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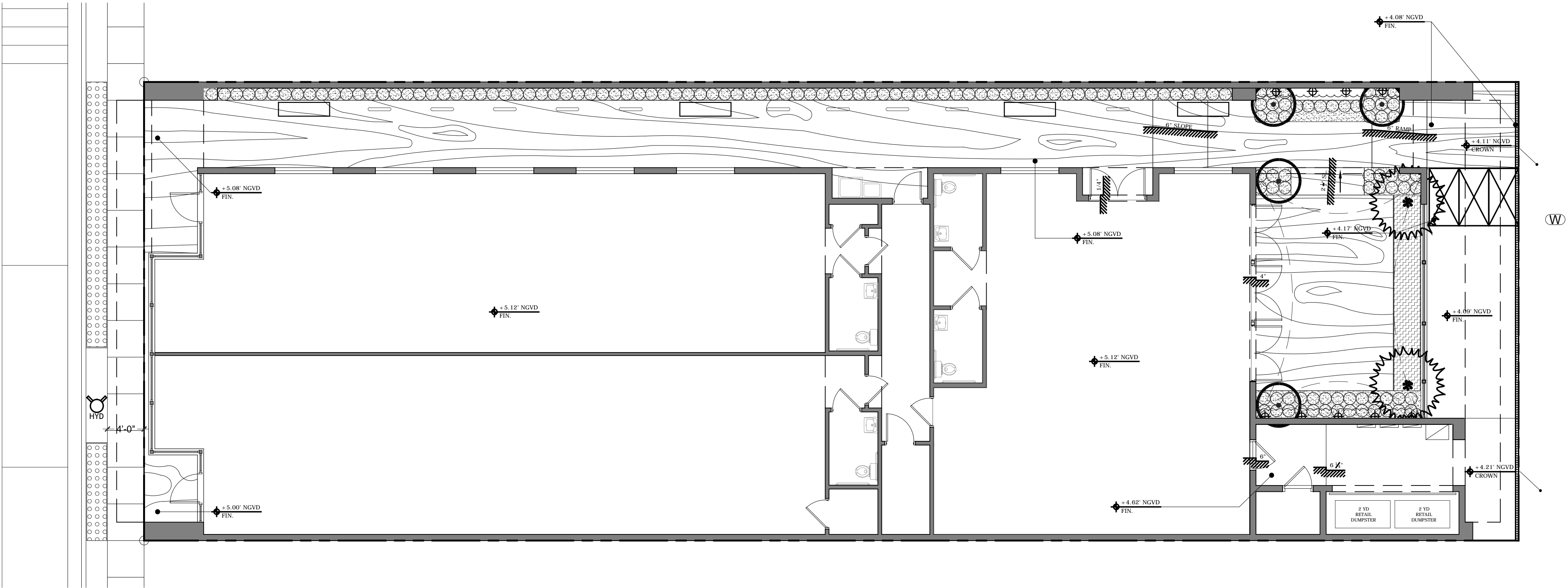
**E+S SHULL, INC.**  
1675 ALTON ROAD | MIAMI BEACH, FL 33139

# E+S SHULL, INC.

1675 ALTON ROAD  
MIAMI BEACH, FLORIDA 33139

## LEGEND:

- |     |                   |
|-----|-------------------|
| L-1 | COVER PAGE        |
| L-2 | LANDSCAPE PLAN    |
| L-3 | LANDSCAPE LIST    |
| L-4 | LANDSCAPE SPECS   |
| L-5 | MAINTENANCE NOTES |
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SHEET TITLE
COVER
SHEET
DATE
02.10.2016
DESIGN
DEENA BELL
DRAWN
JOSE D. FONSECA
SCALE
REVISIONS
SEAL

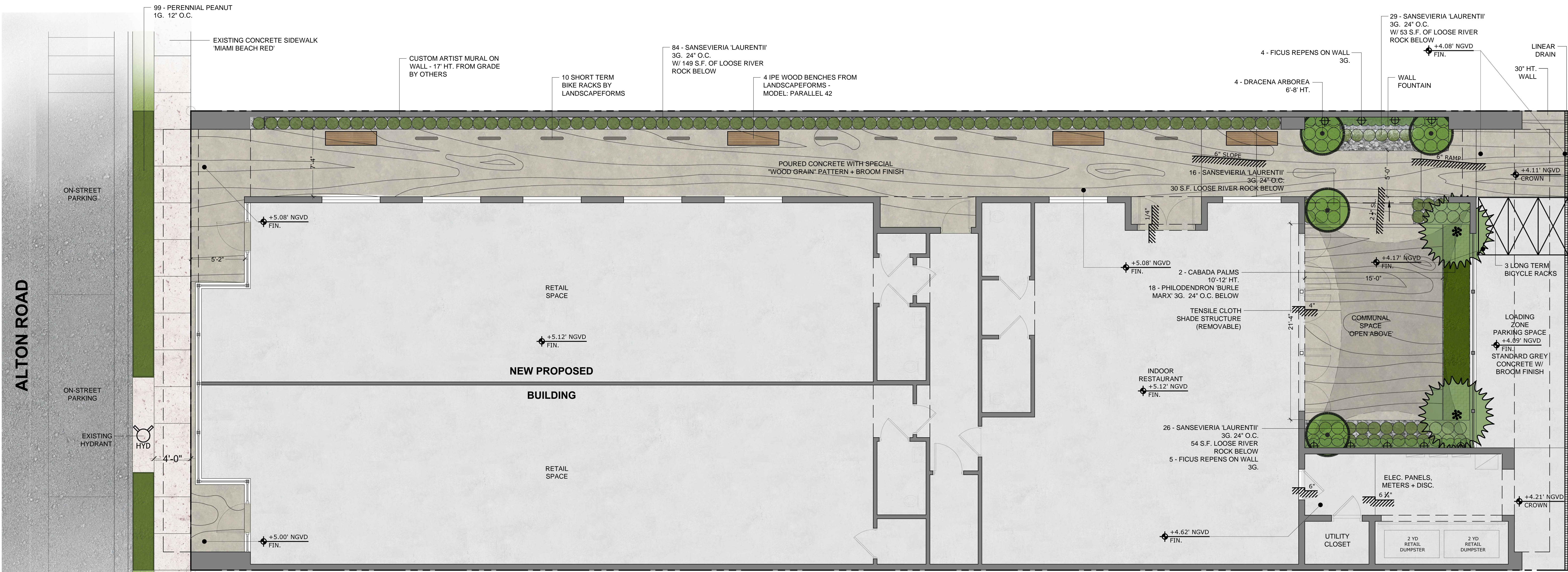
DEENA R. BELL  
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SHEET NO.

L-1



ALTON ROAD



CABADA PALMS



DRACENA ARBOREA



FICUS REPENS ON WALL



TENSILE CLOTH SHADE STRUCTURE



CONCRETE WITH WOOD GRAIN PATTERN



BIKE RACK FROM LANDSCAPEFORMS



PERENNIAL PEANUT



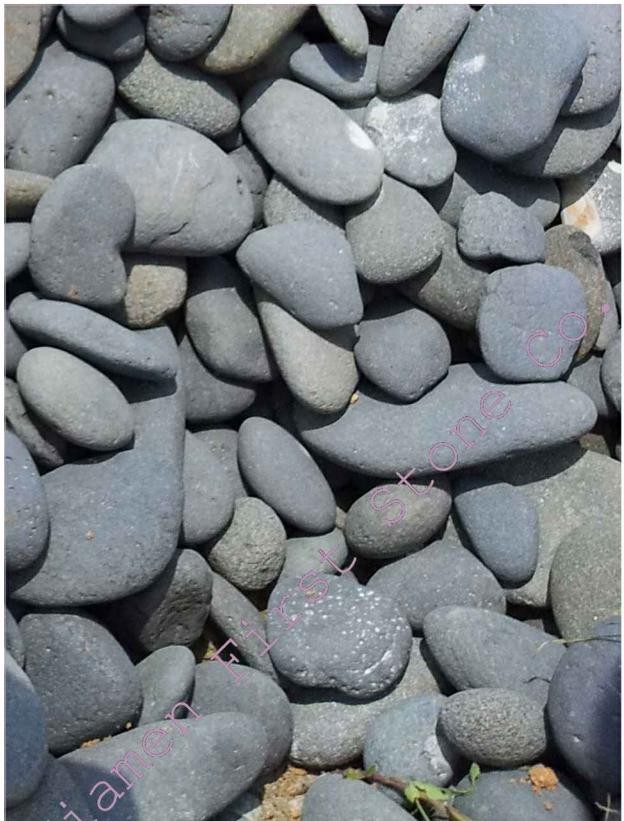
SANSEVIERIA 'LAURENTII'



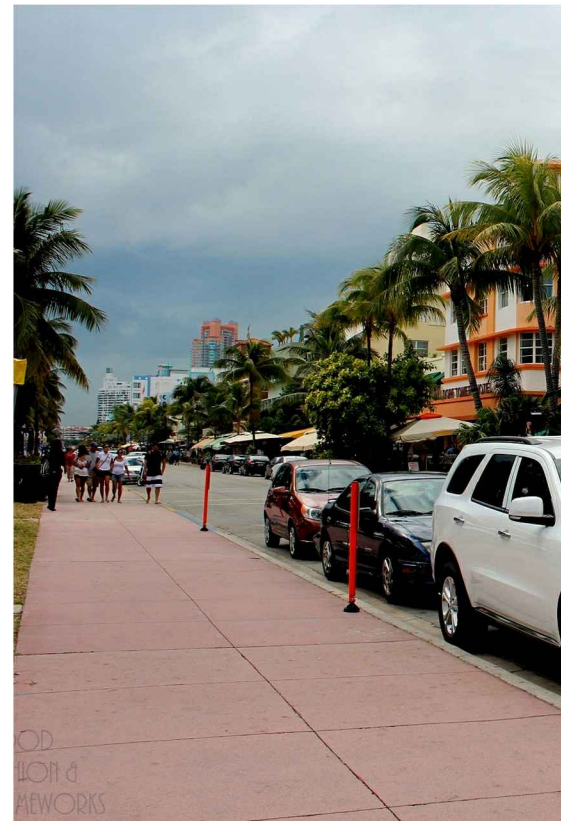
PHILODENDRON 'BURLE MARX'



LOOSE RIVER ROCKS



MIAMI BEACH CITY SIDEWALK



WALL FOUNTAIN



OUTDOOR SEATING BY LANDSCAPEFORMS



NOTE:  
NO WATER SHALL RUN OFF TO STREETS  
OR TO ADJACENT PROPERTIES. SWALES  
SHALL BE CONSTRUCTED AROUND  
PROPERTIES PERIMETERS



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1675 ALTON ROAD | MIAMI BEACH, FL 33139

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PLANTING  
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DATE  
02.10.2016  
DESIGN  
DEENA BELL  
DRAWN  
JOSE D. FONSECA  
SCALE  
3/16"=1'-0"  
REVISIONS

SEAL



DEENA R. BELL  
LICENSE NO. LA0001620

SHEET NO.

L-2



PLANT LIST

E+S SHULL

PALMS								
NEW	QTY	BOTANICAL NAME	COMMON NAME	INSTALLED HT. / SPEC.	CALIPER INSTALLED (DBH)	HEIGHT AT MATURITY	CANOPY DIAMETER AT MATURITY	NATIVE
NEW	2	Dypsis cabadae	Cabada Palms	10'-12' HT.	2" each	40'	15'	No
NEW	4	Dracaena arborea	Dracaena arborea	6' - 8' HT.	3"	20'	10'	No

SHRUBS								
NEW	18	Philodendron 'Burle Marx'	Philodendron 'Burle Marx'	3 Gallon - 24" O.C.	n/a	3'	3'	No
NEW	9	Ficus repens	Ficus repens vine on wall	3 Gallon - 4' O.C.	n/a			No
NEW	155	Sanseveria laurentii	Sanseveria Laurentii - Silver / Green	3 Gallon - 24" O.C.	n/a	4'	2'	No

GROUNDCOVERS								
NEW	99	Arachis glabrata	Perennial Peanut	1 Gallon - 12" O.C.	n/a	6"	1'	No

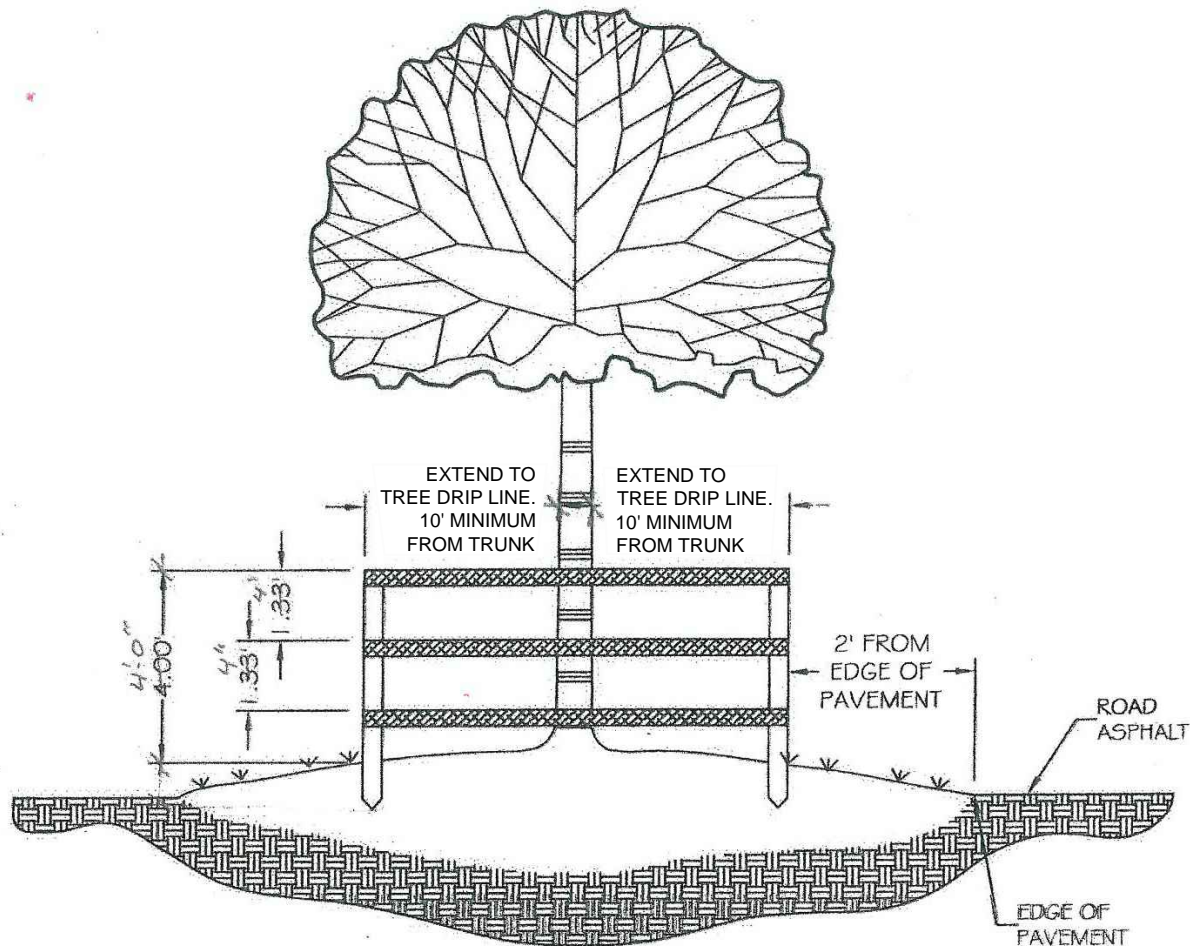
MISCELLANEOUS		ITEM
NEW / QTY		
300 S.F.		Loose River Rock in all planters
		80 / 20 Planting soil mixture. Quantity to be determined - 4" min. depth as per specs.
		Black' Mulch - 2" Depth Min.

TREE AND PALM TRANSPLANTING NOTES:

- Certified arborist is to be hired to supervise and direct all phases of transplanting trees and palms.
- Trees to be relocated shall be root pruned a minimum of eight weeks prior to transplanting. Landscape Contractor shall maintain transplanted materials during construction period by watering, moving, spraying, fertilizing, and pruning.
- Landscape Contractor is responsible for verifying locations of all underground and overhead utilities and easements prior to commencing work. All utility companies and/or the General Contractor shall be notified to verify locations prior to digging. Utility trenching is to be coordinated with the Landscape prior to beginning of project. The Owner and Landscape Architect shall not be responsible for damage to utility or irrigation lines.
- The Landscape Contractor shall comply with all local and State codes and shall be responsible for obtaining all applicable permits.
- The Landscape Contractor shall regularly inspect the relocated materials to ensure compliance with standard horticultural practices
- The Landscape Contractor is responsible for guaranteeing the transplanted trees and palms for a period of one year. At the time of the final inspection all transplanted trees and palms that are not health growing condition shall be replaced by the Landscape Contractor.
- Root Pruning and Transplanting Operations: The Landscape Contractor shall take all precautions to minimize shock of root pruning and transplanting in accordance with standard arboriculture procedures including:
  - The diameter of the root-pruning or transplanting circle shall be at a distance away from the trunk equal to 12 times each inch of trunk diameter at breast height.
  - All small roots shall be cleanly cut with a sharp spade, a clean saw or chainsaw depending on the size of the root.
  - Trees shall not be pruned at transplanting to compensate for root loss. Any trimming required shall be as per the International Society of Arboriculture Trimming Standards.
  - For all palms except Sabal palmetto, the lower fronds shall be pruned leaving 9-11 fronds that can be tied without an extensive amount of weight that may damage the heart of the palm. The Sabal palmetto shall have all fronds cut without damaging the bud.
  - After root pruning trees, backfill roots to original existing grade with existing soil free of any deleterious material to root growth.
  - Provide a minimum of 3" mulch over backfill area to prevent weed growth, conserve moisture and prevent evaporation. Keep mulch 6" away from the trunk.
  - Provide tree protection as per Tree Protection Detail to ensure that the tree or root system is not damaged during the root-pruning period.
  - After root pruning, during root regeneration period trees shall be watered as per standard horticultural practices.
  - Immediately prior to transplanting tie the branches of the tree up to avoid damage.
  - The root ball shall be wrapped with burlap to protect the soil around the roots and protect the roots from drying out at time of moving from the hole.
  - Finish cutting of root ball for transplanting.
  - Transplanting must occur within 24 hours after being dug for relocation. Trees/Palms should be kept in shade and the canopy kept moist.
  - Digging and preparation of the new hole for the transplant shall be done prior to removing the tree from the existing location.
  - The depth of the new hole shall be minimum equal to the depth of the root ball and the width shall be minimum equal to three times the width of the root ball. The Landscape Contractor is to verify that all new holes have appropriate percolation. Landscape Contractor is to report to the Landscape Architect if water percolation does not meet requirements for healthy plant growth.
  - Trees and palms shall be lifted from the ground with heavy equipment designed specifically for tree relocation so that the trunk and crown is not impacted and damaged by the equipment.
  - The slings used to lift the trees and heavy weight palms shall be non-binding nylon type slings that are wrapped under the root ball to support the weight of tree or heavy palm. Slings shall not be solely wrapped around the trunk of the tree that can cause damage, girdling and result in decline and death of the tree.
  - The slings used to lift the lighter weight palms shall be non-binding nylon type slings that are wrapped around the trunk to support the weight of the palm. Padding the sling may be necessary so that the trunk or "boots" are not damaged.
  - Tree should be planted 2" max higher than their original planting level prior to relocation. Palms shall be planted at the same elevation prior to relocation. The tree and palm shall be centrally positioned in the planting hole and set straight, plumb or normal to the growth pattern prior to transplanting.
  - The trees and palms shall be backfield with existing soil free of deleterious material to plant growth.
  - Trees and palms shall be deep root watered to eliminate air pockets in the backfill mix prior to mulching.
  - A 6" saucer shall be created around the edge of the plant pit to help hold water, see planting detail for additional information.
  - Provide a minimum of 3" layer of mulch over saucer and backfill area outside saucer to prevent the weed growth, conserve moisture, and prevent evaporation. Keep mulch 6" away from the trunk.
  - Install tree and palm bracing as per attached details, to ensure stability of tree and palm during time period to and after transplanting, stake trees and palms after transplanting only is required to keep them stable.
  - Over the guarantee period the Landscape Contractor is responsible for resetting any trees/palms that are not vertical when caused by winds less than 75 MPH.
  - After transplanting trees and palms, the Landscape Contractor shall be responsible for obtaining water and watering to maintain soil moisture during the guarantee period at a minimum of:
    - First month - Daily, Second month - 3 times per week, Third and Fourth month - 2 times per week, Last Eight months - 1 time per week. For trees over 4" in caliper at the time of planting, the schedule should be: First 6 weeks - Daily; from 1.5 months to 6 months - 3 times per week, last 6 months - 1 time per week.

