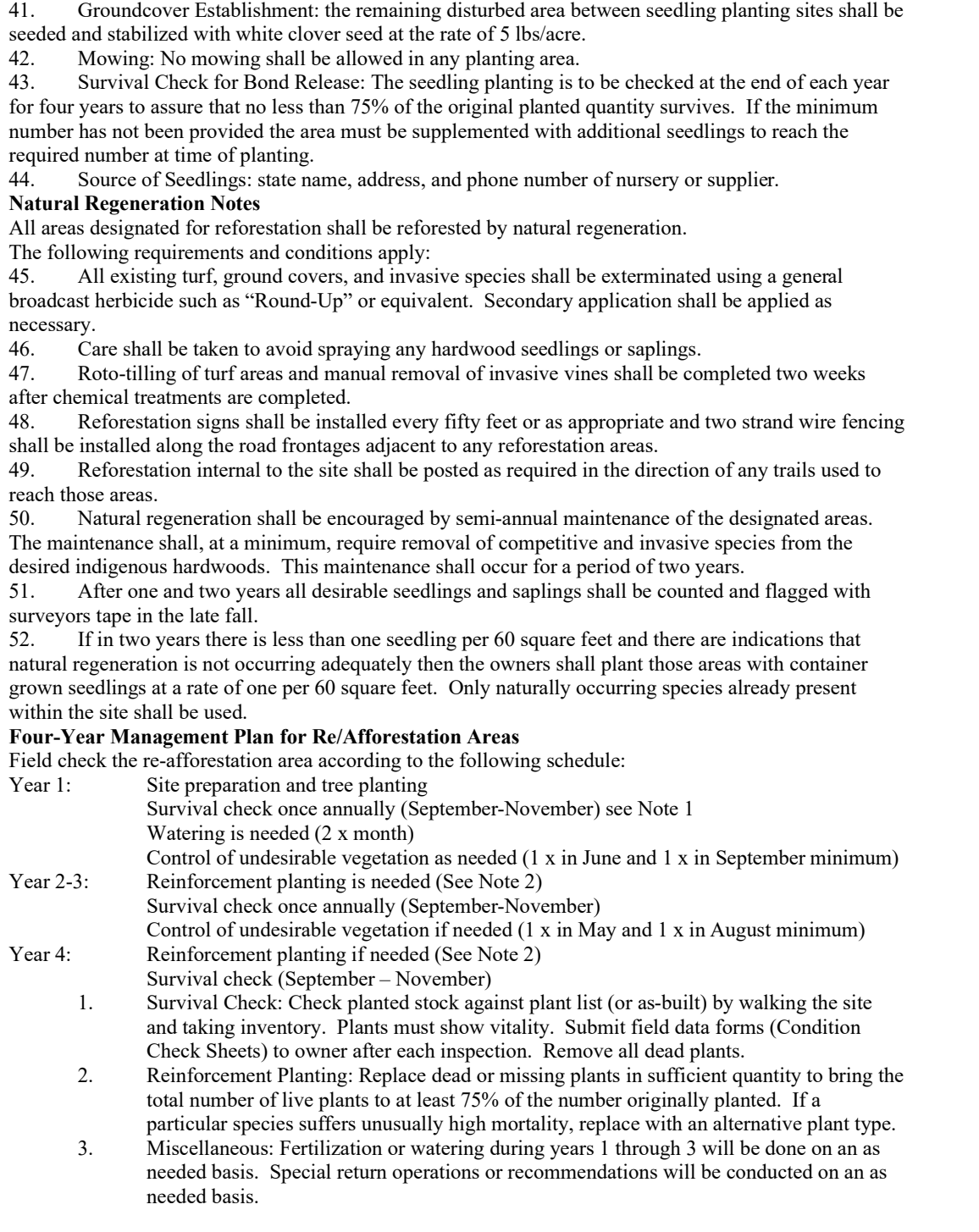


- NOTES:
1. POSTS SHALL STAND PLUMB.
 2. RAILS SHALL BE HUNG WITH UNIFORM HEIGHT AND SPACING.
 3. REFORESTATION SIGNS TO BE ATTACHED TO WOOD POSTS EVERY 50 FEET.
 4. TOP OF SIGN TO BE FLUSH WITH TOP OF WOOD POST.
 5. SIGNS TO BE ATTACHED USING 2 GALVANIZED WOOD SCREWS EACH WITH A GALVANIZED WASHER.

