

### PROPERTY: ZONING: RPD (RESIDENTIAL PLANNED UNIT DEVELOPMENT) FLU: MF (MULTI-FAMILY)

### SITE DEVELOPMENT LANDSCAPE CALCULATIONS: **1. TREE PLANTING REQUIREMENTS:**

PER SECTION 5.2.13.A, 1 CANOPY TREE PER 1,000 SQ. FT. OF GROSS LAND AREA = TOTAL SITE AREA: 866,267 S.F. 1 TREE PER 1,000 SQ. FT. OF TOTAL SITE AREA = 867 TREES REQUIRED **PROVIDED EXISTING PHASE 1: 122 VEHICLE USE TREES 101 LANDSCAPE ADJACENT TO ROAD TREES 363 GENERAL TREES** 

## PROVIDED PROPOSED PHASE 2 (281 REQUIRED - 281 PROVIDED):

25 TREES (3:1) = 75 52 TREES (2:1) = 104 49 TREES (1:1) = 49 46 TREES (1:2) = 23 91 PALMS (1:3) = 30

MIN. 5 SPECIES TO BE UTILIZED = 13 SPECIES PROVIDED

### 2. FOUNDATION LANDSCAPE:

PER SECTION 5.2.13.C.1, 10% OF GROSS GROUND LEVEL FLOOR AREA = TYPICAL RESIDENTIAL BUILDING (24,067 S.F.) 36 SHRUBS REQUIRED @ 3' O.C. PROVIDED

CLUBHOUSE BUILDING (3,466 S.F.) 36 SHRUBS REQUIRED @ 3' O.C. PROVIDED

MAINTENANCE BUILDING (682 S.F.) 36 SHRUBS REQUIRED @ 3' O.C. PROVIDED

### 3. LANDSCAPE ADJACENT TO ROADS:

N/A. EXISTING BUFFER EXISTS. PER ORDINANCE 31-21 ACCENT TREES SHALL BE PLACED BETWEEN CANOPY TREES THAT ARE SPACED 30' APART.

### 4. OFF-STREET PARKING AND VEHICULAR USE AREAS:

PER SECTION 5.2.13.C.3.=

10% OF THE TOTAL UNCOVERED SURFACE PARKING AND VEHICULAR USE AREAS: 100,368 S.F. X 10% 1 CANOPY TREE PER 150 S.F. OF PLANTING = 10,037 S.F. / 150

= 10,037 S.F. REQUIRED = 67 CANOPY TREES REQUIRED

COCONUT PALM (3)

#### = +10,037 S.F LANDSCAPING = 67 CANOPY TREES

= 2,407 S.F. LANDSCAPE REQUIRED

= 347 S.F. LANDSCAPE REQUIRED

= 68 S.F. LANDSCAPE REQUIRED

+268 SHRUBS & GROUNDCOVER PROVIDED

+39 SHRUBS & GROUNDCOVER PROVIDED

+8 SHRUBS & GROUNDCOVER PROVIDED

= 268 SHRUBS REQUIRED

= +2,407 S.F. LANDSCAPE

= 39 SHRUBS REQUIRED = +347 S.F. LANDSCAPE

= 8 SHRUBS REQUIRED

= +68 S.F. LANDSCAPE

5. BUFFER YARDS:

PROVIDED

N/A ALL BUFFERS AND LANDSCAPING ADJACENT TO ROAD HAVE BEEN INSTALLED DURING PHASE 1

### EXISTING PLANT LEGEND



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### CITY OF CAPE CORAL SITE DEVELOPMENT LANDSCAPE NOTES:

- 1. QUALITY REQUIREMENTS PLANT MATERIALS USED TO MEET THE REQUIREMENTS OF THE LDC MUST MEET THE STANDARDS OF FLORIDA NO. #1 OR BETTER AS SET OUT IN GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II, DEPARTMENT OF AGRICULTURE, STATE OF FLORIDA (AS AMENDED).
- 2. CANOPY TREES OR PALMS THAT ARE NOT LISTED SPECIFICALLY LISTED WITHIN THE CITY OF CAPE CORAL ORDINANCE SECTION 5.2.7 A TABLE 1, SHALL NOT BE PLANTED WITHIN TWENTY (20) FEET OF EXISTING OVERHEAD TRANSMISSION OR DISTRIBUTION LINE WITHOUT THE PRIOR WRITTEN CONSENT OF THE DEPARTMENT OF COMMUNITY DEVELOPMENT DIRECTOR.
- NATIVE VARIETIES AT LEAST 50 PERCENT OF THE TREES AND 30 PERCENT OF SHRUBS AND GROUNDCOVERS, EXCLUDING TURF GRASS USED TO FULFILL THE CITY OF CAPE CORAL SITE DEVELOPMENT LANDSCAPE REQUIREMENTS MUST BE NATIVE FLORIDA SPECIES.
- 4. TREES AND PALMS CODE REQUIRED CANOPY TREES MUST BE A MINIMUM OF TEN (10) FEET IN HEIGHT, HAVE A TWO-INCH CALIPER (AT 12 INCHES ABOVE THE GROUND). PALMS MUST HAVE A MINIMUM OF SIXTEEN (16) FEET OVERALL, UNLESS LOCATED WITHIN TEN FEET OF A WALKWAY, IN WHICH CASE THEY SHALL HAVE A MINIMUM OF TEN (10) FEET OF CLEAR TRUNK. ACCENT TREES MUST BE A MINIMUM OF EIGHT (8) FEET, HAVE A  $1\frac{1}{2}$ " CALIPER (AT 6" ABOVE THE GROUND). CANOPY TREES SHALL NOT BE PLANTED CLOSER THAN 20' APART.SHRUBS AND
- 5. HEDGES SHRUBS MUST BE A MINIMUM OF TWENTY-FOUR (24) INCHES IN HEIGHT AND BE IN AT LEAST A SEVEN (7) GALLON CONTAINER SIZE. ORNAMENTAL GRASSES MAY BE USED IN LIEU OF THIRTY (30) PERCENT OF SHRUBS REQUIRED. SAW PALMETTOS AND COONTIES MAY BE USED AS SHRUBS PROVIDED THEY ARE TWELVE (12) INCHES IN HEIGHT AT TIME OF PLANTING. SHRUBS REQUIRED FOR BUFFER YARD PLANTINGS MUST BE A MINIMUM OF THIRTY-TWO (32) INCHES IN
- 6. MULCH REQUIREMENTS A TWO-INCH MINIMUM LAYER, AFTER WATERING-IN, OF MULCH OR OTHER RECYCLED MATERIALS MUST BE PLACED AND MAINTAINED AROUND ALL NEWLY INSTALLED TREES, SHRUBS AND GROUNDCOVER PLANTINGS. EACH TREE MUST HAVE A RING OF MULCH NO LESS THAN THIRTY-SIX (36) INCHES BEYOND ITS TRUNK IN ALL DIRECTIONS. THE MULCH SHALL BE KEPT AWAY FROM THE TRUNKS AND STEMS OF PLANTS SO AS TO AVOID CONDITIONS THAT MAY BE CONDUCIVE TO COLLAR ROT, BASAL CANKER, OR OTHER FUNGI.THE USE OF CYPRESS MULCH IS STRONGLY DISCOURAGED.
- 7. CANOPY TREES SHALL NOT BE PLANTED WITHIN SEVEN (7) FEET OF ANY ROADWAY, SIDEWALK OR PUBLIC UTILITY UNLESS AN ACCEPTABLE ROOT BARRIER MATERIAL IS INSTALLED BETWEEN THE TREE AND THE ROADWAY, SIDEWALK, OR PUBLIC UTILITY. WHERE A ROOT BARRIER IS REQUIRED IT SHALL BE INSTALLED FOR A MINIMUM DISTANCE OF TWENTY (20) LINEAR FEET, A MINIMUM DEPTH OF SIXTEEN (16) INCHES AND MINIMUM THICKNESS OF 0.024".
- 8. GUYING AND STAKING WHERE TREES ARE LARGER THAN EIGHT (8) FEET, GUYS AND STAYS ARE TO BE PROVIDED AND INSTALLED AS SHOWN IN THE ATTACHED TREE STAKING DETAILS. 9. LANDSCAPE IN EASEMENTS - ANY TREES AND PALMS PLANTED WILL NOT BE COUNTED TOWARDS
- LANDSCAPE REQUIREMENTS WITHOUT APPROVAL OF THE CITY OF CAPE CORAL. 10. OVERHEAD AND. UNDERGROUND UTILITIES - ALL LANDSCAPE MATERIAL CONFLICTS WITH OVERHEAD AND/OR UNDERGROUND UTILITIES WILL BE RESOLVED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE.
- 11. EXISTING TREE COUNTS ARE ESTIMATED. VERIFICATION OF QUANTITIES WILL BE DETERMINED AT TIME OF DETAILED PERMITTING. 12. SOME EXISTING TREES MAY BE RELOCATED AND/OR REMOVED IN FUTURE PHASES. HOWEVER,
- TOTAL REQUIRED QUANTITIES WILL BE PROVIDED. 13. ALL INVASIVE EXOTIC PLANTS ARE REQUIRED TO BE REMOVED FROM THE DEVELOPMENT SITE.
- 14. ALL LANDSCAPED AREAS ARE TO HAVE AN AUTOMATIC IRRIGATION SYSTEM. THE REQUIRED IRRIGATION SHALL ALSO BE DESIGNED TO AVOID DAMAGE TO ANY EXISTING NATIVE VEGETATION FROM OVER WATERING OR FROM PHYSICAL CONFLICTS WITH PLANT ROOTS.