TREE AND PALM PROTECTION NOTES:

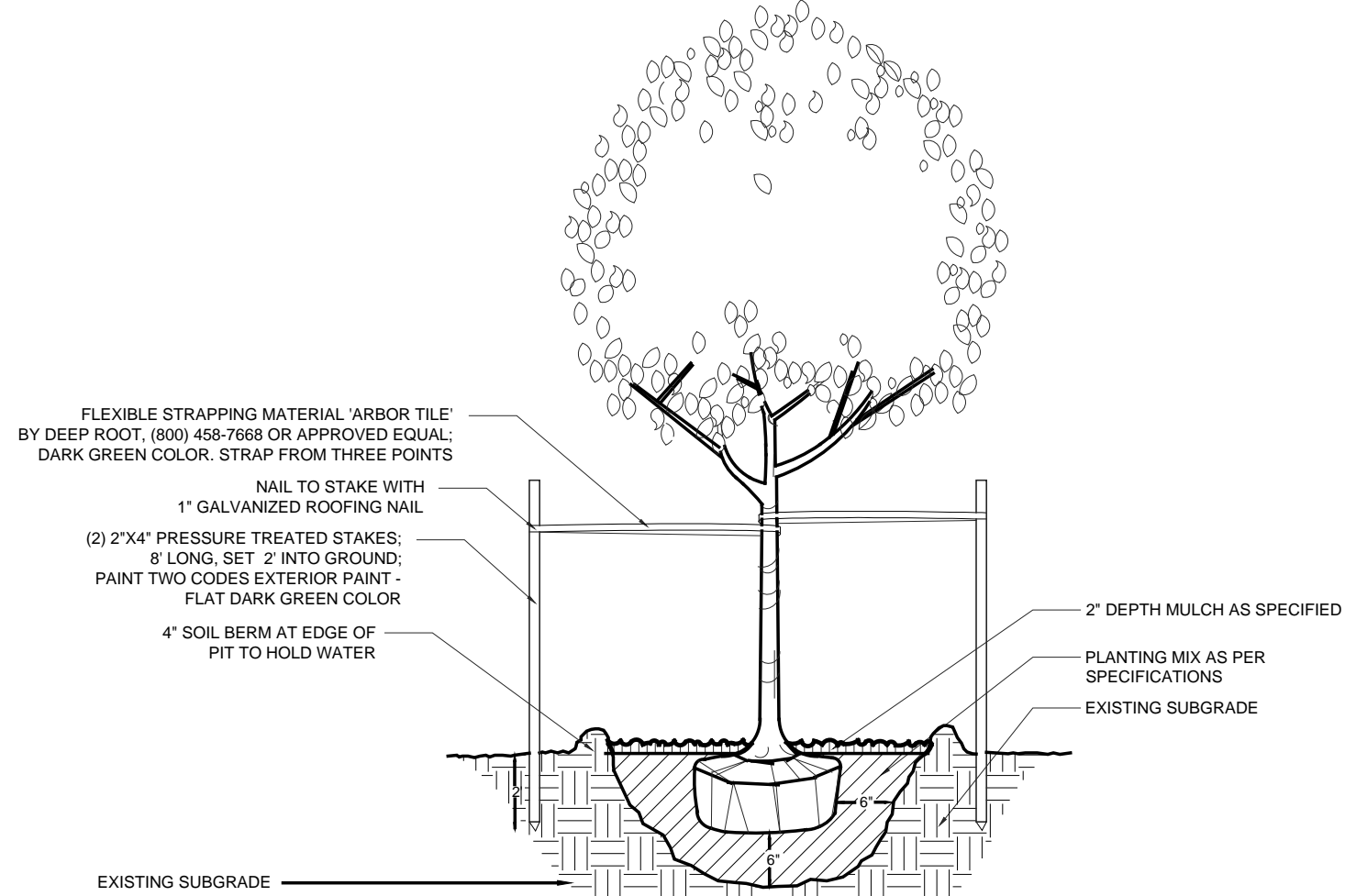
- Before beginning work, the Contractor is required to meet with the Landscape Architect at the site to review all work procedures, access routes, storage areas, and tree protection measures.
- Fences shall be erected to protect trees to be preserved. Fences define a specific protection zone from each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without the written permission of the Landscape Architect. Refer to tree & Palms Protection Detail.
- Construction trailers, traffic and storage areas must remain outside fenced areas at all times.
- All underground utilities and drain or irrigation lines shall be routed outside the tree protection zone. If lines must traverse the protection area, they shall be tunneled or bored under the tree line.
- No materials, equipment, spoil, or waste or washout water may be deposited, stored, or parked within the tree protection zone (fenced area).
- Additional tree pruning required for clearance during construction must be performed by a qualified arborist and not by construction personnel.
- Any herbicides placed under paving materials must be safe for use around trees and labeled for that use. Any pesticides used on site must be tree-safe and not easily transported by water.
- If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Landscape Contractor and the Landscape Architect should be notified immediately.
- Any grading, construction, demolition, or other work that is expected to encounter tree roots must be monitored by the Landscape Contractor.
- All trees shall be irrigated three times a week. Each irrigation procedure shall wet the soil within the tree protection zone to a depth of 30 inches.
- Erosion control devices such as silt fencing, debris basins, and water diversion structures shall be installed to prevent site erosion and siltation situations and/or erosion within the tree protection zone.
- Before grading, pad preparation, or excavation for foundations, footings, walls, or trenching near trees the trees shall be root pruned 12 inches outside the tree protection zone by cutting all roots cleanly to a depth of 36 inches. Roots shall be cut manually by digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root-pruning equipment.
- Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw.
- If temporary haul or access roads must pass over the root area of trees to be retained, a road bed of 6 inches of mulch or gravel shall be created to protect the soil. The road bed material shall be replenished as necessary to maintain a 6 inch depth.
- Spoil from trenches, basements, or other excavations shall not be placed within the tree protection zone, either temporary or permanently.
- No burn piles or debris pits shall be placed within the tree protection zone. no ashes, debris, or garbage may be dumped or buried within the tree protection zone.
- Maintain fire-safe areas around the fences. Also, no heat sources, flames, ignition sources, or smoking is allowed near mulch or trees.



- NOTES
- WOODEN STAKES (2'x4'x5' MIN.) ON 5' CENTERS - TO SUPPORT RAIL FENCING
  - BARRIER TO FORM A CONTINUOUS BARRIER AROUND THE TREE OR GROUP OF TREES
  - THREE ROWS OF RAIL FENCING (2'x4'x5' MIN.) SPACED EQUALLY TO BE PLACED AROUND ALL EXISTING TREES TO REMAIN
  - CONTRACTOR TO INSTALL PROTECTIVE FENCE BARRIER AROUND ALL EXISTING TREES TO REMAIN - AT THE START OF THE PROJECT - FENCE TO REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT
  - CONTRACTOR SHALL TAKE EXTRA CARE DURING EARTHWORK AND UTILITY OPERATIONS TO PROTECT ALL EXISTING TREES - AND SHALL BE RESPONSIBLE TO REPLACE ANY TREES DAMAGED DURING CONSTRUCTION.

TREE PROTECTION STANDARD DETAIL

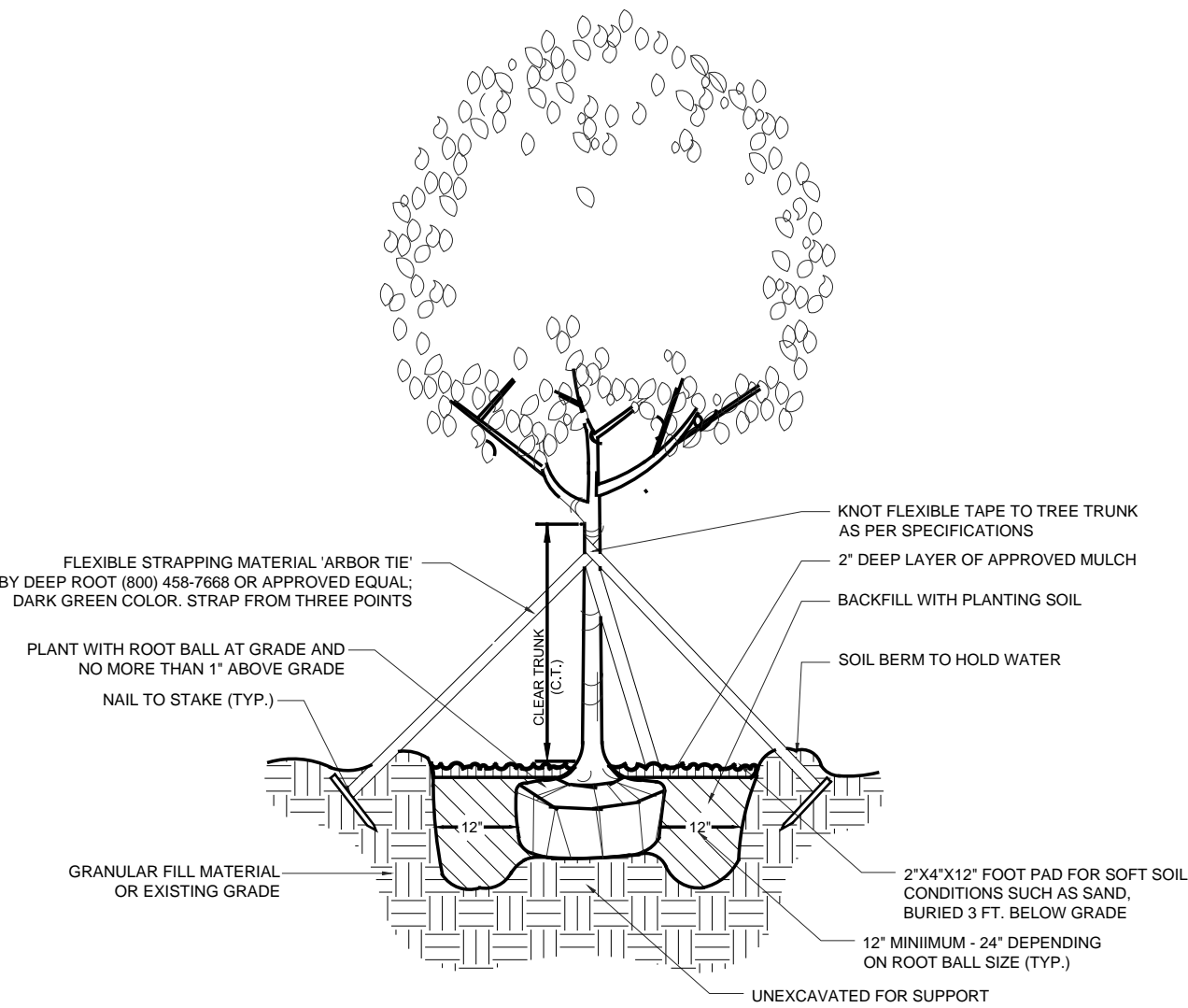
N.T.S.



SPECIMEN TREE GUYING DETAIL

TREES: 4' - 8 ' HEIGHT

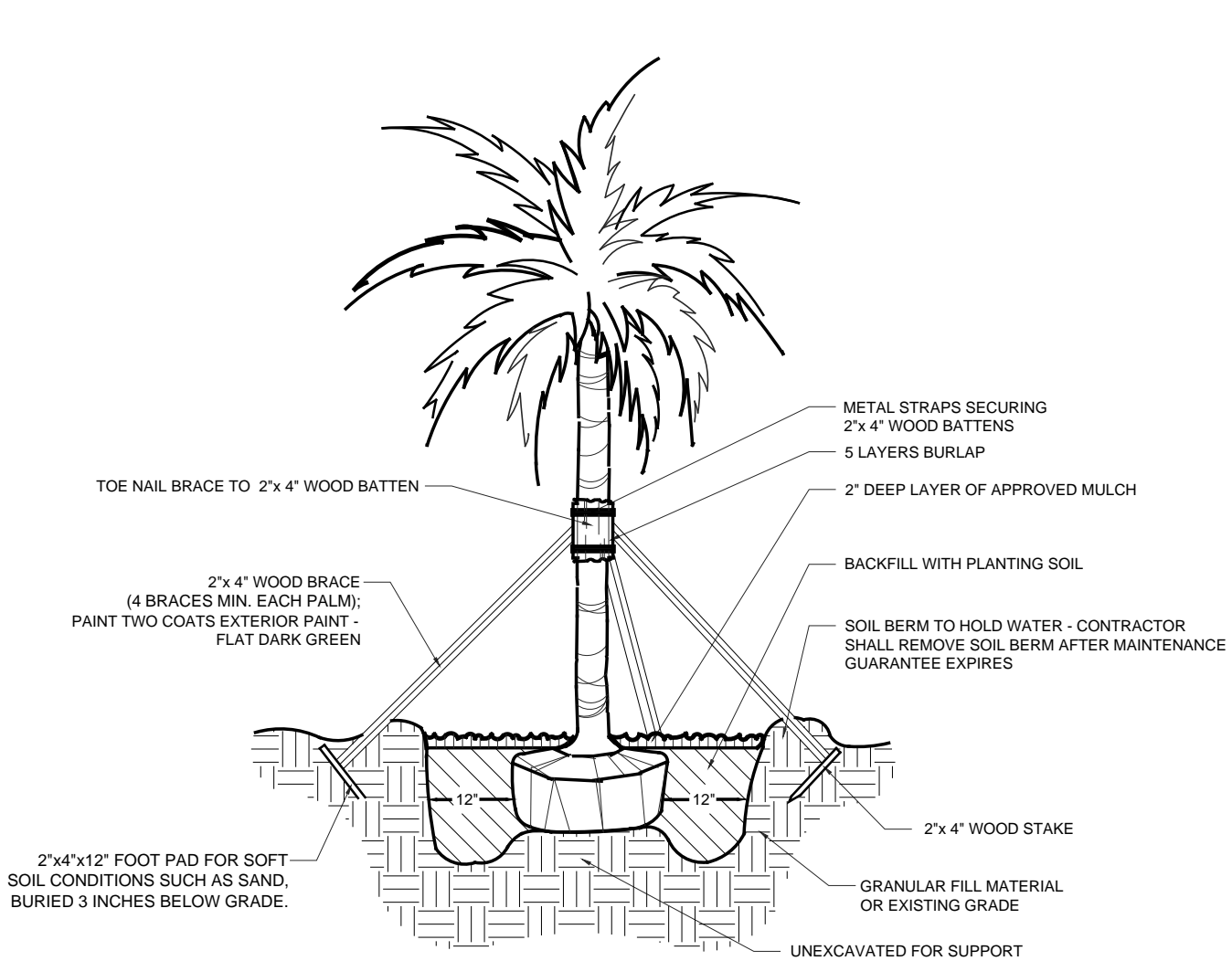
N.T.S.



SMALL TREE PLANTING & GUYING DETAIL

TREES: 4' - 8 ' HEIGHT

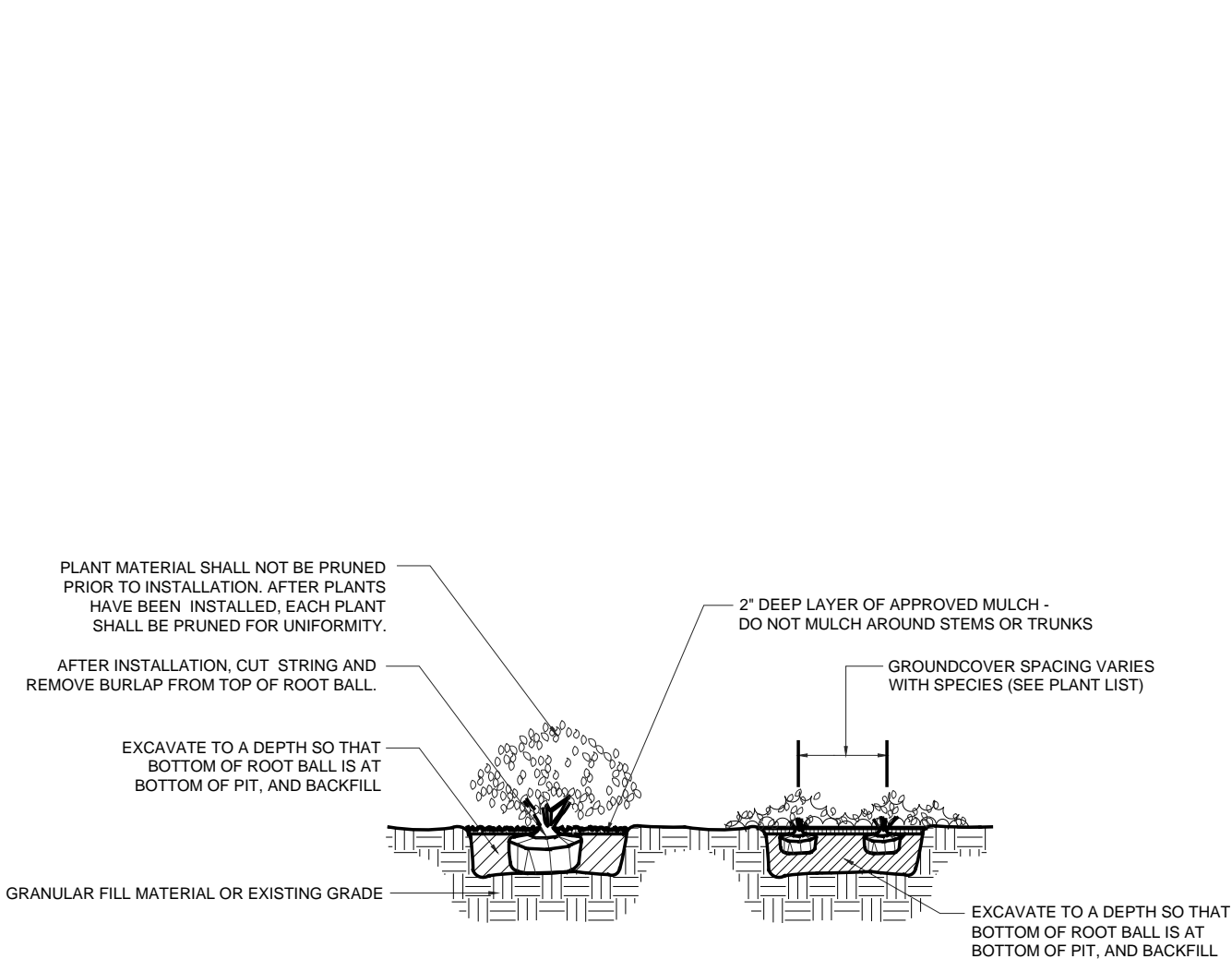
N.T.S.