PERMANENT (SPLIT RAIL) TREE PROTECTION FENCE FOR REFORESTATION AREAS

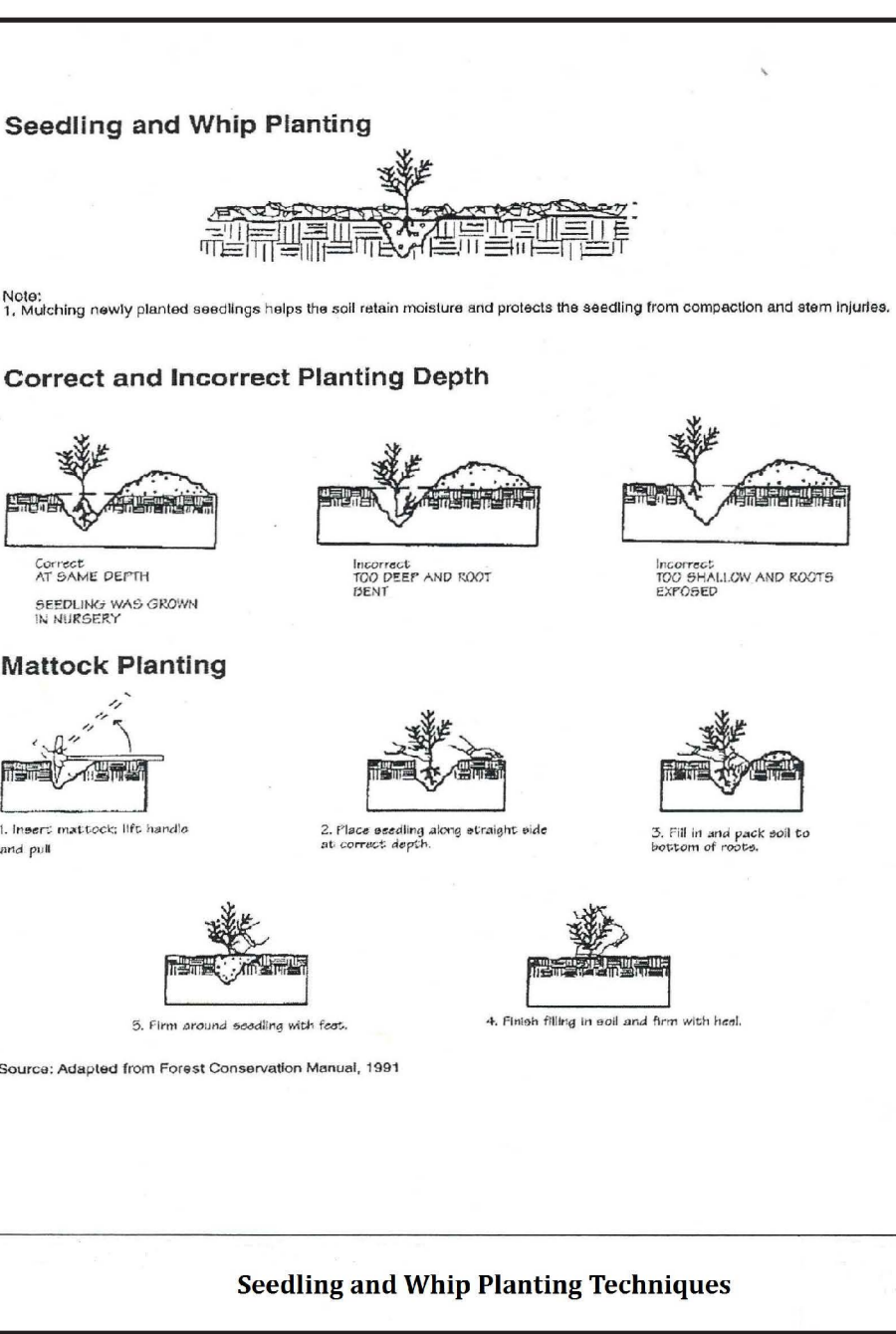
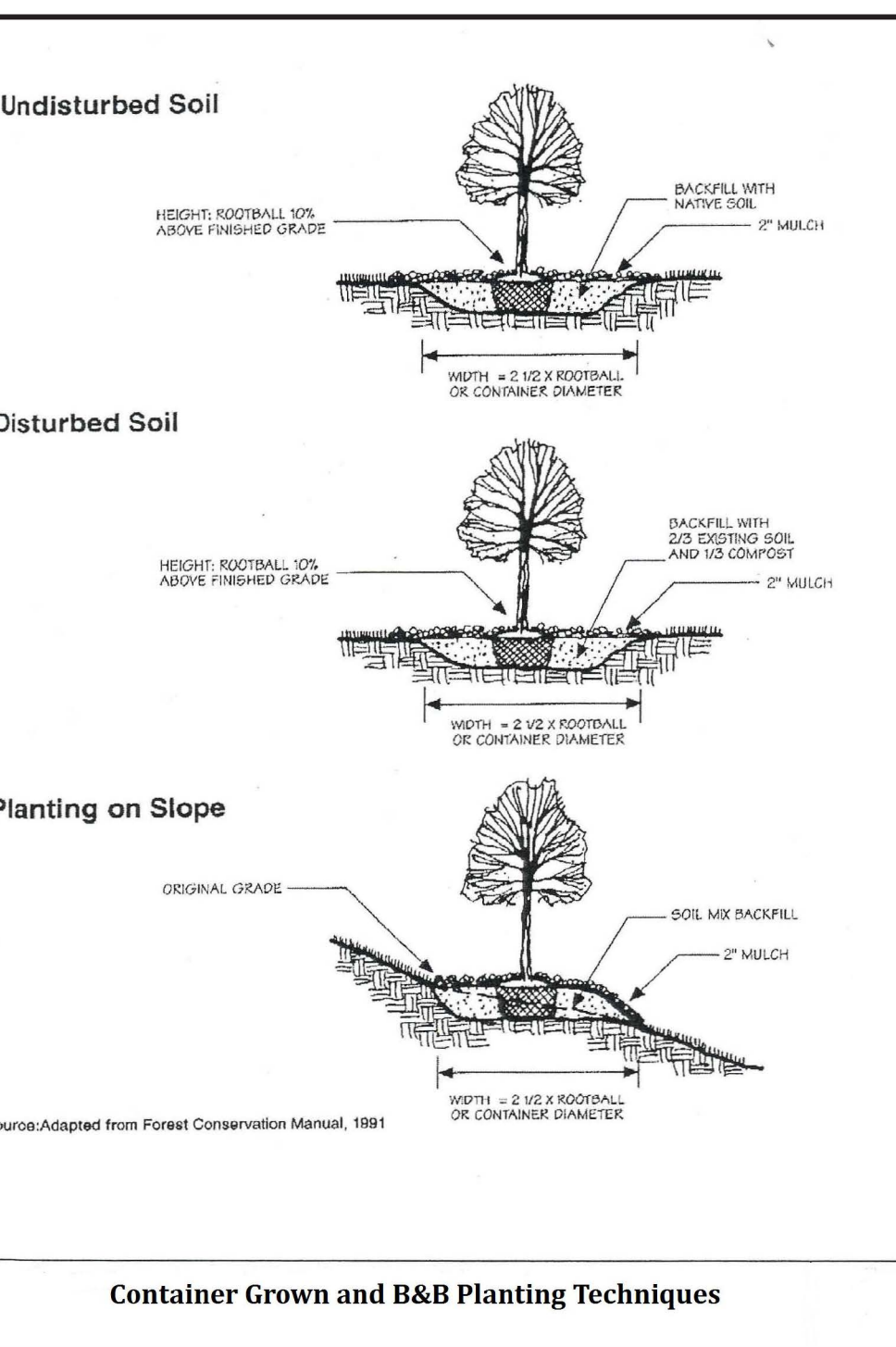
- Standard Type 2 Tree Conservation Plan Notes
1. This plan is submitted to fulfill the woodland conservation requirements for . If expires, then this TCP2 also expires and is no longer valid.
 2. Cutting or clearing woodlands not in conformance with this plan or without the expressed written consent of the Planning Director or designee shall be subject to a \$9.00 per square foot mitigation fee.
 3. A pre-construction meeting is required prior to the issuance of grading permits. The Department of Permitting, Inspections and Enforcement (DPIE), as appropriate, shall be contacted prior to the start of any work on the site to conduct a pre-construction meeting where implementation of woodland conservation measures shown on this plan will be discussed in detail.
 4. The developer or builder of the lots or parcels shown on this plan shall notify future buyers of any woodland conservation areas through the provision of a copy of this plan at time of contract signing. Future property owners are also subject to this requirement.
 5. The owners of the property subject to this tree conservation plan are solely responsible for conformance to the requirements contained herein.
 6. The property is within the Environmental Strategy Area ESA-3 formerly the Rural Tier and is zoned O-S.
 7. The site is not adjacent to a roadway designated as scenic, historic, a parkway or a scenic byway.
 8. The site is not adjacent to a roadway classified as arterial or greater.
 9. This plan is not grandfathered by CB87-2010, Section 25-119(g).
- Tree Preservation and Retention Notes
10. All woodlands designated on this plan for preservation are the responsibility of the property owner. The woodland areas shall remain in a natural state. This includes the canopy trees and understory vegetation. A revised tree conservation plan is required prior to clearing woodland areas that are not specifically identified to be cleared on the approved TCP2.
 11. Tree and woodland conservation methods such as root pruning shall be conducted as noted on this plan.
 12. The location of all temporary tree protection fencing (TPFs) shown on this plan shall be flagged or staked in the field prior to the pre-construction meeting. Upon approval of the locations by the county inspector, installation of the TPF's may begin.
 13. All temporary tree protection fencing required by this plan shall be installed prior to commencement of clearing and grading of the site and shall remain in place until the bond is released for the project. Failure to install and maintain temporary or permanent tree protective devices is a violation of the TCP2.
 14. Woodland preservation areas shall be posted with signage as shown on the plans at the same time as the temporary TCF installation. These signs must remain in perpetuity.
 15. The developer and/or builder is responsible for the complete preservation of all forested areas shown on the approved plan to remain undisturbed. Only trees or parts thereof designated by the county as dead, dying or hazardous may be removed.