### **ROOT BARRIER NOTES:**

CANOPY TREES SHALL NOT BE PLANTED WITHIN SEVEN FEET OF ANY ROADWAY, SIDEWALK OR PUBLIC UTILITY UNLESS AN ACCEPTABLE ROOT BARRIER MATERIAL IS INSTALLED BETWEEN THE TREE AND THE ROADWAY, SIDEWALK, OR PUBLIC UTILITY. ACCEPTABLE ROOT BARRIER MATERIAL SHALL CONSIST OF A MIN. 16 INCH DEPTH MANUFACTURED ROOT BARRIER MATERIAL, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. WHERE A ROOT BARRIER IS REQUIRED, IT SHALL BE INSTALLED FOR A MINIMUM DISTANCE OF 20 LINEAR FEET. All PARKING LOT ISLANDS PLANTED WITH TREES SHALL RECEIVE CONTINUOUS PERIMETER ROOT BARRIER.

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HEIGHT AND BE IN A LEAST A SEVEN (7) GALLON CONTAINER SIZE AT TIME OF PLANTING.

| .=                   | MASIEF   | N F LAIN  |   |  | L   |   |      |   |
|----------------------|--|---|---|--|---|---|------|---|
|                      | SYM  | QTY   | NATIVE  | TYPE   | BOTANICAL NAME  | COMMON NAME   |      | SPECI   |
| TREES / PALMS        | AR   | 23  | Y   | С  | ACER RUBRUM   | FLORIDA FLAME RED MAPLE   |      | MIN. 4" CAL   |
|                      | BS   | 25  | Y   | C  | BURSERA SIMARUBA  | GUMBO LIMBO   |      | MIN. 6" CAL   |
|                      | CE   | 49  | Y   | C  | CONOCARPUS ERECTUS  | GREEN BUTTONWOOD  |      | MIN. 10' HT   |
|                      | CS   | 46  | Y   | A  | CORDIA SEBESTENA  | ORANGE GEIGER   |      | MIN. 8' HT.,  |
|                      | TD   | 29  | Y   | C  | TAXODIUM DISTICHUM  | BALD CYPRESS  |      | MIN. 4" CAL   |
|                      | CN   | 9   | N   | Р  | COCOS NUCIFERA  | COCONUT PALM  |      | MIN. 10'-15   |
|                      | VA   | 26  | N   | Р  | VEITCHIA MONTGOMERYANA  | MONTGOMERY PALM   |      | MIN. 10' CT.  |
|                      | RE   | 14  | Y   | Р  | ROYSTONEA ELATA   | ROYAL PALM  |      | MIN 10' CT I  |
|                      | SP   | 42  | Y   | Р  | SABAL PALMETTO  | SABAL PALM  |      | MIN. 10'-15   |
|                      | CHR  | 27  | Y   | LR   | CHRYSOBALANUS ICACO   | RED TIP COCOPLUM  |      | MIN. 7 GAL,   |
|                      | СПВЭ   |   |   |  |   |   |      |   |
|                      | CHINZ  | 65  | Y   | ГЦ   | CHRTSOBALANOS ICACO   |   |      | IVIIIN. J UAL,  |
| ISC.                 | HAM  | 65<br>141   | Y<br>Y  | FL   | HAMELIA PATENS  | FIREBUSH  |      | MIN. 3 GAL,   |
| / MISC.              | HAM<br>MUH   | 65<br>141<br>222  | Y<br>Y<br>Y                                     | FL<br>FL<br>FL   | HAMELIA PATENS<br>MUHLENBERGIA CAPILLARIS   | FIREBUSH<br>MUHLY GRASS   |      | MIN. 3 GAL,<br>3 GAL., FULI   |
| OD / MISC.           | HAM<br>MUH<br>ACW                                      | 65<br>141<br>222<br>86  | Y<br>Y<br>Y<br>N                                | FL<br>FL<br>FL   | HAMELIA PATENS<br>MUHLENBERGIA CAPILLARIS<br>ACALYPHA WILKESIANA  | FIREBUSH<br>MUHLY GRASS<br>COPPERLEAF   |      | MIN. 3 GAL,<br>MIN. 3 GAL,<br>3 GAL., FULI<br>MIN. 3 GAL,   |