SPECIMEN TREE OR PALM PLANTING DETAIL

TREES & PALMS: 10' & LARGER

N.T.S.



SHRUB & GROUNDCOVER PLANTING DETAIL

N.T.S.



LANDSCAPE SPECIFICATIONS

1.00 GENERAL

1.01 The Contractor is reminded that the General Conditions and / or Special Conditions of this contract govern the work of this section of the Specifications whether attached hereto or not. Subcontractors undertaking to perform work under this Section shall be made fully aware of these documents and of their responsibilities and obligations thereunder. In the event of any discrepancies between the drawings and specifications and the following 'Scope of Work', the latter shall prevail.

2.00 SCOPE OF WORK

2.01 The work of this Section shall include all labor, materials, equipment, appliances, and accessories necessary for the complete performance of all excavation, grading, planting and backfill work in accordance with these Specifications and the Contract Drawing. Without restricting the generality of the foregoing, the items listed below and similar items shown on the Contract Drawings shall constitute the work of this Section:

A. Finish grading and final site preparation of all areas to be landscaped.

B. Furnishing and incorporating fertilizer and other soil amendments.

C. Furnishing plant materials and grass materials and installing same.

D. Furnishing and placing 'Planting Mixture' and other miscellaneous items to complete the work.

E. Replacement of unsatisfactory plant material.

F. Clean-up.

3.00 SITE PREPARATION and SITE SITEWARDSHIP FOR SUSTAINABLE SITES

3.01 The Contractor shall provide finish grading and final preparation of all areas to be landscaped to within 6" of finish grade. This will require raking and pulverizing of all areas in order to crumble dirt, clogs and / or debris. The Landscape Contractor shall be responsible for finish grading, which is the top 6" of the site.

3.02 The Contractor must perform the following preventative measures for erosion controls during construction:

Stockpile and Protect disturbed Topsoil from erosion;

Control the path and velocity of runoff with silt fencing or equivalent;

Protect sewer inlets, streams, and lakes with straw bales or silt fencing;

Provide swales to divert surface water from hillsides, use tiers, erosion blankets, compost blankets, etc. on sloped areas.

3.03 Contractor must minimize disturbed area of site where site is not previously developed by following tree / plant protection plan and enforcing 'No Disturbance Zones' quarantined by use of Construction tape or Fencing.

When site is previously developed, Contractor must enforce Tree / Plant protection Plan and use Hay bales, silt fencing, etc. for erosion controls.

3.04 All Landscaping must be 24" from finish wall of structures for pest control measures.

4.00 MATERIALS

4.01 Plant materials shall be furnished by the Landscape Contractor and as indicated on the plans. All plant materials shall meet or exceed the following standards.

- A. Plant species and sizes shall conform with plant list. Nomenclature shall conform to Standardized plant names, in accordance with the latest edition of the Florida Department of Agriculture's Grades and Standards for Nursery Plants.
- B. All plants shall be nursery grown or as stipulated herein and shall comply with all required inspections, grading standards and plant regulations as set forth in the Florida Department of Agriculture 'Grades and Standards for Nursery Plants', including revisions. Ensure that plant materials are shipped with tags stating the botanical and common name of the plant.
- C. The minimum grade for all trees, palms, shrubs, and groundcovers shall be Florida No. 1 and shall meet or exceed the size and quality standards of the American Association of Nursery Stock, sponsored by the American Association of Nurserymen, latest addition, unless otherwise indicated and all plants shall be sound, healthy and vigorous, well-branched and densely foliated when in leaf. They shall have healthy, well developed root systems and shall be free of disease and insect pests, eggs or larvae. Florida Fancy material shall be provided where plant list specifies 'specimen'.
- D. The determining measurements for trees shall be the height and spread, and shall be measured from the top of the plant to the root crown, not to include the immediate terminal growth. Their width shall be measured across the normal spread of the branches. Both measurements shall be made with the plants in their normal position.
- E. Plants larger in size than those specified may be used with approval of the Landscape Architect at no additional cost to the Owner. If the use of the larger plants is approved, the ball of earth or spread of roots shall be increased proportionately.
- F. Container grown plants the same quality as balled and burlapped plants may be substituted in lieu thereof. Plants grown in containers shall be delivered and remain in the containers in a shady location until planted. Plants in containers shall be watered prior to transportation and shall be kept moist until planted. The container must be removed prior to planting, with care as not to injure the roots.
- G. Grass materials shall consist of the following:
1. Sod: Solid sod shall be as indicated on the drawings. Sod must be strongly rooted and free of pernicious weeds. Mow to a height not to exceed 1 1/2" before lifting. Lifts shall have a uniform thickness of 1 inch to 1 1/2 inches. Sod containing nutgrass, lippia water sedge, dollar weed, or other common turfweed species (if applicable), will not be accepted.
2. Sodding installation :
- a) Sodding shall be done as soon as practical following finish grading. Ground shall be covered with a 4" blanket of soil using specified 60/40 top soil mixture where necessary to create a 4" soil blanket. The day before sod installation, the contractor shall rake 50# Milorganite per 1000 sf of area to receive sod. Ground shall be leveled with the back of a rake and sod laid with joints closely butted so that no voids are visible, keeping surface of sod flush with the adjoining seeded areas and or pavements. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Hand tamp to ensure contact with subgrade, and water thoroughly with a fine spray immediately after laying.

- b) After sod is in place, it shall be top dressed with sufficient sharp, clean 60% sand/40% muck soil mix to fill all voids remaining and thoroughly watered to wash the top dressing into the sodded surface.
- c) All sod areas shall then be rolled using a vibrating #1500 sod roller. The contractor shall apply a preemergent herbicide to all sodded areas.
- d) It is the Landscape Contractor's responsibility to keep new sod properly watered until completion of the contract. All watering shall meet specifications according to 'Grades and Standards' Section 983.

H. Substitutions in plant species or size will be made only with prior written permission of the Landscape Architect.

I. If, in the opinion of the Landscape Architect, materials and /or work do not conform with the plans and specifications, it may be rejected and upon rejection, must be removed immediately from the site by the Contractor and replaced.

J. The Contractor shall be responsible for the certification and inspection of plant material that may be required by local, state, or federal authorities and shall bear the cost of the same, if any.

4.02 Materials used to install the job shall meet or exceed the following standards:

- A. Planting mix to be used for 4" soil blankets and backfilling around trees shall be: 60% coarse sand / 40% Inland Glades Muck. 70% sand / 30% muck shall be used in planters or areas with poor drainage.
- B. Fertilizers: Fertilizer shall be delivered mixed as specified in standard bags, sealed, and showing weight by analysis and name of manufacturer. Fertilizer shall be stored in weatherproof storage and in such a manner that its effectiveness will not be impaired.
- C. Mulch: Mulch shall be shredded melaleuca, Grade B, clean, bright, and free of weeds, moss, sticks, and other debris.
- D. Water: All water required for the execution of the work shall be supplied at the site by the Owner.

5.00 INSTALLATION

5.01 The Planting operations used to install the job shall meet or exceed the following standards:

- A. Excavation of Plant Pits: Plant pit excavations shall be roughly cylindrical in shape, with their side approximately vertical. Pit shall be excavated so that bottom of pit is same depth as root ball. Plants shall be centered in the hole, with the trunk location as shown in the plans. Holes for balled and burlapped plants shall be large enough to allow 12" minimum (depending on root ball size) of back fill around the sides of the root ball, and 12" of back fill beneath the root ball. In all cases the diameter of the plant hole shall be twice the diameter of the root ball. Where excess material has been excavated from the plant hole, the excavated material may be used to backfill to the proper level. Mix existing excavated material in 50% / 50% ratio with new planting soil mix. The Contractor, in excavation for plantings shall take care not to damage underground utilities or other sub-surface obstructions, and shall be held liable for their repair, if damaged.
- B. Setting Plants: All trees shall be set so, that when settled, the top of the root ball will be flush with the surrounding area of the finish grade or slightly above finish grade. Each plant shall be planted in planting soil mix in the center of the pit. Shrubs shall be set flush with the surrounding finish grade of the planting area. The back fill shall be made with prepared planting in mixture as specified herein and shall be firmly rodded and watered, so that no air-pockets remain. The quantity of water applied immediately upon planting shall be sufficient to thoroughly moisten all of the backfilled earth. Plants shall be kept in a moistened condition the duration of the planting.
- C. Staking and Guying: All trees shall be staked or guyed as shown in the details and according to the following specifications.

1. Use wide plastic, rubber or other flexible strapping materials to support the tree to stakes or ground anchors that will give as the tree moves in any direction up to 30 degrees. Use strapping material 'Arbor Tie' by Deep Root (800) 458-7668 dark green color, or approved equal. Do not use rope or wire through a hose. Use guy chords, hose or any other thin bracing or anchorage material which has a minimum 12" [300 mm] length of high visibility flagging tape secured to guys, midway between the tree and stakes for safety.
2. Stake trees larger than 1" [25 mm] diameter and smaller than 2" [50 mm] diameter with a 2" by 2" [50 by 50 mm] stake, set at least 2' [0/6 m] in ground and extending to the crown of the plant. Firmly fasten the plant to the stake with flexible strapping materials as noted above.
3. TREES OF 2 TO 3 ½" [50 MM TO 90 MM] CALIPER: Stake all trees, other than palm trees, larger than 2" [50 mm] caliper and smaller than 3 ½" [90 mm] caliper with two 2" by 4" [50 by 100 mm] stakes, 8' [2.4 m] long, set 2' [0.6 m] in the ground. Place the tree midway between the stakes and hold it firmly in place by flexible strapping materials as noted above.

4. LARGE TREES: Guy all trees, other than palm trees, larger than 3 ½" [90 mm] caliper, from at least three points, with flexible strapping materials as noted above. Anchor flexible strapping to 2" by 4" by 24" [50 by 100 by 600 mm] stakes, driven into the ground such that the top of the stake is at least 3" [75 mm] below the finished ground.
5. SPECIAL REQUIREMENTS FOR PALM TREES: Brace palms which are to be staked with three 2" by 4" [50 by 100 mm] wood braces, toe-nailed to cleats which are securely banded at two points to the palm, at a point one third the height of the trunk. Pad the trunk with five layers of burlap under the cleats. Place braces approximately 120 degrees apart and secure them underground by 2" by 4" by 12" [50 by 100 by 300 mm] stake pads. Paint wood flat dark green exterior paint, two coats.
6. TREE PROTECTION AND ROOT BARRIERS: Install tree barriers when called for in the Contract Documents or by the Landscape Architect to protect existing trees from damage during project construction. Place barricades at the drip line of the tree foliage or as far from the base of the tree trunk as possible. Barricades shall be able to withstand bumps by heavy equipment and trucks. Maintain barricades in good condition. When called for in the Contract Documents, install root barriers or fabrics in accordance with the details shown. Barricades shall be constructed of wood fencing or wire fencing 4' height.

D. Pruning: All broken or damaged roots or branches shall be cut smoothly and the tops of all trees shall be pruned in a manner complying with standard horticultural practice. At the time pruning is completed, all remaining wood shall be alive.

E. Mulching: Within one week after planting, mulch material, consisting of shredded Eucalyptus or Pinebark shall be uniformly applied to a minimum loose thickness of 2 inches, over the entire area of the backfilled hole or bed. The mulch shall be maintained continuously in place until the time of final inspection, and must be a minimum of 2 inches thick to be accepted. Mulch shall not be placed against stems or trunks.

F. Fertilizing: Feeding of all trees and specimen shrubs shall be done with slow release, 'Woodace' Briquettes, 17 gram, tablet fertilizer, analysis 14-3-3, as per manufacturer's instructions. Fertilizing shall not occur until after flush of new growth.

6.00 MAINTENANCE

6.01 Maintenance and hand watering of all trees, shrubs and groundcover by the Landscape Contractor shall terminate 90 days after final acceptance of work. Maintenance prior to final acceptance shall include the removal of all dead or dying twigs and branches, the weeding, watering and normal pruning of plant material.

7.00 GUARANTEE

7.01 The Landscape Contractor shall guarantee and maintain all new trees, palms, shrubs, groundcovers and sod for 90 days during guarantee period. The Landscape Contractor shall replace at the direction of the Landscape Architect all trees, shrubs, or groundcovers deemed by the Landscape Architect to be unacceptable, due to death or damage; acts of God, Owner negligence and vandalism excepted.

7.02 New material used to replace material unacceptable to the Landscape Architect, shall be guaranteed for similar period from date of installation

8.00 FINAL INSPECTION AND ACCEPTANCE

8.01 The Landscape Contractor shall advise the Landscape Architect in writing at the end of the guarantee period that the project is ready for final inspection. Only upon notification to the Landscape Architect by the Landscape Contractor in writing and subsequent inspection attended by the Landscape Contractor shall the requirements of the guarantee be met.

9.00 CLEAN-UP

9.01 Upon completion of all work under this section, and intermittently as required, the Landscape Contractor shall clear the site of all debris, superfluous material and all equipment to the satisfaction of the Landscape Architect

9.02 End



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JOSE D. FONSECA  
SCALE

REVISIONS

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DEENA R. BELL  
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SHEET NO.



MAINTENANCE SPECIFICATIONS

PART I - GENERAL

1. SUMMARY

- 1.1 The landscape design objectives are to provide a visually-pleasing and environmentally-sound landscape with a moderate level of maintenance needs.
- 1.2 The scope-of-work for landscape maintenance at this property is summarized below:
- | Task                               | Schedule   |
|------------------------------------|--|
| Irrigation System Checks & Repairs | 1 time per month   |
| Mowing                             | 38 cuts per year<br>Summer: 1 time per week<br>Winter: 1 time each 2 weeks |
| Edging and Trimming                | 1 time per month   |
| Shrub Pruning                      | 1 time per month   |
| Mulching                           | 4 times per year   |
| Weeding                            | 2 times per month  |
| Tree Pruning, Hardwoods            | 1 time each 2 years  |
| Tree Pruning, Palms                | 2 times per year   |
| Fertilization                      | 4 times per year   |
| Pest Scouting & Treatment          | 1 time per month   |
- 1.3 Sections 1, 2 and 3 of this document apply to all Contractors.
- 1.4 Sections 4 and 5 apply to Landscape Maintenance Contractor.
- 1.5 Section 6 applies to Arborist Contractor.
- 1.6 Sections 7 and 8 apply to Fertilization and Pest Control Contractor.

2. QUALITY ASSURANCE

- 2.1 Contractor shall be an individual or firm of established reputation, which is regularly engaged in, and which maintains a regular force of workers skilled in performing work as outlined in this document.
- 2.2 All Contractors shall be insured with Workers' Compensation Insurance as required by the State of Florida, General Liability Insurance with a minimum limit of \$1,000,000 combined single limit per occurrence and proof of Comprehensive Automobile Liability Insurance.
- 2.3 All Contractors shall have any and all current licensing as required to perform the specified services in the municipality of which work is to be performed.
- 2.4 All Contractors shall visit the site and inspect the landscape prior to submitting a bid.
- 2.5 All Contractors shall comply with all sections of these specifications.
- 2.6 No work is to be subcontracted without the prior written consent of the Owner
- 2.7 All Contractors shall comply with all applicable local, state and federal health and safety requirements, including the latest revisions of Occupational and Safety and Health Administration (OSHA) standards, American National Standards Institute (ANSI) Z133.1-2000 (Tree Care Operations-Safety Requirements) and State of Florida Department of Transportation (FDOT vehicle safety and traffic control requirements).
- 2.8 All Contractors shall designate a competent supervisor or foreman to oversee all activities described in these specifications.
- 2.9 All Contractors shall be responsible for notifying the Owner and for the cost and repair of any damage to irrigation systems, buildings, vehicles or other structures, properties or possessions, which occur as a result of improper or negligent activities within their respective realm of responsibility, as defined in these specifications.
- 2.10 Contractors shall not be responsible for damages caused by others, vandalism, or Acts of Nature.

3. PRODUCTS AND MATERIALS

- 3.1 All Contractors shall be responsible for providing all labor and materials needed to completely and accurately perform the work outlined in these specifications. Equipment and materials furnished shall be of the appropriate type, size and quantity needed to adequately accomplish the specified work.
- 3.2 All Contractors shall be responsible for regularly inspecting all equipment to be used on the job site and for providing scheduled preventative maintenance, so as to prevent any damage or injury to landscaping, structures or the environment.

4. SCOPE OF WORK - IRRIGATION MANAGEMENT

- 4.1 Landscape Contractor shall be responsible for the maintenance, repairs, and timing of the irrigation system. The system shall be inspected at least 1 time per month to check for broken heads, lines, valves, timers, and water coverage patterns.
- 4.2 Broken heads and lines, and water coverage adjustments shall be made within 24 hours by the Contractor. Malfunctioning valves, pumps, or timers shall be reported to the Owner for repair by a licensed irrigation contractor.
- 4.3 Should the Landscape Maintenance crew cause or note any broken heads or lines or other irrigation problems during the course of their regular duties, they shall immediately report such damage to their supervisor so that it can be repaired.
- 4.4 Irrigation timers shall be set according to specific needs of each area or zone, and may be altered as per plant, site, and weather conditions.
- 4.5 All newly installed trees need to be watered once a day for the first 14 days, every other day for days 15-28, and then watered as per current water restrictions.

5. SCOPE OF WORK - LANDSCAPE MAINTENANCE

- 5.1 MOWING
- 5.1.1 All turf areas shall be mowed with rotary mowers 1 time each 7 days between May 1 and October 31. The rest of the year it shall be mowed 1 time each 14 days, as needed to keep the grass from growing more than 1.5" above the cutting height. Total number of cuts per year shall be at least 38.
- 5.1.2 Mowing height for St. Augustine grass shall be 2" to 3", as measured on a flat, paved surface. Mowing height in shaded areas shall be slightly higher.
- 5.1.3 All debris and/or litter shall be removed from turf areas prior to mowing.
- 5.1.4 Injuries to tree trunks, exposed roots, and shrub bases shall be avoided by either mowing at a greater height or by mowing around them and hand-trimming later.
- 5.1.5 Mower blades shall be kept sharp at all times so as to prevent tearing of leaf blades.
- 5.1.6 All grass clippings shall be removed from parking areas, driveways, courtyards, decks, sidewalks, and planter beds using blowers, vacuums, brooms and/or rakes. Clippings shall not be blown out into streets or adjacent areas.
- 5.2 EDGING AND TRIMMING
- 5.2.1 All edges along bed lines, tree rings, parking areas, driveways, sidewalks, etc. shall be mechanically edged at least 1 time per month.
- 5.2.2 All turf around all sprinkler heads shall be trimmed as needed to prevent it from interfering with or intercepting the output of water.
- 5.2.3 The use of nylon cord trimmers (weed-eaters) around tree trunks or hedges shall not be permitted (tree rings and bed lines must be maintained); they may be used around sprinkler heads, fences, posts, and other non-living structures provided they do not cause damage to those structures.

