

Exhibit “D”
Landscape Maintenance Specifications

I. General

- (a) The contractor shall perform all work in accordance with these Exhibits, and ANSI A-300 Tree Care Operations, Z60-.1-2004 American Standards for Nursery Stock, ANSI Z133.1-2006 Safety Requirements for Arboricultural Operations, ANSI/ASAE Tip Over Protective Structure (TOPS) for front wheel drive turf and landscaping equipment, ISO 11091:1994 Construction drawings –landscape drawing practices and ASTM D5268-07 Topsoil used for Landscaping Purposes standards.
- (b) The contractor shall provide a written report to the District monthly describing the dates and services performed by location. The monthly report shall be submitted with the monthly invoice and no later than the 15th of the following month services were provided. Failure to provide the report by the due date may result in a penalty of \$100 for each day that the report is late.
- (c) All use of pesticides and herbicides shall be under the direct supervision of a licensed pesticide applicator in accordance with the rules of the Texas Department of Agriculture. Documentation of appropriate licenses shall be submitted with the proposal.
- (d) All work performed under the contract will be scheduled, supervised and verified by the District’s representative noted below or their designee:

Rachel Hagan, Parks and Facilities Maintenance Coordinator

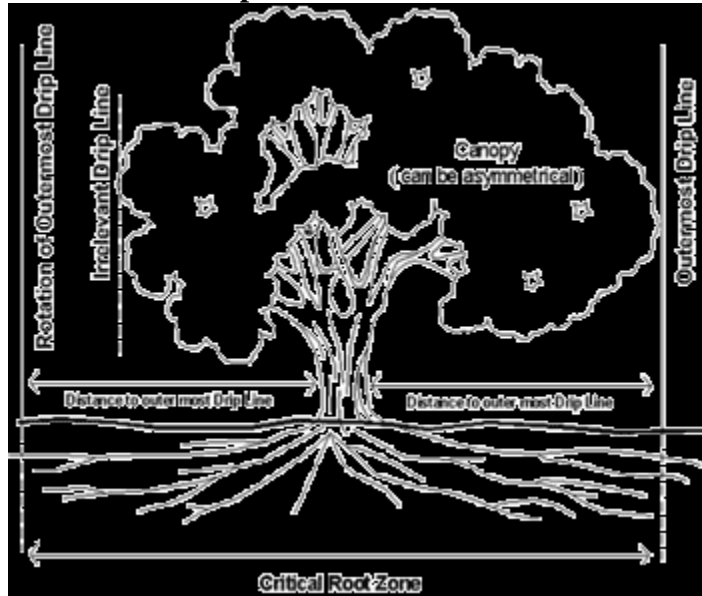
II. Mowing

- (a) All identified properties on Exhibit “B” shall be mowed and edged to maintain a neat and trimmed appearance throughout the year at the frequency noted in Exhibit “B” on a schedule determined at the beginning of the contract term in coordination with the District’s representative.
- (b) Mowing height shall be between two and a half (2 ½) and three (3) inches as determined by the District’s representative.
- (c) Trimming height shall be uniform with height of the mowing around trees, signs, or any other obstacles. When trimming with a line trimmer, ensure that the tree bark remains undamaged by trimmers.
- (d) Remove noticeable clippings from turf and all clippings from parking lots, pathways, seating areas, sport courts, driveways and roadways that are a result of the above work.
- (e) Prior to mowing, all trash and debris in the mowing area shall be picked up and properly disposed of.

III. Mulching

All mulching shall be performed in accordance with the specifications described below:

Illustration of Drip Line and Critical Root Zone



<http://www.greeningmilwaukee.org/pics/treepreservationfig2.gif>

Figure 1 – from Greening Milwaukee

Proper Mulching of Trees



<http://www.vtfpr.org/urban/images/ProperMulching.jpg>

Figure 2 – from Vermont Department of Forestry Parks and Recreation

Illustration of Proper Mulching of Trees



Mulch wide—not deep.