| / SOD / MISC.        | HAM<br>MUH<br>ACW<br>CON                               | 65<br>141<br>222<br>86<br>82                                  | Y<br>Y<br>Y<br>N<br>Y                           | FL<br>FL<br>FL<br>FL                                   | HAMELIA PATENS<br>MUHLENBERGIA CAPILLARIS<br>ACALYPHA WILKESIANA<br>CONOCARPUS ERECTUS                                | FIREBUSH<br>MUHLY GRASS<br>COPPERLEAF<br>GREEN BUTTONWOOD   |      | MIN. 3 GAL,<br>3 GAL., FULI<br>MIN. 3 GAL,<br>MIN. 3 GAL,   |
| UBS / SOD / MISC.    | HAM<br>MUH<br>ACW<br>CON<br>CLU                        | 65<br>141<br>222<br>86<br>82<br>80                            | Y<br>Y<br>N<br>Y<br>N                           | FL<br>FL<br>FL<br>FL<br>FL                             | HAMELIA PATENS<br>MUHLENBERGIA CAPILLARIS<br>ACALYPHA WILKESIANA<br>CONOCARPUS ERECTUS<br>CLUSIA GUTTIFERA            | FIREBUSH<br>MUHLY GRASS<br>COPPERLEAF<br>GREEN BUTTONWOOD<br>CLUSIA                                     |      | MIN. 3 GAL,<br>3 GAL., FULL<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 3 GAL,  |
| SHRUBS / SOD / MISC. | HAM<br>MUH<br>ACW<br>CON<br>CLU<br>ZAM                 | 65<br>141<br>222<br>86<br>82<br>80<br>260                     | Y<br>Y<br>N<br>Y<br>N<br>Y                      | FL<br>FL<br>FL<br>FL<br>FL<br>FL                       | HAMELIA PATENS<br>MUHLENBERGIA CAPILLARIS<br>ACALYPHA WILKESIANA<br>CONOCARPUS ERECTUS<br>CLUSIA GUTTIFERA<br>COONTIE | RED TIP COCOPLOM   FIREBUSH   MUHLY GRASS   COPPERLEAF   GREEN BUTTONWOOD   CLUSIA   ZAMIA INTEGRIFOLIA |      | MIN. 3 GAL,<br>3 GAL., FULI<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 12" HT                         |
| SHRUBS / SOD / MISC. | HAM<br>MUH<br>ACW<br>CON<br>CLU<br>ZAM<br>MULCH        | 65<br>141<br>222<br>86<br>82<br>80<br>260<br>T.B.D.           | Y<br>Y<br>N<br>Y<br>N<br>Y<br>FLORIA            | FL<br>FL<br>FL<br>FL<br>FL<br>MULCH 'N                 | HAMELIA PATENS<br>MUHLENBERGIA CAPILLARIS<br>ACALYPHA WILKESIANA<br>CONOCARPUS ERECTUS<br>CLUSIA GUTTIFERA<br>COONTIE | RED TIP COCOPLOM   FIREBUSH   MUHLY GRASS   COPPERLEAF   GREEN BUTTONWOOD   CLUSIA   ZAMIA INTEGRIFOLIA | 3 CF | MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 12" HT<br>BAGS                  |
| SHRUBS / SOD / MISC. | HAM<br>MUH<br>ACW<br>CON<br>CLU<br>ZAM<br>MULCH<br>SOD | 65<br>141<br>222<br>86<br>82<br>80<br>260<br>T.B.D.<br>T.B.D. | Y<br>Y<br>N<br>Y<br>N<br>Y<br>FLORIA<br>CLIENTS | FL<br>FL<br>FL<br>FL<br>FL<br>FL<br>MULCH 'N<br>CHOICE | HAMELIA PATENS<br>MUHLENBERGIA CAPILLARIS<br>ACALYPHA WILKESIANA<br>CONOCARPUS ERECTUS<br>CLUSIA GUTTIFERA<br>COONTIE | RED TIP COCOPLOM   FIREBUSH   MUHLY GRASS   COPPERLEAF   GREEN BUTTONWOOD   CLUSIA   ZAMIA INTEGRIFOLIA | 3 CF | MIN. 3 GAL,<br>3 GAL., FULI<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 3 GAL,<br>MIN. 12" HT<br>BAGS<br>IT JOINTS, N |

