

SCHEDULE "B"

RIGHT OF WAY LANDSCAPE MAINTENANCE SPECIFICATIONS

These specifications are intended to provide the information by which private entities may understand the minimum requirements of Collier County relative to maintaining County rights of ways. Records of all specification requirements shall be kept and made available to the County's representative upon request.

- A. **MOWING AND EDGING:** Mowing and edging shall include medians as well as those areas, if existing, along the outside edge of the sidewalks of adjacent properties. All turf shall be mowed with mulching type mower equipment to eliminate the need to bag and transport grass clippings. Should bagging be necessary, the bagged clippings shall be collected and removed at no additional cost. Grass shall be cut at a height of three and one half inches (3 ½"). The frequency of cutting will be weekly or fifty-two (52) times.

Mechanical edging of the turf shall be done with each mowing along all sidewalk edges, back of concrete curbs, around all planting beds, utility service boxes, street light bases, sign posts, headwalls, guardrails, timer pedestals, posts, and trees. Metal blade edging is not permitted along back of curbing. Grass root runners extending into the mulched areas shall be cut and removed when the edging is performed. Edging will also be required in all turf areas around isolated trees, sprinkler heads, valve boxes, shrubs, sign posts, manholes, etc. where they exist. All debris on streets, sidewalks or other areas resulting from edging shall be removed. No herbicide shall be used for edging.

All sidewalks, curbing and/or gutters shall be cleaned after each service. All sidewalks shall be blown clean, but no clippings or other debris shall be blown or allowed to be deposited on other adjacent property or accumulate on right-of-way areas.

- B. **WEEDING:** Weeding of plant beds, sidewalks (asphalt, concrete or pavers), guardrail bases, and curb joints as well as other mulched areas by chemical and/or hand removal will be performed weekly or as necessary to provide a weed free and well maintained area.
- C. **GENERAL SITE PRUNING:** General site pruning shall be defined as the pruning of any plant's foliage below ten-foot (10') foot.

All groundcovers, shrubs, canopy trees and palms up to ten foot (10') level, shall be inspected and pruned on a weekly or an as needed basis, so to maintain the proper or required heights for visibility, vehicular movement purposes and desired shape or form as determined by County's representative. Pruning shall also include removal of water sprouts, suckers and any dead or diseased foliage or branches.

During the first week of October and April, ornamental grasses, such as Fountain grass, Florida Gamma or Fakahatchee grass shall be pruned in a pyramid shape to a twelve inch (12") or twenty-four (24") height based upon the type of plant. Ornamental type grasses such as Liriope muscari 'Evergreen Giant', shall only be pruned at the direction and approval of the County's representative.

Plant material with a canopy over pedestrian sidewalks shall be maintained at a minimum height of one hundred twenty inches (120"). Shrubs and groundcovers adjacent to pathways or sidewalks shall be pruned to maintain one foot (1') of clearance from the edge of the pathway. IT is recommended that adjacent shrubs and groundcovers be maintained so that they angle or are rounded away from the pathway.

- D. **TRASH REMOVAL:** With each service, all sites shall be cleaned by removing all trash or debris to include, but not limited to; paper, bottles, cans, other trash, and horticultural debris. All debris or trash pick-ups shall be performed "prior" to mowing in all turf areas. The disposal of all trash and debris must be at a proper landfill or disposal site.
- E. **STREET CLEANING/SWEEPING:** Street Cleaning: A four foot (4') wide area measured from the face of the curb and gutters including turn lanes shall be cleaned with each site service to remove any accumulation of debris or objectionable growth so to maintain a neat and safe condition.

- F. **TRAFFIC CONTROL:** The developer shall comply with the requirements of Collier County Maintenance of Traffic (MOT) Policy, copies of which are available through Risk Management or the Purchasing Department. The Developer shall obtain and review the County MOT policy requirements prior to submitting a bid.

The Developer will be responsible for obtaining copies of all required manuals, MUTCD, FDOT Roadway & Traffic Design Standard Indexes, or other related documents, so to become familiar with the requirements. Strict adherence to the requirements of the MOT policy will be enforced under this Contract.

To assist in employee visibility; approve bright day glow red/orange colored safety vests shall be worn by employees when servicing the area.

- G. **CANOPY TREE AND PALM PRUNING:** For this site, canopy trees shall be defined as any large shrub, tree, or palm with foliage above a ten-foot (10') level.

All canopy trees and palms shall be pruned on a continuous basis to create and maintain a seventeen-foot (17') canopy clearance over the roadways and a ten-foot (10') canopy clearance over all pathways. Canopy trees shall be selectively pruned twice per year in April and September so to thin the interior canopy of cross branching and to shape the canopy of the trees. The County's representative shall approve a professional licensed to prune trees under the direction of a Licensed Landscape Architect, Arborist, Tree Surgeon, or other approved professional shall do the pruning and sharpening. The work shall be performed per ANSI AS300 "Standard Practices for Trees, Shrubs, and other Woody Plant Maintenance" and done in a professional manner in accordance with "Pruning Standards" of the national Arborist Association or accepted local trade standards and practices.