 16. A tree is considered hazardous if a condition is present which leads a Certified Arborist or Licensed Tree Expert to believe that the tree or a portion of the trees has a potential to fall and strike a structure, parking area, or other high use area and result in personal injury or property damage.
 17. During the initial stages of clearing and grading, if hazardous trees are present, or trees are present that are not hazardous but are leaning into the disturbed area, the permittee shall remove said trees using a chain saw. Corrective measures requiring the removal of the hazardous tree or portions thereof shall require authorization by the county inspector. Only after approval by the inspector may the tree be cut by chainsaw to near the existing ground level. The stump shall not be removed or covered with soil, mulch or other materials that would inhibit sprouting.
 18. If a tree or trees become hazardous prior to bond release for the project, due to storm events or other situations not resulting from an action by the permittee, prior to removal, a Certified Arborist or a Licensed Tree Expert must certify that the tree or the portion of the tree in question has a potential to fall and strike a structure, parking area, or other high use area and may result in personal injury or property damage. If a tree or portions thereof are in imminent danger of striking a structure, parking area, or other high use area and may result in personal injury or property damage then the certification is not required and the permittee shall take corrective action immediately. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photos shall be submitted to the inspector for documentation of the damage.
 - a. If corrective pruning may alleviate a hazardous condition, the Certified Arborist or a Licensed Tree Expert may proceed without further authorization. The pruning must be done in accordance with the latest edition of the appropriate ANSI A-300 Pruning Standards. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photographs shall be submitted to the inspector for documentation of the damage.
 - b. Debris from the tree removal or pruning that occurs within 35 feet of the woodland edge may be removed and properly disposed of by recycling, chipping or other acceptable methods. All debris that is more than 35 feet from the woodland edge shall be cut up to allow contact with the ground, thus encouraging decomposition. The smaller materials shall be placed into brush piles that will serve as wildlife habitat.
 - c. Tree work to be completed within a road right-of-way requires a permit from the Maryland Department of Natural Resources unless the tree removal is shown within the approved limits of disturbance on a TCP2. The work is required to be conducted by a Licensed Tree Expert.
- Afforestation and Reforestation Notes
