Shade Tree Commission
Minutes
9 December 2021, at 7:00 pm

Meeting Attendees: David Ingram, Nancy Walker, Roxanne Malé-Brune, Lee Gregg, James Dyer, Ann Bonner, Susan Calhoun

1. Title 33: Tree Permit, Right-of-Way Issues, Public Land
   a. Six trees to be planted near the Stimson Ave. roundabout as part of the Stimson Ave. project. David Ingram met with Interim City Engineer Jessica Aldine on 16-Nov-22 at the site to review potential sites. Three Kentucky Coffee tree have been planted near Sonic. More trees will be planted soon.
   b. West Union St. project – David Ingram toured the site on 1-Dec-21 with City Engineer Saleh Eldabaja and others, including Ann Bonner. Sycamore trees near the intersection with Herald St. will be saved by moving the sidewalk away from the road and creating a multiuse path for pedestrians and cyclists. The trees should survive if the construction limits are honored. A map of the route is attached to the minutes.
   c. Tree Permit for 227 Columbus Road (HAVAR), waiting for the Code Office to determine if the trees are on the Right of Way.
   d. Request for inspection of trees in the RoW on Elmwood from the adjacent owner, at 28 S May Ave, that is on the corner with Elmwood.
   e. The trees for West State St. are being stored while the work on the site is ongoing. Green Leaf have inspected the trees and they are doing okay.
   f. Ann Bonner will send planting specs to be attached to these minutes.

2. Title 37: Landscape Ordinance Issues
   a. Goodwill update – relocation of trees, see attached emails and plan.

3. Maintenance of the Tree Canopy
   a. Plans
      i. Nancy commented on the plans the Ann had sent from other cities. A copy of her draft outline of a plan is attached to these minutes.

4. Other business
   a. American Electric Power (AEP) tree trimming/cutting in Athens in 2022. Work will be on circuits feeding out of the Stroud's Run Substation. There are four circuits feeding out of this substation, two of which mainly feed the East end of Athens City.
   b. Lee Gregg welcomed the addition of rain gardens to Stimson Ave.
   c. David Sincoff, Lee Gregg and David Ingram are stepping down due to term limits in the revised Title 33. They were thanked for their service.

5. Minutes of the November 4th, 2021, meeting
   a. Motion to approve the minutes, by Roxanne Malé-Brune, seconded by James Dyer. The minutes were approved without objection.

6. Next meeting is January 13, 2022, at 7:00 PM

= 5° 20' 42" (RT)

N

0 40
20 80

CURB LINE

PROP. STORM (TYP.)

W. UNION ST.

HERROLD AVE.

TREE WELLS

SIDEWALK (TYP.)

24" STORM

ROADWAY CONSTRUCTION LIMITS

TREE WELL

BIKE PATH

BIKE PATH CONSTRUCTION LIMITS

42" STORM

0 1 2 3 4 5 6 7 8 9 10

PROPOSED TREE PRUNING CONTRACT SPECIFICATIONS
Sample

Written by Ann Bonner
Ohio Department of Natural Resources Division of Forestry

1. **Scope of Work:** To provide all labor, supervision, equipment, materials, and expertise required to perform Tree Pruning as specified. The work shall be performed by a company which derived the majority of its annual income from arboricultural work, and whose employees are highly trained and skilled in all phases of tree maintenance and removal. An ISA certified arborist must oversee all work. Work performance and references may be required.

REQUIREMENTS

2. **Regulations:** The accepted contractor shall comply with all applicable federal, state, and local ordinances, regulations, licenses and permits necessary to perform work under this contract. Prevailing wage rate regulations according to the Davis-Bacon Act shall not apply to any section of this contract.

3. **Work Period:** Work shall begin approximately ---------, 2014 and be completed by ----------, 2014, exclusive of inclement weather. Working hours shall be between 7:00 a.m. and 6:00 p.m. Monday through Friday, excluding state and federal holidays. Weekend and holiday work may be permitted in writing only, at the discretion of the Mayor or Tree Commission.

4. **Insurance:** The accepted contractor shall have, for the life of this contract, such insurance as well protect the contractor and indemnify the City from any claims set forth below which may arise out of , or result from, the Contractor's operations under the Contract, whether such operations are performed by himself, by any approved subcontractor, or by anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable.

    A. Claims under workers compensations, disability benefits, or other employee benefit acts.
    B. Claims for damages because of bodily injury, occupational illness, or death of an employee.
    C. Claims for damages because of bodily injury, illness, or death of any person other than an employee.
    D. Claims for damages because of injury to or destruction of property, including loss of use resulting therefrom.

    Amount of coverage for each of the above types of claims shall be as follows:

A. Workers Compensation	Statutory
B. Liability	$500,000.00

7. **Supervision:** Contractor shall consult with the Mayor or Tree Commission (TC) concerning scheduling and details of all work. Contractor shall have a competent person in charge of his work at all times to whom the Mayor may issue directives, and who shall accept and act upon such directives.

8. **Inspection:** The Tree Commission shall inspect work at its own discretion.

9. **Traffic Control:** Traffic control shall be the total responsibility of the Contractor, and shall be coordinated with the proper authority (Police Department). The Contractor shall be solely responsible for

pedestrian and vehicular safety and control within the work site, and shall provide all necessary warning devices, barricades, and ground personnel needed to give safety, protection, and warning to all persons and vehicles in the area. Blocking of public streets shall not be permitted without consent of the Police Department. Traffic control shall be accomplished in conformance with applicable state, county and city codes.

10. **Utility Agencies:** Utility agencies shall be contacted by the Contractor any time assistance is needed to work safely around overhead or underground installations.

11. **Subcontractors:** Subcontracting of work under this contract shall not be allowed without prior consent of the Tree Commission (TC). All subcontractors permitted to perform any work under this contract shall be bound by all conditions and specifications contained herein.

12. **Tree Damage:** **Climbing irons or spikes shall not be used** on any tree unless such tree is being removed. Any tree damage shall be immediately repaired by the contractors at his expense, and to the satisfaction of the TC. Trees damaged beyond repair as judged by the TC are to be removed and replaced to the Commission's satisfaction at no cost to the TC.

13. **Pruning:** All pruning shall conform to the latest revision of the ANSI A300, Tree Shrub and Other Woody Plant Maintenance and the Standards of the National Arborist Association for the Pruning of Shade Trees. Copies of said standards are available and maybe incorporated herein and made a part hereof as if fully rewritten. Pruning objectives shall be outlined per tree and pruning will consist of crown cleaning, crown thinning or crown restoration. **Topping or heading is not permissible** and is grounds for revoking future bids. In addition, all pruning shall include lifting to provide eight (8) foot clearance over sidewalks and twelve (12) foot clearance over streets, unless otherwise noted.

All pruning cuts shall be made at nodes or crotches, preserving the branch collar and leaving no stubs. The overall shape of the tree shall be retained and enhanced as much as is practical.

Use of bucket trucks shall not excuse contractors from climbing trees to reach portions inaccessible to buckets. **Climbing spikes are forbidden from use.**

If, while pruning, the contractors discover a problem which suggests a tree should be removed, the Contractors shall notify the City and TC and shall wait for a decision before continuing to work on that tree.

13. **Clean-Up:** The work site shall be left as clean as or cleaner than its pre-work condition. Tree limbs and other parts dropped or lowered from the tree shall be kept off private property. Clean-up shall be completed within two hours after debris has been placed around the site of each tree requiring removal unless otherwise agreed upon prior. All lawn areas shall be raked, and all paved areas shall be swept.

14. **Wood Products:** Logs shall be cut into firewood size pieces and shall be piled at the ????????????? in an area indicated by the TC or appropriate official. Wood chips shall be dumped at the ?????????????? in an area indicated by the TC or appropriate official.

15. **Damages:** Any and all damages done by the Contractor to any person or property, public or private, shall be the total responsibility of the Contractor, and shall be repaired or compensated for by the Contractor at no cost to the City, and to the satisfaction of the injured party and the City. All damages and injuries shall be reported to the City within twenty four (24) hours of occurrence.

16. **Award:** Prices shall be quoted as requested. It is the intent of the TC to hire the Contractor submitting the lowest price to fulfill this contract.

PROJECT SPECIFICATIONS

Trees located at the following locations shall receive the indicated Classification of pruning:

tree species and location **action, thin, lift, crown reduction** **cost**

1.
2.
3.
4.
5.
6.
etc.

PROPOSAL

Contractor: Company Name:_____

Address:_____

City, State, Zip Code:_____

Phone:_____

Contact:_____

Total Project Cost:_____

015639 Tree and Plant Protection

DISCLAIMER AND RESPONSIBILITY OF THE USER

Use of this document: The following specification has been prepared by the Urban Tree Foundation and is copyrighted 2014. Permission is granted for use of this material for individual use to prepare specifications. It may not be reproduced in part or in its entirety for sale or profit. This document, when used as the basis of a specification, has significant legal and financial ramifications on the outcome of a construction project. By adopting this specification, in part or in its entirety, the user accepts all liability related to its use.

INSTRUCTIONS TO THE SPECIFICATION WRITER:

The following document is intended as a general specification to guide the writing of a project-specific specification. Each project is unique and it is required that the specification be developed accordingly. DO NOT USE THE FOLLOWING SPECIFICATION WITHOUT MAKING IMPORTANT ADJUSTMENTS to reflect local conditions, regulations, market standards, project schedules and local and regional practices. The following are specific items that need to be addressed.

1. General instructions for using this specification: *These instructions are intended to guide the specification writer (the specifier) through the process of editing this document into a Tree and Plant Protection specification. Be sure to delete these instructions (i.e. all the text in red displayed above the paragraph) before issuing the specifications.*

2. General Requirements - Division 01 (Construction Specification Institute) specifications and other contract elements: *This specification is designed to be used in conjunction with standard Division 01 specifications, which cover project general conditions and project wide contract elements. THIS IS NOT A STAND-ALONE SPECIFICATION and should not be used as a contract for the protection of plants. Important issue of project ownership, liability, insurance, contract language, project controls, Instructions to bidders, change orders and review and approval of the work are normally in the Division 01 specifications.*

3. The construction team: *A construction project is a team effort where the Owner, in effect, creates an agreement with all the Contractors to build a project. As with any good contract there are protections for both sides; that the Owner will get the quality of project that they desire within the time limits and budget available; and the Contractor will be paid for the work satisfactorily completed. In between the initial bidding and the final completion there will be many places where parts of the construction do not work out as originally intended. This is normal and a good contract should allow for these changes in a manner that is equitable to both the Owner and the Contractor. To get there, a team approach and spirit must prevail. Both sides must assume that each is operating in the best interest of the project goals. The clearer the goals and description of the project, the smoother the flow of a successful project.* ***The more each of the team members can trust the other members, the better the project.*** *This should be a critical principle in approaching interpretation of the specification.*

4. Unique aspects of Tree and Plant Protection: *Most specification sections describe how a particular trade or sub contractor should proceed to accomplish certain tasks to construct a specific part of the project. There is an assumption in almost all specifications that if the subcontractor damages the work of another they must provide a remedy to fix the damage. With plants, particularly large trees, there is not effective remedy if significant damage occurs to the plant. Often the damage particularly to the root system of a tree may not be readily apparent and may not express itself as decline in the tree till after the construction project is finished. For this reason Tree and Plant Protection specification is as much about preventing damage as it is instructions to the subcontractor related to what to build. It is also unique specification section in that it applies to all Contractors working on the site effecting where they can park, store equipment and perform excavations by making certain areas off limits except for the activities permitted by the specification. Conflicts between this specification and other requirements must be resolved prior to the start of work. The Tree and Plant Protection requirements begin at the very beginning of construction and are enforce for the entire construction contract period.*

5. Other project documents: *This specification is intended to be used in conjunction with other project documents including the bid forms, the construction contract, Division 1 specifications, other specifications directly related to this section; other specifications that are not directly related to this work and most critically the Project*

construction drawings. It is very critical that all these documents be prepared with consistent terminology and that they be coordinated. The terms used for the parts of trees and other plants, different soil types, drainage features, irrigation features and structures such as paving, walls and planters must be consistent across disciplines.

6. Related specification sections: *This specification requires additional specification sections to describe several important related parts of the Tree and Plant Protection process.*

> ***Planting:*** *This specification assumes that there is a separate specification section and separate plans and details for installation of plants.*
>
> ***Planting Soil:*** *This specification assumes that there is a separate specification section and separate plans and details for installation of planting soils.*
>
> ***Irrigation:*** *This specification assumes that there is a separate specification section for Irrigation that might be associated with the project planting.*
>
> ***Other sections:*** *such as plumbing, electric, excavation, paving site structures.*

7. Reviewing and approval authority: *Each specification identifies a certain entity as responsible for the review and approval of the work, project submittals, changes to the work and acceptance of the work. The entity with this authority is normally identified in Division 1. For the purposes of this specification, the term the "Owner's Representative" has been used as a placeholder for this entity. Once the proper term is defined for example another term such as; Contracting Officer, The Architect, The Landscape Architect, The Engineer etc.; this term should replace the words "Owner's Representative" wherever it appears in this specification.*

8. Header and footer requirements: *Change the header/footer language to meet the project requirements.*

9. Notes to specifier: *Before issuing the document, be sure to remove all "**Notes to specifier**" incorporated into this document after you have read them and responded to the recommendations.*

10. Submittals: *Submittals are a critical part of any construction contract. This is where all products and materials are reviewed and approved in advance of the work. Tree and Plant Protection quality control is in this section. Including very specific requirements for approval of submittals while a good practice assumes that the reviewing authority has the skills needed to make these reviews and interpret the results. A common practice is to make very specific requirements but not have the time or expertise to enforce them. Lack of review of submittals does not automatically transfer quality control to the Contractor. In fact, lack of review or inappropriate review can make the reviewing authority responsible for having accepted the submittal even if it was not acceptable. Take great care in putting into the specification submittal requirements that you do not have the time or knowledge to enforce.*

11. Specification modifications: *There are locations in this specification where additional information is required to reflect project region or contract conditions. Please insert the requested information.*

PART 1 – GENERAL

1.1 SUMMARY

Note to specifier: *Remove parts of this work description that do not apply.*

A. The scope of work includes all labor, materials, tools, equipment, facilities, transportation and services necessary for, and incidental to performing all operations in connection with protection of existing trees and other plants as shown on the drawings and as specified herein.

1. Provide preconstruction evaluations
2. Provide tree and plant protection fencing.
3. Provide protection of root zones and above ground tree and plants
4. Provide pruning of existing trees and plants.
5. Coordinate with the requirements of Section Planting Soil for modifications to the soil within the root zone of existing trees and plants.
6. Provide all insect and disease control.
7. Provide maintenance of existing trees and plants including irrigation during the construction period as recommended by the arborist report.
8. Provide maintenance of existing trees and plants including irrigation during the post construction plant maintenance period.
9. Remove tree protection fencing and other protection from around and under trees and plants.
10. Clean up and disposal of all excess and surplus material.

1.2 CONTRACT DOCUMENTS

A. Shall consist of specifications and general conditions and the drawings. The intent of these documents is to include all labor, materials, and services necessary for the proper execution of the work. The documents are to be considered as one. Whatever is called for by any parts shall be as binding as if called for in all parts.

B. It is the intent of this section that the requirements apply to all sections of the project specification such that any subcontractor must comply with the restrictions on work within designated Tree and Plant Protection Areas.

1.3 RELATED DOCUMENTS AND REFERENCES

A. Related Documents:

Note to specifier: *Coordinate this list with the other related specification sections. Add or delete sections as appropriate.*

1. Drawings and general provisions of contract including general and supplementary conditions and Division I specifications apply to work of this section.
2. Section - Planting Soil
3. Section - Irrigation
4. Section - Planting
5. Section - Lawn

B. References: The following specifications and standards of the organizations and documents listed in this paragraph form a part of the specification to the extent required by the references thereto. In the event that the requirements of the following referenced standards and specification conflict with this specification section the requirements of this specification shall prevail. In the event that the

requirements of any of the following referenced standards and specifications conflict with each other the more stringent requirement shall prevail.