C = CANOPY A = ACCENT P = PALM

50% NATIVE TREES REQUIRED - 86% NATIVE TREES PROVIDED

30% NATIVE SHRUBS REQUIRED - 82% NATIVE SHRUBS PROVIDED (ONLY COUNTING BUFFER AND FOUNDATION SHRUBS. VEHICULAR USE AREA DOES NOT REQUIRE SPECIFIC SHRUB COUNT. VEHICULAR USE AREA MAY BE PLANTED WITH SOD, SHRUBS AND/OR GROUNDCOVER

### **INVASIVE REMOVAL METHODS:**

THERE ARE TWO ACCEPTABLE METHODS OF INVASIVE EXOTIC REMOVAL. THESE METHODS ARE MECHANICAL AND CHEMICAL.

MECHANICAL CONTROL INCLUDES MOWING, HOEING, CULTIVATION AND HAND PULLING. THIS METHOD CAN BE COMPLETED THROUGH THE USE OF MACHINES AND HUMAN EFFORT. CONTRACTOR TO AVOID IMPACTS TO NATIVE VEGETATION PROPOSED TO REMAIN. CONTRACTOR TO FOLLOW ALL BMP PROCEDURES FOR MECHANICAL EXOTIC REMOVAL.

CHEMICAL CONTROL IS THE USE OF HERBICIDES TO TREAT AND PREVENT EMERGENT EXOTIC VEGETATION. CONTRACTOR TO FOLLOW ALL BMP PROCEDURES AND MANUFACTURE RECOMMENDED APPLICATION FOR CHEMICAL REMOVAL AND CONTROL OF INVASIVE PLANTS.

| ATIONS              |  |  |  |  |  |  |
|---------------------|--|--|--|--|--|--|
| ୭ 12", FULL         |  |  |  |  |  |  |
| ຼື 12", FULL        |  |  |  |  |  |  |
| " CAL. @ 12", FULL  |  |  |  |  |  |  |
| 1/2" CAL @ 6"       |  |  |  |  |  |  |
| @ 12" FULL          |  |  |  |  |  |  |
| T. STG HTS          |  |  |  |  |  |  |
| 1IN.                |  |  |  |  |  |  |
| N.                  |  |  |  |  |  |  |
| T MIN.              |  |  |  |  |  |  |
| 2" HT, FULL         |  |  |  |  |  |  |
| 3" HT <i>,</i> FULL |  |  |  |  |  |  |
| 3" HT, FULL         |  |  |  |  |  |  |
| ORM                 |  |  |  |  |  |  |
| 3" HT, FULL         |  |  |  |  |  |  |
| 3" HT, FULL         |  |  |  |  |  |  |
| 8" HT, FULL         |  |  |  |  |  |  |
| ULL                 |  |  |  |  |  |  |
|                     |  |  |  |  |  |  |
| WEEDS               |  |  |  |  |  |  |
|                     |  |  |  |  |  |  |



# **SDP PLAN SET**

**CERTIFICATION BY LANDSCAPE ARCHITECT** THIS DOCUMENT IS SIGNED AND SEALED TO SECURE THE DATA IN THE PERMIT APPLICATION AND ANY REFERENCED SHEETS THAT WERE SUBMITTED ELECTRONICALLY AS DESCRIBED IN FLORIDA ADMINISTRATIVE CODE (PROCEDURES FOR SIGNING AND SEALING ELECTRONICALLY TRANSMITTED PLANS, SPECIFICATIONS, REPORTS OR OTHER DOCUMENTS) FOR THE APPLICABLE REGISTERED PROFESSIONAL REGULATORY BOARD. SHEETS INCLUDE: LA-01 - LA-04

| THE SEAL APPEARING ON THIS DOCUMENT IS AUTHORIZED BY: |                        |  |  |  |
|---|------------------------|--|--|--|
| REGISTERED PROFESSIONAL:                              | MATTHEW D. HORTON, RLA |  |  |  |
| LICENSE:  | LIC. #0001749          |  |  |  |
| DATE:   | 02-23-22               |  |  |  |
| REGISTERED PROFESSIONAL COMPANY:                      | ENSITE, INC.           |  |  |  |
|   |                        |  |  |  |