19. All afforestation and reforestation bonds, based on square footage, shall be posted with the county prior to the issuance of any permits. These bonds will be retained as surety until all required activities have been satisfied or the required timeframe for maintenance has passed, whichever is longer.
 20. The planting of afforestation or reforestation areas shall be completed prior to the issuance of the first building permit. (*This standard note may be modified as necessary to address which building permits are adjacent to the proposed planting area*) Seeding planting is to occur from November through May only. No planting shall be done while the ground is frozen. Planting with larger caliper stock or containerized stock may be done at any time provided a detailed maintenance schedule is provided.
 21. If planting cannot occur due to planting conditions, the developer or property owner shall install the fencing and signage in accordance with the approved Type 2 Tree Conservation Plan. Planting shall then be accomplished during the next planting season. If planting is delayed beyond the transfer of the property title to the homeowner, the developer or builder shall obtain a signed statement from the purchaser indicating that they understand that the reforestation area is located on their property and that reforestation will occur during the next planting season. A copy of that document shall be presented to the county inspector.
 22. Reforestation areas shall not be moved. The management of competing vegetation around individual trees and the removal of noxious, invasive and non-native vegetation within the reforestation areas is acceptable.
 23. All required temporary tree protection fencing shall be installed prior to the clearing and grading of the site and shall remain in place until the permanent tree protection fencing is installed with the required planting. The temporary fencing is not required to be installed if the permanent temporary or permanent tree protective fencing is a notification of this TCP2.
 24. Afforestation / reforestation areas shall be posted with notification signage, as shown on the plans, at the same time as the permanent protection fencing installation. These signs shall remain in perpetuity.
 25. The county inspector shall be notified prior to soil preparation or initiation of any tree planting on this site.
 26. At time of issuance of the first permit, the following information shall be submitted to the M-NCPPC Planning Department regarding the contractor responsible for implementation of this plan: Contractor name, business name (if different), address, and phone number.
 27. Result of annual survival check for each of the required four years after tree planting shall be reported to the M-NCPPC, Planning Department.
 28. Failure to establish the afforestation or reforestation within the prescribed time frame will result in the forfeiture of the reforestation bond and/or a violation of this plan including the associated \$9.00 per square foot penalty unless the county inspector approves a written extension.
- Planting Specification Notes
29. Quantity: (See Plant Schedule)
 30. Type: (See Plant Schedule)