1. ANSI A 300 (Part 5) – Standard Practices for Tree, Shrub and other Woody Plant Maintenance, most current editions.
2. Pruning practices shall conform with recommendations “Structural Pruning: A Guide For The Green Industry”; Published by Urban Tree Foundation, Visalia, California; most current edition.
3. Glossary of Arboricultural Terms, International Society of Arboriculture, Champaign Il, most current edition.

1.4 VERIFICATION

A. All scaled dimensions on the drawings are approximate. Before proceeding with any work, the Contractor shall carefully check and verify all dimensions and quantities, and shall immediately inform the Owner’s Representative of any discrepancies between the information on the drawings and the actual conditions, refraining from doing any work in said areas until given approval to do so by the Owner’s Representative.

1.5 PERMITS AND REGULATIONS

A. The Contractor shall obtain and pay for all permits related to this section of the work unless previously excluded under provision of the contract or general conditions. The Contractor shall comply with all laws and ordinances bearing on the operation or conduct of the work as drawn and specified. If the Contractor observes that a conflict exists between permit requirements and the work outlined in the contract documents, the Contractor shall promptly notify the Owner’s Representative in writing including a description of any necessary changes and changes to the contract price resulting from changes in the work.

B. Wherever references are made to standards or codes in accordance with which work is to be performed or tested, the edition or revision of the standards and codes current on the effective date of this contract shall apply, unless otherwise expressly set forth.

C. In case of conflict among any referenced standards or codes or between any referenced standards and codes and the specifications, the more restrictive standard shall apply or Owner’s Representative shall determine which shall govern.

1.6 PROTECTION OF WORK, PROPERTY AND PERSON

A. The Contractor shall protect the work, adjacent property, and the public, and shall be responsible for any damages or injury due to his/her actions.

1.7 CHANGES IN THE WORK

A. The Owner’s Representative may order changes in the work, and the contract sum should be adjusted accordingly. All such orders and adjustments plus claims by the Contractor for extra compensation must be made and approved in writing before executing the work involved.

1.8 CORRECTION OF WORK

A. The Contractor shall re-execute any work that fails to conform to the requirements of the contract and shall remedy defects due to faulty materials or workmanship upon written notice from the Owner’s Representative, at the soonest possible time that can be coordinated with other work and seasonal weather demands**.**

1.9 DEFINITIONS

Note to specifier: *Delete any words below that are not used in the final specification.*

All terms in this specification shall be as defined in the “Glossary of Arboricultural Terms” or as modified below.

A. Owner’s Representative: The person appointed by the Owner to represent their interest in the review

and approval of the work and to serve as the contracting authority with the Contractor. The Owner's Representative may appoint other persons to review and approve any aspects of the work.

B. Reasonable and reasonably: When used in this specification is intended to mean that the conditions cited will not affect the establishment or long term stability, health or growth of the plant. This specification recognizes that plants are not free of defects, and that plant conditions change with time. This specification also recognizes that some decisions cannot be totally based on measured findings and that profession judgment is required. In cases of differing opinion, the Owner's Representative expert shall determine when conditions within the plant are judged as reasonable.

C. Shrub: Woody plants with mature height approximately less than 25 feet.

D. Tree and Plant Protection Area: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and defined by a circle centered on the trunk with each tree with a radius equal to the clown dripline unless otherwise indicated by the owner's representative.

E. Tree: Single and multi-stemmed plants, including palms with anticipated mature height approximately greater than 25 feet or any plant identified on the plans as a tree.

1.10 SUBMITTALS

Note to specifier: *The arborist report, described below is to provide a current assessment of all trees to remain and serve as the basis for determining if trees are damaged. The Contractor is made responsible for the preparation of this report with the Owner's Representative responsible for approval of the report so that both sides of the contract are satisfied that the condition of these trees is accurately reported before any work has started. Add or delete any portions that do not apply.*

A. ARBORIST REPORT: Prior to the start of construction, submit, for approval by the Owner's Representative, the report of a consulting arborist who is a registered Consulting Arborist® (RCA) with American Society of Consulting Arborists or an ISA Board Certified Master Arborist, which details the following information for all trees to remain within the area designated on the drawings as the Tree and Plant Protection Area. The report shall include the following:
   1. A description of each tree to remain indicating its genus and species, condition including any visible damage to the root system or soil within the root zone, tree diameter at breast height (dbh) and approximate height, size and any visible disease, insect infestations and or branch and trunk structural deficiencies.
   2. The report shall note all trees or parts of trees, which are considered a hazard or significant or extreme risk level. Include the International Society of Arboriculture hazard evaluation sheet for each tree, which may reasonably be identified as a potential hazard tree.
   3. Recommendations as to treatment of all insect, disease and structural problems encountered.
   4. Recommendations for fertilizer treatments, if any.
   5. A plan of the site showing the location of all trees included in the report.

B. PRODUCT DATA: Submit manufacturer product data and literature describing all products required by this section to the Owner's Representative for approval. Provide submittal four weeks before the start of any work at the site.

   Note to specifier: *Confirm submittal time is appropriate for project schedule.*

C. QUALIFICATIONS SUBMITTAL: For each applicable person expected to work on the project, provide copies of the qualifications and experience of the Consulting arborist, proof of either the registered Consulting Arborist® (RCA) with American Society of Consulting Arborists or an ISA Board Certified Master Arborist and any required Herbicide/Pesticide license to the Owner's Representative, for review prior to the start of work.

1.11 OBSERVATION OF THE WORK

A. The Owner's Representative may inspect the work at any time.

1.12 PRE-CONSTRUCTION CONFERENCE

A. Schedule a pre - construction meeting with the Owner's Representative at least seven (7) days before beginning work to review any questions the Contractor may have regarding the work, administrative procedures during construction and project work schedule.
   1. The following Contractors shall attend the preconstruction conference:
      a. General Contractor.
      b. Consulting Arborist.
      c. Subcontractor assigned to install Tree and Plant Protection measures.
      d. Earthwork Contractor.
      e. All site utility Contractors that may be required to dig or trench into the soil.
      f. Landscape subcontractor.
      g. Irrigation subcontractor

B. Prior to this meeting, mark all trees and plants to remain and or be removed as described in this specification for review and approval by the Owner's Representative.

1.13 QUALITY ASSURANCE

A. Contractor qualifications:
   1. All pruning, branch tie back, tree removal, root pruning, and fertilizing required by this section shall be performed by or under the direct supervision of ISA Certified Arborist Submit aforementioned individual's qualifications for approval by the Owner's Representative.
   2. All applications of pesticide or herbicide shall be performed by a person maintaining a current state license to apply chemical pesticides valid in the jurisdiction of the project. Submit copies of all required state licensing certificates including applicable chemical applicator licenses.

PART 2 – PRODUCTS

2.1 MULCH

Note to specifier: *Revise this paragraph to reflect regionally available mulch materials or project specific mulch quality or type requirements where appropriate. The coarse grade Mulch specified here is considered superior for its water retention and soil building properties in areas of tree and shrub roots when irrigation is drip, bubblers or flood methods.*

A. Mulch shall be coarse, ground, from tree and woody brush sources. The minimum range of fine particles shall be 3/8 inch or less in size and a maximum size of individual pieces shall be approximately 1 to 1-1/2 inch in diameter and maximum length of approximately 4 to 8 inches. No more that 25% of the total volume shall be fine particles and no more than 20% of total volume be large pieces.
   1. It is understood that Mulch quality will vary significantly from supplier to supplier and region to region. The above requirements may be modified to conform to the source material from locally reliable suppliers as approved by the Owner's Representative.

B. Submit suppliers product data that product meets the requirements and two gallon sample for approval.

2.2 WOOD CHIPS:

Note to specifier**:** *Woodchips if available may be a suitable and more sustainable alternative to other types of Mulch. Consider permitting Mulch or Wood Chips; however be sure to coordinate requirements with the drawings. Remove this paragraph if Wood Chips are not to be permitted.*

A. Wood Chips from an arborist chipping operation with less than 20% by volume green leaves. Chips stockpiled from the tree removal process may be used.

2.3 TREE PROTECTION FENCING:

Note to specifier: *Two fencing options are provided. The more robust chain link fencing is often*

required at urban sites where there are significant conflicts between tree preservation and other work tasks. Amend this specification and the tree protection details to be clear as to the required fencing. Remove the paragraph of the fence type that is not to be used. If both types are to be permitted coordinate with the drawings so that use is correctly identified.

A. PLASTIC MESH FENCE: Heavy - duty orange plastic mesh fencing fabric 48 inches wide. Fencing shall be attached to metal “U” or “T” post driven into the ground of sufficient depth to hold the fabric solidly in place with out sagging. The fabric shall be attached to the post using attachment ties of sufficient number and strength to hold up the fabric without sagging. The Owner’s Representative may request, at any time, additional post, deeper post depths and or additional fabric attachments if the fabric begins to sag, lean or otherwise not present a sufficient barrier to access.

B. CHAIN LINK FENCE: 6 feet tall metal chain link fence set in metal frame panels on movable core drilled concrete blocks of sufficient size to hold the fence erect in areas of existing paving to remain.

C. GATES: For each fence type and in each separate fenced area, provide a minimum of one 3 foot wide gate. Gates shall be lockable. The location of the gates shall be approved by the Owner's Representative.

D. Submit suppliers product data that product meets the requirements for approval.

2.4 TREE PROTECTION SIGN:

A. Heavy-duty cardboard signs, 8.5 inches x 11 inches, white colored background with black 2 inch high or larger letters block letters. The signs shall be attached to the tree protection fence every 50 feet o.c. The tree protection sign shall read “Tree and Plant Protection Area- Keep Out”.

2.5 TREE GROWTH REGULATOR (TGR)

A. Cambistat 25C.

B. Submit suppliers product data that product meets the requirements for approval.

2.6 MATTING

A. Matting for vehicle and work protection shall be heavy duty matting designed for vehicle loading over tree roots, Alturnamats as manufactured by Alturnamats, Inc. Franklin, PA 16323 or approved equal.

B. Submit suppliers product data that product meets the requirements for approval.

2.7 GEOGRID

A. Geogrid shall be woven polyester fabric with PVC coating, Uni-axial or biaxial geogrid, inert to biological degradation, resistant to naturally occurring chemicals, alkalis, acids.
   1. Geogrid shall be Miragrid 2XT as manufactured by Ten Cate Nicolon, Norcross, GA. http://www.tencate.com or approved equal.

B. Submit suppliers product data that product meets the requirements for approval.

2.8 FILTER FABRIC

A. Filter Fabric shall be nonwoven polypropylene fibers, inert to biological degradation and resistant of naturally occurring chemicals, alkalis and acids.
   1. Mirafi 135 N as manufactured by Ten Cate Nicolon, Norcross, GA. http://www.tencate.com or approved equal.

B. Submit suppliers product data that product meets the requirements for approval.

PART 3 – EXECUTION

3.1 SITE EXAMINATION

A. Examine the site, tree, plant and soil conditions. Notify the Owner’s Representative in writing of any conditions that may impact the successful Tree and Plant Protections that is the intent of this section.

3.2 COORDINATION WITH PROJECT WORK

A. The Contractor shall coordinate with all other work that may impact the completion of the work.

B. Prior to the start of Work, prepare a detailed schedule of the work for coordination with other trades.

C. Coordinate the relocation of any irrigation lines currently present on the irrigation plan, heads or the conduits of other utility lines or structures that are in conflict with tree locations. Root balls shall not be altered to fit around lines. Notify the Owner's Representative of any conflicts encountered.

3.3 TREE AND PLANT PROTECTION AREA: The Tree and Plant Protection Area is defined as all areas indicated on the tree protection plan. Where no limit of the Tree and Plant Protection area is defined on the drawings, the limit shall be the drip line (outer edge of the branch crown) of each tree.

3.4 PREPARATION:

A. Prior to the preconstruction meeting, layout the limits of the Tree and Plant Protection Area and then alignments of required Tree and Plant Protection Fencing and root pruning. Obtain the Owner's Representative's approval of the limits of the protection area and the alignment of all fencing and root pruning.

B. Flag all trees and shrubs to be removed by wrapping orange plastic ribbon around the trunk and obtain the Owner's Representative's approval of all trees and shrubs to be removed prior to the start of tree and shrub removal. After approval, mark all trees and shrubs to be removed with orange paint in a band completely around the base of the tree or shrub 4.5 feet above the ground.

C. Flag all trees and shrubs to remain with white plastic ribbon tied completely around the trunk or each tree and on a prominent branch for each shrub. Obtain the Owner's Representative's approval of all trees and shrubs to be remain prior to the start of tree and shrub removal.

D. Prior to any construction activity at the site including utility work, grading, storage of materials, or installation of temporary construction facilities, install all tree protection fencing, Filter Fabric, silt fence, tree protection signs, Geogrid, Mulch and or Wood Chips as shown on the drawings.

3.5 SOIL MOISTURE

A. Volumetric soil moisture level, in all soils within the Tree and Plant Protection Area shall be maintained above permanent wilt point to a depth of at least 8 inches. No soil work or other activity shall be permitted within the Tree and Plant Protection Area when the volumetric soil moisture is above field capacity. The permanent wilt point and field capacity for each type of soil texture shall be defined as follows (numbers indicate percentage volumetric soil moisture).

Soil type	**Permanent wilt point v/v**	**Field capacity v/v**
Sand, Loamy sand, Sandy loam	5-8%	12-18%
Loam, Sandy clay, Sandy clay loam	14-25%	27-36%
Clay loam, Silt loam	11-22%	31-36%
Silty clay, Silty clay loam	22-27%	38-41%

1. Volumetric soil moisture shall be measured with a digital, electric conductivity meter. The meter shall be the Digital Soil Moisture Meter, DSMM500 by General Specialty Tools and Instruments, or approved equivalent meter.

B. The Contractor shall confirm the soil moisture levels with a moisture meter. If the moisture is too high, suspend operations until the soil moisture drains to below field capacity.

3.6 ROOT PRUNING:

A. Prior to any excavating into the existing soil grade within 25 feet of the limit of the Tree and Plant Protection Area or trees to remain, root prune all existing trees to a depth of 24 inches below existing grade in alignments following the edges of the Tree and Plant Protection Area or as directed by the

Owner’s Representative. Root pruning shall be in conformance with ANSI A300 (part 8) latest edition.

1. Using a rock saw, chain trencher or similar trenching device, make a vertical cut within 2 feet of the limit of grading.
2. After completion of the cut, make clean cuts with a lopper, saw or pruner to remove all torn root ends on the tree side of the excavation, and backfill the trench immediately with existing soil, filling all voids.

3.7 INSTALLATION OF GEOGRIDS, FILTER FABRIC, MATTING, WOOD CHIPS AND OR MULCH

A. Install Geogrids, Filter Fabric, matting, Wood Chips and or Mulch in areas and depths shown on the plans and details or as directed by the Owner's representative. In general it is the intent of this specification to provide the following levels of protection:
   1. All areas within the Tree and Plant Protection area provide a minimum of 5 inches of Wood Chips or Mulch.
   2. Areas where foot traffic or storage of lightweight materials is anticipated to be unavoidable provide a layer of Filter Fabric under the 5 inches of Wood Chips or Mulch.
   3. Areas where occasional light vehicle traffic is anticipated to be unavoidable provide a layer of Geogrids under 8 inches of Wood Chips or Mulch.
   4. Areas where heavy vehicle traffic is unavoidable provide a layer of Geogrids under 8 - 12 inches of Wood Chips or Mulch and a layer of matting over the Wood Chips or Mulch.