- 5.2.4 All trimmings shall be removed from parking lots, driveways, courtyards, sidewalks, and planter beds using blowers, vacuums, brooms, and/or rakes. Clippings shall not be blown out into streets or adjacent areas.
- 5.2.5 All trimmings shall be collected daily and disposed of at authorized dumping or recycling sites.
- 5.3 SHRUB PRUNING
- 5.3.1 All landscaped areas shall be inspected at least 1 time per week to ascertain whether any pruning and trimming is needed to maintain plants within their intended bounds, to remove dead or damaged plant parts including limbs, branches, palm fronds, stems, or flowers, and to keep plants from encroaching upon parking areas, driveways, sidewalks, streets, windows, signs, lighting, etc.
- 5.3.2 Appropriate pruning tools (hedge trimmers, pruning clippers, loppers, and hand saws) shall be used and properly maintained with sharpened blades at all times. Machetes, breakage by hand, and climbing spikes shall not be permitted.
- 5.3.3 All shrub beds are to be massed in a naturalistic fashion. Shrub beds shall be pruned as needed to maintain plants within their intended bounds, prune out old flowers, clean out old leaves, and create a naturalistic mass effect. Plants shall not be individually shaped. Maximum bloom shall be maintained by minimizing pruning. Periodic cut-backs of specific plantings may be necessary 1 to 2 times per year.
- 5.3.4 All ground cover material shall be regularly pruned and cleaned as needed to remove any dead or damaged plant parts, including old leaves, flowers, and stems. Periodically, it may be necessary to thin or reduce the size of the plantings by removing sections of plants or clusters.
- 5.3.5 Hedges and formal border plantings shall be pruned at least 1 time per month or more often if needed to maintain them at the heights and widths specified by the landscape architect. Small-leaf plants such as Serissa can be sheared; large-leaf plants such as Clusia shall be hand-pruned to avoid tearing of leaves. Sheared hedges may require substantial height and width reductions 1 time per year to remove accumulations of dead twigs and epicormic shoots.
- 5.3.6 All vines shall be pruned and trained as needed onto trellises or other structures as intended.
- 5.3.7 All palms which are less than 15 feet in overall height shall be pruned as needed to remove brown fronds, coconuts, and inflorescences. Each individual frond shall be cut as close to the trunk as possible, removing the entire leaf base, including all spines. Thatch accumulations on trunks shall be regularly removed as it naturally loosens.
- 5.3.8 All clustering palms which are less than 15 feet in overall height shall be pruned as needed to remove brown fronds and inflorescences. Periodically (no more than one time per year), some thinning of the clusters may be required; approximately 1/4 to 1/3 of the total number of stems, evenly distributed throughout the cluster and at staggered heights, shall be cut at ground level and removed. Palms shall not be "cleaned" to remove all young stems.
- 5.3.9 All hardwood trees which are less than 15 feet in overall height shall be pruned as needed to remove dead branches, or to raise or reduce crowns to prevent them from encroaching into pedestrian/vehicular areas, over windows, sidewalks, lights, signs, etc. There shall be no other "cleaning", "thinning", or "raising" of tree crowns by the Landscape Contractor. All other tree and palm pruning shall be the responsibility of a qualified arborist or tree crew.
- 5.3.10 All clippings and debris, including fallen palm fronds and nuts, shall be collected daily and disposed of at authorized dumping or recycling sites.
- 5.4 MULCHING
- 5.4.1 All hedges, shrubs, planter beds, and free-standing palms and hardwood trees shall be mulched 4 times per year using naturally-colored, shredded cypress, eucalyptus, or heat-sterilized melaleuca mulch, Grade B or better, layered to and maintained at a depth of 1 to 2 inches at all times.
- 5.4.2 All free-standing palms and shade trees shall have circular tree rings maintained uniformly at a distance of at least 18-inch radius (36-inch diameter) from the trunk, within which mulch shall be maintained.
- 5.4.3 Mulched areas shall begin 2 to 4 inches from trunks or stems and continue out to completely fill in shrub beds and tree rings. Mulch shall not be allowed to cover crowns of shrub plants or accumulate against the trunks of trees and palms.
- 5.5 WEED CONTROL
- 5.5.1 Weeds shall be removed by hand on an on-going basis throughout the year in all landscaped areas, including the removal of weeds growing in thatch on palm trunks, fallen palm fruits, and tree/palm seedlings ("volunteers") in hedges and shrub beds.
- 5.5.2 All weeds in driveways, sidewalks, fencelines, or other hardscape areas shall be removed by hand or sprayed with Round-Up (Glyphosate) herbicide, once each 1 to 2 months or more often if needed to keep them under control.
- 5.5.3 After adequate plant establishment, chemical pre- and post-emergent herbicides may be used on an as-needed basis in turf and shrub areas (see PEST CONTROL section).
- 5.5.4 All debris shall be collected daily and disposed of at authorized dumping or recycling sites.
6. SCOPE OF WORK - TREE AND PALM PRUNING
- 6.1 All shade trees and palms shall be pruned by a Certified Arborist following the standards set forth in the American National Standard for Tree Care Operations, ANSI A-300 (Part 1)-2001 Pruning; (11 West 42 Street, New York, N.Y. 10036).
- 6.2 Pruning practices including tree inspection, tools and equipment, and pruning cuts, shall be performed as outlined in the ANSI A-300 standards.
- 6.3 Hardwood trees shall be pruned on a regular cycle which shall be determined according to pruning objectives, tree species, tree age/size, tree condition, location, and usage. Trees shall be pruned at least one time each 2 years.
- 6.4 The pruning types to be implemented on hardwood trees shall be determined prior to each pruning cycle and shall consist of one or a combination of the following pruning types, as defined in the ANSI A-300 standards: crown cleaning, crown thinning, crown raising, and crown reduction.
- 6.5 Trees with crowns which spread over roadways shall be pruned by canopy raising and/or canopy reduction such that a 15-foot vertical clearance is maintained.
- 6.6 Trees with crowns which spread over sidewalks and other pedestrian areas shall be pruned by canopy raising and/or canopy reduction such that an 8-foot vertical clearance is maintained.
- 6.7 Trees with crowns which spread over parking areas shall be pruned by canopy raising and/or canopy reduction such that a 12-foot vertical clearance is maintained.
- 6.8 Trees adjacent to buildings, structures, fences, lightposts, signs, or other fixtures shall have their crowns reduced to provide clearance from those structures or fixtures.
- 6.9 Palms shall be pruned on a regular cycle, at least 2 times per year.
- 6.10 Palms shall be pruned such that all brown lower fronds and no more than 1 to 2 rows of live fronds are removed. Live healthy fronds which are initiated above the horizontal plane shall not be removed (maximum frond removal shall result in a "9 and 3" position, as it relates to the face of a clock). All inflorescences and fruits (including coconuts) shall be removed.
- 6.11 Palm frond petioles shall be severed as close to the trunk as possible without causing damage to trunk tissues. All loose frond bases ("boots" and "thatch") shall be removed. Those which do not readily abscise shall not be forced, torn, or shaven. All volunteer tree seedlings (ficus, bischofia, schefflera, etc.) shall be removed from the remaining "boots" or "thatch" by cutting or pulling.
- 6.12 There shall be no tree or palm pruning within 10 feet of an energized power line; utility line-clearing crews shall be contacted if this service is needed.
- 6.13 All debris shall be collected daily and disposed of at authorized dumping or recycling sites.

7. SCOPE OF WORK - FERTILIZATION

- 7.1 GENERAL PRACTICES
- 7.1.1 All fertilizers shall be applied in a professional, workmanlike manner in accordance with all state and local laws pertaining to the handling and usage of hazardous materials.
- 7.1.2 Fertilizers shall be provided on a regularly scheduled basis using the fertilizer types, rates, and frequencies specified herein. Monthly site inspections shall include evaluations of plant health and any subsequent needs for remedial fertilization.
- 7.2 FERTILIZER TYPES
- 7.2.1 The fertilizer to be used on all landscape material except for turfgrass, bromeliads, orchids, and other species sensitive to granular fertilizers, shall be a granular "Palm Special" 8-2-12 product, with at least 50% of the nitrogen and potassium in the slow-release form, preferably sulfur-coated. Fertilizer mix shall also contain micronutrients, specifically magnesium (kieserite, at least 3%), manganese sulfate (at least 1%), chelated iron (Trachelene, at least 1%), and trace amounts (less than 1%) of boron (boric acid), copper sulfate, and zinc sulfate.

- 7.2.2 Turfgrass fertilizer shall be in granular form and have a 3-1-2, 4-1-3 (i.e., 12-6-8 or 16-4-8) or similar ratio of N, P, and K, with at least 50% of the nitrogen in the insoluble or slow-release form. Fertilizer mix shall also contain iron (at least 0.5%) and other micronutrients such as magnesium, manganese, and zinc. A lower-nitrogen product can be used during the summer months so as not to substantially increase growth rates.
- 7.2.3 Fertilizer for bromeliads or other species sensitive to granular fertilizer shall be a slow-release resin-coated product containing an N, P, and K ratio of 1-1-1 (i.e., Osmocote or Nutricote), and/or soluble 1-1-1 (i.e., Peters 20-20-20).
- 7.2.4 Fertilizer for orchids shall be a soluble 1-1-1 product.
- 7.2.5 A micronutrient product which contains sulfur, manganese sulfate, chelated iron, zinc, boron, and molybdenum shall be used on all specimen palms and any other species susceptible to deficiencies of such. It shall also be used as a supplement when needed to correct deficiencies.
- 7.3 FERTILIZER RATES
- 7.3.1 Turfgrass, hedges, shrubs, and ground covers shall be fertilized at the rate of 1.0 to 1.5 pounds of actual nitrogen per 1,000 square feet of area per application.
- 7.3.2 All free-standing palms and hardwood trees shall receive 1 to 8 pounds of the product recommended above, as per individual tree size (1 to 3 pounds each for small trees/palms; 3 to 5 pounds for each of the mid-size trees/palms; 5 to 8 pounds for large trees/palms).
- 7.3.3 Trees and palms with reduced rooting space in small planters or beds, or those with extensive ground cover beneath, shall have overall fertilizer rates proportionately reduced by 1/3 to 1/2 and frequencies increased to 6 times per year (1 time each 2 months) to prevent phytotoxicity.
- 7.3.4 Resin-coated and soluble fertilizers shall be applied at label rates as specified for the intended plant species.
- 7.3.5 Micronutrient products shall be mixed at label rates.
- 7.4 FERTILIZER FREQUENCY
- 7.4.1 All granular fertilizers for turfgrass, trees, palms, and woody shrubs shall be applied on a quarterly basis in February, May, August, and November.
- 7.4.2 Trees and palms with reduced rooting space in small planters or beds, or those with extensive ground cover beneath, shall have overall fertilizer rates proportionately reduced by 1/3 to 1/2 and frequencies increased to 6 times per year (1 time each 2 months) to prevent phytotoxicity.
- 7.4.3 All resin-coated fertilizers shall be applied on a quarterly basis or as per label rates.
- 7.4.4 Soluble 20-20-20 used on orchids shall be applied 1 time per month during the winter months and 2 times per month during the summer months. Bloom spikes and flowers shall not be sprayed with fertilizer products.
- 7.4.5 All micronutrient products shall be applied quarterly or as directed for remedial treatments.
- 7.5 APPLICATION METHODS
- 7.5.1 Fertilizer for all plant material except turfgrass shall be broadcast by hand on the ground or in the planters underneath plant canopies prior to mulch applications. Fertilizer application shall begin at 2 to 6 inches away from trunks/crowns of trees and shrubs and continue out to the dripline of the plants. Granular fertilizer shall not be allowed to accumulate on any plant leaves, in plant crowns, or at leaf bases. Special care shall be taken to avoid getting fertilizer into the crowns of clustering plants such as mondo grass and flax lilies.
- 7.5.2 Turfgrass fertilizer shall be applied with a rotary spreader after dew and irrigation water has dried from the leaves.
- 7.5.3 Fertilizers shall not be applied to any drought-stressed plants or wet foliage.
- 7.6.4 Slow-release fertilizer for bromeliads or other species sensitive to granular fertilizer shall be broadcast on the soil surface beneath the plants. Soluble fertilizer shall be sprayed and/or soil drenched.
- 7.5.5 Some overlap in fertilizer application can be expected in those areas which contain combinations of turf, shrubs, trees, and palms. Contractor shall be responsible for exercising judgment in reducing absolute rates of application where significant overlap occurs.
- 7.5.6 Spillage, runoff, and spray drift of fertilizers into parking areas, courtyards, driveways, sidewalks, etc., shall be avoided and all excess fertilizer shall be swept, blown, vacuumed, or hosed off of parking areas, driveways, sidewalks, etc., immediately after application, so as to avoid staining.
- 7.5.7 Irrigation shall be set to run through one complete cycle immediately after granular fertilizer application.
- 7.6 SPECIAL TREATMENT PROGRAMS
- 7.6.1 During the first year following landscape installation, all relocated trees and palms shall be fertilized at 1/3 standard rates and increased frequency of once each 2 months. They shall also receive micronutrient root drenches once per month for the first three months, once each two months thereafter, or more often if directed by landscape architect or horticulturist.

8. SCOPE OF WORK - PEST/DISEASE CONTROL

- 8.1 GENERAL PRACTICES
- 8.1.1 Pest control shall be implemented on an as-needed basis only as part of an Integrated Pest Management (IPM) program. Contractor shall inspect all areas of the landscape at least 1 time per month for early detection of actual or potential pest and/or disease infestations which may require treatment.
- 8.01.02 Contractor shall accurately identify any pest, disease, or weed species and determine whether or not chemical treatment is required. If so, it shall be treated with the most appropriate selective pesticide following all pesticide label directions. All pesticides are to be applied in a professional manner in accordance with all state and local laws pertaining to the handling and usage of hazardous materials. Owner shall be notified of any and all chemical applications so that children and pets may be kept out of the treated areas until safe for re-entry.
- 8.02 TURFGRASS PESTS/DISEASES
- 8.2.1 Insecticide treatments for turfgrass shall be provided on an as-needed basis. Product selection, application rates, and frequencies shall be determined after diagnosis, and repeat applications shall be made at the recommended rates and frequencies, as needed to obtain complete pest control.
- 8.2.2 Fireant control in turfgrass and shrub areas may be necessary as often as 1 time per month, using fireant baits, broadcast in the vicinity of, but not on top of, each nest.
- 8.2.3 Fungicide treatments for turfgrass shall be provided on an as-needed basis. Product selection, application rates, and frequencies shall be determined after diagnosis, and repeat applications shall be made at the recommended rates and frequencies, as needed to obtain complete disease control.
- 8.2.4 Pre-emergent weed treatment in St. Augustine grass areas shall be provided in the spring and fall months using approved herbicide products. Post-emergent weed treatments shall be provided as needed. Product selection shall depend upon weed species present and weather conditions.
- 8.2.5 Pre- and post-emergent turf weed control treatments for grasses and sedges shall be provided on an as-needed basis, using the most appropriate products, as directed on product labels.
- 8.3 TREE, PALM, AND SHRUB PESTS/DISEASES
- 8.3.1 Common pests of shrubs, such as insects and mites, shall be properly identified and treated with the most appropriate pesticide following all label directions. Follow-up treatments shall be provided as needed to completely control the infestations.
- 8.3.2 Snail bait shall be broadcast in shrub beds or sprayed on the foliage of susceptible plants (mostly foliage plants) on an as-needed basis.
- 8.3.3 Fungicide treatments shall be provided on an as-needed basis. Product selection, application rates, and frequencies must be determined after diagnosis.
- 8.3.4 Pre-emergent weed treatment in established shrub beds using Ronstar (Oxadiazon) or Surflan (Oryzalin) or a similar material may be used 1 to 2 times per year during the summer and fall months to control heavy seed-germinated weed infestations. These products shall be applied according to label directions immediately following mechanical weed control.
- 8.3.5 Round-Up (Glyphosate) herbicide may be used for post-emergent weed control in shrub beds, driveways, sidewalks, or other hardscape areas.
- 9.0 CLEAN-UP AND DISPOSAL
- 9.1 All debris shall be collected daily and disposed of at authorized dumping or recycling sites.
- 9.2 No tools or equipment shall be left on the site overnight.



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SHEET TITLE  
MAINTENANCE  
NOTES

DATE  
02.10.2016

DESIGN

DEENA BELL

DRAWN

JOSE D. FONSECA

SCALE

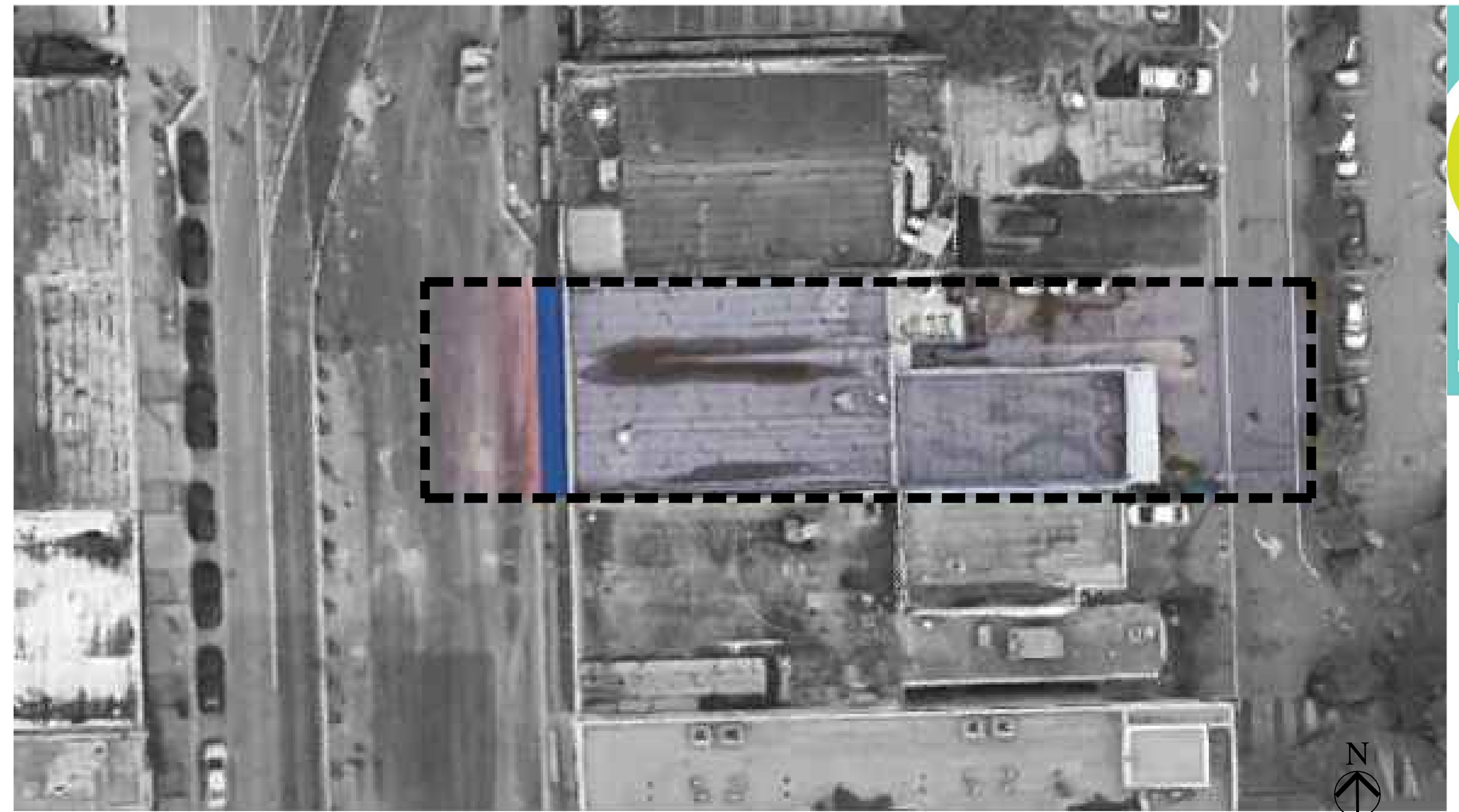
REVISIONS

SEAL

DEENA R. BELL  
LICENSE NO. LA0001620

SHEET NO.





