

EXHIBIT 1 – Service Compliance Standards

1. Service Compliance Standards

1.1. The specifications outline maintenance standards that are required under this contract; however, the Contractor shall provide oversight and exercise discretion to ensure that all locations are well maintained at all times, using proper techniques and resulting in a standard and attractive appearance for all City properties. To ensure the work performed is acceptable, Contractor shall perform the work in accordance with all applicable federal, state, and local laws, statutes, regulations, rules, ordinances, and guidance as amended from time to time which include, but are not limited to the following:

- 1.1.1. City of Phoenix Environmentally Preferable Purchasing (EPP) Policy.
- 1.1.2. American National Standards Institute (ANSI) standard practices.
- 1.1.3. All equipment manufacturer's, OSHA, ANSI, and DOT standards and/or regulations governing such equipment.
- 1.1.4. Maricopa County Air Pollution Control Regulations (Regulation III – Control of Air Contaminants) – Rule 310 Fugitive Dust from Dust Generating Operations.
- 1.1.5. American National Standards Institute (ANSI)
- 1.1.6. Occupational Safety and Health Administration (OSHA)
- 1.1.7. International Society of Arboriculture (ISA)
- 1.1.8. Tree Care Industry Association (TCIA)
- 1.1.9. Urban Tree Foundation
- 1.1.10. Irrigation Association
- 1.1.11. US Environmental Protection Agency
- 1.1.12. Arizona Landscape Contractor Association
- 1.1.13. Arizona Department of Agriculture Pest Management Division
- 1.1.14. Arizona Department of Environmental Quality
- 1.1.15. Sustainable Landscape Management: Standards for Landscape Care in the Desert Southwest (SLM)
- 1.1.16. Landscape Watering by the Numbers- Water Use it Wisely
- 1.1.17. City of Phoenix Water Use It Wisely - Landscape Watering Guidelines
- 1.1.18. Maricopa Association of Governments (MAG)
- 1.1.19. City of Phoenix Landscape Standards 13.09
- 1.1.20. City of Phoenix Sonoran Desert Plant List
- 1.1.21. City of Phoenix Building Codes and Specifications
- 1.1.22. City of Phoenix Fire Code

2. Service Performance Standards

2.1. Inspection Requirements

Contractor shall:

- 2.1.1. Inspect all irrigation systems for leaks, clogged emitters, and other issues during each routine service to ensure that all devices are functioning properly.
- 2.1.2. Inspect all trees, shrubs, plants, turf, planters, drainage areas, decomposed granite, hardscape, barriers, and stakes for damage, debris, erosion, overgrowth, or disease.

- 2.1.3. Document and report details of property inspections and the resulting service provided to the City Representatives for that property no more than seven (7) days following service.

2.2. **Drainage Requirements**

Contractor shall:

- 2.2.1. Maintain the retention area landscaping to achieve a mature and attractive appearance while allowing the drainage elements to be fully functional at all times to their designed capacity. City properties have stormwater drainage features that function to retain property surface drainage. In most cases these consist of conveyances and retention basins that are integral to the landscaping. Typically, retention areas have trees, shrubs, and groundcovers located throughout.
- 2.2.2. Maintain grates, catch basins, riprap, and curb openings to storm drains in a clear and unobstructed condition at all times.
- 2.2.3. Remove landscape debris, leaves, trash, weeds, silt, rocks, or other materials from drainage structures and overflow ditches as a routine service such that free flow occurs through the intended conveyance to the storage component or retention basin.
- 2.2.4. Remove all weeds, grass, trash, and debris from irrigation berms and swales to optimize stormwater conveyance and absorption.
- 2.2.5. Maintain all lagoons at Water Services sites. Some lagoons have a plastic liner that must be kept clear of all vegetation. Contractor must take care with the liners. Contractor will be responsible for replacing/ repairing the liners as deemed necessary by the City, at Contractor's expense.