B. The Owner's Representative shall approve the appropriate level of protection.

C. In the above requirements, light vehicle is defined as a track skid steer with a ground pressure of 4 psi or lighter. A heavy vehicle is any vehicle with a tire or track pressure of greater than 4 psi. Lightweight materials are any packaged materials that can be physically moved by hand into the location. Bulk materials such as soil, or aggregate shall never be stored within the Tree and Plant Protection Area.

3.8 PROTECTION:

A. Protect the Tree and Plant Protection Area at all times from compaction of the soil; damage of any kind to trunks, bark, branches, leaves and roots of all plants; and contamination of the soil, bark or leaves with construction materials, debris, silt, fuels, oils, and any chemicals substance. Notify the Owner’s Representative of any spills, compaction or damage and take corrective action immediately using methods approved by the Owner’s Representative.

3.9 GENERAL REQUIREMENTS AND LIMITATIONS FOR OPERATIONS WITHIN THE TREE AND PLANT PROTECTION AREA:

A. The Contractor shall not engage in any construction activity within the Tree and Plant Protection Area without the approval of the Owner's Representative including: operating, moving or storing equipment; storing supplies or materials; locating temporary facilities including trailers or portable toilets and shall not permit employees to traverse the area to access adjacent areas of the project or use the area for lunch or any other work breaks. Permitted activity, if any, within the Tree and Plant Protection Area maybe indicated on the drawings along with any required remedial activity as listed below.

B. In the event that construction activity is unavoidable within the Tree and Plant Protection Area, notify the Owner’s Representative and submit a detailed written plan of action for approval. The plan shall include: a statement detailing the reason for the activity including why other areas are not suited; a description of the proposed activity; the time period for the activity, and a list of remedial actions that will reduce the impact on the Tree and Plant Protection Area from the activity. Remedial actions shall include but shall not be limited to the following:
   1. In general, demolition and excavation within the drip line of trees and shrubs shall proceed with extreme care either by the use of hand tools, directional boring and or Air Knife excavation where indicated or with other low impact equipment that will not cause damage to the tree, roots or soil.
   2. When encountered, exposed roots, 1 inches and larger in diameter shall be worked around in a manner that does not break the outer layer of the root surface (bark). These roots shall be

covered in Wood Chips and shall be maintained above permanent wilt point at all times. Roots one inch and larger in diameter shall not be cut with out the approval of the owners representative. Excavation shall be tunneled under these roots without cutting them. In the areas where roots are encountered, work shall be performed and scheduled to close excavations as quickly as possible over exposed roots.

3. Tree branches that interfere with the construction may be tied back or pruned to clear only to the point necessary to complete the work. Other branches shall only be removed when specifically indicated by the Owner's Representative. Tying back or trimming of all branches and the cutting of roots shall be in accordance with accepted arboricultural practices (ANSI A300, part 8) and be performed under supervision of the arborist.
4. Matting: Install temporary matting over the Wood Chips or Mulch to the extent indicated. Do not permit foot traffic, scaffolding or the storage of materials within the Tree and Plant Protection Area to occur off of the temporary matting.
5. Trunk Protection: Protect the trunk of each tree to remain by covering it with a ring of 8 foot long 2 inch x 6 - inch planks loosely banded onto the tree with 3 steel bands. Staple the bands to the planks as necessary to hold them securely in place. Trunk protection must by kept in place no longer than 12 months. If construction requires work near a particular tree to continue longer than 12 months, the steel bands shall be inspected every six months and loosened if they are found to have become tight.
6. Air Excavation Tool: If excavation for footings or utilities is required within the Tree and Plant Protection Area, air excavation tool techniques shall be used where practical or as designed on the drawings.
    a. Remove the Wood Chips from an area approximately 18 inches beyond the limits of the hole or trench to be excavated. Cover the Wood Chips for a distance of not less than 15 feet around the limit of the excavation area with Filter Fabric or plastic sheeting to protect the Wood Chips from silt. Mound the Wood Chips so that the plastic slopes towards the excavation.
    b. Using a sprinkler or soaker hose, apply water slowly to the area of the excavation for a period of at least 4 hours, approximately 12 hours prior to the work so that the ground water level is at or near field capacity at the beginning of the work. For excavations that go beyond the damp soil, rewet the soil as necessary to keep soil moisture near field capacity.
    c. Using an air excavation tool specifically designed and manufactured for the intended purpose, and at pressures recommended by the manufacturer of the equipment, fracture the existing soil to the shape and the depths required. Work at rates and using techniques that do not harm tree roots. Air pressure shall be a maximum of 90-100 psi.
        1.) The air excavation tool shall be "Air-Spade" as manufactured by Concept Engineering Group, Inc., Verona, PA (412) 826-8800, or Air Knife as manufactured by Easy Use Air Tools, Inc. Allison Park, Pa (866) 328-5723 or approved equal.
    d. Using a commercial, high-powered vacuum truck if required, remove the soil from the excavation produced by the Air Knife excavation. The vacuum truck should generally operate simultaneously with the hose operator, such that the soil produced is picked up from the excavation hole, and the exposed roots can be observed and not damaged by the ongoing operation. Do not drive the vacuum truck into the Tree and Plant Protection Area unless the area is protected from compaction as approved in advance by the Owner's Representative.
    e. Remove all excavated soil and excavated Wood Chips, and contaminated soil at the end of the excavation.
    f. Schedule the work so that foundations or utility work is completed immediately after the excavation. Do not let the roots dry out. Mist the roots several times during the day. If the excavated area must remain open over night, mist the roots and cover the excavation with black plastic.
    g. Dispose of all soil in a manner that meets local laws and regulations.
    h. Restore soil within the trench as soon as the work is completed. Utilize soil of similar texture to the removed soil and lightly compact with hand tools. Leave soil mounded over the trench to a height of approximately 10% of the trench depth to account for settlement.
    i. Restore any Geogrids, Filter Fabric, Wood Chips or Mulch and or matting that was previously

required for the area.

3.10 TREE REMOVAL:

A. Remove all trees indicated by the drawings and specifications, as requiring removal, in a manner that will not damage adjacent trees or structures or compacts the soil.

B. Remove trees that are adjacent to trees or structures to remain, in sections, to limit the opportunity of damage to adjacent crowns, trunks, ground plane elements and structures.

C. Do not drop trees with a single cut unless the tree will fall in an area not included in the Tree and Plant Protection Area. No tree to be removed within 50 feet of the Tree and Plant Protection Area shall be pushed over or up-rooted using a piece of grading equipment.

D. Protect adjacent paving, soil, trees, shrubs, ground cover plantings and understory plants to remain from damage during all tree removal operations, and from construction operations. Protection shall include the root system, trunk, limbs, and crown from breakage or scarring, and the soil from compaction.

E. Remove stumps and immediate root plate from existing trees to be removed. Grind trunk bases and large buttress roots to a depth of the largest buttress root or at least 18 inches below the top most roots which ever is less and over the area of three times the diameter of the trunk (DBH).
   1. For trees where the stump will fall under new paved areas, grind roots to a total depth of 18 inches below the existing grade. If the sides of the stump hole still have greater than approximately 20% wood visible, continue grinding operation deeper and or wider until the resulting hole has less than 20% wood. Remove all wood chips produced by the grinding operation and back fill in 8 inch layers with controlled fill of a quality acceptable to the site engineer for fill material under structures, compacted to 95% of the maximum dry density standard proctor. The Owner’s Representative shall approve each hole at the end of the grinding operation.
   2. In areas where the tree location is to be a planting bed or lawn, remove all woodchips and backfill stump holes with planting soil as defined in Specification Section Planting Soil, in maximum of 12 inch layers and compact to 80 - 85% of the maximum dry density standard proctor.

3.11 PRUNING:

A. Within six months of the estimated date of substantial completion, prune all dead or hazardous branches larger than 2 inch in diameter from all trees to remain.

B. Implement all pruning recommendations found in the arborist report.

C. Prune any low, hanging branches and vines from existing trees and shrubs that overhang walks, streets and drives, or parking areas as follows:
   1. Walks - within 8 feet vertically of the proposed walk elevation.
   2. Parking areas - within 12 feet vertically of the proposed parking surface elevation.
   3. Streets and drives - within 14 feet vertically of the proposed driving surface elevation.

D. All pruning shall be done in accordance with ANSI A300 (part 1), ISA BMP Tree Pruning (latest edition, and the "Structural Pruning: A Guide for the Green Industry", Edward Gilman, Brian Kempf, Nelda Matheny and Jim Clark, 2013 Urban Tree Foundation, Visalia CA.

E. Perform other pruning task as indicated on the drawings or requested by the Owner's Representative.

F. Where tree specific disease vectors require, sterilize all pruning tools between the work in individual trees.

3.12 TREE GROWTH REGULATOR INJECTION (TGR)

Note to specifier: *Confirm that Tree Growth Regulator is appropriate for the project. If not remove this paragraph and the TGR product in Part 2. If appropriate, be sure that the specific trees to be treated are labeled on the Tree and Plant Protection Plan. There is little data on the effectiveness of*

TGR treatments. Use you own judgment on including it in the requirements.

A. At the start of the construction contract period, treat all trees, indicated on the Plan, with Tree Growth Regulator at recommended rates, time of year and methods indicated by the product distributor.

3.13 WATERING

A. The Contractor shall be fully responsible to ensure that adequate water is provided to all plants to be preserved during the entire construction period. Adequate water is defined to be maintaining soil moisture above the permanent wilt point to a depth of 8 inches or greater.

B. The Contractor shall adjust the automatic irrigation system, if available, and apply additional water, using hoses or water tanks as required.

C. Periodically test the moisture content in the soil within the root zone to determine the water content.

3.14 WEED REMOVAL

A. During the construction period, control any plants that seed in and around the fenced Tree and Plant Protection area at least three times a year.
   1. All plants that are not shown on the planting plan or on the Tree and Plant Protection Plan to remain shall be considered as weeds.

B. At the end of the construction period provide one final weeding of the Tree and Plant Protection Area.

3.15 INSECT AND DISEASE CONTROL

A. Monitor all plants to remain for disease and insect infestations during the entire construction period. Provide all disease and insect control required to keep the plants in a healthy state using the principles of Integrated Plant Management (IPM). All pesticides shall be applied by a certified pesticide applicator.

3.16 CLEAN-UP

A. During tree and plant protection work, keep the site free of trash, pavements reasonably clean and work area in an orderly condition at the end of each day. Remove trash and debris in containers from the site no less than once a week.
   1. Immediately clean up any spilled or tracked soil, fuel, oil, trash or debris deposited by the Contractor from all surfaces within the project or on public right of ways and neighboring property.

B. Once tree protection work is complete, wash all soil from pavements and other structures. Ensure that Mulch is confined to planting beds.

C. Make all repairs to grades, ruts, and damage to the work or other work at the site.

D. Remove and dispose of all excess Mulch, Wood Chips, packaging, and other material brought to the site by the Contractor.

3.17 REMOVAL OF FENCING AND OTHER TREE AND PLANT PROTECTION

A. At the end of the construction period or when requested by the Owner's Representative remove all fencing, Wood Chips or Mulch, Geogrids and Filter Fabric, trunk protection and or any other Tree and Plant Protection material.

3.18 DAMAGE OR LOSS TO EXISTING PLANTS TO REMAIN

Note to specifier: *This clause is not written to cover high value heritage trees. A specification to address high value heritage trees should be added here if any exist on the project.*

A. Any trees or plants designated to remain and which are damaged by the Contractor shall be replaced in kind by the Contractor at their own expense. Trees shall be replaced with a tree of similar species and of equal size or 6 inch caliper which ever is less. Shrubs shall be replaced with a plant of similar species and equal size or the largest size plants reasonably available which ever is less. Where replacement plants are to be less than the size of the plant that is damaged, the Owner's

Representative shall approve the size and quality of the replacement plant.

1. All trees and plants shall be installed per the requirements of Specification Section Planting.

B. Plants that are damaged shall be considered as requiring replacement or appraisal in the event that the damage affects more than 25 % of the crown, 25% of the trunk circumference, or root protection area, or the tree is damaged in such a manner that the tree could develop into a potential hazard. Trees and shrubs to be replaced shall be removed by the Contractor at his own expense.
   1. The Owner's Representative may engage an independent arborist to assess any tree or plant that appears to have been damaged to determine their health or condition.

C. Any tree that is determined to be dead, damaged or potentially hazardous by the Owner's arborist and upon the request of the Owner's Representative shall be immediately removed by the Contractor at no additional expense to the owner. Tree removal shall include all clean up of all wood parts and grinding of the stump to a depth sufficient to plant the replacement tree or plant, removal of all chips from the stump site and filling the resulting hole with topsoil.

D. Any remedial work on damaged existing plants recommended by the consulting arborist shall be completed by the Contractor at no cost to the owner. Remedial work shall include but is not limited to: soil compaction remediation and vertical mulching, pruning and or cabling, insect and disease control including injections, compensatory watering, additional mulching, and could include application tree growth regulators (TGR).

E. Remedial work may extend up to two years following the completion of construction to allow for any requirements of multiple applications or the need to undertake applications at required seasons of the year.

END OF SECTION 015639

SECTION 02910 - TREE PRUNING AND REMOVAL

1.0 SCOPE OF WORK

1.1 The work under this section is as shown on the drawings and/or in schedules and shall include furnishing all materials, labor, equipment, and services necessary to complete the following:

1.1.4 Selective pruning of marked trees by or under the direction of a ISA certified arborist.

1.1.5 Removal of marked trees and stumps.

2.0 RELATED DOCUMENTS

2.1 The General Provisions of the Contract, including General Conditions, Supplemental General Conditions, and Special Conditions, apply to work specified herein.

3.0 INSURANCE

3.1 The accepted contractor shall have, for the life of this contract, such insurance as will protect the contractor and indemnify the City of Zanesville from any claims set forth below which may arise out of, or result from, the Contractor's operations under the Contract, whether such operations are performed by himself, by any approved subcontractor, or by anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable.

3.1.1 Claims under workers compensations, disability benefits, or other employee benefit acts.

3.1.2 Claims for damages because of bodily injury, occupational illness, or death of an employee.

3.1.3 Claims for damages because of bodily injury, illness, or death of any person other than an employee.

3.1.4 Claims for damages because of injury to or destruction of property, including loss of use resulting there from.

3.1.5 Amount of coverage for each of the above types of claims shall be as follows:

Workers Compensation	Statutory
Liability	$500,000.00

4.0 SUPERVISION

4.1 Contractor shall consult with the Superintendent of Parks and Cemeteries concerning scheduling and details of all work. Contractor shall have a competent person in charge of this work at all times.

5.0 OPERATIONS

5.1 TRAFFIC CONTROL: Traffic control shall be the total responsibility of the Contractor and shall be coordinated with the proper authority (Public Safety Department). The Contractor shall be solely responsible for pedestrian and vehicular safety and control within the work site, and shall provide all necessary warning devices, barricades, and ground personnel needed to give safety, protection, and warning to all persons and vehicles in the area. Blocking of public streets shall not be permitted without consent of the Public Safety Department and the issuance of a barricade permit. Traffic control shall be accomplished in conformance with applicable state, county and city codes.

5.2 TREE DAMAGE: Climbing irons or spikes shall not be used on any tree unless such tree is being removed. Any tree damage shall be immediately repaired by the contractor at his expense, and to the satisfaction of the Landscape Architect. Trees damaged beyond repair as judged by the Landscape Architect are to be removed and replaced to the satisfaction of the City of Zanesville and at no cost to the City.

5.3 PRUNING: All pruning shall conform to the latest revision of the ANSI A300, *Tree Shrub and Other Woody Plant Maintenance* and the Standards of the National Arborist Association for the Pruning of Shade Trees. Copies of said standards are available and may be incorporated herein and made a part hereof as if fully rewritten.