31. Plant Quality Standards: The plants selected shall be healthy and sturdy representative of their species. Seedlings shall have a minimum top growth of 18". The diameter of the root collar (the part of the root just below ground level) shall be at least 3/8". The roots shall be well developed and at least 8" long, no more than twenty-five percent (25%) of the root system (both primary and auxiliary/fibrous roots) shall be present.
 - a. Plants that do not have an abundance of well developed terminal buds on the leaders and branches shall be rejected.
 - b. Plants shall be shipped by the nursery immediately after lifting from the field or removal from the green house, and planted immediately upon receipt by the landscape contractor.
 - c. If the plants cannot be planted immediately after delivery to the reforestation site, they shall be stored in the shade with their root masses protected from direct exposure to sun and wind by the use of straw, peat moss, compost, or other suitable material and shall be maintained through periodic watering, until the time of planting.
 32. Plant handling: the quantity of seedlings taken to the field should exceed the quantity that can be planted in a day. Seedlings, once removed from the nursery or temporary storage area shall be planted immediately.
 33. Timing of Planting: The best time to plant seedlings is while they are dormant, prior to spring budding. The most suitable months for planting are March and April, when the soils is moist, but may be planted from March through November. No planting shall be done while the ground is frozen. Planting shall occur within one growing season of the issuance of grading/building permits and/or reaching the final grades and stabilization of planting areas.
 34. Seedling Planting: Tree seedlings shall be hand planted using a dibble bar or sharp-shooter shovel. It is important that the seedling be placed in the hole so that the roots can spread out naturally; they shall not be twisted, balled up or bent. Moist soil should then be packed firmly around the roots. Seedlings should be planted at a depth where their roots lie just below the ground surface. Air pockets should not be left after closing the hold which would allow the roots to dry out. See planting details for further explanation. If the contractor wishes to plant by another method, the preparer of this tree conservation plan must be contacted and give his approval before planting may begin.
 35. Spacing: See Plant Schedule and/or Planting Plan for spacing requirements. Also refer to the Planting Layout detail for a description of the general planting theory.
 36. Soil: Upon the completion of all grading operations, a soil test shall be conducted to determine what soil preparation and soil amendments, if any, are necessary to create good tree growing conditions. Soil samples shall be taken at a rate that provides on soil sample for each area that appears to have a different soil type (10' x 10' grid). If a soil test is necessary, and submitted to a private company. The company of choice shall make recommendations for improving the existing soil. The soil will be tested and recommended for corrections of soil texture, pH, magnesium, phosphorus, potassium, calcium and organic matter.
 37. Soil Improvement Measures: the soil shall then be improved according to the recommendations made by the testing company.
 38. Fencing and Signage: Final protective fencing shall be placed on the visible and/or development side of planting areas. The final protective fence shall be installed upon completion of planting operations unless it was installed during the initial stages of development. Signs shall be posted per the signage detail on this sheet.
 39. Planting method: Consult the Planting Detail(s) shown on this plan.
 40. Mulching: Apply two-inch thick layer of woodchip or shredded hardwood mulch (as noted) to each planting site (see detail shown on this plan).
 41. Groundcover Establishment: the remaining disturbed area between seedling planting sites shall be seeded and stabilized with white clover seed at the rate of 5 lbs/acre.
 42. Mowing: No mowing shall be allowed in any planting area.
 43. Survival Check for Bond Release: The seedling planting is to be checked at the end of each year for four years to assure that no less than 75% of the original planted quantity survives. If the minimum number has not been provided the area must be supplemented with additional seedlings to reach the required number at time of planting.
 44. Source of Seedlings: state name, address, and phone number of nursery or supplier.
- Natural Regeneration Notes
- All areas designated for reforestation shall be reforested by natural regeneration. The following requirements and conditions apply:
45. All existing turf, ground covers, and invasive species shall be exterminated using a general broadcast herbicide such as "Round-Up" or equivalent. Secondary application shall be applied as necessary.
 46. Care shall be taken to avoid spraying any hardwood seedlings or saplings.
 47. Roto-tilling of turf areas and manual removal of invasive vines shall be completed two weeks after chemical treatments are completed.
 48. Reforestation signs shall be installed every fifty feet or as appropriate and two strand wire fencing shall be installed along the road frontages adjacent to any reforestation areas.
 49. Reforestation internal to the site shall be posted as required in the direction of any trails used to reach those areas.
 50. Natural regeneration shall be encouraged by semi-annual maintenance of the designated areas. The maintenance shall, at a minimum, require removal of competitive and invasive species from the desired indigenous hardwoods. This maintenance shall occur for a period of two years.
 51. After one and two years all desirable seedlings and saplings shall be counted and flagged with surveyors tape in the late fall.
 52. If in two years there is less than one seedling per 60 square feet and there are indications that natural regeneration is not occurring adequately then the owners shall plant those areas with container grown seedlings at a rate of one per 60 square feet. Only naturally occurring species already present within the site shall be used.
- Four-Year Management Plan for Re/Afforestation Areas
- Field check the re-afforestation area according to the following schedule:
- Year 1: Site preparation and tree planting
Survival check once annually (September-November) see Note 1
Watering is needed (2 x month)
Control of undesirable vegetation as needed (1 x in June and 1 x in September minimum)
Reinforcement planting is needed (See Note 2)
- Year 2-3: Survival check once annually (September-November)
Control of undesirable vegetation if needed (1 x in May and 1 x in August minimum)
Reinforcement planting if needed (See Note 2)
- Year 4: Survival check (September - November)
Survival Check: Check planted stock against plant list (or as-built) by walking the site and taking inventory. Plants must show vitality. Submit field data forms (Condition Check Sheets) to owner after each inspection. Remove all dead plants.
1. Reinforcement Planting: Replace dead or missing plants in sufficient quantity to bring the total number of live plants to at least 75% of the number originally planted. If a particular species suffers unusually high mortality, replace with an alternative plant type.
 2. Miscellaneous: Fertilization or watering during years 1 through 3 will be done on an as needed basis. Special return operations or recommendations will be conducted on an as needed basis.