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LEGEND:

L-1	COVER PAGE
L-2	LANDSCAPE PLAN
L-3	LANDSCAPE LIST
L-4	LANDSCAPE SPECS
L-5	MAINTENANCE NOTES
L-6	LIGHTING PLAN
L-7	LIGHTING SPECS

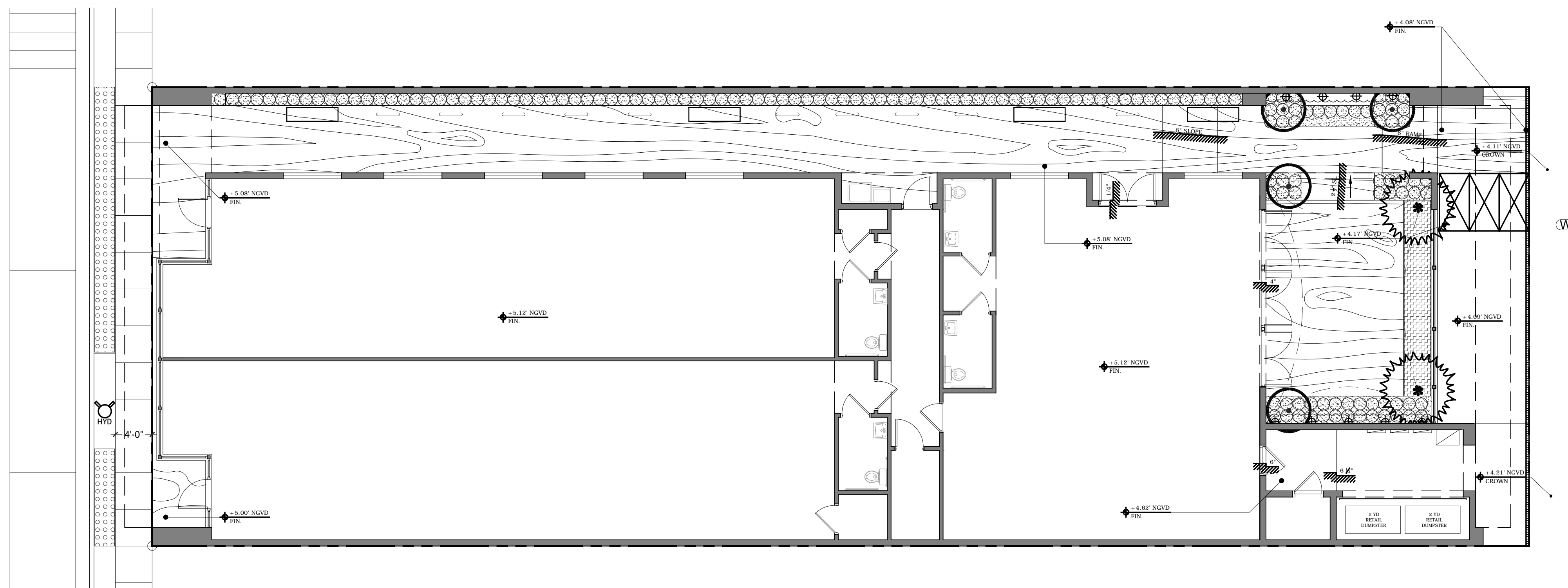
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CENSE NO. LA0001620

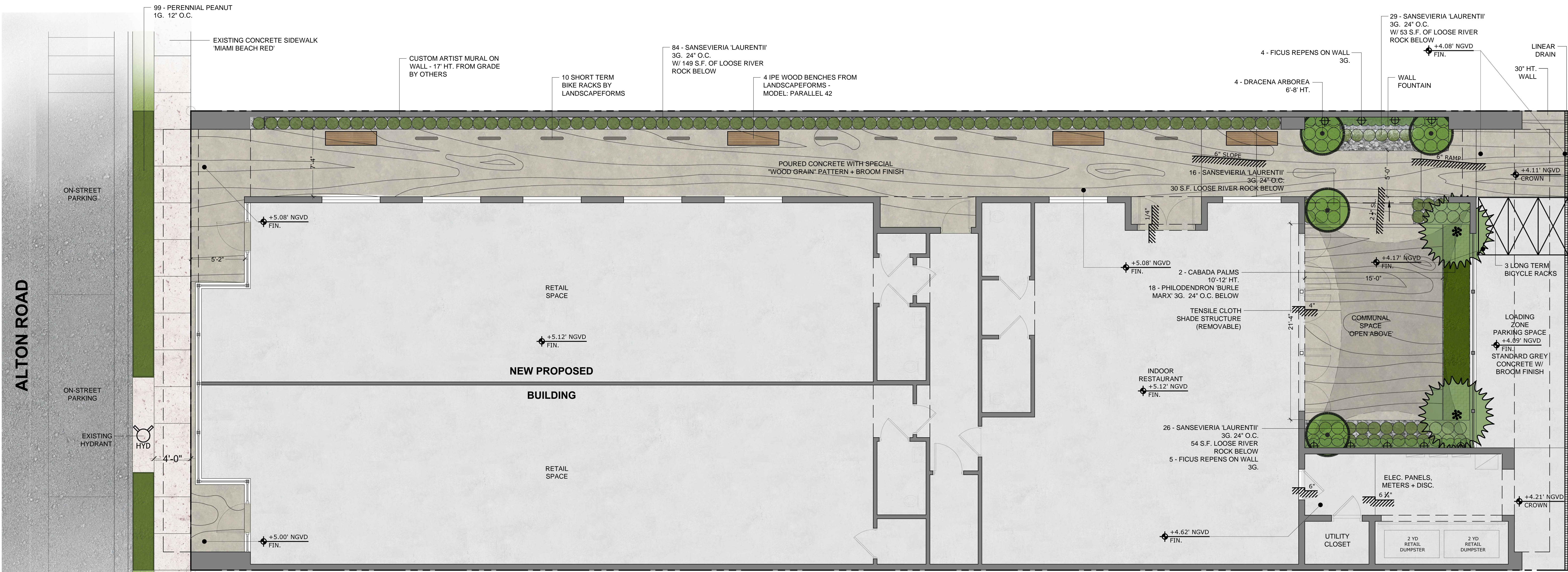
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ALTON ROAD



CABADA PALMS



DRACENA ARBOREA



FICUS REPENS ON WALL



TENSILE CLOTH SHADE STRUCTURE



CONCRETE WITH WOOD GRAIN PATTERN



BIKE RACK FROM LANDSCAPEFORMS



PERENNIAL PEANUT



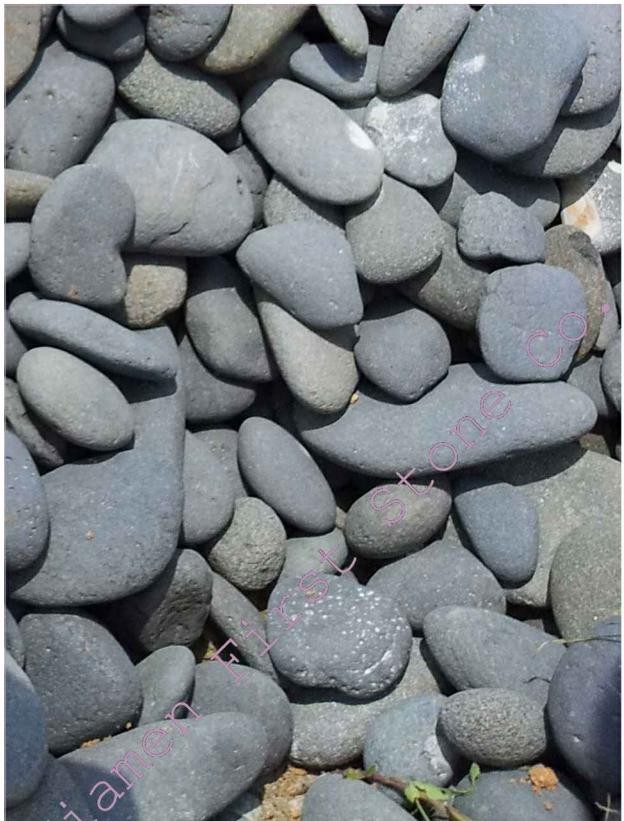
SANSEVIERIA 'LAURENTII'



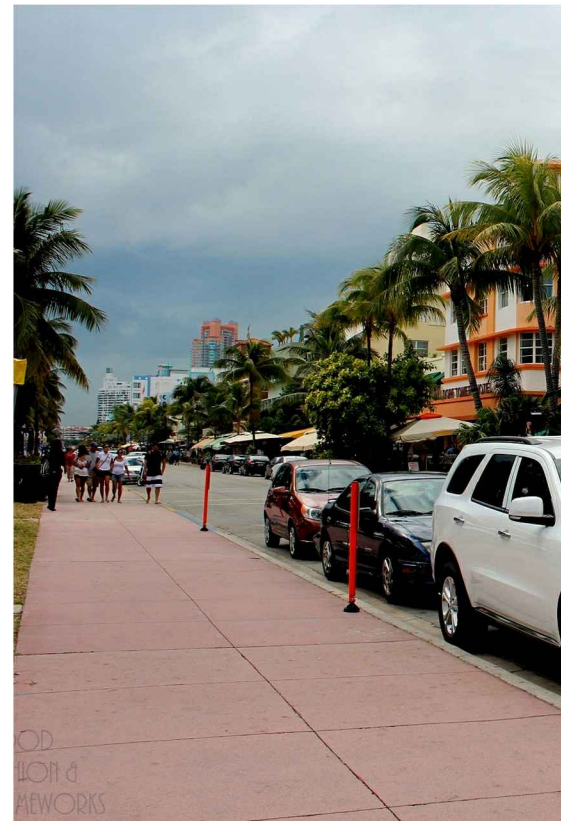
PHILODENDRON 'BURLE MARX'



LOOSE RIVER ROCKS



MIAMI BEACH CITY SIDEWALK



WALL FOUNTAIN



OUTDOOR SEATING BY LANDSCAPEFORMS



NOTE:  
NO WATER SHALL RUN OFF TO STREETS  
OR TO ADJACENT PROPERTIES. SWALES  
SHALL BE CONSTRUCTED AROUND  
PROPERTIES PERIMETERS



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SHEET TITLE  
PLANTING  
PLAN  
DATE  
02.10.2016  
DESIGN  
DEENA BELL  
DRAWN  
JOSE D. FONSECA  
SCALE  
3/16"=1'-0"  
REVISIONS

SEAL



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LICENSE NO. LA0001620

SHEET NO.

L-2



TREE AND PALM TRANSPLANTING NOTES:

- Certified arborist is to be hired to supervise and direct all phases of transplanting trees and palms.
- Trees to be relocated shall be root pruned a minimum of eight weeks prior to transplanting. Landscape Contractor shall maintain transplanted materials during construction period by watering, moving, spraying, fertilizing, and pruning.
- Landscape Contractor is responsible for verifying locations of all underground and overhead utilities and easements prior to commencing work. All utility companies and/or the General Contractor shall be notified to verify locations prior to digging. Utility trenching is to be coordinated with the Landscape prior to beginning of project. The Owner and Landscape Architect shall not be responsible for damage to utility or irrigation lines.
- The Landscape Contractor shall comply with all local and State codes and shall be responsible for obtaining all applicable permits.
- The Landscape Contractor shall regularly inspect the relocated materials to ensure compliance with standard horticultural practices
- The Landscape Contractor is responsible for guaranteeing the transplanted trees and palms for a period of one year. At the time of the final inspection all transplanted trees and palms that are not health growing condition shall be replaced by the Landscape Contractor.
- Root Pruning and Transplanting Operations: The Landscape Contractor shall take all precautions to minimize shock of root pruning and transplanting in accordance with standard arboriculture procedures including:
  - The diameter of the root-pruning or transplanting circle shall be at a distance away from the trunk equal to 12 times each inch of trunk diameter at breast height.
  - All small roots shall be cleanly cut with a sharp spade, a clean saw or chainsaw depending on the size of the root.
  - Trees shall not be pruned at transplanting to compensate for root loss. Any trimming required shall be as per the International Society of Arboriculture Trimming Standards.
  - For all palms except Sabal palmetto, the lower fronds shall be pruned leaving 9-11 fronds that can be tied without an extensive amount of weight that may damage the heart of the palm. The Sabal palmetto shall have all fronds cut without damaging the bud.
  - After root pruning trees, backfill roots to original existing grade with existing soil free of any deleterious material to root growth.
  - Provide a minimum of 3" mulch over backfill area to prevent weed growth, conserve moisture and prevent evaporation. Keep mulch 6" away from the trunk.
  - Provide tree protection as per Tree Protection Detail to ensure that the tree or root system is not damaged during the root-pruning period.
  - After root pruning, during root regeneration period trees shall be watered as per standard horticultural practices.
  - Immediately prior to transplanting tie the branches of the tree up to avoid damage.
  - The root ball shall be wrapped with burlap to protect the soil around the roots and protect the roots from drying out at time of moving from the hole.
  - Finish cutting of root ball for transplanting.
  - Transplanting must occur within 24 hours after being dug for relocation. Trees/Palms should be kept in shade and the canopy kept moist.
  - Digging and preparation of the new hole for the transplant shall be done prior to removing the tree from the existing location.
  - The depth of the new hole shall be minimum equal to the depth of the root ball and the width shall be minimum equal to three times the width of the root ball. The Landscape Contractor is to verify that all new holes have appropriate percolation. Landscape Contractor is to report to the Landscape Architect if water percolation does not meet requirements for healthy plant growth.
  - Trees and palms shall be lifted from the ground with heavy equipment designed specifically for tree relocation so that the trunk and crown is not impacted and damaged by the equipment.
  - The slings used to lift the trees and heavy weight palms shall be non-binding nylon type slings that are wrapped under the root ball to support the weight of tree or heavy palm. Slings shall not be solely wrapped around the trunk of the tree that can cause damage, girdling and result in decline and death of the tree.
  - The slings used to lift the lighter weight palms shall be non-binding nylon type slings that are wrapped around the trunk to support the weight of the palm. Padding the sling may be necessary so that the trunk or "boots" are not damaged.
  - Tree should be planted 2" max higher than their original planting level prior to relocation. Palms shall be planted at the same elevation prior to relocation. The tree and palm shall be centrally positioned in the planting hole and set straight, plumb or normal to the growth pattern prior to transplanting.
  - The trees and palms shall be backfield with existing soil free of deleterious material to plant growth.
  - Trees and palms shall be deep root watered to eliminate air pockets in the backfill mix prior to mulching.
  - A 6" saucer shall be created around the edge of the plant pit to help hold water, see planting detail for additional information.
  - Provide a minimum of 3" layer of mulch over saucer and backfill area outside saucer to prevent the weed growth, conserve moisture, and prevent evaporation. Keep mulch 6" away from the trunk.
  - Install tree and palm bracing as per attached details, to ensure stability of tree and palm during time period to and after transplanting, stake trees and palms after transplanting only is required to keep them stable.
  - Over the guarantee period the Landscape Contractor is responsible for resetting any trees/palms that are not vertical when caused by winds less than 75 MPH.
  - After transplanting trees and palms, the Landscape Contractor shall be responsible for obtaining water and watering to maintain soil moisture during the guarantee period at a minimum of:
    - First month - Daily, Second month - 3 times per week, Third and Fourth month - 2 times per week, Last Eight months - 1 time per week. For trees over 4" in caliper at the time of planting, the schedule should be: First 6 weeks - Daily; from 1.5 months to 6 months - 3 times per week, last 6 months - 1 time per week.

TREE AND PALM PROTECTION NOTES:

- Before beginning work, the Contractor is required to meet with the Landscape Architect at the site to review all work procedures, access routes, storage areas, and tree protection measures.
- Fences shall be erected to protect trees to be preserved. Fences define a specific protection zone from each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without the written permission of the Landscape Architect. Refer to tree & Palms Protection Detail.
- Construction trailers, traffic and storage areas must remain outside fenced areas at all times.
- All underground utilities and drain or irrigation lines shall be routed outside the tree protection zone. If lines must traverse the protection area, they shall be tunneled or bored under the tree line.
- No materials, equipment, spoil, or waste or washout water may be deposited, stored, or parked within the tree protection zone (fenced area).
- Additional tree pruning required for clearance during construction must be performed by a qualified arborist and not by construction personnel.
- Any herbicides placed under paving materials must be safe for use around trees and labeled for that use. Any pesticides used on site must be tree-safe and not easily transported by water.
- If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Landscape Contractor and the Landscape Architect should be notified immediately.
- Any grading, construction, demolition, or other work that is expected to encounter tree roots must be monitored by the Landscape Contractor.
- All trees shall be irrigated three times a week. Each irrigation procedure shall wet the soil within the tree protection zone to a depth of 30 inches.
- Erosion control devices such as silt fencing, debris basins, and water diversion structures shall be installed to prevent site erosion and siltation situations and/or erosion within the tree protection zone.
- Before grading, pad preparation, or excavation for foundations, footings, walls, or trenching near trees the trees shall be root pruned 12 inches outside the tree protection zone by cutting all roots cleanly to a depth of 36 inches. Roots shall be cut manually by digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root-pruning equipment.
- Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw.
- If temporary haul or access roads must pass over the root area of trees to be retained, a road bed of 6 inches of mulch or gravel shall be created to protect the soil. The road bed material shall be replenished as necessary to maintain a 6 inch depth.
- Spoil from trenches, basements, or other excavations shall not be placed within the tree protection zone, either temporary or permanently.
- No burn piles or debris pits shall be placed within the tree protection zone. no ashes, debris, or garbage may be dumped or buried within the tree protection zone.
- Maintain fire-safe areas around the fences. Also, no heat sources, flames, ignition sources, or smoking is allowed near mulch or trees.