<http://www.treesaregood.com/treecare/mulching.aspx>

Figure 3 – From Trees are Good

Incorrect Mulching of Trees



<http://www.washtwpmorris.org/town/shadetree/mulch.html>

Figure 4 – From Washington Township New Jersey

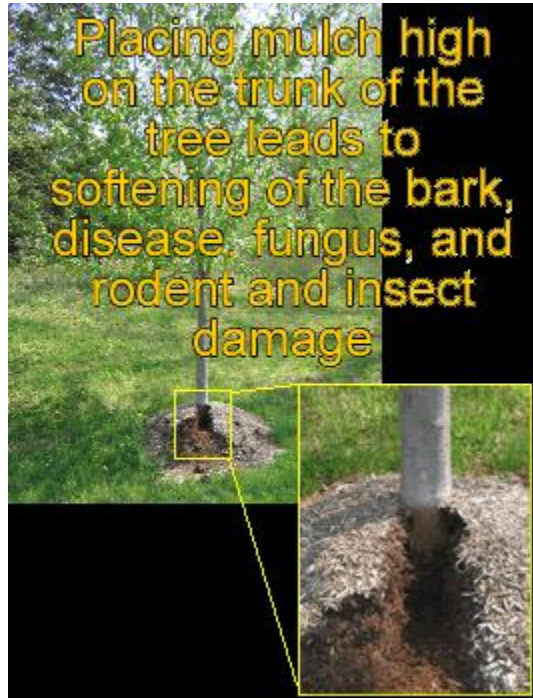
Incorrect Mulching of Trees (Mulch Volcanoes)



Bad mulch volcano – eventually kills trees

Figure 5 – Also from Washington Township New Jersey

How Mulch Volcanoes Harm Trees



<http://www.washtwpmorris.org/town/shadetree/mulch.html>

Figure 6 – Also from Washington Township New Jersey

Wood Chip Mulch Specifications:

1. Submission of a 5 pound sample of ground wood mulch in a labeled plastic bag is required for approval by the District prior to applying any mulch.
2. Label shall include information about the location where the wood for the chips was acquired and the type of material ground.
3. Wood chip mulch shall be coarse ground tree material (approximately ½” – 3” along the longest dimension) derived from the mechanical grinding or shredding of whole trees or portions of trees.
4. Tree species shall be mixed hardwood and softwood species such as oak, juniper, cedar elm, hackberry and ash. Mulch may contain ground or shredded bark, wood fiber, branches, leaves, and trunks.
5. Mulch shall be free from weeds, weed seed, deleterious materials, foreign materials or other compounds detrimental to plant life.
6. Mulch shall have no obvious disproportionate ratio of chip sizes.

Mulching of trees

Mulch shall be layered two to four inches and cover the area under the canopy to the drip line as illustrated in figures two and three. Figures four through six are provided to illustrate incorrect methods of mulching that will not be accepted by the District.

Do not cover the actual trunk of the tree with mulch. Leave a two to three inch space between the trunk of the tree and the beginning of the mulch ring to avoid overly moist bark conditions that cause trunk decay.

Mulch shall be applied twice a year in the months of March and October. The mulch shall be applied the first week of these months.

Prior to mulching tree rings herbicide shall be sprayed on any weeds in the area to be mulched under with a glyphosate product mixed according to the label on the product. Please see the section on herbicides for further information.

Prior to mulching the tree shall be fertilized with a slow release organic fertilizer. Please see the section on fertilization for further information.

The mulched area shall be maintained to remove weeds from the mulch ring areas around the trees. This maintenance shall be performed concurrently with the mowing schedule of each property.

Mulching of flower beds

Mulching of flower beds shall be the same practice as described in the 'Mulching of trees portion of this Landscape Maintenance Specification. Non-selective herbicides are not allowed in the flower beds. Selective herbicides described in the herbicide section of this Landscape Maintenance Specification are allowed.

V. Trimming and weed removal of landscaped beds

Landscape beds shall be trimmed and weeded to maintain a neat appearance. All ANSI standards for trimming of landscape materials describe in section I. a. of this specification shall be followed. Reference section IX in regards to accepted herbicides for use in beds and tree mulch rings.

Shrubs, bushes and perennials shall only be trimmed or pruned to avoid conflicts with streets, parking lots, pathways, seating areas, sport courts, and driveways. Otherwise, shrubs should be allowed to develop a natural shape and should not be groomed. Shrubs shall not be trimmed into square, rectangular or trapezoidal shapes.

Landscape beds shall be trimmed in the winter after several frosts have forced perennials into dormancy.

Landscape beds shall also be trimmed the last week of July specifically for perennials which need a trimming to promote bushiness and more blooms – such as salvias, roses and lantanas. Trimming of salvias shall include removal of old semi-hardwood from the center of the plant to encourage bushiness and fullness.