5.3.1 Pruning objectives shall be outlined per tree and pruning will consist of crown cleaning, crown thinning or crown restoration. Topping or heading is not permissible and is grounds for revoking future bids. In addition, all pruning shall include lifting to provide eight (8) foot clearance over sidewalks and thirteen foot (13') clearance over streets, unless otherwise noted.

5.3.2 All pruning cuts shall be made at nodes or crotches, preserving the branch collar and leaving no stubs. The overall shape of the tree shall be retained and enhanced as much as is practical.

5.3.3 Use of bucket trucks shall not excuse Contractor from climbing trees to reach portions inaccessible to buckets. Climbing spikes are forbidden from use.

5.3.4 If, while pruning, the Contractor discovers a problem which suggests a tree should be removed, the Contractor shall notify the Landscape Architect and shall wait for a decision before continuing to work on that tree.

5.4 UTILITY AGENCIES: Utility agencies shall be contacted by the Contractor any time assistance is needed to work safely around overhead or underground installations.

5.0 CLEANUP AND PROTECTION

5.1 Contractor shall maintain the site in a safe and clean condition throughout this Contract. Clean up shall be completed within two hours after debris has been placed

around the site of each tree requiring removal or pruning unless otherwise agreed upon prior.

5.2 All excess excavated material, debris, or foreign material of any kind shall be removed from the site and disposed of according to State and Federal regulation, leaving the property in a neat and clean condition. Proof of proper waste disposal is required.

5.4 Contractor shall protect all landscape work and materials from damage due to planting operations, other trades, and trespassers.

5.5 Any and all damages done by the Contractor to any person or property, public or private, shall be the total responsibility of the Contractor, and shall be repaired or compensated for by the Contractor at no cost to the City of Zanesville and to the satisfaction of the injured party and the City. All damages and injuries shall be reported to the Superintendent of Parks and Cemeteries within twenty-four (24) hours of occurrence.

5.6 The Contractor shall be responsible for the repair of any damage to lawns, paved areas, roads, walks, buildings, and all utilities which may result from this work and such repairs shall be made swiftly in a thorough and workmanlike manner, with minimum inconvenience to the City of Zanesville and users of the site.

5.7 Where lawn areas have been damaged, all ruts and depressions shall be cultivated to a minimum depth of four inches (4”), filled with topsoil, and settled to surrounding finish grade and reseeded or sodded upon completion of planting and plant replacement operations.

END OF SECTION

SAMPLE TREE PLANTING SPECIFICATIONS
Endorsed by
Ohio Nursery and Landscape Association and ODNR Division of Forestry

Purpose: To increase transplanting success by providing municipalities with the most current and acceptable tree planting procedures. This information, prepared in specification format, will enable communities to convey specific requirements to contractors, developers, and/or volunteers. It contains the fundamental elements necessary to ensure transplanting success, and is intended to be a template that can be expanded to address other project issues.

Endorsement: This information is approved and endorsed by the Ohio Nursery and Landscape Association, and the Ohio Department of Natural Resources Division of Forestry.

Assumptions: All plant material complies with American Standard for Nursery Stock ANZI Z60.1. All plant material has been selected based on site conditions and constraints.

Planting Balled and Burlapped Trees:

1. If not readily apparent, locate root flare by removing twine, burlap, and excess soil.
2. Dig tree hole at least two times wider than the tree ball, with sides sloped to an unexcavated or firm base. Dig hole to a depth so the located root flare, at the first order lateral root, will be at finished grade.
3. Lifting only from the bottom of the root ball, position tree on firm pad so that it is straight and top of root flare is level with the surrounding soil.
4. Remove all twine from the root ball. If present, remove and discard at least the top one half of the wire basket. Burlap shall be removed from the top to a point halfway down the root ball and discarded.
5. With clean, sharp pruning tools, prune off any secondary/adventitious, girdling, and potential girdling roots.
6. Backfill planting hole with existing unamended soil, and thoroughly water.
7. Mulch the entire planting surface with composted bark applied no less than two inches (2") deep and no more than three inches (3") deep, leaving three inches (3”) adjacent to the tree trunk free of mulch.

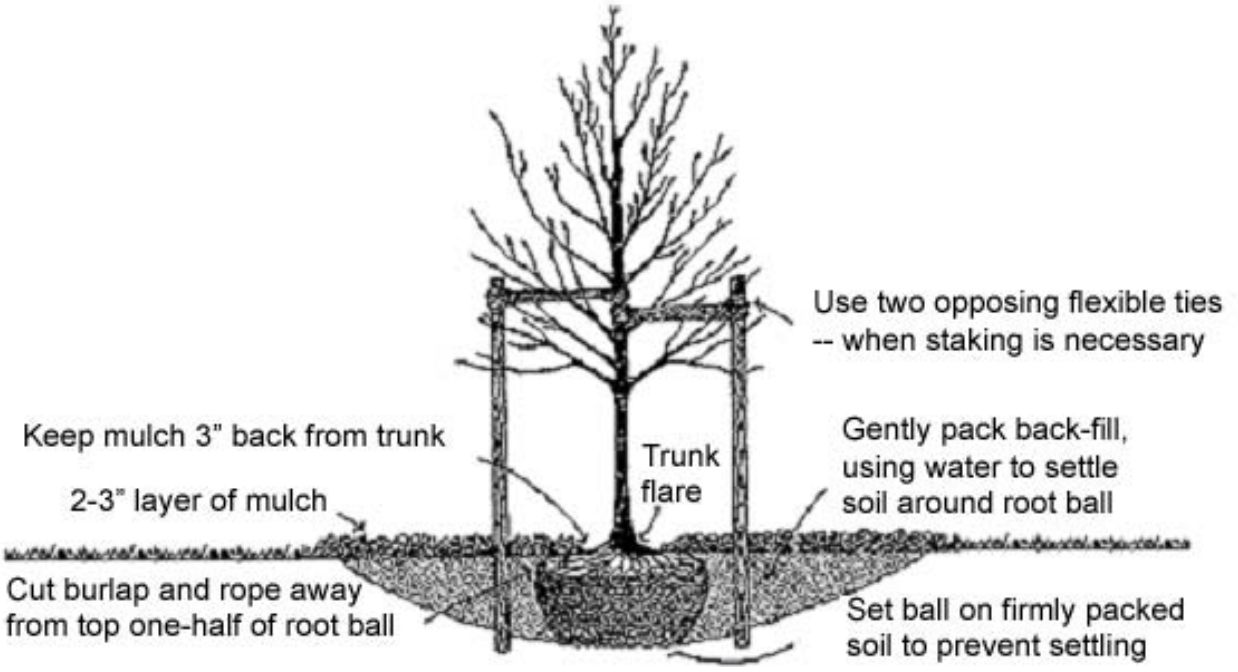
Planting Containerized or Grow Bag Trees:

1. If not readily apparent, locate root flare by removing excess soil.
2. Dig tree hole at least two times wider than the tree ball with sloping sides. Dig hole to a depth so the located root flare, at the first order lateral root, will be at finished grade.
3. Create a firm soil mound at the bottom of the planting hole.
4. Remove tree from container or grow bag and completely tease apart root system, repositioning any girdling or potentially girdling roots.
5. Spread roots over soil mound so that root flare is at finished grade and the tree is straight.
6. With clean, sharp pruning tools, prune off any secondary/adventitious, girdling, and potential girdling roots.
7. Backfill planting hole with existing unamended soil and thoroughly water.
8. Mulch the entire planting surface with composted bark applied no less than two inches (2") deep and no more than three inches (3") deep, leaving three inches (3”) adjacent to the tree trunk free of mulch.

Planting Bare Root Trees:

1. Dig tree hole at least two times wider than the tree ball with sloping sides. Dig hole to a depth so the located root flare, at the first order lateral root, will be at finished grade.
2. Create a firm soil mound at the bottom of the planting hole.
3. Spread roots over soil mound so that root flare is at finished grade and the tree is straight.
4. With clean, sharp pruning tools, prune off any secondary/adventitious, girdling, and potential girdling roots.
5. Backfill planting hole with existing unamended soil and thoroughly water.

6. Mulch the entire planting surface with composted bark applied no less than two inches (2") deep and no more than three inches (3") deep, leaving three inches (3”) adjacent to the tree trunk free of mulch.



THE PERILS OF PLANTING TREES TOO DEEPLY

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Stephanie Miller and Drew Todd
Ohio Department of Natural Resources

Trees are the basic building blocks that urban foresters use to enhance the livability of their communities. Foresters spend a great deal of time selecting the appropriate plants, preparing the planting site, properly installing the tree, and providing appropriate after care. This is done to ensure the rapid establishment, survival, and growth of the community's investment. Much has been written about each of these four critical elements, and failure in any single area may adversely affect the success of the planting.

This article will focus on one element of the planting process that is becoming far too familiar in Ohio – the problem of *planting trees too deeply*. Although not readily apparent at the time of installation, the long-term affects of improperly placing the root system in the planting hole is substantial.

What is the problem?

There are both short and long-term problems associated with deeply planted roots. When buried too deeply, tree roots decline in health and condition. Poor tree health results in reduced growth rate, atypical leaf size and color, increased disease susceptibility, and reduced cold hardiness. Trees in poor condition exhibit decay, cracks, and excessive deadwood. Sometimes trees show signs of stress within the first year of planting, but it usually takes several years for the problem to rear its ugly head.

Downtown trees in Van Wert, Ohio planted too deeply and with burlap survived less than 5 years.

How do tree roots function?

Tree roots have four primary functions:

- Absorbing water and nutrients
- Anchoring the trunk
- Storing food reserves
- Chemical production

The part of a plant where the stem and root system meet is called the “root collar” which has a “flare” where it transitions between the stem wood and the roots. Four to eleven large roots called “transport roots” radiate from the root collar and function to move water and minerals that are absorbed by smaller roots. Transport roots contain cells that synthesize a variety of substances essential to the normal functioning of the top of the tree as well as help to stabilize the tree. The smaller roots called “absorbing” or “feeder roots” emanate from the transport roots. They have a huge surface area and function to absorb water and minerals from the soil in addition to providing sites for chemical synthesis.

For tree roots to grow vigorously, they require *water*, *oxygen* and *warmth*. An oxygen level of 25% of the soil volume is considered good for root development. At a 5% oxygen level growth stops, and at 2% roots decline and die.

What exactly happens to cause these adverse reactions?

New roots growing out of buried trunk. Root flare is approximately 6 inches below soil line.

Lack of Water & Oxygen: Tree roots naturally grow quite shallowly in the soil profile. When root systems are buried, less soil oxygen and water is available. As a survival response, trees work to get roots closer to the soil surface where there is a more reliable source of both. The energy that a newly transplanted tree should use to overcome normal transplant stress is instead used just to survive. The tree expends its energy either by forcing its roots to grow upward or by creating totally new roots from dormant buds on the buried trunk. Some plants survive being buried too deeply and live normal lives after developing a functional root system. Others begin a long, slow decline of health resulting in either premature death or sudden failure during wind or ice storms.

Reduced Root Mass: Most trees today are dug with mechanical tree spades. Tree spades, by design, extract soil balls that are wider at the top than at the bottom. The widest part of

the ball contains the highest proportion of the volume of the ball and should have the highest proportion of roots. Unfortunately, if the nursery liner's root collar is planted too deeply, the tree spade will be unable to reach a large portion of roots. Although the soil ball may be the correct size for the tree being moved, the actual root mass may be one-half or less of what it should be. Trees with undersized root systems that are planted too deep rarely survive.

(Left) Tree Spade; (Above) Large percentage of roots removed by tree spade on deeply planted tree.

To put it into perspective, by volume, 90 to 95% of a field-grown tree's root system is removed during normal transplanting procedures. Fortunately, by weight, approximately 80% of the root system is left. This is where the bulk of the stored food reserves occur. Therefore, the key to survival is for the tree to use these carbohydrates to regenerate a functional root system as quickly as possible.

Disease Susceptibility: Deeply planted trees often succumb to secondary problems not commonly associated with healthy root systems. Many of these problems, such as root rots, are related to water and oxygen availability. As a general rule, healthy organisms are less susceptible to pathogens than stressed organisms.

(Right) Bur oak was an excellent choice for this site, but has suffered for years due to planting depth

Stem-girdling Roots: Another adverse affect related to burying root collar flares is a condition termed stem-girdling roots (SGRs). Roots that grow up toward the soil surface often wrap around or run close to the buried stems. As these roots enlarge over the years, along with normal growth of the buried stems, roots begin to compress and weaken the stem tissues. This creates a weakened point in the stem, along with a general

(Above) This tiny root looks harmless now…(Below) 10 to 15 years later it will likely cause this.

decline of the root system. Over time, the root system declines in health along with a corresponding decline in the canopy.

The compressed areas of the stems are weak points and are frequently sites of failure during wind or ice storms. For instance, following catastrophic windstorms in Minnesota in 1998, storm damage research showed that 73.3% of the lindens that were lost actually broke at compression points from SGRs, and most broke below ground.

How deep is too deep?

Based on research conducted by the University of Minnesota's Forest Resource Department, as little as one inch of soil over the root collar flare can disguise stem-girdling roots until it is too late. With Sugar Maple, the significant decline in health began when the soil depth was four inches. A survey of 302 street trees found that buried root systems of street trees were "alarmingly common". They found that the transport roots of all studied species were buried with one to 11 inches of soil. When they rated the condition of these trees, they found a direct relationship between declining tree condition and depth of soil over the roots. In other words, "as main order roots were covered by more and more inches of soil, the condition of all three tree species (that they studied) further declined". They concluded that there is no biological reason to bury root collar flares.

How do you determine if a tree is planted too deeply?

Identifying whether a trees is planted too deeply is fairly simple. One of the first things to look for is whether the trunk of the tree is going straight into the ground – like a pole – or whether it has some flare at the base. Another good clue is to rock the tree a bit. If it simply pushes soil aside and creates a larger hole in the ground, then it is probably buried too deeply.

Digging is often necessary to find the root flare. Metal hand spades can cut into the tree, but plastic dandelion pullers and hand spades work well for small-scale root excavation. An Air Spade®, is also a wonderful tool for diagnosing root-related problems.

Air Spade ® uses high-pressure air to remove soil without damaging roots.

How do tree roots get buried?

Sometimes it happens before the trees get to the planting site, sometimes at the time of planting. There are two nursery practices that can result in inadequate roots in the upper part of the ball: "hilling up" around the base of the tree and setting liners deep into the planting beds. The practice of "hilling up" soil around the base of trees was begun many years ago as a method of weed control. When trees were dug by hand, experienced diggers knew that they had to take the time to move the "hilled up" soil away from the base of the tree before digging it. With today's mechanized tree digging, this may no longer be done.

Another nursery practice is to set out liners up to 12 inches deep in the beds to "stabilize" barefoot tree liners and help reduce graft union breakage. Because of the better-structured and textured nursery soils, periodic fertilization and irrigation, and the relatively short time the trees spends in the nursery, this technique is usually harmless. Unfortunately, it becomes an arboricultural problem if transferred to our city streets.

The planting process is another opportunity for problems to occur. It has been a common and acceptable practice to plant with the tree's soil line level with the site's soil line. But, if there is excess soil over the root system when the tree is dug and balled at the nursery, then anyone following the normally accepted installation practice could actually be planting the root system several inches too deep. It only takes a few minutes to find the root flare prior to planting. It is far more efficient to check for it ahead of time and adjust the soil ball than it is to go back later to correct it.

Improper planting is still another means of getting roots too deep in the soil profile. Digging the hole too deeply and then failing to firm the backfill may cause the tree to sink and settle below proper depth. Once again, make sure the root collar flare is visible. If not, reset the tree to the proper depth.

A common practice, often referred to as *volcano* or *teepee* mulching, also contributes to this problem. In addition to subjecting trees to the problems associated with planting too deeply, heat from the composting mulch can literally cook a tree's trunk. Two to three inches of wood chips is the optimum depth to mulch and keep it an inch or two away from the trunk.