- POST DEVELOPMENT NOTES
- When woodlands and/or specimen, historic or champion trees are to remain:
53. If the developer or builder no longer has an interest in the property and the new owner desires to remove a hazardous tree or portion thereof, the new owner shall obtain a written statement from a Certified Arborist or Licensed Tree Expert identifying the hazardous condition and the proposed corrective measures prior to having the work conducted. After proper documentation has been completed per the handout "Guidance for Prince George's County Property Owners, Preservation of Woodland Conservation Areas", the arborist or tree expert may then remove the tree. The stump shall be cut as close to the ground as possible and left in place. The removal or grinding of the stumps in the woodland conservation area is not permitted.
 54. If a tree or portion thereof are in imminent danger of striking a structure, parking area, or other high use areas and may result in personal injury or property damage then the certification is not required and the permittee shall take corrective action immediately. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photos shall be submitted to the inspector for documentation of the damage.
 55. Tree work to be completed within a road right-of-way requires a permit from the Maryland Department of Natural Resources unless the tree removal is shown within the approved limits of disturbance on a TCP2. The work is required to be conducted by a Licensed Tree Expert.
 56. The removal of noxious, invasive, and non-native plant species from any woodland preservation area shall be done with the use of hand-held equipment only (pruners or a chain saw). These plant may be cut near the ground and material less than two inches diameter may be removed from the area and disposed of appropriately. All material from these noxious, invasive, and non-native plants greater than two (2) inches diameter shall be cut to allow contact with the ground, thus encouraging decomposition.
 57. The use of broadcast spraying of herbicides is not permitted. However, the use of herbicides to discourage re-sprouting of invasive, noxious, or non-native plants is permitted if done as an application of the chemical directly to the cut stump immediately following cutting of plant tops. The use of any herbicide shall be done in accordance with the label instructions.
 58. The use of chainsaws is extremely dangerous and should not be conducted with poorly maintained equipment, without safety equipment, or by individuals not trained in the use of this equipment for the pruning and/or cutting of trees.
- Protection of Reforestation and Afforestation Areas by Individual Homeowners
59. Reforestation fencing and signage shall remain in place in accordance with the approved Type 2 Tree Conservation Plan.
 60. Reforestation areas shall not be mowed; however, the management of competing vegetation and removal of noxious, invasive, and non-native vegetation around individual trees is acceptable.