Perennial grasses in landscape beds shall be pruned in early February. Grasses shall not be pruned at any other time, unless the Contractor is instructed to do so by a representative of the District. Grasses shall be pruned no shorter than 12”.

Roses shall be trimmed in early February by no more than 2/3rds of the total plant height to promote a full shape.

Beds shall be pruned monthly to remove dead plant material and ensure shrubs and other plants do not interfere with streets, parking lots, pathways, seating areas, sport courts, and driveways. Spent flower stalks from yuccas shall be removed to maintain a neat appearance of the plants. Lantana and similar prostrate plants may be allowed to grow over the edge of the flower bed to lend a soft appearance to the edge of the curb. This also allows for the plant to bloom and not be cut back when it is blooming profusely.

The row of oleanders in the Great Oaks Median near Shirley McDonald Park shall be pruned monthly to maintain a neat appearance. Tree seedlings and weeds which sprout in this hedge of oleanders shall be removed to maintain a neat appearance.

Live oak and red oak trees may be trimmed during dormancy and during extremely hot dry periods. Texas Forest Service states that live oak and red oaks should be trimmed from July through February and all wounds painted. These practices help reduce the spread of Oak Wilt. The ANSI standards for Tree Care operations listed in section I. a. provide the allowable specifications on pruning. All live oak and red oaks must be sprayed with a latex based paint to cover pruning cuts. Spraying of the cuts must be done immediately after each tree is pruned.

All other trees may be pruned at anytime to maintain the lowest branches of the canopy down roadways, in parks and around District facilities. As described in the ‘Description of District Facilities’ the lowest branches of shade trees shall be maintained at 7’ in parks, at facilities and in medians. This measurement excludes juvenile trees and trees that grow to only a small size. Trees over roads shall be maintained at 14’. Structural pruning shall be done during dormancy (mid November through January.)

VI. Fertilization of trees

All irrigated trees in district parks, pools and down the great oaks median shall be fertilized. Fertilization of trees shall comply with ANSI A300 standards part 2 for fertilization. Trees, landscape beds and turf shall be fertilized at a rate of 2 pounds per 1000 square feet of nitrogen annually. This total of 2 pounds per 1000 square feet annually shall be divided into four applications per year. Applications shall be made in the months of March, May, July and October. The application in March shall be the last week of the month. Applications for May, July and October shall be the first week of these months. The contractor shall give the district 48 hours of notice that tree areas will be fertilized. A District representative shall examine the containers of fertilizer before the application to confirm the fertilizer meets the fertilizer requirements described in this RFP.

Acceptable fertilizers include:

- The Natural Gardener's 8-2-4 Lawn and Garden Fertilizer
- The Natural Gardener's 4-6-4 Flower Power Fertilizer
- Gardenville's Soil Food Select 6-2-2 Fertilizer
- Gardenville's Premium Lawn Fertilizer 7-2-2
- Rabbit Hill Farms Rose Food
- Rabbit Hill Farms Buds and Blooms
- Medina Growin' Green Fertilizer

The fertilizer shall be evenly spread throughout the root zone under the canopy of the tree in the area indicated by figures 2 and 3 above. After the fertilizer is spread it shall be watered in by running the irrigation for one cycle. Fertilizer shall not be spread 24 hours prior to predicted rains over 1" in rainfall totals.

VII. Fertilization of landscaped beds

All Landscaped beds shall be fertilized at a rate of 2 pounds per 1000 square feet of nitrogen annually. This total of 2 pounds per 1000 square feet annually shall be divided into four applications per year. Applications shall be made in the months of March, May, July and September. The application in March shall take place the last week of the month. Applications in May, July and September shall take place the first week of the month. The contractor shall give the district 48 hours of notice that landscaped beds will be fertilized. A district representative shall examine the containers of fertilizer before the application to confirm the fertilizer meets the fertilizer requirements described in this RFP.

Landscape beds shall be fertilized in accordance with the methods and fertilizers describe in the fertilization of trees section prior to this section.

VIII. Fertilization of turf areas

Turf areas shall be fertilized at a rate of 2 pounds per 1000 square feet of nitrogen annually. This total of 2 pounds per 1000 square feet annually shall be divided into four applications per year. Applications shall be made in the months of March, May, July and September. The application in March shall take place the last week of the month. Applications in May, July and September shall take place the first week of the month. The contractor shall give the district 48 hours of notice that turf areas will be fertilized. A district representative shall examine the containers of fertilizer before the application to confirm the fertilizer meets the fertilizer requirements described in this RFP.