(Left)
Volcano Mulching
(Right)
Proper Mulching

How do you avoid planting trees too deeply?

The first step to prevent trees from being planted too deeply is to communicate with your nursery supplier and landscape contractor. Clearly explain your expectations for the stock you want to buy and the how you want it planted. Next, write understandable and precise specifications for the purchase and installation of your plant material. One example is the Village of Canal Winchester's Street Tree Planting Specifications: *Root balls and burlap – All trees balled and burlapped with ball shape and size conforming to ANSI-Z60.1-1990 standards. Root flare will be easily visible on root balls.* Several Northwest Ohio communities have changed their planting specifications to include the clause: *The tree shall be set straight in the hole and with the top of the root flare level with the surrounding soil.* Inspect all incoming trees to make sure they meet your requirements, as well as perform random inspections of their installation. Finally, contract with reputable, qualified, and ethical firms and individuals.

Are we alone with this problem?

This issue is not limited to Ohio. Ralph Sievert, Minneapolis' City Forester, and the Minnesota Chapter of the International Society of Arboriculture have also been dealing with this problem. According to Mr. Sievert, they have rejected some trees that had 16 inches of soil over the root collar flare. Because of this continuing problem, Minneapolis is now purchasing almost 90% of their trees as bare root. When they do plant B&B stock, they probe each plant for the root collar flare using a surveyors pin and shave off any excess soil as needed. "Of course, this doesn't help the fact that you now have far fewer roots in the ball", states Sievert.

Deeply planted tree excavated in Minneapolis

In Summary

It is not logical to believe that planting deeper is planting better. Since this does not occur in natural ecosystems, there is no reason to believe it should be successful in our urban environments. We know that the act of transplanting a tree is unnatural and highly disruptive to its root system. Unfortunately, when dug incorrectly and planted too deeply fewer roots will occupy the more habitable upper soil profile where normal root regeneration occurs. The problems associated with planting trees too deeply are numerous, long-term, and difficult to correct. But, they can be prevented. . By understanding how tree roots normally function and respond to transplanting, we can take those actions necessary to ensure that the trees grown for our cities and villages are not short-term liabilities but long lasting community assets.

those actions necessary to ensure that the trees grown for our cities and villages are not short-term liabilities but long lasting community assets.

Tree Planting Checklist

Select Quality Stock

- Purchase trees from a reputable nursery.
- Select well-trained, healthy trees with good form and labeled with their Latin names.
- Make sure trees are protected during transport.
- One-year guarantee is standard, but some nurseries offer 2 years.

Determine Planting Depth

Dig the Hole

- The wider the better
- Make arrangements to haul away extra soil instead of piling it around the tree.

Remove the Burlap & Twine or Container

- Burlap wicks water away from the roots. Sure, it may *eventually* break down; but what about the most critical first years after transplanting when the trees need a lot of water?
- Twine can girdle the tree as the trunk grows.

Inspect the Roots

- Check for and remove potential girdling roots.

Water

- WATER! WATER! WATER!

Mulch

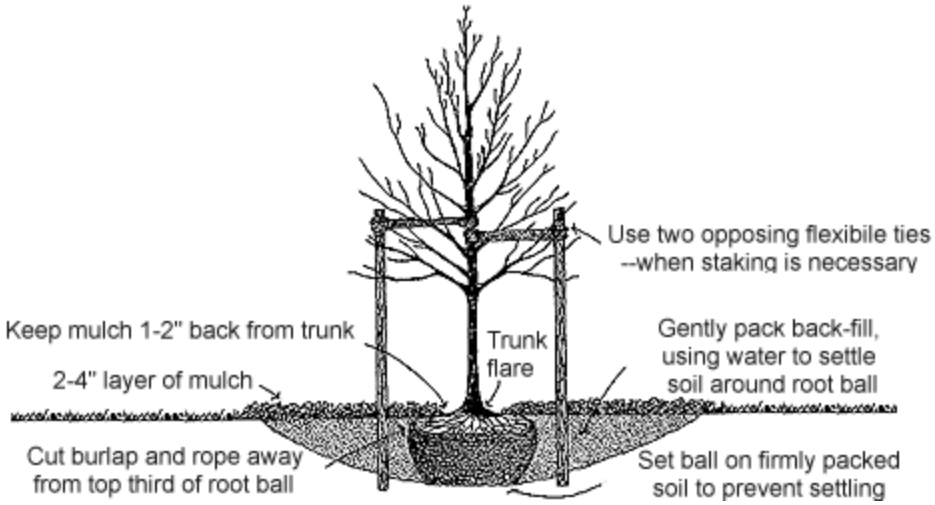
- 2-3 inches maximum of hardwood bark mulch is the best.
- Leave an inch or two free around the trunk so that the tree doesn't respond as if it is planted too deeply.

Remove Tree Wrap

- We once thought this was for the good of the trees. It actually does little if anything to reduce sunscald and often times ends up holding in moisture.
- Another problem is that a lot of tree wrap is tied on with twine. Folks often forget to take them off resulting in girdled trunks.

Stake Only When Necessary

- Research indicates that staked trees lack the trunk strength of their unstaked counterparts. If you have good stock and the tree is planted correctly, then staking is usually unnecessary.
- Trees planted in sandier soil, on windy sites, or larger trees with a heavy crown may need to be staked for 6-12 months until some roots are established.


Use two opposing flexibile ties
--when staking is necessary
Keep mulch 1-2" back from trunk
2-4" layer of mulch
Trunk
flare
Gently pack back-fill,
using water to settle
soil around root ball
Cut burlap and rope away
from top third of root ball
Set ball on firmly packed
soil to prevent settling

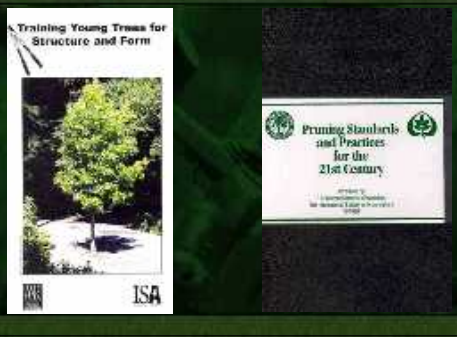
Pruning Community Trees

and the ANSI A300 Standard

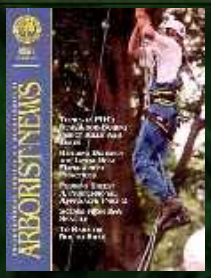
Created by
Vincent Cotrone and Dr. William Elmendorf,
Penn State School of Forest Resources

Pruning References

Pruning Videos



Up-to-Date Research



http://www.isa-arbor.com

Define Pruning

- Pruning is the art and science of removing tree parts (branches and stems, roots, buds, flowers and fruit) for a specific purpose.
- The science involves understanding the tree's biological response to the pruning.
- The art involves understanding tree's natural form and shape.

Is This Good Pruning?

Understanding Tree Biology

Removing more than 25% live crown causes stress to the tree & a biological response to produce more leaves.

Tree Biology
Terminal & Lateral Buds

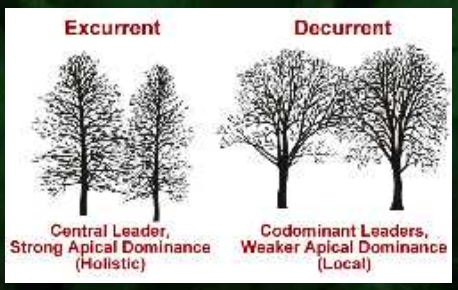
Growth regulating hormones (auxin) produced by apical meristem inhibit lateral growth.

Accounts for orderly branch development & spacing

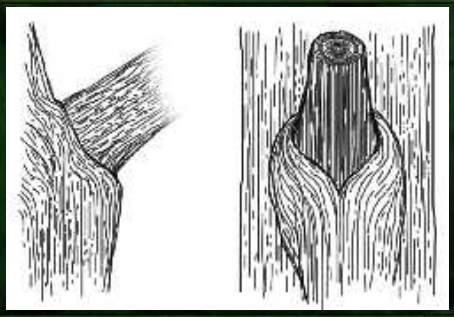
Tree Biology
Meristematic Points

- Tree insurance policy
- Epicormic sprouts, adventitious and dormant, arise on the trunk and branches
- Adventitious sprouts develop from callus tissue
- Dormant sprouts develop from latent or dormant buds

Tree Biology
Tree Form

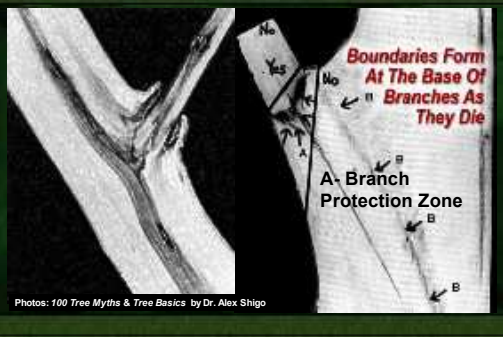


Tree Biology
Branch Collar



Branch Attachment
Branch Collar

Tree Biology
Branch Attachment



Tree Biology
Branch Protection Zone

1. Branch Collar
2. Branch bark ridge
3. Branch protection zone
4. Dormant bud
5. Pith protection zone
6. Pith

Tree Biology
Flush Cuts

Branch collar is removed

Trunk is exposed to decay and future structural problems.

Compartmentalization of Decay in Trees
CODIT

- Walls 1 - resists vertical spread
- Walls 2 - resists inward spread
- Walls 3 - resists lateral or circumferential spread
- Wall 4 - separates infected wood from new healthy wood that forms
- Shakes can form along Wall 4

Tree Biology
Timing Tree Pruning

- **Period 5 is best**.
- **Avoid Period 2** *(removing leaves before they are making energy)*

- **Avoid Period 4** *(increases water sprouting, decay fungal spores, and energy needed for leaf abscission).*
- **Prune Deadwood Anytime.**
- **Spring Flowering –** *to maximize flowering prune after spring flowers*

Tree Pruning
Pruning Objectives

- Train Young Plants
- Maintain Plant Health
- Reduce Risk of Failure – Safety
- Provide Clearance – Control Plant Size
- Influence Flowering, Fruiting & Vigor
- Improve a View
- Reduce Shade & Wind Resistance
- Improve Aesthetics

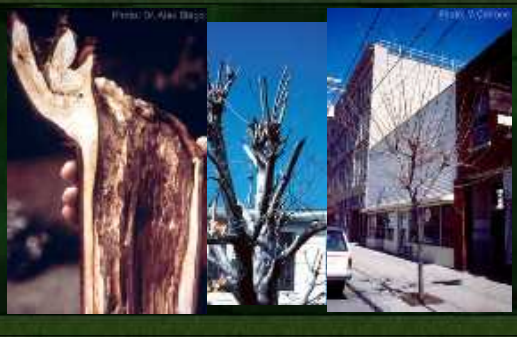
Tree Pruning
What Branches Should Be Removed?

- Dead, Dying, Diseased, Decayed, Damaged
- Rubbing and Crossing Branches
- Tight V Branch Union with Included Bark
- Some Water Sprouts
- Root Suckers from Base of Tree

Tree Pruning
Pruning Cuts - Heading Cuts

- Cutting a 1 year old shoot back to a bud or
- Cutting an older branch back to a point between branches (internodal), leaving a stub
- Rarely appropriate on established trees

Tree Pruning
Tree Response To Head Cuts

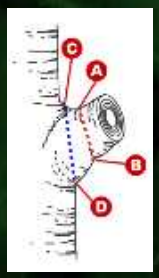


Tree Pruning
Water Sprouts from Heading Cuts

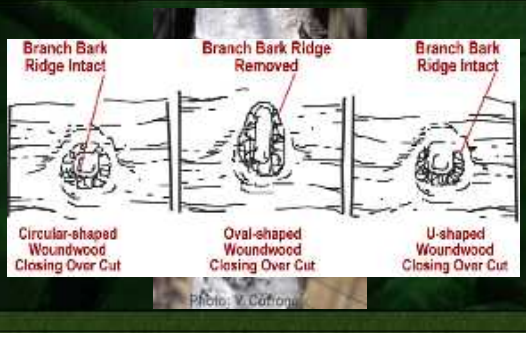
Tree Pruning
Pruning Cut – Thinning Cut

- Thinning or Branch Removal Cut
- Removing a branch back to its point of origin on a trunk, stem or larger branch
- Making the cut just outside the branch collar, without leaving a stub

Tree Pruning
Thinning or Removal Cut



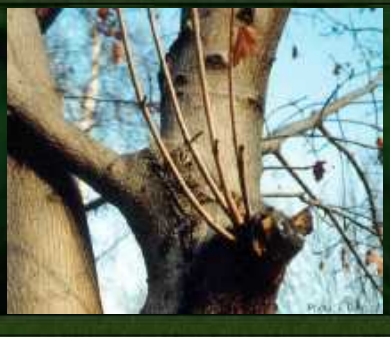
Tree Pruning
Wound Closure



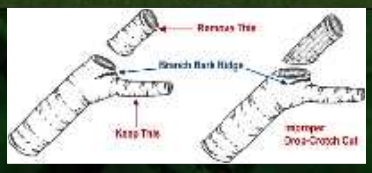
Tree Pruning
Wound Dressings

Tree Pruning
Large Flush Cut

Tree Pruning
Sprouts from a Stub



Tree Pruning
Reduction Cut

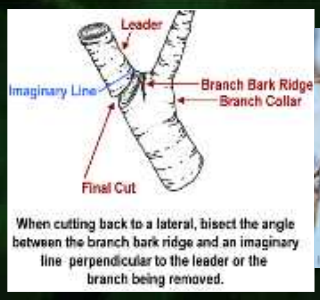


- Reduction Cut/Cutting to a Lateral/Drop-Crotch Cut.
- Shortens a limb or branch back to a smaller lateral branch or similarly sized limb.
- Used in structural pruning or reducing tree size.
- Remaining lateral branch should be 1/3 to 1/2 the diameter of the branch removed.

Tree Pruning
Reduction Cuts

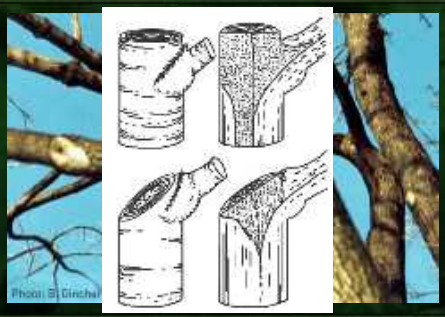
The lateral branch we prune back to must be 1/2 to 1/3 diameter of the branch removed.

Tree Pruning
Making Reduction Cuts



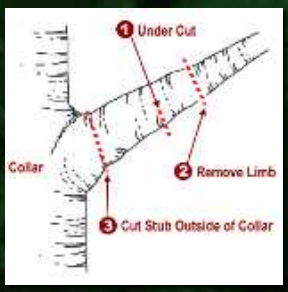
When cutting back to a lateral, bisect the angle between the branch bark ridge and an imaginary line perpendicular to the leader or the branch being removed.

Tree Pruning
Reduction Cuts



Tree Pruning
How are these Reduction Cuts?

Tree Pruning
Removing Large Branches With 3 Cuts



Pruning Types

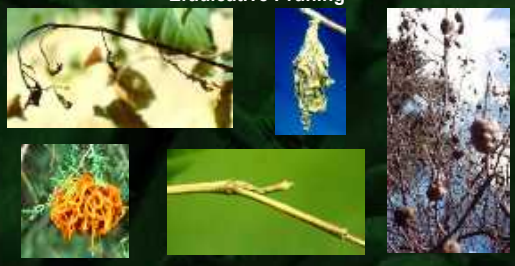
- Crown Cleaning
- Crown Raising
- Crown Thinning
- Crown Reduction – Drop Crotch
- Crown Restoration
- Training – Structural Pruning
- Directional Pruning for Clearance
- Conifer Pruning
- Pollard, Espalier, Pleach, Topiary, Bonsai
- Shrub Pruning – Slow Growing, Fast Growing, Hedges

Types of Pruning
Crown Cleaning

The removal of dead, dying, diseased, crowded, weakly attached, low-vigor branches, and some water sprouts from a tree's crown.