SHEET NUMBER



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LANDSCAPE PLANS

SHEET TITLE





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LA-03 SHEET NUMBER



#### LANDSCAPE SPECIFICATIONS PART I GENERAL 1.01 WORK INCLUDED

A. The work included in this Section consists of furnishing, planting, watering, fertilizing and mulching all plants and lawn areas of species, size and quality in the locations indicated on the drawings or as directed by the Landscape Architect. 1.02 DELIVERY, STORAGE AND HANDLING A. Transportation and Inspection: Plant transportation shall

comply with all federal and state 1.03 GUARANTEE A. The contractor shall guarantee all planting work and irrigation equipment for a period of 12 months and all sod for 6 months after the date of final acceptance. During this period, the Contractor shall continue the observation of plants and guaranteed work. The Contractor shall submit monthly observation reports to the Owner with a copy to the Landscape Architect during the guarantee period. The purpose of these reports is to state any maintenance deficiencies observed. It is the

Contractor's responsibility to report these to protect his guarantee. Failure to submit reports eliminates any claims that the guarantee is not valid due to improper maintenance by the Owner. B. Replacement of Defective Plants: Any dead plants or plants showing indication of probable non-survival or lack of health and vigor, or which do not exhibit the characteristics to meet specifications, shall be replaced within two weeks of notice from Owner or Landscape Architect. The replacement plants shall be furnished/installed at no additional cost to the Owner and shall be guaranteed for 12 months. All replacements shall meet original specifications. C. The Contractor shall notify the Owner and Landscape Architect ten days prior to the end of the guarantee period and such guarantee shall be extended until notification is received. D. At the end of the guarantee period, all plants that are dead or in unsatisfactory growth shall be replaced within two weeks.

#### 1.04 JOB CONDITIONS A. Protection:

The Contractor shall protect all materials and work against injury from any causes and shall provide and maintain any necessary safeguards for the protection of the public. Contractor shall be held responsible for any damage or injury to person or property which may occur as a result of his negligence in the prosecution of the work.

#### **B.** Existing Conditions:

1. The Contractor shall exercise care in digging and other work so as not to damage existing work including underground pipes and cables, and the pipes and hydrants of watering systems. Should such overhead or underground obstructions be encountered and interfere with planting, the Landscape Architect shall be consulted to recommend adjustment to the plant locations to clear such obstruction. The Contractor shall be responsible for the immediate repair of any damage caused by his work. (See Section 3.01) 2. Should any objectionable materials such as old concrete, bricks or other debris be encountered during planting operations, they shall be removed from the site and disposed of by the Contractor.

#### 1.05 QUALITY CONTROL

A. The Landscape Architect shall have the right, at any stage of the operations, to reject any and all work and materials which, in his/her opinion, do not meet the requirements of these specifications. B. All planting shall be performed by personnel familiar with planting procedure and under the supervision of a qualified planting foreman.

C. All work shall comply with applicable codes and regulations.

D. The work shall be coordinated with other trades to prevent conflicts.

1.06 OUANTITIES I n the event of a conflict between quantities shown on the plant list and plans, the plans shall control.

#### PART 2 - PRODUCTS 2.01 MATERIALS

1. Nomenclature: All trees, shrubs and plants shall be true to name as established by the American Joint Committee on Horticultural Nomenclature publication "Standard Plant Names". 2. Grade Standards and Quality: All plants shall be nursery grown 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", Parts 1 and 2 including revisions. a. The minimum grade for all trees and shrubs shall be Florida No. 1 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

3. Measurements: The minimum acceptable size of all plants, measured after pruning, with branches in normal positions, shall conform to the specified sizes as shown on the plans. Sizes specified are minimum standards. Plants shall be equal to or larger than all categories (height, spread, caliper) of size specification. Substantial deviations from these measurements must be approved by the Landscape Architect. Caliper of tree trunks shall be measured above finish grade.

4. Plant Protection: Plants shall be protected upon arrival to the site by being thoroughly watered, kept moist and properly maintained until planted. B. Plant Materials:

With reference to method of cultivation, root system status, etc., plants for landscaping shall be classified under the following designations:

1. Balled and Burlapped: Plants so classified shall be dug with firm natural root balls of earth, of sufficient diameter and depth to include most of the fibrous roots. The root ball of these plants shall be properly wrapped with burlap sack material and remain protected and wet until they are planted. The plant shall be handled only by the earth ball and not by the plant itself. All balled and burlapped plants with cannot be planted immediately upon delivery shall be set on the ground and shall be well protected with soil, wet moss, or other acceptable material. The plants shall be set with the burlap cover intact and with the burlap showing, until inspection. At final inspection the burlap may be cut away to ground level and then completely covered with soil.