2.3. **Decomposed Granite Requirements:**

Contractor shall:

- 2.3.1. Contain decomposed granite in planted areas and will sweep it from all curbs, walks, driveways, and roads to provide a consistently tidy appearance.
- 2.3.2. Rake non-flat surfaces in an upward direction.
- 2.3.3. Backfill holes, potholes, ruts, settlement, depressions or undermines, and redistribute decomposed granite that eroded or washed away by irrigation leaks, excess rainfall, or slopes that are too steep.
- 2.3.4. Maintain decomposed granite to a two-inch depth consistently throughout all landscaped areas and will ensure decomposed granite extends under all plant materials within landscape areas.
- 2.3.5. Replace decomposed granite where it is worn away by foot traffic, or with approval from the City Representatives, may propose installation of an alternate pathway.
- 2.3.6. Replace decomposed granite with the same type, color, and size gradation currently existing on the property. These may vary from one property to another. If a match cannot be made, Contractor shall submit a color and gradation sample as a proposed substitution. The sample must be submitted to the City Representatives for approval prior to ordering or replacing any material at any property.
- 2.3.7. Furnish material; alternatively, the City may provide the decomposed granite and river rock material and request that Contractor to install it.

2.3.8. Install granite per MAG Specification, Section 430, with the exception of pre-emergent applications. The decomposed granite shall be evenly distributed over the area with a minimum depth of two (2) inches. Finish grading will be accomplished, and the granite will be lightly watered and then compacted to an extent satisfactory to the Engineer.

2.4. Hardscaping Requirements:

Contractor shall:

- 2.4.1. Ensure that non-horticultural elements (hardscaping) within the property such as paving, walkways, rocks, retaining walls, curbing, dividers, curb stops, signage, furnishings, fences, play equipment, art works, and fountains shall be maintained as designed and free of debris. Health and safety shall be considered, especially with regard to potable water, play areas, and equipment.
- 2.4.2. Immediately document and report deterioration or unsafe conditions of any hardscape element of the property to the City Representatives.
- 2.4.3. Control and remove weeds from hardscape.
- 2.4.4. Sweep and/or remove debris, gum, and stains from hardscape.

2.5. Pruning (not-Palm) Requirements

The Contractor shall:

- 2.5.1. Use a natural pruning method to maintain characteristic growth patterns of plant materials to promote structural strength and health while controlling size and providing for any specific needs as requested by the City Representatives. Well-pruned landscape shrubs and trees have a natural look; they do not look pruned. Good pruning is essentially invisible.
- 2.5.2. Conduct all pruning according to standard arboricultural practices as noted in the current American National Standards Institute (ANSI) A300 Pruning Standards Exhibit 8) and the Sustainable Landscape Management developed by the Arizona Landscape Contractor Association. The contractor shall follow the ANSI Z133.1 safety requirements and all applicable OSHA standards.
- 2.5.3. To avoid transmitting disease-causing organisms, Contractor must disinfect tools before and after pruning individual trees.
- 2.5.4. All trees and shrubs shall be pruned and maintained clear of all roads, drives and sidewalks so as not to inhibit pedestrian and vehicle traffic. Prune hedges are to be wider at the base than at the top, to allow all parts to receive sunlight. Contractor shall remove no more than 20% of canopy during any single pruning and ensure that there shall be a minimum 6-foot horizontal clearance between sidewalks, trails and other obstacles i.e., fences, walls, utility boxes, electric cabinets, and other fixed objects unless otherwise directed by City Representatives.
- 2.5.5. Prune and remove dead branches, suckers, and stakes; shall prune vegetation in planters so it does not hang over the planters; and shall prune so plant growth is clear of all security system beams; unless otherwise directed by City Representatives.

- 2.5.6. Prune all trees by approved methods to ensure that no trees are permitted to encroach on or over any public right-of-way or adjacent.
- 2.5.7. Prune growth from plants which conflict with pedestrian circulation movements or traffic sight lines, as required. Sight visibility specifications are at: <https://www.phoenix.gov/streets/reference-material/visibility-landscape>.
- 2.5.8. right-of-way back to the property line. Clearances shall be a minimum foot height clearance compliant with Phoenix City Code Section 27- 13, which is currently eighteen (18) feet, unless otherwise indicated in this document or in writing by the City Representatives. This shall be accomplished at the beginning of the contract and maintained throughout the contract period through regular landscape maintenance services. Contractor is responsible for any fines assessed to the City for such violations.
- 2.5.9. Maintain the minimum distance from overhead electrical conductors as identified in the most current ANSI standards. Overhead wire pruning shall be coordinated with the appropriate Utility Company and the City Representatives. Contractor will prune to maintain a healthy canopy such that trees do not touch any surface or structure not intended for contact nor interfere with visibility or movement of pedestrians or vehicles. Such surfaces and structures include but are not limited to signage and oncoming traffic, buildings, structures, stairways, roof edges, and overhead wires.
- 2.5.10. During breeding season (February to August), visibly inspect the tree for active nests and/or evidence of breeding birds prior to commencing work. If an active nest is present, Contractor shall immediately stop work and notify the City Representative.