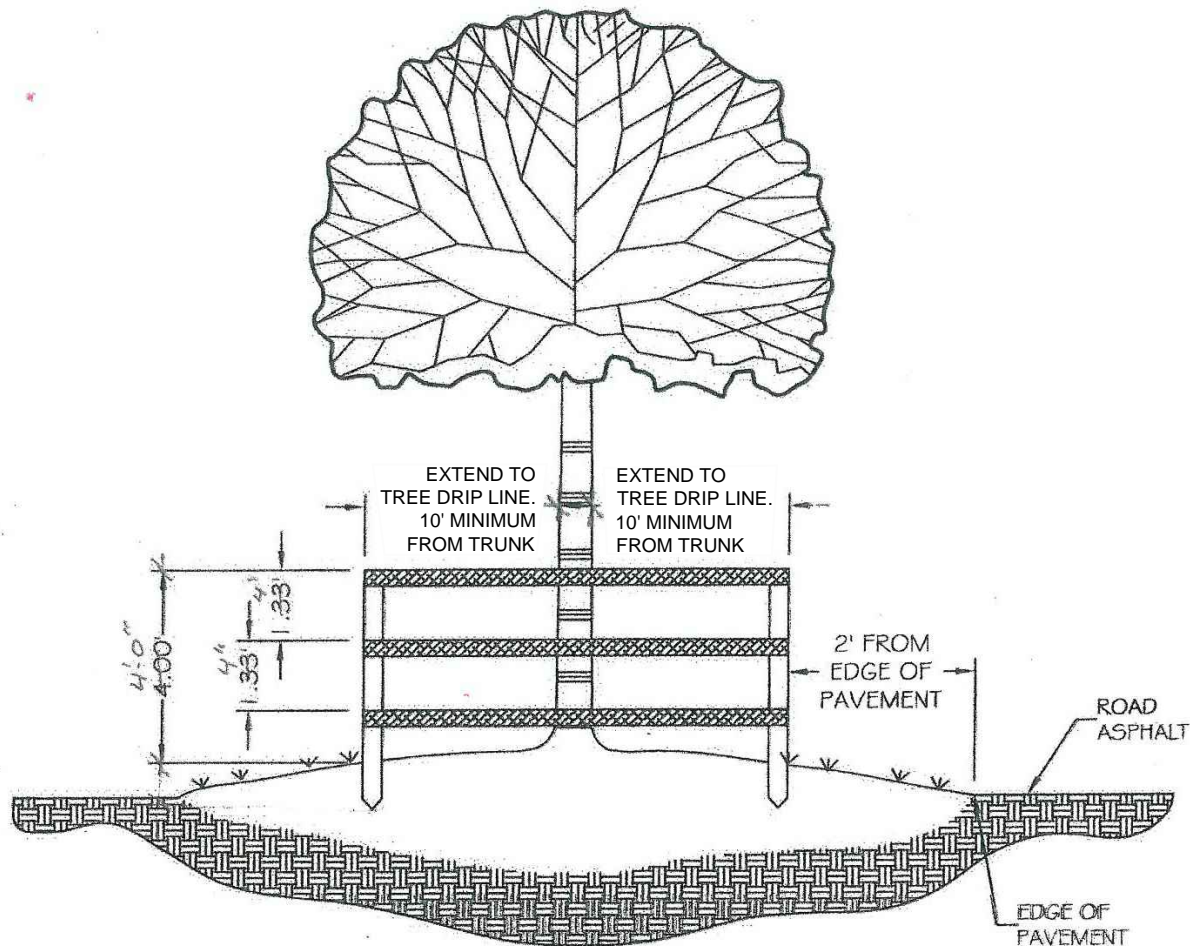
PLANT LIST  
E+S SHULL

PALMS								
NEW	QTY	BOTANICAL NAME	COMMON NAME	INSTALLED HT. / SPEC.	CALIPER INSTALLED (DBH)	HEIGHT AT MATURITY	CANOPY DIAMETER AT MATURITY	NATIVE
NEW	2	Dypsis cabadae	Cabada Palms	10'-12' HT.	2" each	40'	15'	No
NEW	4	Dracaena arborea	Dracaena arborea	6' - 8' HT.	3"	20'	10'	No

SHRUBS								
NEW	18	Philodendron 'Burle Marx'	Philodendron 'Burle Marx'	3 Gallon - 24" O.C.	n/a	3'	3'	No
NEW	9	Ficus repens	Ficus repens vine on wall	3 Gallon - 4' O.C.	n/a			No
NEW	155	Sanseveria laurentii	Sanseveria Laurentii - Silver / Green	3 Gallon - 24" O.C.	n/a	4'	2'	No

GROUNDCOVERS								
NEW	99	Arachis glabrata	Perennial Peanut	1 Gallon - 12" O.C.	n/a	6"	1'	No

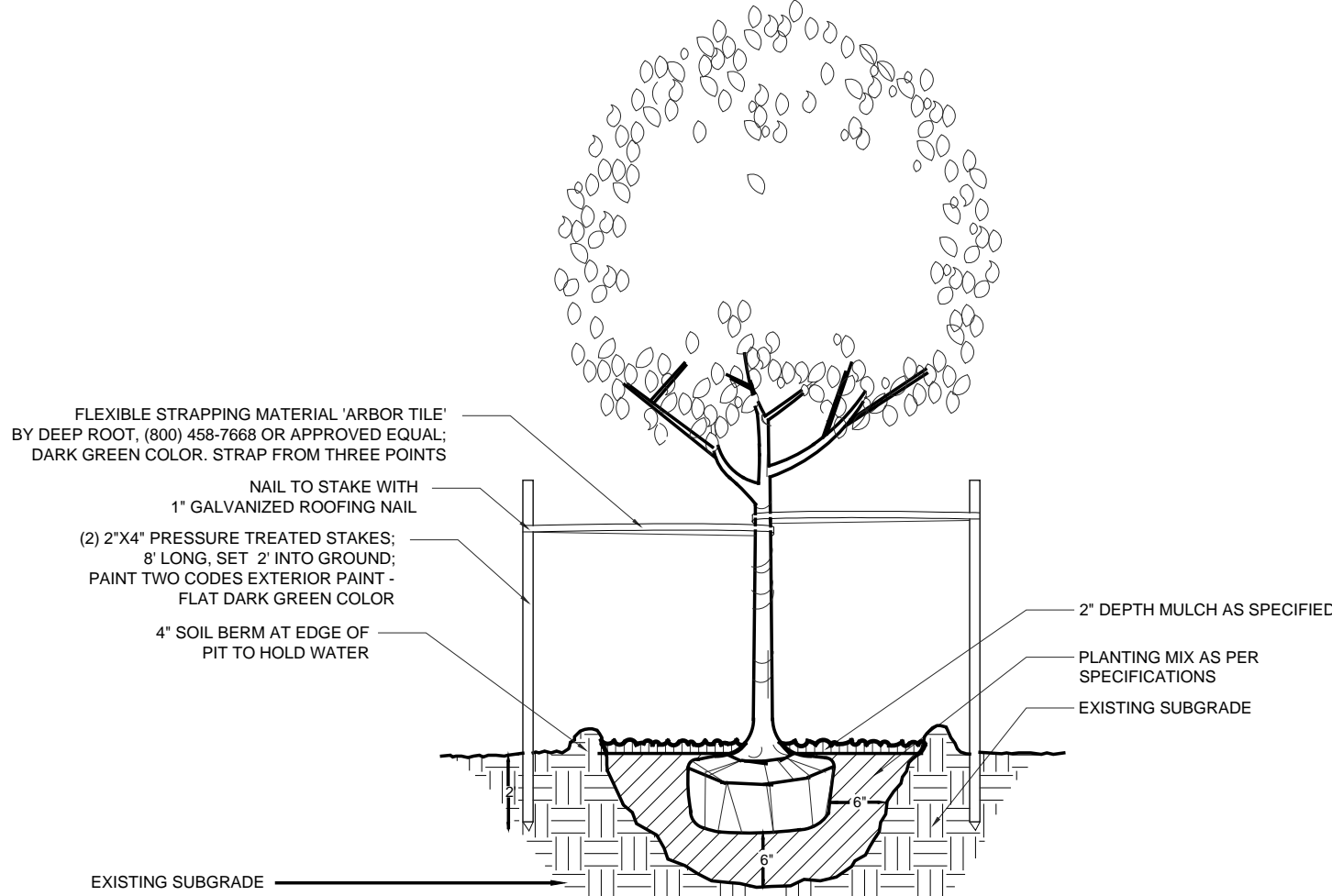
MISCELLANEOUS		ITEM
NEW / QTY		
300 S.F.		Loose River Rock in all planters
		80 / 20 Planting soil mixture. Quantity to be determined - 4" min. depth as per specs.
		Black' Mulch - 2" Depth Min.



- NOTES
- WOODEN STAKES (2'x4'x5' MIN.) ON 5' CENTERS - TO SUPPORT RAIL FENCING
  - BARRIER TO FORM A CONTINUOUS BARRIER AROUND THE TREE OR GROUP OF TREES
  - THREE ROWS OF RAIL FENCING (2'x4'x5' MIN.) SPACED EQUALLY TO BE PLACED AROUND ALL EXISTING TREES TO REMAIN
  - CONTRACTOR TO INSTALL PROTECTIVE FENCE BARRIER AROUND ALL EXISTING TREES TO REMAIN - AT THE START OF THE PROJECT - FENCE TO REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT
  - CONTRACTOR SHALL TAKE EXTRA CARE DURING EARTHWORK AND UTILITY OPERATIONS TO PROTECT ALL EXISTING TREES - AND SHALL BE RESPONSIBLE TO REPLACE ANY TREES DAMAGED DURING CONSTRUCTION.

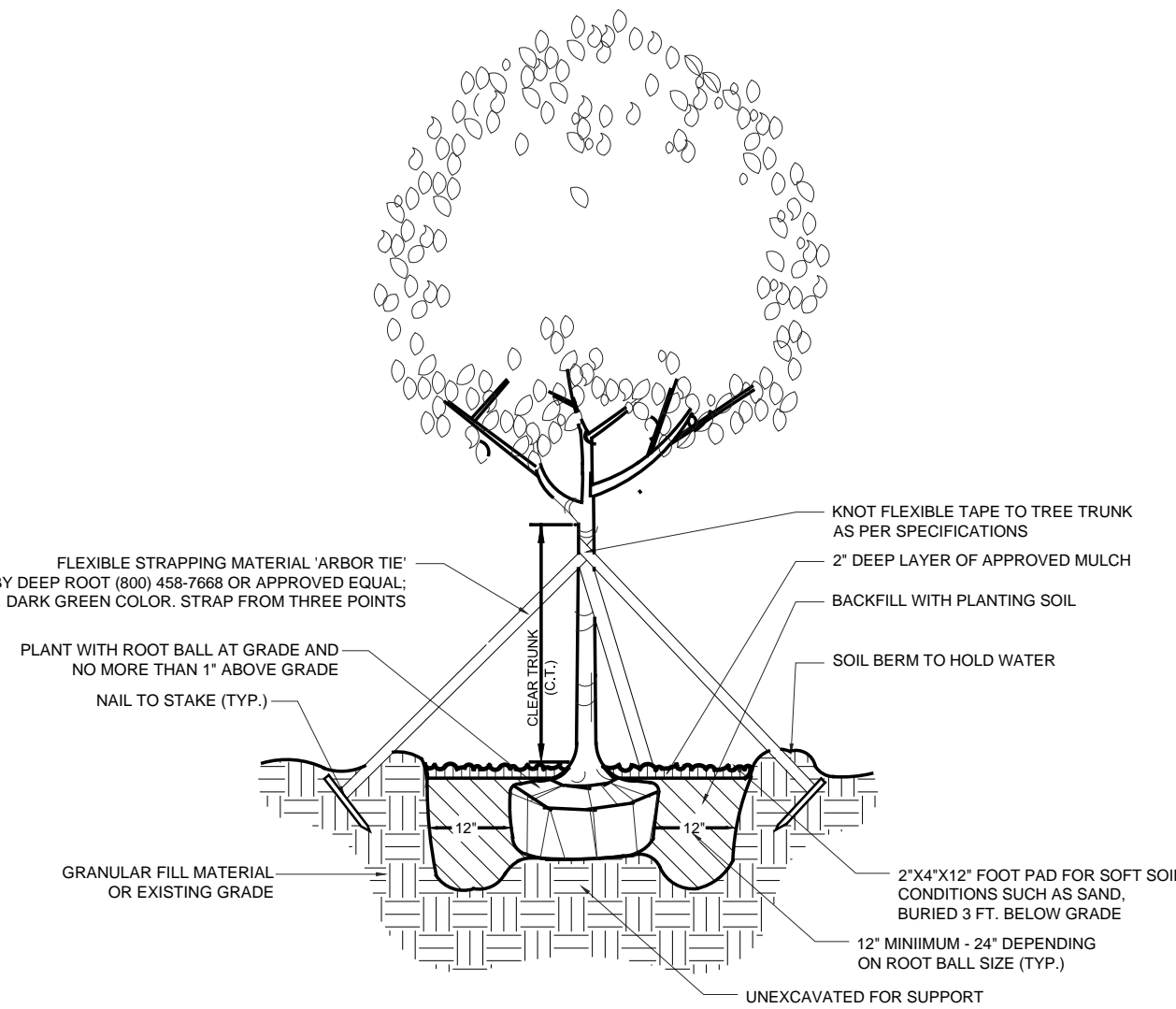
TREE PROTECTION STANDARD DETAIL

N.T.S.



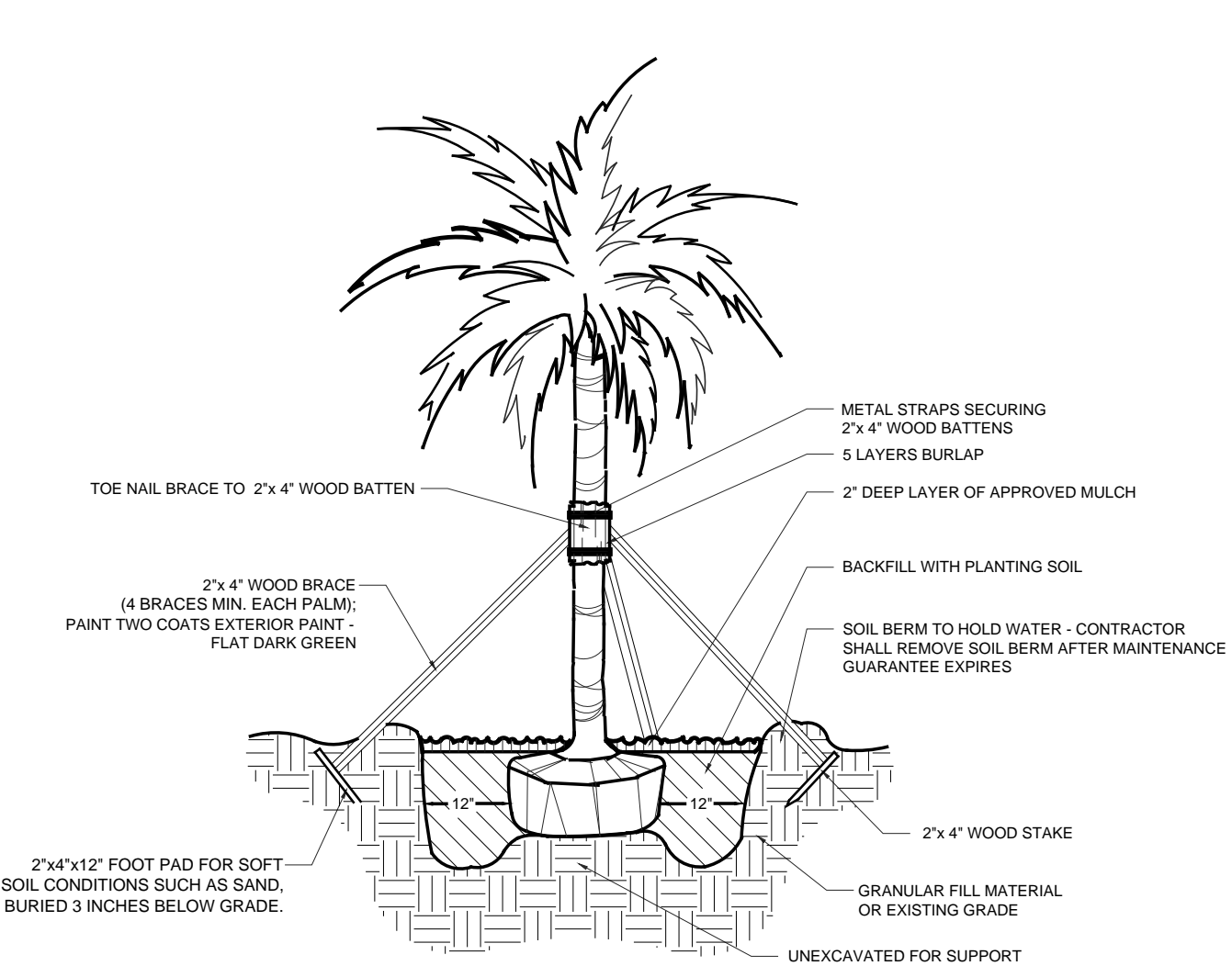
SPECIMEN TREE GUYING DETAIL

TREES: 4' - 8 ' HEIGHT N.T.S.