2. Container Grown Plants: a. Container grown plants shall have been grown in a container large enough and for sufficient time for the root system to have developed well to hold its soil together firm and whole. No plants shall be loose in the container. Plants, which have become pot bound or for which the top system is too large for the size of the container will not be acceptable. b. All containers shall be cut and opened fully in a manner such as will not damage the root system. Container grown plants shall not be removed from the container until immediately before planting, when all due care shall be taken to prevent damage to the root system.

3. Bare Root Plants: No bare root plants shall be used.

### B. Planting Materials:

1. Topsoil: a. Topsoil shall be a friable loam, typical of cultivated topsoils locally, containing at least 5 percent of decayed organic matter (humus). It shall be taken from a well drained, arable site. It shall be reasonably free from weeds, subsoil, stones, clods, sticks, roots or other objectionable extraneous matter or debris. It shall not contain toxic materials and shall have an acidity range of pH 6.0 to 7.0. Topsoil from nut grass infested areas will not be acceptable. b. Any required soil testing shall be the Contractor's responsibility. c. Soil Preparation: Prior to placing mix and backfill, or commencing with planting, rototill any or all areas that have been previously compacted over 90 percent for other construction purposes.

2. Fertilizer: Fertilizer shall be a complete fertilizer, of which part of the elements shall be derived from organic sources. It shall contain the following minimum percentages by weight: a. Nitrogen N - 6 percent b. Phosphorous P - 6 percent c. Potassium K - 6 percent d. (Or other analysis as may be approved by the Landscape Architect). e. In addition, the recommended micronutrients must be present in the guaranteed analysis.

3. Planting Mixture: Planting mixture shall consist of approximately four parts of acceptable natural topsoil and one part pulverized peat or sterilized manure, and to each cubic yard shall be added and incorporated by thoroughly mixing, four pounds of commercial fertilizer having an analysis of 6 - 6 - 6. a. Acceptable artificially prepared planting compost material, approved by the Landscape Architect, will be permitted in lieu of the pulverized peat or sterilized manure, in the prepared topsoil mixture for use as backfill material.

4. Mulch: Mulch shall be shredded, clean, bright and free of weeds, moss, sticks and other debris. The use of cypress mulch is strongly discouraged. Pine straw mulch shall be used in all native revegetated areas.

5. Water: Suitable water for the irrigation of the new plantings during the progress of construction shall be provided and paid for by the Contractor, who shall also furnish adequate watering equipment. 6. Stakes and Ties: Stakes and tree ties shall be provided in accordance with the requirements of Paragraph 3.02 B hereinafter.

#### END OF SECTION 2

PART 3 -- EXECUTION 3.01

#### PREPARATION A. Underground Obstructions

1. Upon request from the Contractor, the Owner shall provide plans showing locations of underground utilities and/or will assist the Contractor in securing underground locations from other public utility companies, such as telephone, electricity, etc.

2. In the event that rock, underground construction work, utility lines or obstructions out of the ordinary are encountered in any plant pit excavation; alternative locations shall be selected by the Landscape Architect. Where locations cannot be changed and the obstructions may be removed, the obstructions shall be removed to a depth of not less than 3 feet below grade and no less than 6 inches below bottom of balls or roots when plant is properly set at the required grade.

B. Excavation of Planting Beds and/or Plant Holes: 1. Where excavation encounters materials which are unsuitable for plant growth, all of said unsuitable material shall be removed and replaced with topsoil, meeting the requirements of paragraph 2.01 - C herein.

2. Where excavation encounters materials, which are unsuitable for plant growth, the plant hole excavations shall be roughly cylindrical in shape, with the sides approximately vertical. Plants shall be centered in the hole, with the trunk location as shown in the Drawings. Bottoms of the holes shall be loosened at least 6 inches deeper than the required depth of excavation. C. Protections of Existing Trees:

The Contractor shall protect existing trees from damage. Where damage does occur, the Contractor shall remove the damaged tree and replace it in kind and size in accordance with the instructions of the Landscape Architect and the appropriate specifications, all at no additional cost to the Owner. D. Grades: It shall be the responsibility of the Contractor to finish (fine) grade all landscape areas

eliminating all surface irregularities, depressions, sticks, stones and other debris to the satisfaction of Owner or his designee. After the grade has been established and compacted to the required depth, no sod shall be laid until the grade has been approved. 3.02 PLANTING A. Setting of Plants

1. When lowered into the hole, the plant shall rest on a prepared hole bottom such that the roots are level with or slightly above, the level of their previous growth and so oriented such as to present the best appearance. The Contractor, when setting plants in holes, shall make allowances for any anticipated settling of the plants.