2.6. **Palm Pruning:** Consists of maintaining the crowns and trunks of palms including the pruning of declining fronds, seed stalks and the peeling or shaping of petiole bases.

Contractor shall:

- 2.6.1. Visually inspect each palm during the pruning process and notify the City Representatives in the event that any hazardous conditions exist (i.e. structural weakness in the trunk).
- 2.6.2. Properly care for palms and be able to recognize signs and symptoms of unhealthy plant material and shall have the knowledge to treat unhealthy plants properly.
- 2.6.3. Unless otherwise directed, palms may be climbed using industry- approved and appropriate equipment, only from a point of ten feet above the ground and beyond. It is acceptable to use a ladder to reach a point of ten feet above ground level to avoid spur entry wounds near ground level. An aerial lift truck of at least seventy- five feet may be used. Climbing out of an aerial bucket truck will not be permitted.
- 2.6.4. Sterilize cutting tools between each palm if disease and/or infection is suspected or known to exist within a certain palm.
- 2.6.5. Pruning shall consist of the removal of all dead fronds, all flower and fruit parts, whether dead or alive and loose frond bases within the top four feet of the trunk. Live, healthy fronds, initiating at an angle of 60 to 90 degrees from the horizontal plane, shall not be removed. Contractor shall remove living fronds hanging down below this point.
- 2.6.6. Fronds removed should be severed close to the petiole base without damaging living trunk tissue.

- 2.6.7. Leave palms in a neat and clean fashion without stubs or loose frond bases left hanging within the top four feet of the trunk.
 - 2.6.8. Remove all fronds, seed stalks, and loose frond bases of the past from any adjacent landscaping or structures they may fall in and hang (i.e. other trees, streetlights).
 - 2.6.9. Take precautions that no live fronds are partially cut and left hanging. Within 30 days of original pruning, Contractor will remove any fronds left hanging. At the City's sole option, and upon request, Contractor shall provide palm peeling. In some cases, the palms to be peeled will have been already pruned by City staff.
 - 2.6.10. Use aerial lift type equipment or shall climb palms above ten (10) feet from the ground by using a ladder to get over the first ten feet to avoid spur entry wounds near ground level.
 - 2.6.11. Palm peeling should consist of the removal of the dead frond bases only at the point they contact the trunk without damaging living trunk tissue.
 - 2.6.12. Provide a written price based on Attachment 3 - Bid Price Proposal to the City Representatives for approval prior to commencing the work. The price shall include peeling palms according to the most current ANSI standards.
- 2.7. **Wood Perennials Pruning-** Woody perennials such as leucophyllum spp., cassias, and bougainvillea shall be pruned to the base once every three (3) years.
- 2.7.1. Prune oleanders utilizing the sphere shape 4' diameter sphere or box and flat cut at all applicable sites every four to six months, unless otherwise directed. City Representatives will determine the appropriate height.
 - 2.7.2. Maintain oleanders pruned flush with fence lines. Oleanders along fence line, trim to two (2) feet width and eight (8) feet high. Oleanders at the base trim at 4" minimum / 6" maximum height above/off the ground.
 - 2.7.3. Bushes, Shrubs, and Groundcover Pruning
 - 2.7.4. Prune shrubs or brush growing upon the property to ensure that no landscaping elements encroach on or over any public right-of- way so as to interfere with the movement of persons or vehicles.
 - 2.7.5. Prune when most beneficial to the plants, except when causing a visual obstruction to drivers. Do not prune more than 1/3 of plant at any one time and use pruning sealer on the plants.
 - 2.7.6. Maintain bushes to three-foot maximum height and two-foot clearance within five feet of perimeter fence.
- 2.8. **Tree Trimming Requirements**
- 2.8.1. Tree stakes, ties, and guys shall be checked and adjusted if necessary. Ties shall be adjusted to prevent girdling of tree trunks.
 - 2.8.2. When evaluating trees for trimming the following should be determine:
 - 2.8.2.1. If the height of the limbs and branches will be greater than 10 feet from the finishing grade, then an ISA-certified arborist must be used to complete the job.
 - 2.8.2.2. If the height of the limbs and branches will not be greater than 10 feet from the finishing grade, then the Contractor will be responsible for completing the job.