Types of Pruning
Crown Cleaning for Insect & Disease Management

Eradicative Pruning



Fireblight, Bagworm, DED, Anthracnose Canker, Black Knot

Types of Pruning
Crown Thinning

The selective removal of branches to increase light penetration and air movement through the crown. The tree's natural shape should be retained and no more than 1/4 (one fourth) of the live crown of a mature tree should be removed. At least 1/2 (one half) of the foliage should be on branches that arise in the lower 2/3 (two thirds) of the tree. Retain well spaced inner lateral branches with foliage to reduce sunburn, watersprouts, weakened branch structure and limb breakage.

Types of Pruning
Crown Thinning

Before Thinning

After Thinning

Types of Pruning
Over Thinning


Types of Pruning
Crown Raising

The removal of lower branches of a tree in order to provide clearance for buildings, vehicles, pedestrians, and vistas.

Types of Pruning
Crown Raising


Types of Pruning
Crown Raising - Maple

Types of Pruning
Crown Reduction

Making Reduction and Thinning Cuts to reduce the size of the crown that will result in fewer water sprouts and will maintain the structural integrity and natural form of the tree, delaying the need to re-prune. The lateral to which a branch or leader is cut should be at least 1/3 (one third) the diameter of the branch being removed.

Types of Pruning
Crown Reduction

The height & spread of a tree can usually be reduced and still maintain its natural shape. Branches that have been removed by thinning cuts are indicated in red.

Types of Pruning
Crown Reduction

Types of Pruning
Pollarding

- Heading cuts made on young tree
- 1” diameter branches headed
- All sprouts are removed annually back to the same spot (knuckles of callus growth)
- Sycamore, Linden, Horsechesnuts, Catalpa, Pear, Beech, Ash

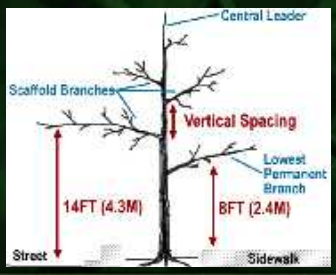
Types of Pruning
Training Pruning

Pruning young trees to develop strong structure with a sturdy, tapered trunk with well spaced branches that are smaller in diameter than the trunk. Training maintains a single, straight trunk or central leader; correctly positions the lowest permanent branch; and maintains vertical spacing between branches.

Types of Pruning
Training Young Trees for Structure & Form

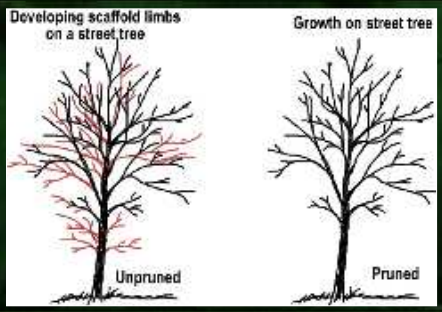
Types of Pruning
Training Young Trees Branch Spacing

Vertical Branch Spacing



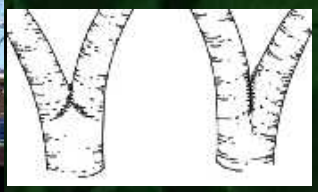
- 6-12 inches apart for small maturing trees
- 18-36 inches apart for large maturing trees

Types of Pruning
Training Young Trees



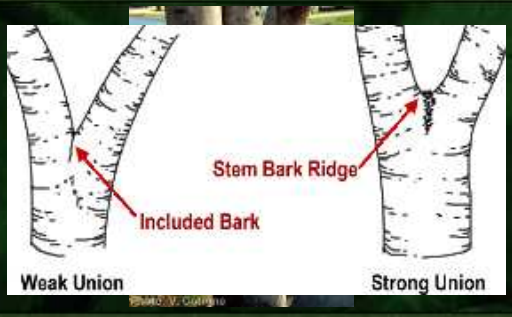
Types of Pruning
Good Form

Training Young Trees
Poor Form - Co-Dominant Stems



Included Bark

Training Young Trees
Co-Dominant Stems

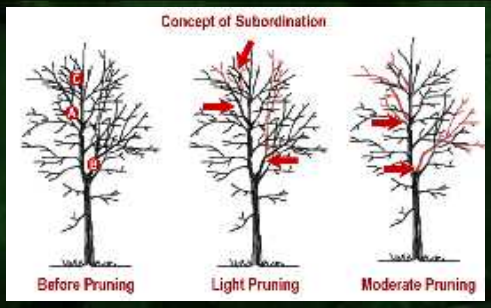


Training Young Trees
Co-Dominant Stems- Bradford Pear

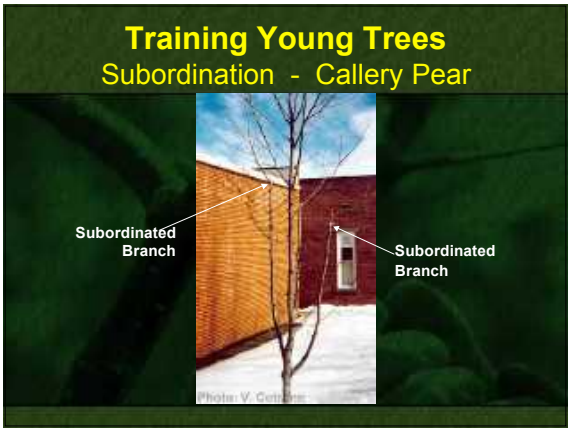
Training Young Trees
Removing a Co-Dominant Stem

Training Young Trees
Attempting to Correct Poor Branch Structure

Training Young Trees
Subordination of a Branch



Training Young Trees
Subordination - Callery Pear



Training Young Trees
Subordination – Callery Pear

Training Young Trees

Training Young Trees

Training Young Trees

Pruning Tools

Improper Pruning Tool

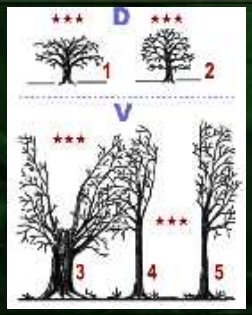
Correcting Roadside Pruning Practices

Ground to Sky Pruning to Daylight a Road Effects Health and Can Cause Tree Failure

Utility Pruning
Lateral or Directional Pruning

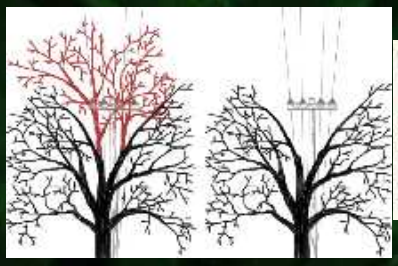
The removal of a branch to the trunk or a significant lateral branch growing away from a utility conductor or other obstruction. Thinning and Reduction Cuts are made to achieve clearance versus Heading or topping which encourages vigorous sprouting.

Utility Pruning
Shigo's Guide to Utility Pruning



90-3-90 Rule

Utility Pruning
Directional Pruning



Utility Pruning

Roundover 5/2002

Re-growth 11/2003

Directional Pruning for Utility Line Clearance

- Works Well on Trees with Decurrent Form
- Healthier for the Tree
- Reduces Sprouting and Decay
- Removing Less Live Crown than Topping
- Structurally Sound

Utility Pruning
Norway Maples

Utility Pruning
Pin Oak

Utility Pruning
Zelkova

Utility Pruning
Littleleaf Linden

Utility Pruning
Side Pruning

ANSI A300
National Tree Care Standarads

- ANSI A300 Part 1- 2001 American National Standards Institute
- This industry consensus document presents performance standards for the care and maintenance of trees, shrubs, and other woody plants. Intended as a guide for drafting specifications.
- Compliance is voluntary, although the standards will be the *benchmark used in tree care malpractice litigation.*

ANSI A300 Standards
Shall vs. Should

- **Shall** - a requirement that must be adhered to.
- **Should** - a recommendation. If work is not done, there should be a reason or justification (in writing if part of the specifications).

ANSI A300 Standards
An Arborist meeting ANSI A300

- Should not climb with spikes to prune
- Should prefer to use Thinning and Reduction Cuts instead of Heading Cuts.
- Shall not cut off the Branch Collar.
- Shall use sharp tools so as to not leave jagged rough, or torn bark around cuts.
- Shall not Top or Lion's-tail (over thin) trees.

ANSI A300 Standards
An Arborist meeting ANSI A300

- Should not remove more than 25 percent of the foliage of a single branch.
- Should not remove more than 25 percent of the total tree foliage in a single year.
- Should leave 50 percent of the foliage evenly distributed in the lower 66 percent of the crown.
- Should not use equipment or practices that would damage bark or cambium beyond the scope of the work.

ANSI A300 Standards
An Arborist Meeting ANSI A300

- Shall not leave cut limbs in the crown of a tree upon completion of pruning, at times when the tree would be left left unattended, or at the end of the work day
- Should not use wound paint.

Tree Pruning Contract Specifications

- A statement that says all work will be performed in accordance with ANSI A300.
- A statement with a clearly defined pruning objective(s).
- The type of pruning to be performed to meet the objective.
- Size specifications of the minimum and/or maximum branch size to be removed.

Contract Specifications
Pruning Objectives

- A Specific reasons for performing the pruning.
- Hazard Reduction Pruning per ANSI A300, to reduce the danger to specific targets such as traffic.
  - All deadwood greater than 2 inch diameter shall be removed.
  - Reduce the weight of branches or stems overhanging the road.
  - Allow more light to reach the ground under the tree and to reduce damage from wind storms.

Tree Worker Safety

- Operations shall comply with all applicable OSHA, ANSI Z133.1, state, and local regulations.
- If electrical hazards exist on this site, tree workers must meet the requirements of OSHA's CFR 1910.269, *Electrical Power Generation, Transmission and Distribution*, safety and training requirements.

Tree Worker Safety
Pruning & Electrical Hazards

Conductors
Telephone
Cable
Grounding Wire
Overhead Electric
House Drops

EHAP – OSHA 1910.268, 1910.269, 1910.333 & ANSI Z133.1-1994

- Any part of tree worker comes within 10 ft of any conductor
- Any part of the tree is within 10 ft of any conductor
- Any part of tree pruned or removed will pass within 10 ft of any conductor
- Any tool or aerial device within 10 ft

Tree Worker Safety
Electrical Hazards

"Only qualified line clearance tree trimmers or qualified line clearance tree trimmer trainees, per ANSI Z133.1 shall work within 10 feet of electrical conductors and/or an electrical hazard. Electrical hazards exist when a worker, a tool, or any object is closer than 10 feet to an energized conductor of 50kV or less. Consult ANSI Z133.1 table 1 and 2 for a complete list of approach distances and nominal voltages."

ISA Arborist Certification Program

CERTIFIED ISA ARBORIST

www.isa-arbor.com

In 2004, there were over 15,000 Certified Arborist in U.S.

Combat Topping

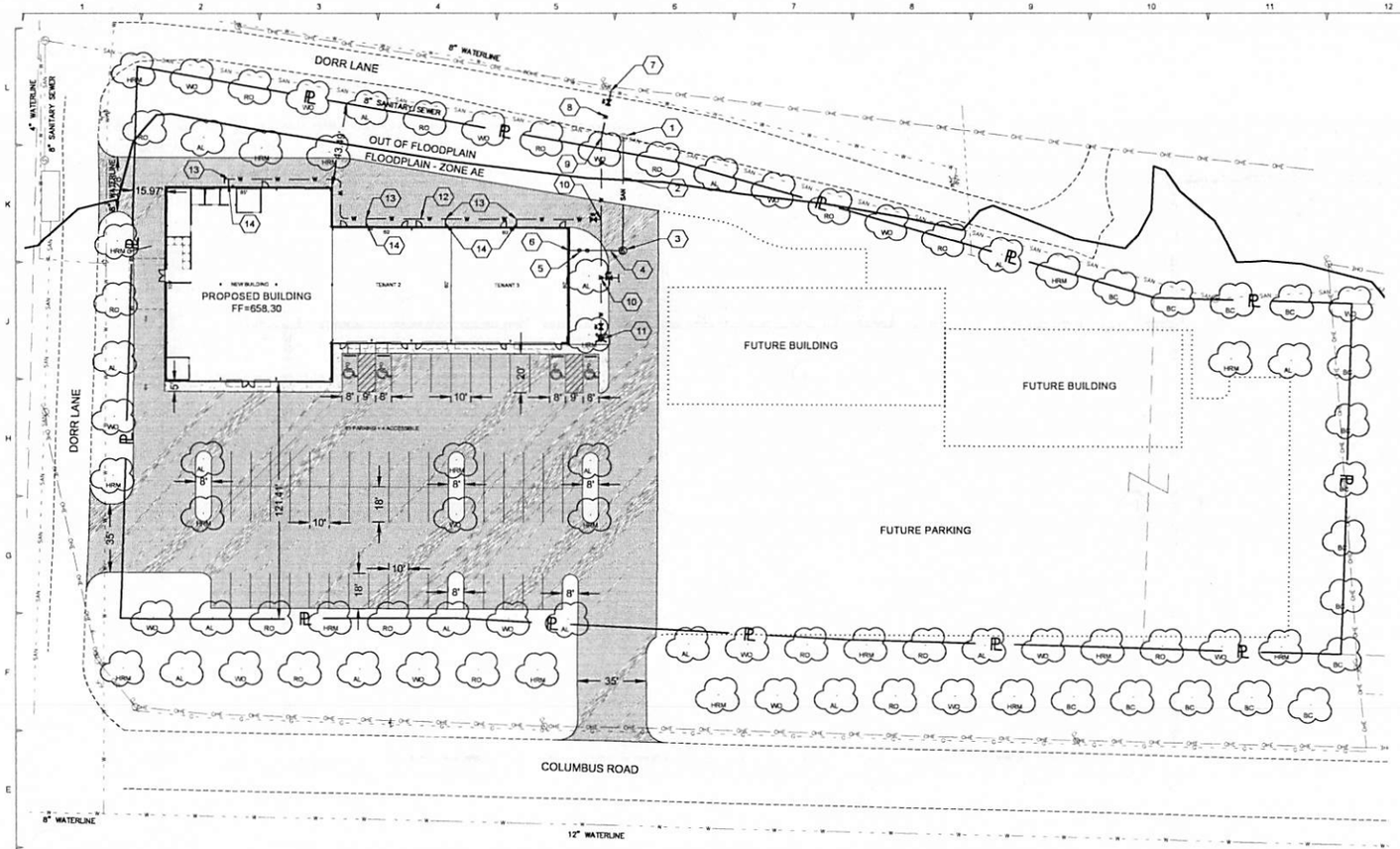
Penn State Cooperative Extension

Slide set created for the USDA Forest Service, NA, S&PF, Mid-Atlantic Center for Urban & Community Forestry, by:

Vincent Cotrone & William Elmendorf,
School of Forest Resources,
Penn State University

Photos & artwork provided by:

Dr. Edward Gilman, University of Florida
Dr. Alex Shigo, Shigo & Associates
Vincent Cotrone, Penn State University
Dr. William Elmendorf, Penn State University
Cynthia Carey, Penn State University
Bernard Dincher, Dincher & Dincher Tree
Dennis Braun, Pennsylvania Power & Light
Frank Snyder, DCNR Bureau of Forestry
Willet Wandell, Discov-Tree Research
Cornell University



SITE PLAN

C101 SCALE: 1"=30'

0 30 60 Feet

CODED NOTES

1. EX. SANITARY MANHOLE
   T/C: 662.14
   PR. INV: 651.58 6" SW
   EX. INV: 651.42 8" NW
   EX. INV: 651.40 8" SE OUTLET
2. PR. 58' OF 6" SANITARY @ 1.00%, SDR-35, ASTM D3034
3. PR. SANITARY MANHOLE
   T/C: 657.76
   PR. INV: 652.32 4" NW FROM BLDG
   PR. INV: 652.16 6" NE OUTLET
4. PR. 27' OF 4" SANITARY @ 1.00%, SDR-35, ASTM D3034
   MAINTAIN 18" VERTICAL SEPARATION UNDER WATERLINE AT CROSSING
5. PR. DOUBLE CLEANOUT
6. PR. 4" INV. @ BUILDING: 652.59
7. PR. 6" x 8" TAPPING SLEEVE AND VALVE
   CONTRACTOR TO VERIFY LOCATION OF EX. 8" WATERLINE
8. PR. 127' OF 6" WATERLINE, AWWA C900, DR-18
9. 11.25° BEND
10. PR. 6" x 6" x 2" TEES AND VALVES W/ VALVE BOXES
11. PR. 6" HYDRANT AND VALVE W/ VALVE BOX
12. PR. 209' OF 2" WATERLINE, AWWA C901, DR-11
13. PR. 2" x 2" x 2" TEES
14. PR. 4' OF 2" WATERLINE TO BULDING, AWWA C901, DR-11

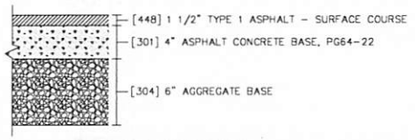
NOTE:
- CONTRACTOR SHALL EXCAVATE AND COORDINATE WITH CITY OF ATHENS FOR CONNECTIONS OF SANITARY AND WATER.
- CONTRACTOR TO FILE STREET CLOSURE PERMIT REQUEST TO ATHENS CITY HALL AT LEAST 48 HOURS PRIOR TO WALK/STREET CLOSURE.