Palms shall be pruned annually during June of each year. The palms shall be pruned to a "Tropical Cut" or to a nine (9) o'clock- three (3) o'clock angle from the horizontal at the base of the palm's bud or lowest fronds. Approximately seven (7) to (10) ten green fronds shall be left at the head after pruning. The pruning shall include removal of all nuts, seed stalks, brown or dead and lower fronds.

The work shall be done in a professional manner in accordance with acceptable trade standards and practices. The palms shall not be climbed with tree spikes to remove the fronds. The pruning shall be accomplished by the use of a ladder, boom truck or lift. All debris from the pruning shall be removed and the site shall be left on a clean and neat manner.

When the annual or bi-annual heavy pruning work is being performed with the use of a lift or boom truck, it is required that the adjacent traffic or turn lane to the work area, be closed using traffic control devices and signage per the current FDOT traffic control standards and indexes.

- H. **FERTILIZATION:** Granular fertilization of shrubs and groundcovers shall be applied by hand in a twelve-inch (12") wide radius ring around the base of the plants. Granular fertilization of the trees and palms shall be determined by the caliper (diameter) of the trunk and broadcast by hand in a band around the plant's base from a distance of 12" to the drip line of the palm, whenever possible.

An 8 oz. cup equals one (1) pound. Trees and palms shall receive one (1) cup per one-inch (1") caliper. Shrubs and groundcovers shall receive one (1) cup per three foot (3') of height or spread. Shrubs and groundcovers shall receive one-half (1/2) cup per eighteen inches (18") of height or spread. All fertilizer shall be swept off all sidewalks, concrete curbing and paving.

The fertilizer shall be applied as set forth in the following schedule.

Turf Areas and Plant beds containing Shrubs, Groundcovers, and Trees.

The (13-3-13) fertilizer shall be applied at a rate of ten (10) pounds per one thousand (1000) sq ft. for all areas. Four applications of (13-3-13) fertilizer will be applied yearly during the months of February, May, July, and October. Palms: Developer shall apply approved by County's representative palm fertilizer during February, May, July, and October as specified below.

Should yellowing occur on the top of the fronds, manganese sulfate will be required and if on the lower fronds, Sul-Po-Mag or equivalent will be required to be applied with the palm fertilizer at the rates specified.

- I. **MULCHING:** Organic Mulch Areas with no mulch or new planting areas shall have mulch placed to provide for a four inch (4") non-compacted or unsettled depth measured from the existing soil grade. The area to receive the mulch shall be raked level to establish the proper finished grade and have all weeds removed prior to the placement of the mulch. Two inches must be applied to replenish this mulch twice a year, November and during May.
- J. **LANE CLOSURE:** Lane closure for median maintenance shall be limited. Upon proper placement of the lane closed signs, pre-warning signs, arrow boards, traffic cones form the existing soil grade.
- K. **IRRIGATION SYSTEMS:** The irrigation systems shall be checked and repaired as necessary. Each zone shall be manually turned on at the valve once a week and a thorough inspection conducted to ascertain proper operations of the system. Quick coupling valves, if existing shall be reviewed weekly and operated quarterly to insure proper operation. Maintenance responsibilities will include cleaning and adjustment of heads, nozzles, installation or replacement of risers, repair of minor PVC piping breaks or subsurface piping or restricted sprinkler lines, replacement of damaged valve boxes/lids and adjustment of controller and rain shut off switches for settings and operations. Where required, the Developer shall maintain on site reclaimed water irrigation signage.

SUBSURFACE IRRIGATION SYSTEMS:

No excavation or mechanical metal edging around plant beds shall be done within the Right-of-way. Mechanical metal blade edging is permitted along the back of curbing.

Weekly Service Requirements:

- 1. A visual inspection of the subsurface irrigation systems shall be performed weekly to determine if the systems are functioning normally and if cuts, leaks, piping damage, flooded areas exist, and repair as necessary. This shall also include review and re-setting of the controller and in-ground moisture sensor adjustments or other rain sensing devices as needed.
- 2. System Computer/Controller
 - a. Operate, adjust, and set controller to provide proper operation of the systems.
 - b. Diagnose and repair electrical and mechanical malfunctions.
 - c. Monitor and adjust the system zones moisture levels based upon moisture sensor readings.
 - d. Operate controller on automatic, manual and single trip operation.
 - e. Monitor controller standby battery backup and replace as required.
- 3. Automatic Control Assemblies and Quick Coupling Valves
 - a. Review control valve assembly and by-pass system for proper settings.
 - b. Open zone control valve assemblies and quick coupling valve boxes to review valves for leaks; pressure gauge operation; proper settings and are clean of debris or mulch.
- 4. Pump Sites
 - a. Inspect for proper operations.
 - b. The Developer shall record and provide to the County's representative the well water flow meter readings for the two well locations on the General Maintenance Report Sheets.
- 5. Review system water source connections to include water meters, backflow preventers, gate valve points of connection and main lines for proper operation.