- 2.8.3. The Contractor shall be responsible for trimming trees to prevent branches from impeding parking, sidewalks and lighting at the locations listed above.
- 2.8.4. Trees and landscape shall be cared for in accordance with the American National Standards Institute (ANSI) standard practices for trees, shrubs, and other plants as well as the Phoenix City Code.
- 2.8.5. During breeding season (February to August), visibly inspect the tree for active nests and/or evidence of breeding birds prior to commencing work. If an active nest is present, Contractor shall immediately stop work and notify the City Representative.
- 2.8.6. Establish tree rings using chemical edging techniques 12 to 18 inches from tree trunk; Contractor will not use line trimmers against tree trunks.

2.9. **Staking Trees and Shrubs:** The purpose of staking is to support and protect young trees and shrubs until they are able to stand on their own.

Contractor shall:

- 2.9.1. Keep trees and shrubs that are staked at the beginning of the contract period staked to City specifications until such time as the Contractor's certified Arborist determines the stakes can be removed. However, stakes should not remain on trees and shrubs for longer than a one-year period.
- 2.9.2. Obtain the City Representative's approval prior to the use of guy wires. Substitute stake types are not allowed unless alternative staking methods or materials are deemed necessary, and Contractor has obtained prior approval from the City Representatives.
- 2.9.3. Use approved staking material which consists of two round, two-inch diameter lodge poles, one on each side of the tree, with two hose-protected guy wires between trees and stakes firmly driven into solid soil in accordance with the City of Phoenix Landscape Standards. Guy wires shall be 7 strands; 3/16" galvanized steel cable. Contractor shall loop into a branch crotch using 5/8" rubber hose sleeves at 1/3 the height of the trunk.
- 2.9.4. Consult the City Representatives for staking detail for trees having a trunk diameter greater than 3 inches as it may be appropriate to secure those trees with 3 stakes in accordance with the City of Phoenix Landscape Standards or the Urban Tree Foundation.
- 2.9.5. Drive stakes a minimum of twenty-four (24) inches into firm, undisturbed soil below the excavated depth of the planting pit and NOT drive stakes into the root ball. A top tie shall be placed for maximum support and a bottom tie shall be placed halfway between the top tie and the ground. Stake heights should be equal and not interfere or cause damage to branches.
- 2.9.6. Remove nursery stakes, one-inch stakes, metal fence posts, and bamboo stakes when found and when trees are planted or replaced.
- 2.9.7. Flag all guy wires with permanent red-flagging material for visibility.
- 2.9.8. Maintain all tree stakes and ties supporting trees. Contractor shall inspect staked trees and shrubs a minimum of once each 60 days for girdling or chafing of trunks or branches or rubbing which may cause bark wounds.
- 2.9.9. Check all tree stakes for adjustment, replacement, or removal where unnecessary.
- 2.9.10. When tree stakes are removed, remove the entire stake above and below grade, including all wire and hose materials. It is not acceptable to leave broken stakes at or below grade.

- 2.9.11. Check all properties for trees requiring re-staking and re-wiring within twenty-four (24) hours following windstorms. Additionally, remove broken trees and tree limbs from the property, surrounding street right-of-way, vehicular and bus travel lanes, and sidewalks. Provide approved staking materials.