SEWER AND WATER TAPS:

CONTRACTOR SHALL SUPPLY ALL EXCAVATION AND MATERIAL FOR TAPS. CITY OF ATHENS SHALL MAKE ACTUAL TAP.

CONTRACTOR SUPPLIED MINIMUMS:

- 6 LINEAL FEET X 3 FEET WIDE EXCAVATED/SUPPORTED TRENCH
- TRAFFIC CONTROL
- ACCESS FOR CITY VEHICLES
- LIFTING ASSISTANCE FOR TAPPING MACHINE



APSHALT PAVEMENT DETAIL
NOT TO SCALE

LEGEND

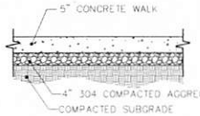
PROPERTY LINE	EXISTING SANITARY MANHOLE
EXISTING SANITARY	PROPOSED SANITARY MANHOLE
PROPOSED SANITARY	EXISTING WATER VALVE
EXISTING WATER	PROPOSED WATER VALVE
PROPOSED WATER	EXISTING FIRE HYDRANT
EXISTING STORM	PROPOSED FIRE HYDRANT
EXISTING GAS	EXISTING UTILITY POLE
EX. OVERHEAD ELECTRIC	

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG
CALL 811 OR
(TOLL FREE) 1-800-362-2764
NON-MEMBERS MUST BE CALLED DIRECTLY

OHIO Utilities Protection SERVICE
Click, Call or Tap Before You Dig

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE
CALL (TOLL FREE) 1-800-925-0988
NON-MEMBERS MUST BE CALLED DIRECTLY



CONCRETE WALK
NO SCALE

PR. ASPHALT PARKING (SEE DETAIL)

PR. CONCRETE SIDEWALK (SEE DETAIL)

FLOOD MAP INFORMATION

Community No.	390016
Panel No.	0230C
Date of Map	December 18, 2009

NOTE: THE BASE FLOOD ELEVATION FOR THE PROJECT SITE IS 657.2 FT BASED ON THE NAVD 1988 DATUM.

PARKING SPACE CALCULATIONS

CLASSIFICATION:	REQUIRED	PROPOSED
RETAIL STORE		
TOTAL FLOOR SPACE: 15,700 SF		
(1 SPACE/ EACH 250 SF)	61	65
HANDICAP PARKING	3	4
VAN-ACCESSIBLE PARKING	1	4

IMPERVIOUS AREA CALCULATIONS

LOT AREA = 140,623 SF

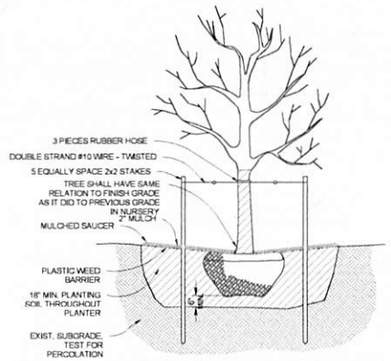
PR. IMPERVIOUS AREA

BUILDING FOOTPRINT	15,700 SF
ASPHALT PARKING	39,928 SF
CONCRETE SIDEWALK	1,313 SF
TOTAL	56,941 SF

PERCENT IMPERVIOUS = 40.5 %

SHADE TREE CALCULATIONS

IMPERMEABLE= 56,941 SF * 1 TREE/1,529 SF
+ PERMEABLE= 83,682 SF * 1 TREE/1,767 SF
85 TREES REQUIRED



DECIDUOUS TREES (BY OWNER)

QUANTITY	KEY	DESCRIPTION	SIZE
19	HRM	ACER X FREEMANII - HYBRID RED MAPLE	1.75"
18	WO	QUERCUS ALBA - WHITE OAK	1.75"
16	RO	QUERCUS RUBRA - RED OAK	1.75"
17	AL	TILIA AMERICANA - AMERICAN LINDEN	1.75"
15	BC	TAXODIUM DISTICHUM - BALD CYPRESS	1.75"
85	TOTAL		

bdt ARCHITECTS & DESIGNERS
BDTAD, Inc.
107 Richland Avenue, Athens, Ohio 45701
OFFICE 740-593-3436 FAX 740-593-3434
ONLINE www.bdtad.com
EMAIL office@bdtad.com

buckleygroup
engineering + surveying
439 RICHLAND AVENUE
ATHENS, OH 45701
PH: (740) 589-5001
WWW.BUCKLEYGROUPLLC.COM

PROFESSIONAL SEAL

ISSUE DATES

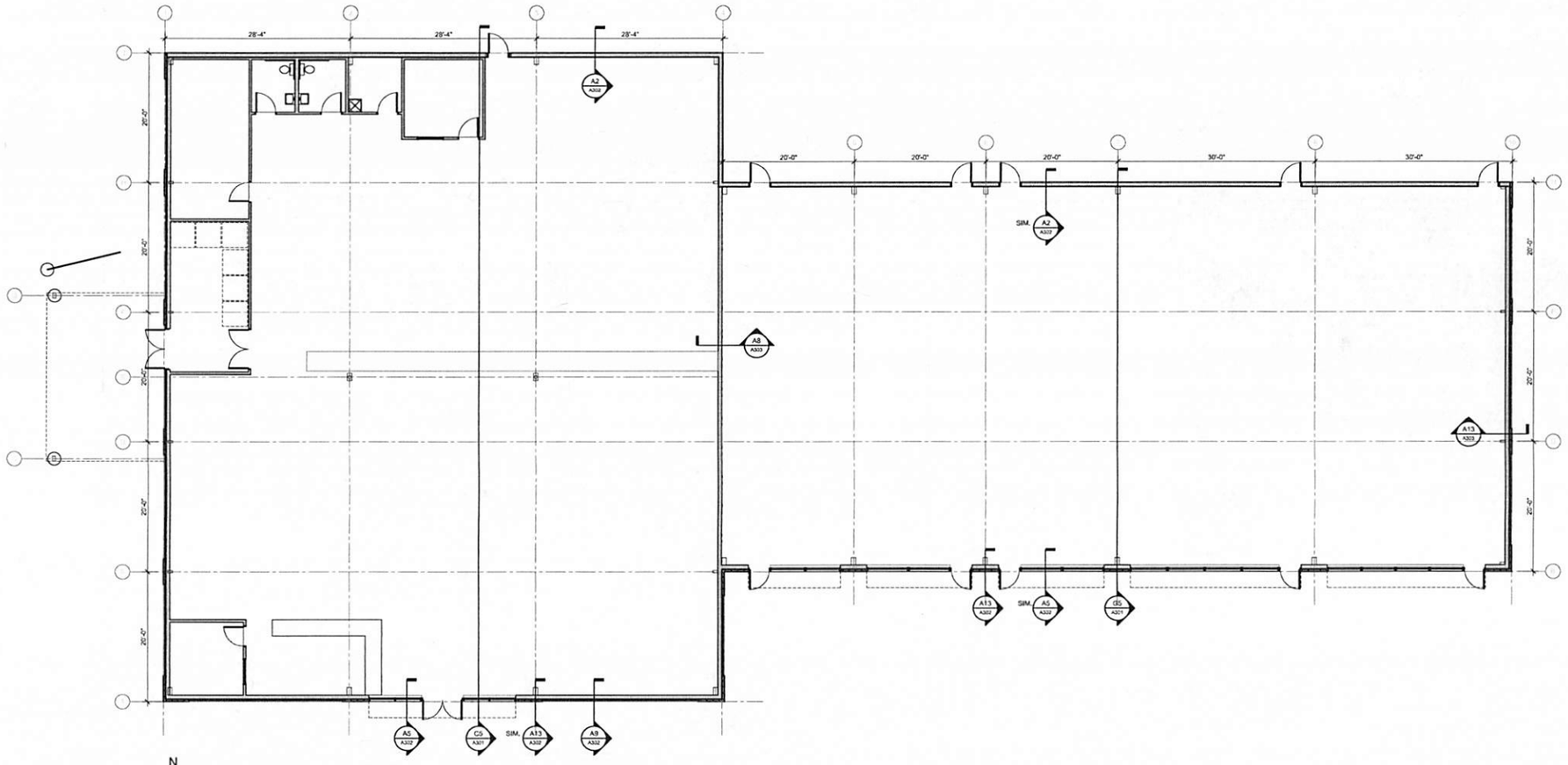
NO.	DATE	DESCRIPTION
1	12/06/17	TITLE 41

PROJECT TITLE
GOODWILL
BRENMAR CONSTRUCTION
175 COLUMBUS ROAD
ATHENS, OH 45701

PROJECT NUMBER 17051
DATE DECEMBER 6, 2017
DRAWN CK
SHEET TITLE SITE PLAN
SHEET C101

CODED NOTES:

1. FIRST CODED NOTE GOES HERE.



N

C3 FLOOR PLAN
SCALE: 1/8" = 1'-0"

bdt ARCHITECTS & DESIGNS

307 Richland Avenue Athens, Ohio 45701
OFFICE 740-592-3435 FAX 740-593-3434

ONLINE www.bdtarc.com
EMAIL office@bdtarc.com

BDT PROJECT NO: #

PROFESSIONAL SEAL

ISSUE DATES

NO.	DATE	DESCRIPTION

PROJECT TITLE

GOODWILL
BRENMAR CONSTRUCTION
175 COLUMBUS ROAD
ATHENS, OH 45701

PROJECT NUMBER 17051

DATE DATE

DRAWN EN

SHEET TITLE
FLOOR PLAN

SHEET
A101

X:_Projects\17051_Columbus Rd_Brenmar_Athens\Construction Documents\17051_A100.dwg, 10/24/2017 7:20:55 AM, Adobe PDF

David C Ingram

From: Andrew Chiki <achiki@ci.athens.oh.us>
Sent: Friday, October 29, 2021 3:26 PM
To: Ann.Bonner@dnr.ohio.gov; Amy J Toohey; Mike Deskin
Cc: Scott A McManus; David Ingram [d3ingram@gmail.com]; Roxanne Male'-Brune; David Riggs; James Dyer; Lee Gregg; Nancy Walker (newalker39@yahoo.com); David Sincoff; Andy Stone; Jessica Adine
Subject: RE: Goodwill site in Athens City AEP Potential Tree relocation
Attachments: Goodwill Landscape Plan.pdf

Hi All,

David Riggs and I walked the property earlier today and I also reviewed the site plan from 2018 when the Goodwill Site was developed. In the area in question the site plan has the trees planted on the property line and not in the Right of Way. When we walked it we confirmed that they are planted in alignment with the site plan. I have attached the 2018 plan. It looks like one Hybrid Red Maple, two White Oaks, and a Red Oak.

It seems like something AEP would want to discuss with the property owner, but I am in favor of having the trees moved to another location on the same property.

-Andrew

Andrew Chiki
Deputy Service-Safety Director
8 East Washington Street
Athens, OH 45701
740-592-3340
achiki@ci.athens.oh.us

_____

From: Ann.Bonner@dnr.ohio.gov [Ann.Bonner@dnr.ohio.gov]
Sent: Friday, October 29, 2021 3:16 PM
To: Amy J Toohey; Mike Deskin
Cc: Scott A McManus; David Ingram [d3ingram@gmail.com]; Roxanne Male'-Brune; Andrew Chiki; David Riggs; James Dyer; Lee Gregg; Nancy Walker (newalker39@yahoo.com); David Sincoff; Andy Stone; Jessica Adine
Subject: RE: Goodwill site in Athens City AEP Potential Tree relocation

Thank you for the prompt, Amy! I will check out the trees on Monday, but as I recall the trees were planted a few years as required by the City when Goodwill developed that site. They have appeared to be in good condition over the years that I have glanced at Them while passing by. As I recall, they had their stakes removed from them by a volunteer (Mary Ann Borch) last year. Judging from their size and species, I would think that they would be moveable/salvageable.

My concern/question was about these trees being “city” trees or private trees. If they are in the City’s public Right of way, there are rules and policies that we want to be aware of.

Andrew Chiki and David Riggs may be best able to answer that. I have also copied Andy Stone and Jessica Adine from the city’s engineering office, as maybe they can provide some info.

Amy and Mike, thanks for your concern about these trees. Hopefully, we will get some answers next week?

Ann Bonner
Ohio Department of Natural Resources
Division of Forestry
360 East State Street
Athens, OH 45701
C 614-670-2630
O 740-589-9910
Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov>

Click here to receive emails about Urban and Community Forestry events, opportunities and education<https://mailchi.mp/ba69a5cae635/ohiodofregion2>

Bookmark our website http://forestry.ohiodnr.gov/urban

From: Amy J Toohey <ajtoohey@aep.com>
Sent: Friday, October 29, 2021 11:44 AM
To: Bonner, Ann <Ann.Bonner@dnr.ohio.gov>; Mike Deskin <mcdeskin@aep.com>
Cc: Scott A McManus <samcmanus@aep.com>; David Ingram [d3ingram@gmail.com] <d3ingram@gmail.com>; Roxanne Male'-Brune <male-bru@ohio.edu>; Andrew Chiki <achiki@ci.athens.oh.us>; David Riggs <driggs@ci.athens.oh.us>; James Dyer <dyer@ohio.edu>; Lee Gregg <tleegregg@gmail.com>; Nancy Walker (newalker39@yahoo.com) <newalker39@yahoo.com>; David Sincoff <dsincoff@columbus.rr.com>
Subject: RE: Goodwill site in Athens City AEP Potential Tree relocation

Greetings:

Didn't want this to get lost in our emails over the weekend. Is there a way to determine if these trees are even good candidates to relocate? What are the available days next week?

I am not sure I understand the status question of the trees being in public right-of-way or not. Would you be able to provide more information on the public right-of-way definition/impact.

This is one of those very unique situations and new terms/considerations.