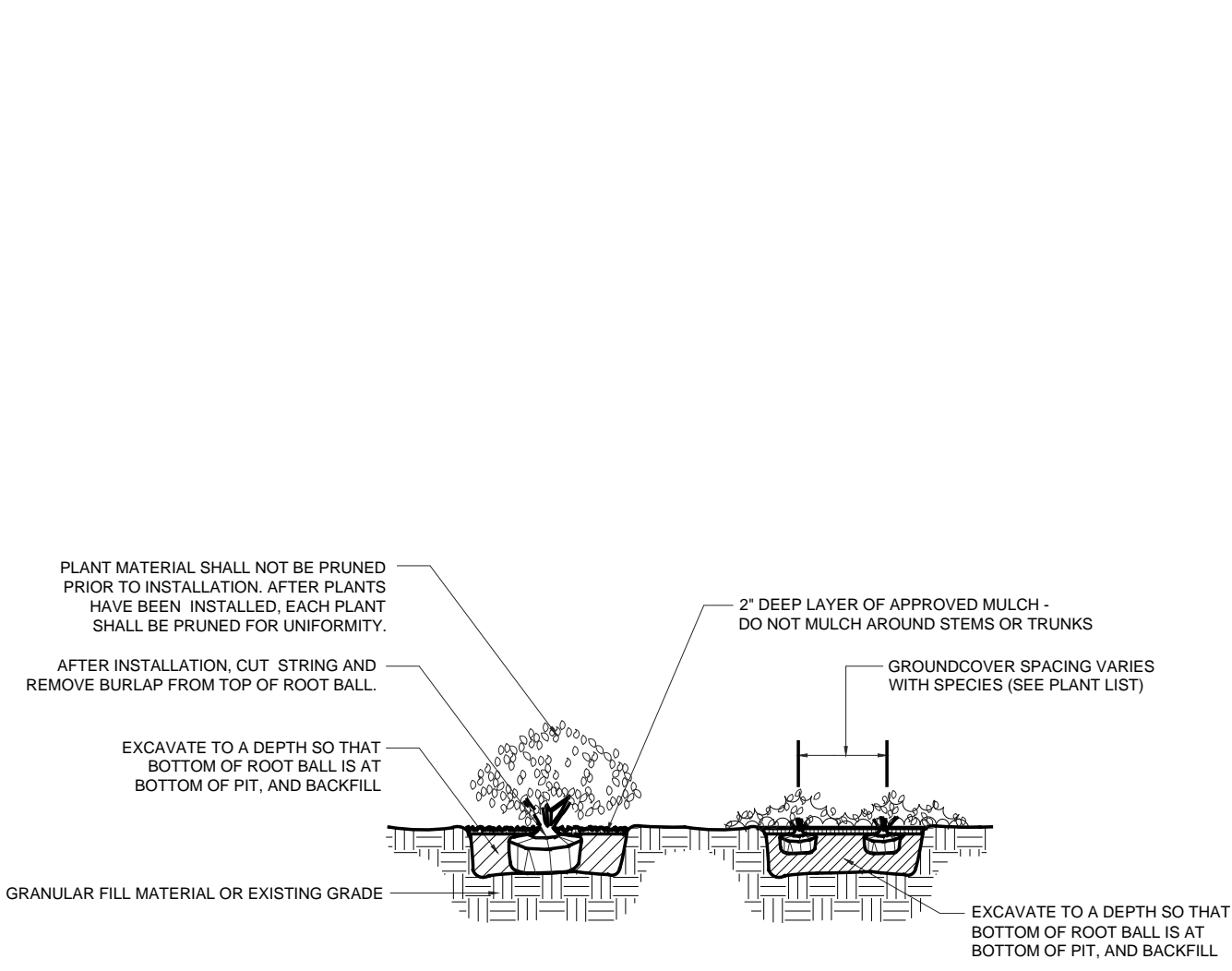
SMALL TREE PLANTING & GUYING DETAIL

TREES: 4' - 8 ' HEIGHT N.T.S.



SPECIMEN TREE OR PALM PLANTING DETAIL

TREES & PALMS: 10' & LARGER N.T.S.



SHRUB & GROUNDCOVER PLANTING DETAIL

N.T.S.



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FAX: (305) 774-9652  
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E+S SHULL, INC  
1675 ALTON ROAD | MIAMI BEACH, FL 33139

SHEET TITLE

PLANTING

DETAILS

DATE

02.10.2016

DESIGN

DEENA BELL

DRAWN

JOSE D. FONSECA

SCALE

REVISIONS

SEAL



LANDSCAPE SPECIFICATIONS

1.00 GENERAL

1.01 The Contractor is reminded that the General Conditions and / or Special Conditions of this contract govern the work of this section of the Specifications whether attached hereto or not. Subcontractors undertaking to perform work under this Section shall be made fully aware of these documents and of their responsibilities and obligations thereunder. In the event of any discrepancies between the drawings and specifications and the following 'Scope of Work', the latter shall prevail.

2.00 SCOPE OF WORK

2.01 The work of this Section shall include all labor, materials, equipment, appliances, and accessories necessary for the complete performance of all excavation, grading, planting and backfill work in accordance with these Specifications and the Contract Drawing. Without restricting the generality of the foregoing, the items listed below and similar items shown on the Contract Drawings shall constitute the work of this Section:

A. Finish grading and final site preparation of all areas to be landscaped.

B. Furnishing and incorporating fertilizer and other soil amendments.

C. Furnishing plant materials and grass materials and installing same.

D. Furnishing and placing 'Planting Mixture' and other miscellaneous items to complete the work.

E. Replacement of unsatisfactory plant material.

F. Clean-up.

3.00 SITE PREPARATION and SITE SITEWARDSHIP FOR SUSTAINABLE SITES

3.01 The Contractor shall provide finish grading and final preparation of all areas to be landscaped to within 6" of finish grade. This will require raking and pulverizing of all areas in order to crumble dirt, clogs and / or debris. The Landscape Contractor shall be responsible for finish grading, which is the top 6" of the site.

3.02 The Contractor must perform the following preventative measures for erosion controls during construction:

Stockpile and Protect disturbed Topsoil from erosion;

Control the path and velocity of runoff with silt fencing or equivalent;

Protect sewer inlets, streams, and lakes with straw bales or silt fencing;

Provide swales to divert surface water from hillsides, use tiers, erosion blankets, compost blankets, etc. on sloped areas.

3.03 Contractor must minimize disturbed area of site where site is not previously developed by following tree / plant protection plan and enforcing 'No Disturbance Zones' quarantined by use of Construction tape or Fencing.

When site is previously developed, Contractor must enforce Tree / Plant protection Plan and use Hay bales, silt fencing, etc. for erosion controls.

3.04 All Landscaping must be 24" from finish wall of structures for pest control measures.

4.00 MATERIALS

4.01 Plant materials shall be furnished by the Landscape Contractor and as indicated on the plans. All plant materials shall meet or exceed the following standards.

- A. Plant species and sizes shall conform with plant list. Nomenclature shall conform to Standardized plant names, in accordance with the latest edition of the Florida Department of Agriculture's Grades and Standards for Nursery Plants.
- B. All plants shall be nursery grown or as stipulated herein and shall comply with all required inspections, grading standards and plant regulations as set forth in the Florida Department of Agriculture 'Grades and Standards for Nursery Plants', including revisions. Ensure that plant materials are shipped with tags stating the botanical and common name of the plant.
- C. The minimum grade for all trees, palms, shrubs, and groundcovers shall be Florida No. 1 and shall meet or exceed the size and quality standards of the American Association of Nursery Stock, sponsored by the American Association of Nurserymen, latest addition, unless otherwise indicated and all plants shall be sound, healthy and vigorous, well-branched and densely foliated when in leaf. They shall have healthy, well developed root systems and shall be free of disease and insect pests, eggs or larvae. Florida Fancy material shall be provided where plant list specifies 'specimen'.
- D. The determining measurements for trees shall be the height and spread, and shall be measured from the top of the plant to the root crown, not to include the immediate terminal growth. Their width shall be measured across the normal spread of the branches. Both measurements shall be made with the plants in their normal position.
- E. Plants larger in size than those specified may be used with approval of the Landscape Architect at no additional cost to the Owner. If the use of the larger plants is approved, the ball of earth or spread of roots shall be increased proportionately.
- F. Container grown plants the same quality as balled and burlapped plants may be substituted in lieu thereof. Plants grown in containers shall be delivered and remain in the containers in a shady location until planted. Plants in containers shall be watered prior to transportation and shall be kept moist until planted. The container must be removed prior to planting, with care as not to injure the roots.
- G. Grass materials shall consist of the following:
1. Sod: Solid sod shall be as indicated on the drawings. Sod must be strongly rooted and free of pernicious weeds. Mow to a height not to exceed 1 1/2" before lifting. Lifts shall have a uniform thickness of 1 inch to 1 1/2 inches. Sod containing nutgrass, lippia water sedge, dollar weed, or other common turfweed species (if applicable), will not be accepted.
2. Sodding installation :
- a) Sodding shall be done as soon as practical following finish grading. Ground shall be covered with a 4" blanket of soil using specified 60/40 top soil mixture where necessary to create a 4" soil blanket. The day before sod installation, the contractor shall rake 50# Milorganite per 1000 sf of area to receive sod. Ground shall be leveled with the back of a rake and sod laid with joints closely butted so that no voids are visible, keeping surface of sod flush with the adjoining seeded areas and or pavements. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Hand tamp to ensure contact with subgrade, and water thoroughly with a fine spray immediately after laying.

- b) After sod is in place, it shall be top dressed with sufficient sharp, clean 60% sand/40% muck soil mix to fill all voids remaining and thoroughly watered to wash the top dressing into the sodded surface.
- c) All sod areas shall then be rolled using a vibrating #1500 sod roller. The contractor shall apply a preemergent herbicide to all sodded areas.
- d) It is the Landscape Contractor's responsibility to keep new sod properly watered until completion of the contract. All watering shall meet specifications according to 'Grades and Standards' Section 983.

H. Substitutions in plant species or size will be made only with prior written permission of the Landscape Architect.

I. If, in the opinion of the Landscape Architect, materials and /or work do not conform with the plans and specifications, it may be rejected and upon rejection, must be removed immediately from the site by the Contractor and replaced.

J. The Contractor shall be responsible for the certification and inspection of plant material that may be required by local, state, or federal authorities and shall bear the cost of the same, if any.

4.02 Materials used to install the job shall meet or exceed the following standards:

- A. Planting mix to be used for 4" soil blankets and backfilling around trees shall be: 60% coarse sand / 40% Inland Glades Muck. 70% sand / 30% muck shall be used in planters or areas with poor drainage.
- B. Fertilizers: Fertilizer shall be delivered mixed as specified in standard bags, sealed, and showing weight by analysis and name of manufacturer. Fertilizer shall be stored in weatherproof storage and in such a manner that its effectiveness will not be impaired.
- C. Mulch: Mulch shall be shredded melaleuca, Grade B, clean, bright, and free of weeds, moss, sticks, and other debris.
- D. Water: All water required for the execution of the work shall be supplied at the site by the Owner.

5.00 INSTALLATION

5.01 The Planting operations used to install the job shall meet or exceed the following standards:

- A. Excavation of Plant Pits: Plant pit excavations shall be roughly cylindrical in shape, with their side approximately vertical. Pit shall be excavated so that bottom of pit is same depth as root ball. Plants shall be centered in the hole, with the trunk location as shown in the plans. Holes for balled and burlapped plants shall be large enough to allow 12" minimum (depending on root ball size) of back fill around the sides of the root ball, and 12" of back fill beneath the root ball. In all cases the diameter of the plant hole shall be twice the diameter of the root ball. Where excess material has been excavated from the plant hole, the excavated material may be used to backfill to the proper level. Mix existing excavated material in 50% / 50% ratio with new planting soil mix. The Contractor, in excavation for plantings shall take care not to damage underground utilities or other sub-surface obstructions, and shall be held liable for their repair, if damaged.
- B. Setting Plants: All trees shall be set so, that when settled, the top of the root ball will be flush with the surrounding area of the finish grade or slightly above finish grade. Each plant shall be planted in planting soil mix in the center of the pit. Shrubs shall be set flush with the surrounding finish grade of the planting area. The back fill shall be made with prepared planting in mixture as specified herein and shall be firmly rodded and watered, so that no air-pockets remain. The quantity of water applied immediately upon planting shall be sufficient to thoroughly moisten all of the backfilled earth. Plants shall be kept in a moistened condition the duration of the planting.
- C. Staking and Guying: All trees shall be staked or guyed as shown in the details and according to the following specifications.

1. Use wide plastic, rubber or other flexible strapping materials to support the tree to stakes or ground anchors that will give as the tree moves in any direction up to 30 degrees. Use strapping material 'Arbor Tie' by Deep Root (800) 458-7668 dark green color, or approved equal. Do not use rope or wire through a hose. Use guy chords, hose or any other thin bracing or anchorage material which has a minimum 12" [300 mm] length of high visibility flagging tape secured to guys, midway between the tree and stakes for safety.
2. Stake trees larger than 1" [25 mm] diameter and smaller than 2" [50 mm] diameter with a 2" by 2" [50 by 50 mm] stake, set at least 2' [0/6 m] in ground and extending to the crown of the plant. Firmly fasten the plant to the stake with flexible strapping materials as noted above.
3. TREES OF 2 TO 3 ½" [50 MM TO 90 MM] CALIPER: Stake all trees, other than palm trees, larger than 2" [50 mm] caliper and smaller than 3 ½" [90 mm] caliper with two 2" by 4" [50 by 100 mm] stakes, 8' [2.4 m] long, set 2' [0.6 m] in the ground. Place the tree midway between the stakes and hold it firmly in place by flexible strapping materials as noted above.

4. LARGE TREES: Guy all trees, other than palm trees, larger than 3 ½" [90 mm] caliper, from at least three points, with flexible strapping materials as noted above. Anchor flexible strapping to 2" by 4" by 24" [50 by 100 by 600 mm] stakes, driven into the ground such that the top of the stake is at least 3" [75 mm] below the finished ground.

5. SPECIAL REQUIREMENTS FOR PALM TREES: Brace palms which are to be staked with three 2" by 4" [50 by 100 mm] wood braces, toe-nailed to cleats which are securely banded at two points to the palm, at a point one third the height of the trunk. Pad the trunk with five layers of burlap under the cleats. Place braces approximately 120 degrees apart and secure them underground by 2" by 4" by 12" [50 by 100 by 300 mm] stake pads. Paint wood flat dark green exterior paint, two coats.

6. TREE PROTECTION AND ROOT BARRIERS: Install tree barriers when called for in the Contract Documents or by the Landscape Architect to protect existing trees from damage during project construction. Place barricades at the drip line of the tree foliage or as far from the base of the tree trunk as possible. Barricades shall be able to withstand bumps by heavy equipment and trucks. Maintain barricades in good condition. When called for in the Contract Documents, install root barriers or fabrics in accordance with the details shown. Barricades shall be constructed of wood fencing or wire fencing 4' height.

D. Pruning: All broken or damaged roots or branches shall be cut smoothly and the tops of all trees shall be pruned in a manner complying with standard horticultural practice. At the time pruning is completed, all remaining wood shall be alive.

E. Mulching: Within one week after planting, mulch material, consisting of shredded Eucalyptus or Pinebark shall be uniformly applied to a minimum loose thickness of 2 inches, over the entire area of the backfilled hole or bed. The mulch shall be maintained continuously in place until the time of final inspection, and must be a minimum of 2 inches thick to be accepted. Mulch shall not be placed against stems or trunks.

F. Fertilizing: Feeding of all trees and specimen shrubs shall be done with slow release, 'Woodace' Briquettes, 17 gram, tablet fertilizer, analysis 14-3-3, as per manufacturer's instructions. Fertilizing shall not occur until after flush of new growth.

6.00 MAINTENANCE

6.01 Maintenance and hand watering of all trees, shrubs and groundcover by the Landscape Contractor shall terminate 90 days after final acceptance of work. Maintenance prior to final acceptance shall include the removal of all dead or dying twigs and branches, the weeding, watering and normal pruning of plant material.

7.00 GUARANTEE

7.01 The Landscape Contractor shall guarantee and maintain all new trees, palms, shrubs, groundcovers and sod for 90 days during guarantee period. The Landscape Contractor shall replace at the direction of the Landscape Architect all trees, shrubs, or groundcovers deemed by the Landscape Architect to be unacceptable, due to death or damage; acts of God, Owner negligence and vandalism excepted.

7.02 New material used to replace material unacceptable to the Landscape Architect, shall be guaranteed for similar period from date of installation

8.00 FINAL INSPECTION AND ACCEPTANCE

8.01 The Landscape Contractor shall advise the Landscape Architect in writing at the end of the guarantee period that the project is ready for final inspection. Only upon notification to the Landscape Architect by the Landscape Contractor in writing and subsequent inspection attended by the Landscape Contractor shall the requirements of the guarantee be met.

9.00 CLEAN-UP

9.01 Upon completion of all work under this section, and intermittently as required, the Landscape Contractor shall clear the site of all debris, superfluous material and all equipment to the satisfaction of the Landscape Architect

9.02 End



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FAX: (305) 774-9652  
WWW.BELL-LA.COM

E+S SHULL, INC  
1675 ALTON ROAD | MIAMI BEACH, FL 33139

SHEET TITLE

PLANTING

NOTES

DATE

02.10.2016

DESIGN

DEENA BELL

DRAWN

JOSE D. FONSECA

SCALE

REVISIONS

SEAL

DEENA R. BELL

LICENSE NO. LA0001620

SHEET NO.

L-4



MAINTENANCE SPECIFICATIONS

PART I - GENERAL

1. SUMMARY

- 1.1 The landscape design objectives are to provide a visually-pleasing and environmentally-sound landscape with a moderate level of maintenance needs.
- 1.2 The scope-of-work for landscape maintenance at this property is summarized below:
- | Task                               | Schedule   |
|------------------------------------|--|
| Irrigation System Checks & Repairs | 1 time per month   |
| Mowing                             | 38 cuts per year<br>Summer: 1 time per week<br>Winter: 1 time each 2 weeks |
| Edging and Trimming                | 1 time per month   |
| Shrub Pruning                      | 1 time per month   |
| Mulching                           | 4 times per year   |
| Weeding                            | 2 times per month  |
| Tree Pruning, Hardwoods            | 1 time each 2 years  |
| Tree Pruning, Palms                | 2 times per year   |
| Fertilization                      | 4 times per year   |
| Pest Scouting & Treatment          | 1 time per month   |
- 1.3 Sections 1, 2 and 3 of this document apply to all Contractors.
- 1.4 Sections 4 and 5 apply to Landscape Maintenance Contractor.
- 1.5 Section 6 applies to Arborist Contractor.
- 1.6 Sections 7 and 8 apply to Fertilization and Pest Control Contractor.

2. QUALITY ASSURANCE

- 2.1 Contractor shall be an individual or firm of established reputation, which is regularly engaged in, and which maintains a regular force of workers skilled in performing work as outlined in this document.
- 2.2 All Contractors shall be insured with Workers' Compensation Insurance as required by the State of Florida, General Liability Insurance with a minimum limit of \$1,000,000 combined single limit per occurrence and proof of Comprehensive Automobile Liability Insurance.
- 2.3 All Contractors shall have any and all current licensing as required to perform the specified services in the municipality of which work is to be performed.
- 2.4 All Contractors shall visit the site and inspect the landscape prior to submitting a bid.
- 2.5 All Contractors shall comply with all sections of these specifications.
- 2.6 No work is to be subcontracted without the prior written consent of the Owner
- 2.7 All Contractors shall comply with all applicable local, state and federal health and safety requirements, including the latest revisions of Occupational and Safety and Health Administration (OSHA) standards, American National Standards Institute (ANSI) Z133.1-2000 (Tree Care Operations-Safety Requirements) and State of Florida Department of Transportation (FDOT vehicle safety and traffic control requirements).
- 2.8 All Contractors shall designate a competent supervisor or foreman to oversee all activities described in these specifications.
- 2.9 All Contractors shall be responsible for notifying the Owner and for the cost and repair of any damage to irrigation systems, buildings, vehicles or other structures, properties or possessions, which occur as a result of improper or negligent activities within their respective realm of responsibility, as defined in these specifications.
- 2.10 Contractors shall not be responsible for damages caused by others, vandalism, or Acts of Nature.

3. PRODUCTS AND MATERIALS

- 3.1 All Contractors shall be responsible for providing all labor and materials needed to completely and accurately perform the work outlined in these specifications. Equipment and materials furnished shall be of the appropriate type, size and quantity needed to adequately accomplish the specified work.
- 3.2 All Contractors shall be responsible for regularly inspecting all equipment to be used on the job site and for providing scheduled preventative maintenance, so as to prevent any damage or injury to landscaping, structures or the environment.