2.10. Mowing Requirements

Contractor shall:

- 2.10.1. Remove all trash and debris from lawn and turf areas prior to mowing.
- 2.10.2. All clippings, cuttings, and trimmings shall be bagged and removed from landscaped sites and disposed of legally off City property.
- 2.10.3. Blow, sweep or vacuum all paved paths, sidewalks, driveways, and street gutters.
- 2.10.4. Turf shall be mowed to a height no lower than 1" and no greater than 1.5" unless communicated otherwise with City Representatives.
- 2.10.5. Complete edging when turf is cut. Edging may be done with a powered, monofilament type edging machine or by hand.
- 2.10.6. Use a standard power edger for edging and will use tree guards to protect trees from edger.
- 2.10.7. Edge lawns along building structures, curbs, sidewalks, driveways, and their physical barriers, except bed dividers, when lawns are cut as required.
- 2.10.8. If not already indicated in this document, the City Representatives will notify Contractor of the motion detection systems Contractor must take care not to damage.
- 2.10.9. The contractor shall not use chemical weed killer as a substitute for edging around fence lines, parking lots or streetscape curbing.
- 2.10.10. When using power blowers, the guidelines of Maricopa County Air Pollution Control Regulations (Regulation III – Control of Air Contaminants) – Rule 310 Fugitive Dust from Dust Generating Operations must be considered. Blowers may be used in open areas where it does not affect pedestrians, staff, or the general public. Contractor shall not use blowers when the general public is present and shall use discretion when working around facilities and private and personal property. Debris and gravel shall not be blown onto adjacent property, street surfaces, or planting beds and **the blowers shall not be used around open water sources.**

2.11. Trash Cans, Weeds And Debris Removal Requirements

Contractor shall:

- 2.11.1. Litter and debris removal from turf areas, plant beds, curb and gutter, dry wells, swales, fences and site grounds shall be collected and disposed of during the performance of the routine services. Litter and debris to be removed include but not limited to: paper, cans, bottles, wood, tires, plastic, cardboard, and undesirable materials, deposited or blown onto the sites. Palm fronds, weeds, tree limbs, plant leaves, grass clippings, etc. shall also be removed during each site visit. Disposal of litter and debris must be at an offsite location at the Contractor's expense.

From time to time, the City may require non-routine services to clear a large quantity of debris. In these special cases, this additional work shall be ancillary services and charged at the general labor rate.

- 2.11.2. Clean each property area, including grounds, easements, rights-of way surfaces, medians, roadways, parking lots, reservoirs, ditches, in and around retention basins, and drywells, associated riprap or rock drainage ways, but not limited to: parking lots; islands; landscaped areas; and multi-use trails throughout, raking under ground cover plants, and cleaning out irrigation valve boxes making sure valves are accessible for inspection and repair.
- 2.11.3. Sweep all sidewalks around the buildings clean of debris. The Contractor is not responsible for sweeping of entire parking lots.
- 2.11.4. Maintain the properties to ensure that it remains free of weeds. Contractor shall control weeds and intrusive grasses in all medians, easements, retention and native vegetation strip areas and other planting areas.
 - 2.11.4.1. Generally, weeds are to be controlled by using both chemical and mechanical means (hoeing) at Water properties using an Integrated Pest Management (IPM).
 - 2.11.4.2. Pre-emergent shall not be used but post-emergent and herbicide is allowed.
 - 2.11.4.3. Remove weeds from the entire property, including fences and property lines, and maintain the property in a weed- free condition year-round without additional cost to the City, regardless of application of weed control substance and periodic applications of post emergent. This effort shall include all sidewalks, driveways, fence lines, and rights-of-way within a specific.

2.12. Pesticides, herbicides, and insecticides Requirements:

Contractor shall:

- 2.12.1. Always exercise necessary precautions using Integrated Pest Management (IPM) practices to control pests and diseases in the landscape. Pesticides will only be used after careful consideration of non-chemical alternatives and then the least toxic chemicals that are effective shall be used.
- 2.12.2. Routine application of pesticides, insecticides, herbicides, and other chemicals shall not be practiced and are only to be used under specific conditions. Under no circumstance is pre- emergent herbicide or soil sterilant to be used on any Water Services City property.
- 2.12.3. Post emergent shall be applied on an as needed basis in order to maintain weed control throughout the City's properties.
- 2.12.4. The City Representatives must be made aware of any and all chemical application at City properties prior to application. Additionally, all chemicals used, why they were used, in what quantities they were used, and on which City properties they were used shall be included in all Maintenance Reports.