Thank you!
Amy

From: Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov> <Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov>>
Sent: Wednesday, October 27, 2021 3:03 PM
To: Mike Deskin <mcdeskin@aep.com<mailto:mcdeskin@aep.com>>
Cc: Scott A McManus <samcmanus@aep.com<mailto:samcmanus@aep.com>>; Amy J Toohey <ajtoohey@aep.com<mailto:ajtoohey@aep.com>>; David Ingram [d3ingram@gmail.com] <d3ingram@gmail.com<mailto:d3ingram@gmail.com>>; Roxanne Male'-Brune <male-bru@ohio.edu<mailto:male-bru@ohio.edu>>; Andrew Chiki <achiki@ci.athens.oh.us<mailto:achiki@ci.athens.oh.us>>; David Riggs <driggs@ci.athens.oh.us<mailto:driggs@ci.athens.oh.us>>; James Dyer <dyer@ohio.edu<mailto:dyer@ohio.edu>>; Lee Gregg <tleegregg@gmail.com<mailto:tleegregg@gmail.com>>; Nancy Walker (newalker39@yahoo.com<mailto:newalker39@yahoo.com>) <newalker39@yahoo.com<mailto:newalker39@yahoo.com>>; David Sincoff <dsincoff@columbus.rr.com<mailto:dsincoff@columbus.rr.com>>
Subject: [EXTERNAL] Re: Goodwill site in Athens City AEP Potential Tree relocation

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments. If suspicious please click the 'Report to Incidents' button in Outlook or forward to incidents@aep.com<mailto:incidents@aep.com> from a mobile device.

Thank you guys for your interest in trying to save these trees. Monday won't work for me. I think the first step is finding out if the trees are in the public right of way.

Ann Bonner
Ohio Department of Natural Resources
Division of Forestry
360 East State Street
Athens, OH 45701
740-589-9910
Cell 614-670-2630
ann.bonner@dnr.state.oh.us<mailto:ann.bonner@dnr.state.oh.us>

On Oct 27, 2021, at 2:54 PM, Mike Deskin <mcdeskin@aep.com<mailto:mcdeskin@aep.com>> wrote:

Thanks Amy and Ann!

Let us know if there is anything else you need.

From: Scott A McManus <samcmanus@aep.com<mailto:samcmanus@aep.com>>
Sent: Wednesday, October 27, 2021 12:14 PM
To: Amy J Toohey <ajtoohey@aep.com<mailto:ajtoohey@aep.com>>; Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov>; David Ingram [d3ingram@gmail.com] <d3ingram@gmail.com<mailto:d3ingram@gmail.com>>; Roxanne Male'-Brune <male-bru@ohio.edu<mailto:male-bru@ohio.edu>>; Andrew Chiki <achiki@ci.athens.oh.us<mailto:achiki@ci.athens.oh.us>>; David Riggs <driggs@ci.athens.oh.us<mailto:driggs@ci.athens.oh.us>>; James Dyer <dyer@ohio.edu<mailto:dyer@ohio.edu>>; Lee Gregg <tleegregg@gmail.com<mailto:tleegregg@gmail.com>>; Nancy Walker (newalker39@yahoo.com<mailto:newalker39@yahoo.com>) <newalker39@yahoo.com<mailto:newalker39@yahoo.com>>; David Sincoff <dsincoff@columbus.rr.com<mailto:dsincoff@columbus.rr.com>>
Cc: Mike Deskin <mcdeskin@aep.com<mailto:mcdeskin@aep.com>>
Subject: RE: Goodwill site in Athens City AEP Potential Tree relocation

Amy

Im available the first half of the day on Monday

<image001.png><https://urldefense.com/v3/__https:/gcc02.safelinks.protection.outlook.com/?url=http*3A*2F*2Fwww.aep.com*2F&data=04*7C01*7CAnn.Bonner*40dnr.ohio.gov*7C70fe85a4e21948957bbc08d9997b230e*7C50f8fcc494d84f0784eb36ed57c7c8a2*7C0*7C0*7C637709576460838187*7CUnknown*7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0*3D*7C1000&sdata=UNTxfJbQxvv53kfVOp9kgtjhDW30g*2FN*2FQ8T8JiXSFpI*3D&reserved=0__;JSUlJSUlJSUlJSUlJSUlJSUlJQ!!H3PqUTRkow!qKc0tu0BZA-utu8tPci7CbQ3qqDg_Tu6zow1Pnhbc7hsa13OYt6SH7I0qRu5Rw$>

SCOTT A MCMANUS | TRANS CONSTRUCTION REP SAMCMANUS@AEP.COM<mailto:SAMCMANUS@AEP.COM> | D:740.594.1966 | C:740.279.0224

9135 ST. RT. 682, ATHENS, OH 45701-9102

From: Amy J Toohey <ajtoohey@aep.com<mailto:ajtoohey@aep.com>>
Sent: Wednesday, October 27, 2021 10:26 AM
To: Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov>; Scott A McManus <samcmanus@aep.com<mailto:samcmanus@aep.com>>; David Ingram [d3ingram@gmail.com] <d3ingram@gmail.com<mailto:d3ingram@gmail.com>>; Roxanne Male'-Brune <male-bru@ohio.edu<mailto:male-bru@ohio.edu>>; Andrew Chiki <achiki@ci.athens.oh.us<mailto:achiki@ci.athens.oh.us>>; David Riggs <driggs@ci.athens.oh.us<mailto:driggs@ci.athens.oh.us>>; James Dyer <dyer@ohio.edu<mailto:dyer@ohio.edu>>; Lee Gregg <tleegregg@gmail.com<mailto:tleegregg@gmail.com>>; Nancy Walker (newalker39@yahoo.com<mailto:newalker39@yahoo.com>) <newalker39@yahoo.com<mailto:newalker39@yahoo.com>>; David Sincoff <dsincoff@columbus.rr.com<mailto:dsincoff@columbus.rr.com>>
Cc: Mike Deskin <mcdeskin@aep.com<mailto:mcdeskin@aep.com>>
Subject: RE: Goodwill site in Athens City AEP Potential Tree relocation

Greetings:

Thanks all for helping explore this opportunity.

Would we want to try for a Monday meeting if Friday is not available?

Thank you
Amy

<image001.png><https://urldefense.com/v3/__https:/gcc02.safelinks.protection.outlook.com/?url=http*3A*2F*2Fwww.aep.com*2F&data=04*7C01*7CAnn.Bonner*40dnr.ohio.gov*7C70fe85a4e21948957bbc08d9997b230e*7C50f8fcc494d84f0784eb36ed57c7c8a2*7C0*7C0*7C637709576460848135*7CUnknown*7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0*3D*7C1000&sdata=fBUYxritnGEl8v9SvNP9RyO8TR90eyy1si2mdMadP8U*3D&reserved=0__;JSUlJSUlJSUlJSUlJSUlJSU!!H3PqUTRkow!qKc0tu0BZA-utu8tPci7CbQ3qqDg_Tu6zow1Pnhbc7hsa13OYt6SH7J7yg211A$>

AMY J TOOHEY | ENVIRONMENTAL SPEC CONSULT AJTOOHEY@AEP.COM<mailto:AJTOOHEY@AEP.COM> | | C:614.565.1480
8600 SMITHS MILL ROAD, NEW ALBANY, OH 43054

From: Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov> <Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov>>
Sent: Wednesday, October 27, 2021 10:07 AM
To: Scott A McManus <samcmanus@aep.com<mailto:samcmanus@aep.com>>; David Ingram [d3ingram@gmail.com] <d3ingram@gmail.com<mailto:d3ingram@gmail.com>>; Roxanne Male'-Brune <male-bru@ohio.edu<mailto:male-bru@ohio.edu>>; Andrew Chiki <achiki@ci.athens.oh.us<mailto:achiki@ci.athens.oh.us>>; David Riggs <driggs@ci.athens.oh.us<mailto:driggs@ci.athens.oh.us>>; James Dyer <dyer@ohio.edu<mailto:dyer@ohio.edu>>; Lee Gregg <tleegregg@gmail.com<mailto:tleegregg@gmail.com>>; Nancy Walker (newalker39@yahoo.com<mailto:newalker39@yahoo.com>)

<newalker39@yahoo.com<mailto:newalker39@yahoo.com>>; David Sincoff
<dsincoff@columbus.rr.com<mailto:dsincoff@columbus.rr.com>>
Cc: Amy J Toohey <ajtoohey@aep.com<mailto:ajtoohey@aep.com>>; Mike Deskin
<mcdeskin@aep.com<mailto:mcdeskin@aep.com>>
Subject: [EXTERNAL] Goodwill site in Athens City AEP Potential Tree relocation

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments. If suspicious please click the 'Report to Incidents' button in Outlook or forward to incidents@aep.com<mailto:incidents@aep.com> from a mobile device.

OK, thank you for clarifying the location. I am copying cities assistant service director and Athens Tree Commission for some assistance on this. I believe these might be City trees.
Ann Bonner
Ohio Department of Natural Resources
Division of Forestry
360 East State Street
Athens, OH 45701
740-589-9910
Cell 614-670-2630
ann.bonner@dnr.state.oh.us<mailto:ann.bonner@dnr.state.oh.us>

On Oct 27, 2021, at 9:11 AM, Scott A McManus <samcmanus@aep.com<mailto:samcmanus@aep.com>> wrote:
Ann

The address is 175 Columbus Road (Goodwill). The location of these trees are on the back right hand corner of the property.
I do not work on Fridays so I won't be out on site but I'm available a most other days.

DO SOMETHING POSITIVE EVERY DAY

Scott McManus
TCR - American Electric Power
9135 State Route 682
Athens, Ohio
740-277-8669

On Oct 27, 2021, at 8:21 AM, Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov> wrote:

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments. If suspicious please click the 'Report to Incidents' button in Outlook or forward to incidents@aep.com<mailto:incidents@aep.com> from a mobile device.

I am happy to help. The quality of the photo attached does not allow me to see the location or the lat/long. Please send lat/long and or address. I can make some time Friday to do a site visit. Let me know if you/someone will be there.

Ann Bonner
Ohio Department of Natural Resources
Division of Forestry
360 East State Street
Athens, OH 45701
C 614-670-2630
O 740-589-9910
Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov>

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Bookmark our website
http://forestry.ohiodnr.gov/urban<https://urldefense.com/v3/__http:/forestry.ohiodnr.gov/urban__;!!H3PqUTRkow!txwHIfY-F_6yxmzdGuSqdI4eTkXiXDSJc36zvioS5DEHRP0LZd2eGvHybyCI$>

From: Amy J Toohey <ajtoohey@aep.com<mailto:ajtoohey@aep.com>>
Sent: Tuesday, October 26, 2021 5:47 PM
To: Bonner, Ann <Ann.Bonner@dnr.ohio.gov<mailto:Ann.Bonner@dnr.ohio.gov>>; Scott A McManus <samcmanus@aep.com<mailto:samcmanus@aep.com>>; Mike Deskin <mcdeskin@aep.com<mailto:mcdeskin@aep.com>>
Subject: AEP Potential Tree relocation

Greetings:

Scott McManus, AEP Transmission Construction Representative and Mike Deskin, AEP Project Manager have identified an area of trees that are potential candidates for moving from the right-of-way of a construction project. There are approximately 10 trees (Maples) that are 2-3 years old that need to be removed from the r/w. We are in the exploring phase and need your help in determining if the tree relocation is feasible. The location of the trees to be removed are near paved access and overall a unique situation.

I copied Scott and Mike on the email- if it would be easier for a quick call or if you are in the area and can stop by to meet Scott and Mike that would work too. Please let us know what works with your schedule.

Thank you in advance for your help on determining the feasibility of this project.

Sincerely,
Amy

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AMY J TOOHEY | ENVIRONMENTAL SPEC CONSULT AJTOOHEY@AEP.COM<mailto:AJTOOHEY@AEP.COM> | |
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Gmail

David Ingram <d3ingram@gmail.com>

Shade Tree Commission Agenda November 4th, 2021, at 7:00 pm

Andrew Chiki <achiki@ci.athens.oh.us> Fri, Oct 29, 2021 at 1:14 PM
To: David Ingram <d3ingram@gmail.com>
Cc: David Riggs <driggs@ci.athens.oh.us>

Hello David,

I spoke with Scott from AEP this morning. I also pulled the Planning Commission notes from the 175 Columbus Rd. Project from 2018.

Scott indicated that there are about 4 trees in the Northwest Corner that are approximately 3 years old and that they think the trees would be good candidates to move as opposed to cutting down. This is consistent with the site plan from 2018 and the trees that were planted to comply with Shade Tree regulations. These would be the only trees that would be affected by their project.

From looking at the site plan and where the property lines are drawn, it appears all of the trees on the back portion were planted either inside or on the property line and not in the RoW. My discussion with David Riggs was in line with what you are saying about it being between the property owner and AEP. Director Riggs and I were on site to look at this as well.

I have attached the landscape plan that shows the property line (PL) and the location of the trees on the back portion of the parcel.

-Andrew

[Quoted text hidden]

Goodwill Landscape Plan.pdf
641K

Nancy's suggest outline for a plan

Budget and Planning

Tree Canopy Assessment

Tree survey of neighborhoods, parks, and public places

Tree selection and planting

Tree bank review

Clear vines from trees

Arbor day

Congratulations to citizens for tree plantings

Title 37 surveys and evaluations of plans

Title 37 compliance review surveys

Title 33 surveys and permits

The Honorable Steve Patterson
Mayor
City of Athens
8 East Washington Street
Athens, OH 45701

December 2, 2021

Dear Mayor Patterson,

This letter is to inform you of the tree trimming/cutting that American Electric Power (AEP) needs to perform at the locations listed below. Tree trimming/cutting is an effort by AEP to eliminate tree contact from Overhead Power Lines. The AEP Forestry Department will identify trees selected for work. The 2022 work will be on circuits feeding out of the Strouds Run Substation. There are four circuits feeding out of this substation, two of which mainly feed the East end of Athens City. Our proposed timeframe for these two circuits is January 3, 2022 - April 30, 2022. Weather is the biggest factor in the completion of this work.

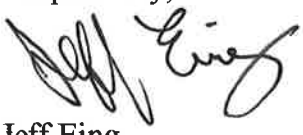
After the tree trimming/cutting is complete, AEP would again trim/cut the same route every four years, provided no line relocation has taken place. Asplundh Tree Expert Company, contractors of AEP, started marking trees in mid-November 2021. Asplundh personnel do attempt to contact property owners in the affected areas. If unable to make personal contact, Asplundh will leave a door hanger with contact information if the customer has questions. In addition, a telephone message will be sent to customers on the affected circuits. Listed below are general streets and areas where tree crews will be working:

E. State St.
Della Dr.
Cook Dr.
Woodside Dr.
Harris Rd.
Cable Ln.
McGuffey Ln.
Tulane Rd.
Ransom Rd.
N. May Ave.
Home St.
Hudson Ave.
Lincoln St.
Meadow Ln.
E. Park Dr.
Lorene Ave.
Elmwood Pl.
S. May Ave.
S. Shannon Ave.
Sunnyside Dr.
Ohio Ave.
Maplewood Dr.
Watt St.
Morris Ave.
Grant St.
Bolleann Pl.
E. Stimson Ave.
Campbell St.
Cornwell St.
Elliot St.
Montrose
Ondis Ave.
Lloyd St.
Verona St.
Wallace Dr.
Stonybrook Dr.
Utah Pl.
Strathmore Blvd.
Graham Dr.
Jacobs Dr.
Charles St.
Euclid Dr.
Avon Pl.
Grand Park Blvd.
Eden Pl.
Townsend Pl.
Pinchot Ln.
Dalton Ave.
Pleasantview Dr.
Hillcrest Rd.
Hope Dr.

Please feel free to contact me with any questions at either my work number, 740-594-1961 or cell, 740-447-4506.

Thank you.

Respectfully,



Jeff Eing
Utility Forester
American Electric Power