Turf fertilizer shall consist of a slow release organic fertilizer fertilizers listed above in section V shall be considered acceptable. Turf areas that shall be fertilized are described in the 'Description of District Facilities.'

IX. Repairs due to maintenance

Damage caused by the landscape maintenance contractor shall be repaired immediately by the Contractor. The Contractor shall notify the District of all damage as soon as it occurs and shall include a report of all damage including the date it occurred and the date it was repaired in the monthly report submitted with each invoice. These include any damages to irrigation, landscape plants, trees, hardscapes and any other items damaged by the Contractor's equipment and/or personnel. Damages shall be repaired or items damaged shall be replaced by the contractor within a week of the time the damage was created. If the damage is not remedied within this period, the District may repair the damage, in which event the Contractor shall be responsible for payment for materials and labor costs incurred by the District.

X. Herbicides

Allowable herbicides in landscape beds include selective herbicides and pre-emergent herbicides to prevent weed seed germination. These herbicides include:

Selective herbicides for Nut sedge such as sedge hammer (Halosulfuron-methyl) or image (ammonia salt of imazaquin).

Bermuda grass – sethoxydim (Grass Getter), fluazifop (Fusilade, Ornamec, and Grass-B-Gon), or clethodim (Envoy).

Pre-emergent herbicide shall be applied twice a year to landscape beds, turf in pool areas and tree mulch rings. The applications shall be made mid February and mid September. Preen or Amaze may be used in landscape beds. Products toxic to trees and other broadleaf perennials such as 2, 4 – D may not be used as pre-emergents.

Weed and feed products are not to be used in the District.

Under trees in mulched area, glyphosate and any selective herbicides listed for landscape beds are allowed.

Over the decomposed granite pathways that are in parks and greenbelts, and which compose the District's trail system, glyphosate shall be applied monthly to kill weeds on the path.

All mixing and application must follow TDA rules and regulations under the direct supervision of a licensed pesticide applicator. No herbicides may be mixed on District property. Excess pesticide shall not be disposed of on District property. Excess pesticide must be disposed of according to TDA rules and regulations. No other herbicides, pesticides, or fungicides may be used on District property without prior written approval from the District. The contractor shall provide a copy of all spray logs for pesticide application to the District on a monthly basis.

All other weeds and non-desirable plants in landscape areas must be removed mechanically by hand. Weed eaters are not to be used in mulched areas. No hoes or pronged rakes (garden rakes)

shall be used in areas with drip tubing. After the use of shovels in areas with drip tubing the irrigation must be tested for leaks. Damage must be repaired within a week of the occurrence.

XI. Fire Ant Suppression

Fire ants shall be treated with Advion (0.45% indoxacarb) broadcast at 1.5 lbs. per acre. Application shall be made quarterly. Additional applications may be requested by the District at a price pre-determined by the contractor in the bid document as price per treatment. No more than 6 applications annually may be made within 2 month duration in between treatments. Ants must be foraging when applications are made. Foraging shall be tested prior to application. Treatment shall not be made when the ground is moist or 4 hours before a rain.

This product must not be applied in areas that could flow in to recharge features such as caves, streams or creeks. The label of this pesticide must be followed in application and handling of this product. Any changes to the fire ant suppression program must be approved in writing by District Staff.

XII. Reporting from the Contractor to the District

The contractor shall provide monthly reporting to the District. The report for the previous month shall be provided no later than the 15th of each month. The report shall be provided digitally via email to the District's representative.

The landscape maintenance report shall include:

- Pesticide spray log (which shall include all herbicides, pre-emergents, pesticides, miticides, fungicides and any other pesticide sprayed on district property.)
- Total pounds of fertilizer applied during the month
- Dates (day and month) of all areas mowed and/or maintained

XIII. Shaded Fuel Break Area Maintenance

(a) Each of the shaded fuel break areas identified on Exhibit "A" shall be mowed and trimmed once per quarter using the same standards as are described above in Section II. Mowing.

(b) Prior to mowing or trimming the shaded fuel break areas, all trash and debris in the mowing area shall be picked up and properly disposed of.

Please see the Google Earth images for shaded fuel break mowing areas.