- 2.12.5. Contractor shall immediately notify the City Representatives of any disease or pest infestation that may result in the destruction of plant material.
- 2.12.6. The Contractor shall only apply chemicals on City properties that are in accordance with the City of Phoenix Environmentally Preferable Purchasing (EPP) Policy. The City of Phoenix EPP Policy details that through City contractual agreements, purchases shall be made with preference for reduced toxicity and hazards and bio-based materials. Compliance with the City of Phoenix EPP Policy must be detailed in the Annual Recommendation and Performance Report.
- 2.12.7. Contractor shall not mix pesticides or chemicals on City property.
- 2.12.8. Contractor shall not leave pesticides and their hand-held application equipment unattended or in a place that is not under lock and key. Contractor shall not store pesticides on the premises of any City of Phoenix buildings or grounds. Contractor will maintain a specimen label and safety data sheet (SOS) on each vehicle transporting or using each herbicide, pesticide, insecticide, and fertilizer on City property.
- 2.12.9. Contractor may not spray herbicides within twenty (20) feet of any potable water treatment process or storage reservoir or designated Waters of the United States. These areas require weed removal by hand or mechanical means only. Contractor shall ensure that the quantity and frequency of herbicide application is the minimum necessary to control the growth.

2.13. Planting, Removal, And Replacement

Contractor shall:

Notify the City Representatives of any unrecoverable or damaged plant material.

- 2.13.1. Obtain approval by the City Representatives prior to the replacement for all plant material replaced by the Contractor.
- 2.13.2. The City will be the sole judge as to whether treatment or removal and replacement are required. The City shall have the option of providing the replacement plant material for Contractor's installation.
- 2.13.3. Provide a list to the City Representatives naming plants to be replaced, the plant being used as the replacement, the name of the nursery where the plants are being obtained, and the cost of the plants if replacement is provided by the Contractor. The report shall include the date proposed for conducting the replacement operations and at which area property.
- 2.13.4. Replace all plants with the exact same type, variety, and size per the original landscape plans, as provided by City Representatives, for the site unless a substitution is requested by the City Representatives. The City Representatives reserve the right to make substitutions for plants that have not been successful in the past.
- 2.13.5. If a plant type cannot be located in the size or quantity needed, Contractor shall submit a list of possible substitutions for the plant. Contractor's substitutions may only be considered with written description to include reasons for proposing a substitute plant material. Substitutions shall be locally available in the size and quantity needed to complete the replacement.

- 2.13.5.1. Obtain all replacement plants from a grower, preferably located in Arizona, who is licensed to grow and sell plant materials from an established wholesale or retail nursery growing yard. Replacement plants shall be true to size in accordance with the American Nursery Association specifications current edition.
- 2.13.5.2. Ensure that replacement plants are healthy, free of disease, insects, or other deformities.
- 2.13.5.3. Replacement plants shall not be root-bound. Contractor is responsible to verify the condition of the plant material prior to delivery site.
- 2.13.5.4. Irrigate newly planted materials as necessary for successful establishment.
- 2.13.5.5. Remove excess soil from the property which is generated from planting holes and not reused as backfill or for establishing final grading.

2.14. **Tree Planting.** Follow the procedures and details shown in the City of Phoenix Landscape Standards.

Contractor shall:

- 2.14.1. Rake back existing decomposed granite to allow for excavation of the planting pit
- 2.14.2. use a tarp(s) to stockpile the excavated soil separately from the decomposed granite during the planting operation to prevent leaving soil on the surrounding decomposed granite.
- 2.14.3. dig the width of the planting pit at least three times the width of the planting container for trees, shrubs, and groundcovers.
- 2.14.4. hand-dig all planting pits at the City Representative's request.
- 2.14.5. thoroughly irrigate for duration needed to sustain the plant depending on the climatic conditions (Manual irrigation may be necessary until the plants are able to sustain themselves on the schedule set for the season on the controller).
- 2.14.6. leave smaller branches that do not interfere with the pedestrian or vehicular movement on the trunk.
- 2.14.7. Contractor shall not:
 - 2.14.7.1. Over-excavate the depth of the planting pit.
 - 2.14.7.2. Drive planting stakes through the root ball.
 - 2.14.7.3. Remove small temporary branches from trunk without City approval.
 - 2.14.7.4. Substitute different types of stakes for those that are indicated on the planting detail.
 - 2.14.7.5. Use an auger to dig planting pits.
 - 2.14.7.6. Leave excavated soil on top of the decomposed granite after completing planting.
 - 2.14.7.7. Apply fertilizer on top of the soil

2.15. **Cactus And Succulents:**

Contractor shall:

- 2.15.1.