4. SCOPE OF WORK - IRRIGATION MANAGEMENT

- 4.1 Landscape Contractor shall be responsible for the maintenance, repairs, and timing of the irrigation system. The system shall be inspected at least 1 time per month to check for broken heads, lines, valves, timers, and water coverage patterns.
- 4.2 Broken heads and lines, and water coverage adjustments shall be made within 24 hours by the Contractor. Malfunctioning valves, pumps, or timers shall be reported to the Owner for repair by a licensed irrigation contractor.
- 4.3 Should the Landscape Maintenance crew cause or note any broken heads or lines or other irrigation problems during the course of their regular duties, they shall immediately report such damage to their supervisor so that it can be repaired.
- 4.4 Irrigation timers shall be set according to specific needs of each area or zone, and may be altered as per plant, site, and weather conditions.
- 4.5 All newly installed trees need to be watered once a day for the first 14 days, every other day for days 15-28, and then watered as per current water restrictions.

5. SCOPE OF WORK - LANDSCAPE MAINTENANCE

- 5.1 MOWING
- 5.1.1 All turf areas shall be mowed with rotary mowers 1 time each 7 days between May 1 and October 31. The rest of the year it shall be mowed 1 time each 14 days, as needed to keep the grass from growing more than 1.5" above the cutting height. Total number of cuts per year shall be at least 38.
- 5.1.2 Mowing height for St. Augustine grass shall be 2" to 3", as measured on a flat, paved surface. Mowing height in shaded areas shall be slightly higher.
- 5.1.3 All debris and/or litter shall be removed from turf areas prior to mowing.
- 5.1.4 Injuries to tree trunks, exposed roots, and shrub bases shall be avoided by either mowing at a greater height or by mowing around them and hand-trimming later.
- 5.1.5 Mower blades shall be kept sharp at all times so as to prevent tearing of leaf blades.
- 5.1.6 All grass clippings shall be removed from parking areas, driveways, courtyards, decks, sidewalks, and planter beds using blowers, vacuums, brooms and/or rakes. Clippings shall not be blown out into streets or adjacent areas.
- 5.2 EDGING AND TRIMMING
- 5.2.1 All edges along bed lines, tree rings, parking areas, driveways, sidewalks, etc. shall be mechanically edged at least 1 time per month.
- 5.2.2 All turf around all sprinkler heads shall be trimmed as needed to prevent it from interfering with or intercepting the output of water.
- 5.2.3 The use of nylon cord trimmers (weed-eaters) around tree trunks or hedges shall not be permitted (tree rings and bed lines must be maintained); they may be used around sprinkler heads, fences, posts, and other non-living structures provided they do not cause damage to those structures.

- 5.2.4 All trimmings shall be removed from parking lots, driveways, courtyards, sidewalks, and planter beds using blowers, vacuums, brooms, and/or rakes. Clippings shall not be blown out into streets or adjacent areas.
- 5.2.5 All trimmings shall be collected daily and disposed of at authorized dumping or recycling sites.
- 5.3 SHRUB PRUNING
- 5.3.1 All landscaped areas shall be inspected at least 1 time per week to ascertain whether any pruning and trimming is needed to maintain plants within their intended bounds, to remove dead or damaged plant parts including limbs, branches, palm fronds, stems, or flowers, and to keep plants from encroaching upon parking areas, driveways, sidewalks, streets, windows, signs, lighting, etc.
- 5.3.2 Appropriate pruning tools (hedge trimmers, pruning clippers, loppers, and hand saws) shall be used and properly maintained with sharpened blades at all times. Machetes, breakage by hand, and climbing spikes shall not be permitted.
- 5.3.3 All shrub beds are to be massed in a naturalistic fashion. Shrub beds shall be pruned as needed to maintain plants within their intended bounds, prune out old flowers, clean out old leaves, and create a naturalistic mass effect. Plants shall not be individually shaped. Maximum bloom shall be maintained by minimizing pruning. Periodic cut-backs of specific plantings may be necessary 1 to 2 times per year.
- 5.3.4 All ground cover material shall be regularly pruned and cleaned as needed to remove any dead or damaged plant parts, including old leaves, flowers, and stems. Periodically, it may be necessary to thin or reduce the size of the plantings by removing sections of plants or clusters.
- 5.3.5 Hedges and formal border plantings shall be pruned at least 1 time per month or more often if needed to maintain them at the heights and widths specified by the landscape architect. Small-leaf plants such as Serissa can be sheared; large-leaf plants such as Clusia shall be hand-pruned to avoid tearing of leaves. Sheared hedges may require substantial height and width reductions 1 time per year to remove accumulations of dead twigs and epicormic shoots.
- 5.3.6 All vines shall be pruned and trained as needed onto trellises or other structures as intended.
- 5.3.7 All palms which are less than 15 feet in overall height shall be pruned as needed to remove brown fronds, coconuts, and inflorescences. Each individual frond shall be cut as close to the trunk as possible, removing the entire leaf base, including all spines. Thatch accumulations on trunks shall be regularly removed as it naturally loosens.
- 5.3.8 All clustering palms which are less than 15 feet in overall height shall be pruned as needed to remove brown fronds and inflorescences. Periodically (no more than one time per year), some thinning of the clusters may be required; approximately 1/4 to 1/3 of the total number of stems, evenly distributed throughout the cluster and at staggered heights, shall be cut at ground level and removed. Palms shall not be "cleaned" to remove all young stems.
- 5.3.9 All hardwood trees which are less than 15 feet in overall height shall be pruned as needed to remove dead branches, or to raise or reduce crowns to prevent them from encroaching into pedestrian/vehicular areas, over windows, sidewalks, lights, signs, etc. There shall be no other "cleaning", "thinning", or "raising" of tree crowns by the Landscape Contractor. All other tree and palm pruning shall be the responsibility of a qualified arborist or tree crew.
- 5.3.10 All clippings and debris, including fallen palm fronds and nuts, shall be collected daily and disposed of at authorized dumping or recycling sites.
- 5.4 MULCHING
- 5.4.1 All hedges, shrubs, planter beds, and free-standing palms and hardwood trees shall be mulched 4 times per year using naturally-colored, shredded cypress, eucalyptus, or heat-sterilized melaleuca mulch, Grade B or better, layered to and maintained at a depth of 1 to 2 inches at all times.
- 5.4.2 All free-standing palms and shade trees shall have circular tree rings maintained uniformly at a distance of at least 18-inch radius (36-inch diameter) from the trunk, within which mulch shall be maintained.
- 5.4.3 Mulched areas shall begin 2 to 4 inches from trunks or stems and continue out to completely fill in shrub beds and tree rings. Mulch shall not be allowed to cover crowns of shrub plants or accumulate against the trunks of trees and palms.
- 5.5 WEED CONTROL
- 5.5.1 Weeds shall be removed by hand on an on-going basis throughout the year in all landscaped areas, including the removal of weeds growing in thatch on palm trunks, fallen palm fruits, and tree/palm seedlings ("volunteers") in hedges and shrub beds.
- 5.5.2 All weeds in driveways, sidewalks, fencelines, or other hardscape areas shall be removed by hand or sprayed with Round-Up (Glyphosate) herbicide, once each 1 to 2 months or more often if needed to keep them under control.
- 5.5.3 After adequate plant establishment, chemical pre- and post-emergent herbicides may be used on an as-needed basis in turf and shrub areas (see PEST CONTROL section).
- 5.5.4 All debris shall be collected daily and disposed of at authorized dumping or recycling sites.
6. SCOPE OF WORK - TREE AND PALM PRUNING
- 6.1 All shade trees and palms shall be pruned by a Certified Arborist following the standards set forth in the American National Standard for Tree Care Operations, ANSI A-300 (Part 1)-2001 Pruning; (11 West 42 Street, New York, N.Y. 10036).
- 6.2 Pruning practices including tree inspection, tools and equipment, and pruning cuts, shall be performed as outlined in the ANSI A-300 standards.
- 6.3 Hardwood trees shall be pruned on a regular cycle which shall be determined according to pruning objectives, tree species, tree age/size, tree condition, location, and usage. Trees shall be pruned at least one time each 2 years.
- 6.4 The pruning types to be implemented on hardwood trees shall be determined prior to each pruning cycle and shall consist of one or a combination of the following pruning types, as defined in the ANSI A-300 standards: crown cleaning, crown thinning, crown raising, and crown reduction.
- 6.5 Trees with crowns which spread over roadways shall be pruned by canopy raising and/or canopy reduction such that a 15-foot vertical clearance is maintained.
- 6.6 Trees with crowns which spread over sidewalks and other pedestrian areas shall be pruned by canopy raising and/or canopy reduction such that an 8-foot vertical clearance is maintained.
- 6.7 Trees with crowns which spread over parking areas shall be pruned by canopy raising and/or canopy reduction such that a 12-foot vertical clearance is maintained.
- 6.8 Trees adjacent to buildings, structures, fences, lightposts, signs, or other fixtures shall have their crowns reduced to provide clearance from those structures or fixtures.
- 6.9 Palms shall be pruned on a regular cycle, at least 2 times per year.
- 6.10 Palms shall be pruned such that all brown lower fronds and no more than 1 to 2 rows of live fronds are removed. Live healthy fronds which are initiated above the horizontal plane shall not be removed (maximum frond removal shall result in a "9 and 3" position, as it relates to the face of a clock). All inflorescences and fruits (including coconuts) shall be removed.
- 6.11 Palm frond petioles shall be severed as close to the trunk as possible without causing damage to trunk tissues. All loose frond bases ("boots" and "thatch") shall be removed. Those which do not readily abscise shall not be forced, torn, or shaven. All volunteer tree seedlings (ficus, bischofia, schefflera, etc.) shall be removed from the remaining "boots" or "thatch" by cutting or pulling.
- 6.12 There shall be no tree or palm pruning within 10 feet of an energized power line; utility line-clearing crews shall be contacted if this service is needed.
- 6.13 All debris shall be collected daily and disposed of at authorized dumping or recycling sites.

7. SCOPE OF WORK - FERTILIZATION

- 7.1 GENERAL PRACTICES
- 7.1.1 All fertilizers shall be applied in a professional, workmanlike manner in accordance with all state and local laws pertaining to the handling and usage of hazardous materials.
- 7.1.2 Fertilizers shall be provided on a regularly scheduled basis using the fertilizer types, rates, and frequencies specified herein. Monthly site inspections shall include evaluations of plant health and any subsequent needs for remedial fertilization.
- 7.2 FERTILIZER TYPES
- 7.2.1 The fertilizer to be used on all landscape material except for turfgrass, bromeliads, orchids, and other species sensitive to granular fertilizers, shall be a granular "Palm Special" 8-2-12 product, with at least 50% of the nitrogen and potassium in the slow-release form, preferably sulfur-coated. Fertilizer mix shall also contain micronutrients, specifically magnesium (kieserite, at least 3%), manganese sulfate (at least 1%), chelated iron (Trachelene, at least 1%), and trace amounts (less than 1%) of boron (boric acid), copper sulfate, and zinc sulfate.

- 7.2.2 Turfgrass fertilizer shall be in granular form and have a 3-1-2, 4-1-3 (i.e., 12-6-8 or 16-4-8) or similar ratio of N, P, and K, with at least 50% of the nitrogen in the insoluble or slow-release form. Fertilizer mix shall also contain iron (at least 0.5%) and other micronutrients such as magnesium, manganese, and zinc. A lower-nitrogen product can be used during the summer months so as not to substantially increase growth rates.
- 7.2.3 Fertilizer for bromeliads or other species sensitive to granular fertilizer shall be a slow-release resin-coated product containing an N, P, and K ratio of 1-1-1 (i.e., Osmocote or Nutricote), and/or soluble 1-1-1 (i.e., Peters 20-20-20).
- 7.2.4 Fertilizer for orchids shall be a soluble 1-1-1 product.
- 7.2.5 A micronutrient product which contains sulfur, manganese sulfate, chelated iron, zinc, boron, and molybdenum shall be used on all specimen palms and any other species susceptible to deficiencies of such. It shall also be used as a supplement when needed to correct deficiencies.
- 7.3 FERTILIZER RATES
- 7.3.1 Turfgrass, hedges, shrubs, and ground covers shall be fertilized at the rate of 1.0 to 1.5 pounds of actual nitrogen per 1,000 square feet of area per application.
- 7.3.2 All free-standing palms and hardwood trees shall receive 1 to 8 pounds of the product recommended above, as per individual tree size (1 to 3 pounds each for small trees/palms; 3 to 5 pounds for each of the mid-size trees/palms; 5 to 8 pounds for large trees/palms).
- 7.3.3 Trees and palms with reduced rooting space in small planters or beds, or those with extensive ground cover beneath, shall have overall fertilizer rates proportionately reduced by 1/3 to 1/2 and frequencies increased to 6 times per year (1 time each 2 months) to prevent phytotoxicity.
- 7.3.4 Resin-coated and soluble fertilizers shall be applied at label rates as specified for the intended plant species.
- 7.3.5 Micronutrient products shall be mixed at label rates.
- 7.4 FERTILIZER FREQUENCY
- 7.4.1 All granular fertilizers for turfgrass, trees, palms, and woody shrubs shall be applied on a quarterly basis in February, May, August, and November.
- 7.4.2 Trees and palms with reduced rooting space in small planters or beds, or those with extensive ground cover beneath, shall have overall fertilizer rates proportionately reduced by 1/3 to 1/2 and frequencies increased to 6 times per year (1 time each 2 months) to prevent phytotoxicity.
- 7.4.3 All resin-coated fertilizers shall be applied on a quarterly basis or as per label rates.
- 7.4.4 Soluble 20-20-20 used on orchids shall be applied 1 time per month during the winter months and 2 times per month during the summer months. Bloom spikes and flowers shall not be sprayed with fertilizer products.
- 7.4.5 All micronutrient products shall be applied quarterly or as directed for remedial treatments.
- 7.5 APPLICATION METHODS
- 7.5.1 Fertilizer for all plant material except turfgrass shall be broadcast by hand on the ground or in the planters underneath plant canopies prior to mulch applications. Fertilizer application shall begin at 2 to 6 inches away from trunks/crowns of trees and shrubs and continue out to the dripline of the plants. Granular fertilizer shall not be allowed to accumulate on any plant leaves, in plant crowns, or at leaf bases. Special care shall be taken to avoid getting fertilizer into the crowns of clustering plants such as mondo grass and flax lilies.
- 7.5.2 Turfgrass fertilizer shall be applied with a rotary spreader after dew and irrigation water has dried from the leaves.
- 7.5.3 Fertilizers shall not be applied to any drought-stressed plants or wet foliage.
- 7.6.4 Slow-release fertilizer for bromeliads or other species sensitive to granular fertilizer shall be broadcast on the soil surface beneath the plants. Soluble fertilizer shall be sprayed and/or soil drenched.
- 7.5.5 Some overlap in fertilizer application can be expected in those areas which contain combinations of turf, shrubs, trees, and palms. Contractor shall be responsible for exercising judgment in reducing absolute rates of application where significant overlap occurs.
- 7.5.6 Spillage, runoff, and spray drift of fertilizers into parking areas, courtyards, driveways, sidewalks, etc., shall be avoided and all excess fertilizer shall be swept, blown, vacuumed, or hosed off of parking areas, driveways, sidewalks, etc., immediately after application, so as to avoid staining.
- 7.5.7 Irrigation shall be set to run through one complete cycle immediately after granular fertilizer application.
- 7.6 SPECIAL TREATMENT PROGRAMS
- 7.6.1 During the first year following landscape installation, all relocated trees and palms shall be fertilized at 1/3 standard rates and increased frequency of once each 2 months. They shall also receive micronutrient root drenches once per month for the first three months, once each two months thereafter, or more often if directed by landscape architect or horticulturist.

8. SCOPE OF WORK - PEST/DISEASE CONTROL

- 8.1 GENERAL PRACTICES
- 8.1.1 Pest control shall be implemented on an as-needed basis only as part of an Integrated Pest Management (IPM) program. Contractor shall inspect all areas of the landscape at least 1 time per month for early detection of actual or potential pest and/or disease infestations which may require treatment.
- 8.01.02 Contractor shall accurately identify any pest, disease, or weed species and determine whether or not chemical treatment is required. If so, it shall be treated with the most appropriate selective pesticide following all pesticide label directions. All pesticides are to be applied in a professional manner in accordance with all state and local laws pertaining to the handling and usage of hazardous materials. Owner shall be notified of any and all chemical applications so that children and pets may be kept out of the treated areas until safe for re-entry.
- 8.02 TURFGRASS PESTS/DISEASES
- 8.2.1 Insecticide treatments for turfgrass shall be provided on an as-needed basis. Product selection, application rates, and frequencies shall be determined after diagnosis, and repeat applications shall be made at the recommended rates and frequencies, as needed to obtain complete pest control.
- 8.2.2 Fireant control in turfgrass and shrub areas may be necessary as often as 1 time per month, using fireant baits, broadcast in the vicinity of, but not on top of, each nest.
- 8.2.3 Fungicide treatments for turfgrass shall be provided on an as-needed basis. Product selection, application rates, and frequencies shall be determined after diagnosis, and repeat applications shall be made at the recommended rates and frequencies, as needed to obtain complete disease control.
- 8.2.4 Pre-emergent weed treatment in St. Augustine grass areas shall be provided in the spring and fall months using approved herbicide products. Post-emergent weed treatments shall be provided as needed. Product selection shall depend upon weed species present and weather conditions.
- 8.2.5 Pre- and post-emergent turf weed control treatments for grasses and sedges shall be provided on an as-needed basis, using the most appropriate products, as directed on product labels.
- 8.3 TREE, PALM, AND SHRUB PESTS/DISEASES
- 8.3.1 Common pests of shrubs, such as insects and mites, shall be properly identified and treated with the most appropriate pesticide following all label directions. Follow-up treatments shall be provided as needed to completely control the infestations.
- 8.3.2 Snail bait shall be broadcast in shrub beds or sprayed on the foliage of susceptible plants (mostly foliage plants) on an as-needed basis.
- 8.3.3 Fungicide treatments shall be provided on an as-needed basis. Product selection, application rates, and frequencies must be determined after diagnosis.
- 8.3.4 Pre-emergent weed treatment in established shrub beds using Ronstar (Oxadiazon) or Surflan (Oryzalin) or a similar material may be used 1 to 2 times per year during the summer and fall months to control heavy seed-germinated weed infestations. These products shall be applied according to label directions immediately following mechanical weed control.
- 8.3.5 Round-Up (Glyphosate) herbicide may be used for post-emergent weed control in shrub beds, driveways, sidewalks, or other hardscape areas.
- 9.0 CLEAN-UP AND DISPOSAL
- 9.1 All debris shall be collected daily and disposed of at authorized dumping or recycling sites.
- 9.2 No tools or equipment shall be left on the site overnight.



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SHEET TITLE  
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NOTES

DATE  
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DESIGN

DEENA BELL

DRAWN

JOSE D. FONSECA

SCALE

REVISIONS

SEAL

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SHEET NO.