Tasks	Months											
	Jan*	Feb*	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov*	Dec*
Transport of 2" DBH or Greater	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED
Planting Seedlings, Whips	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED	RECOMMENDED
Minimum Monitoring		*								*		*
Fertilizer (if Needed)**												
Water***												
Pruning												
Recommended, Optimal time												
Recommended with Additional Care												
Recommended												
Dependent Upon Site Conditions												
Dependent Upon Site Conditions: Weekly Watering is Strongly Recommended From May Through October Unless Weekly Watered Square 1												



Size	Number Required per Acre	Approximate Spacing feet on center	Survivability Requirement At the end of the second growing season
Bare Root Seedlings or Whips	700	8 x 8	75% 625
Container Grown Seedling Tables (Minimum Cavity Width 1.5')	600	10 x 10	75% 375
Container Grown 1, 2, 3 Gallon	400	12 x 12	75% 300
Container Grown 5, 7 Gallon or 1" Caliper B & B	300	15 x 15	85% 255
Container Grown 15, 25 Gallon or 1.5 - 2" Caliper B & B	150	20 x 20	100% 150

NOTES:

1. These stocking and survival requirements are the minimum numbers estimated to meet the definition of forest from bare land.
2. In certain circumstances, any combination of the above mentioned stocking options, dry seeding, tree shelters, transplants, and/or natural regeneration may be appropriate strategies to fulfill the requirements of an approved TCP2. They will be evaluated on a case-by-case basis by the approving authority.
3. Spacing does not imply that trees or shrubs must be planted in a grid pattern.

I/We Jonathan Vega hereby acknowledge that we are aware of this Type 2 Tree Conservation Plan (TCP2) and that we understand the requirements as set forth in this TCP2.

Jonathan Vega 1/26/22 Date

QUALIFIED PROFESSIONAL CERTIFICATION

This complies with the current requirements of Subtitle 25 and the Environmental Technical Manual

Signed: John P. Markovich Date: 4/1/2022

John P. Markovich
JM Forestry Services, LLC
11552 Timberbrook Drive
Waldorf, MD 20601
Phone: 301-751-4888
Email: JPMarkovich@comcast.net

STATE OF MARYLAND
JIM FORESTRY SERVICES, LLC
BOARD OF FORESTERS

Prince George's County Planning Department, M-NCPPC Environmental Planning Section TREE CONSERVATION PLAN APPROVAL			
TCP2-003-2022			
Approved by	Date	DRD #	Reason for Revision
00 Revision <u>Suzanne F. Nickle</u>	4/19/2022	N/A	N/A
01 Revision			
02 Revision			
03 Revision			
04 Revision			
05 Revision			

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11552 Timberbrook Drive
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Phone/FAX: (301) 645-4977

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Phone: 571-623-1487

APPLICANT / DEVELOPER

North Keys Estates, Lot 32
12901 Tobacco Trail Lane
PRINCE GEORGE'S COUNTY, MARYLAND

11th ELECTION DISTRICT

DWN Checked
JPM JPM

Scale 1" = 50'

Project No. 21-030

Sheet No. 2 of 2