- 2.15.2. Care for cactus and succulents, be able to recognize signs and symptoms of unhealthy plant material, and shall have the knowledge to treat unhealthy plants-
- 2.15.3. Recognize the need for supplemental irrigation (summer only) if wilting or shriveling occurs.
- 2.15.4. Recognize the need for good drainage and grade ground material (soil and decomposed granite) properly away from cactus and succulents to avoid water collecting at the base.
- 2.15.5. Recognize damage caused by common pests such as the Agave Snout Nosed Weevil, e.g., lower leaves will lay flat to the ground.
- 2.15.6. Remove plantings that are found to have succumbed to the Agave Weevil immediately and treat surrounding plants with an approved pesticide to prevent damage from spreading in April- May and September
- 2.15.7. Remove agave stalks after they have flowered.
- 2.15.8. Replace plants that have been removed only with replacements that have been approved.
- 2.15.9. Remove diseased tissue from saguaros.
- 2.15.10. Contractor shall not:
 - 2.15.10.1. Apply a regular drip system to cactus and succulents.
 - 2.15.10.2. Fertilizer or herbicides and pesticides shall only be used to prevent Agave Weevil
 - 2.15.10.3. Provide soil amendments.
 - 2.15.10.4. Dig or grade around cacti in a way that would create low spots near cactus and succulents.

2.16. Fertilizing

Contractor shall:

- 2.16.1. **Supplement the plants/trees with Fertilizer must be approved by the City's Representative prior to the application.** The purpose for adding fertilizer to plants shall be to support and manage growth by adding supplemental minerals that are in short supply. Desert trees, once mature, do not benefit substantially from routine fertilizer applications. Non-desert trees, and all shrubs and groundcovers will benefit from routine applications of complete fertilizer. Fertilizer and soil amendments must be applied on a routine basis as described in Sustainable Landscape Management: Standards for Landscape Care in the Desert Southwest (SLM), latest edition, to promote healthy, attractive, and thriving plant material.
- 2.16.2. Contractor will apply fertilizer and soil amendments and de- thatch grass turf areas as needed to promote healthy, attractive, and thriving plant material and grass turf.
- 2.16.3. When fertilizing, Contractor shall:
- 2.16.4. Base fertilization on soil nutrient testing as requested.
- 2.16.5. Fertilize all groundcovers and shrubs.
- 2.16.6. Always include ammonium phosphate 16:20:0 in the backfill for new plantings at one-half the recommended rate.
- 2.16.7. Only use homogeneous formulations as opposed to blended mixtures. Provide three liquid foliar fertilizer applications Spring- Fall. Specify more clearly when these applications should be done.

- 2.16.8. When fertilizing, Contractor shall not:
 - 2.16.8.1. Apply dry fertilizer to dry ground.
 - 2.16.8.2. Apply fertilizer to legume type plants (Palo Verde, Mesquite, Sweet Acacia-pod type seed tree)
 - 2.16.8.3. Apply fertilizer to cacti or succulents.
 - 2.16.8.4. Use bleached fertilizer mixtures.
- 2.16.9. When adding amendments, Contractor shall:
 - 2.16.9.1. Provide 3:1 native soil to mulch in backfill mix for all new and replacement shrubs and groundcovers and non-desert shade trees.
 - 2.16.9.2. Mulch should be ground or processed wood product from redwood, ground or shredded fir, redwood, or ponderosa bark. Nitrogen content 1%, pH not to exceed 7.5%, and organic matter not less than 85%. Gradation should be treated with non-toxic agents so that it is hydroscopic.
- 2.16.10. When adding amendments, Contractor shall not:
 - 2.16.10.1. add mulch or manure to the backfill mix for replacement of desert trees
 - 2.16.10.2. use steer manure for any backfill or as any other amendment.