Monthly Service Requirements:

- 1. Automatic Control Valve Assembly
 - Manually operate valves, and clean valve assembly filters
- 2. Backflow Assembly
 - Review assembly for proper operation and clean filter as needed

3. Quick Coupling Valves
 - Review boxes and operate valve

4. Pump Sites
 - a. Once a month, the Developer will trouble shoot each pump station, checking amperage draw and document the results for future reference.
 - b. Manually run the system to ensure proper coverage and that no sprinkler head and nozzle are spraying onto the roadway. Clean and adjust sprinkler heads and nozzles and irrigation shields to ensure proper coverage.
 - c. The Developer will check all zone wiring and solenoid conditions through the use of an OHM meter and document the results for future reference.
 - d. The Developer will clean the strainers filters and inspect them for wear at the Pump Station.

5. Manually run the system with open flush caps and review sprinkler head indicators located at the end of zones.

6. Review pressure gauge readings at control valve assemblies for each zone, as well as gauges located at the end of zones where present to determine the system and porous piping is functioning properly.

7. Check, analyze and adjust flow control devices as required.

Quarterly Service Requirements:

1. Review all subsurface system piping, valve assemblies, wiring, moisture sensors and controllers for overall operation and provide adjustments as required to assure proper operation and irrigation application.

Conventional Pop-up Irrigation Systems:

Weekly Service Requirements:

1. Each median zone shall be manually turned on at the valve to ascertain proper operation of the system.
2. Repair system for any blown-off heads, broken lines or leaks around heads or valves.
3. Check the controller and rain sensing devices for proper operation and settings.
4. The Developer shall further adjust all sprinkler heads to ensure that all landscaped areas receive one hundred percent (100%) irrigation coverage.
5. Within all work areas the Developer shall review the plant material and turf for dry conditions and if found correct the problem.

Monthly Service Requirements:

1. Manually run the system, clean and adjust sprinkler heads/nozzles and concrete donuts as necessary to ensure proper coverage and that there are no sprinkler heads/nozzles spraying directly onto the roadway.
 - a. Each median and side right-of-way zone shall be manually turned on at the valve to ascertain proper operation of the system.
 - b. Repair system for any blown-off head, broken lines or leaks around heads or valves.
 - c. Check the controllers and rain sensors for proper operation and settings.
 - d. The Developer shall further adjust all sprinkler heads to ensure that all landscaped areas receive one hundred percent (100%) irrigation coverage.
 - e. Within all work areas the Developer shall review the plant material and turf for dry conditions and if found correct the problem.

General Service Requirements for Irrigation Systems:

1. Should South Florida Water Management District or other governing agency establish water restrictions, the irrigation systems shall be inspected and all other controllers set to the mandated hours of operation set by the District or Agency. Subsurface systems are exempt from water restrictions.
2. Replace defective heads or nozzles, install or replace defective risers and repair minor breaks or restricted sprinkler lines.
3. Replace damaged valve boxes/lids if caused by the Maintenance Developer.
4. Inspect, clean, and replace, if necessary, screen/filters within the sprinkler heads.
5. Keep all grass and mulch out of all valve boxes. All valve boxes in sod areas are to be kept at sod level. All valve boxes in plant beds are to be kept two inches (2") above finished mulch.

6. One hundred percent (100%) irrigation coverage shall be maintained within all irrigated landscaped areas while this Contract is in effect.
7. Notification to the County's representative is required when acts of vandalism or accidents have occurred to the irrigation system. Photos shall be taken and provided to the County's representative at no added cost.

Miscellaneous Irrigation Maintenance Responsibilities:

1. Should the temperature be forecast to be below thirty-four (34) degrees, the Developer shall be responsible for turning the irrigation system off in order to protect plants from possible freeze damage.
 2. It shall be the Developer's responsibility to notify the County's representative of any irrigation problems or additional irrigation maintenance needs.
 3. The irrigation service personnel must trouble shoot time clocks, i.e. power-in 110 volt and 24-volt fuses, 24 volts output when necessary.
 4. The irrigation services personnel must trouble shoot any pump start relay, main fuses and capacitors when necessary.
- L. **BRICK PAVERS:** All median brick paving shall be pressure cleaned twice per year, in April and November, to remove marks, gum and other dirt that may be deposited on the surface areas. Upon finding damaged areas, the developers shall clean-up debris if present, and or flag off the areas with protective barriers and/or high visibility hazard tape. Damaged areas must be repaired as quickly as possible.
- M. **PEST CONTROL:** Trees, Palms, Shrubs, Groundcovers, and Sod must be closely monitored for pests and diseases and must be treated appropriately by a licensed Pest Control Operator approved by the County's representative.