2. The backfill shall be made with prepared topsoil as specified hereinbefore and shall be firmly rodded and watered in, so that no air pockets remain. The quantity of waster applied immediately upon planting shall be sufficient to thoroughly moisten all of the backfilled earth. Plants shall be kept in a moistened condition for the duration of the planting period. B. Staking and Guying:

It is the responsibility of the Contractor to maintain all plants in a plumb, upright position until the end of the guarantee period. Staking shall be the option of the Contractor, although all damaged plants resulting from the lack of proper staking and guying shall be replaced by the Contractor at no expense to the Owner. All tree guy wires shall be flagged with yellow safety ribbon. C. Pruning:

1. All broken or damaged roots shall be cut off 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. Fine pruning for tree shape and appearance shall be done only under the direction of the Landscape Architect or Certified Arborist. 2. At the end of the guarantee period at least 80 percent of the wood remaining shall be alive. D. Mulching: Within one week after the planting, mulch material shall be uniformly applied to a minimum loose thickness of three (3) 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. E. Watering: The Contractor shall continue watering for as long as is necessary to properly

temporary well water is used.

F. Pest Control: Prior to Final Acceptance, occurrence of scales, borers, foliage feeders, aphids, mites, leaf-spot and dieback, nematodes and canker-producing fungi, etc., shall be treated with appropriate pesticide.

G. All plants shall receive fertilizer during the planting period. 3.03 BERMING

A. Fill dirt shall be locally obtained material from naturally drained sources, free from dry organic debris, stones larger than one inch diameter and other materials harmful to successful drainage and plant growth. Soil shall be well mixed and contain no more than 25 percent muck. B. Grade areas indicated with uniform levels or slopes with no more than 4:1 maximum slope. Berms shall be gently rolling and parabolic and shall be smoothed with a box blade tractor prior to

planting. C. Contractor shall repair and re-establish grades in settled, eroded, rutted or otherwise damaged

3.04 SODDING/SEEDING

A. The sod shall be of firm, tough texture having a compact growth of grass with good root development. It shall contain no Bermuda grass, weeds or any other objectionable vegetation. The soil embedded in the sod shall be good clean earth, free from stones and debris. The sod shall be free from fungus, vermin and other diseases. Final turf shall have no area greater than 12 square inches of un-sodded area.

B. Solid sod shall be laid with closely abutting joints with a tamped or rolled even surface. It shall be the responsibility of the Contractor to bring the sod edge in a neat, clean manner to the edge of all paving and shrub areas. After the sod is laid, a top dressing of clean sand will be evenly applied over the entire surface and thoroughly washed in, if determined necessary. Peg sod on slopes as required to prevent slippage. Fertilize all sod with one pound nitrogen per 1,000 square feet. C. Areas to be seeded shall be seeded with a blend of Argentine Bahia and Japanese Millet or Rye Grass Seed and then covered with straw. Hydro-mulched areas shall have all slopes swales and a two (2) foot strip along the pavement edges sodded. 3.05 FIELD QUALITY CONTROL

A. Maintenance Prior to Final Acceptance: 1. Maintenance shall begin immediately after each plant is planted and shall continue until Final Acceptance. Plants shall be watered, mulched, weeded, pruned, sprayed, fertilized, cultivated and otherwise maintained and protected for the period of time stated above. Sod shall be mowed as

required. 2. Settled plants shall be reset to proper grade position, planting saucer restored and dead material removed. Guys shall be tightened and repaired. 3. Defective work shall be corrected as soon as possible after it becomes apparent and weather and season permit. Upon completion of planting, the Contractor shall remove from the site excess soil and debris, and repair any damage to structures, etc., resulting from planting operations. 4. Contractor is responsible for protection against mechanical damage; that includes providing protection from vehicles, including the posting of approved warning signs and barricades, as might be necessary. He shall repair, restore or replace any plants or planting areas that might become damaged as a result of any negligence by him in complying with these requirements. As a specific requirement of these conditions, the Contractor shall be responsible for assuring that all plants at the time of final inspection exhibit the characteristics and qualifications required for the grade of plant as originally specified.

5. Contractor shall be responsible for any additional watering required if irrigation proves to be inadequate for freshly planted material. 6. Except as otherwise specified, the Contractor's work shall conform to accepted horticultural

practices as used in the trade.

B. Final Acceptance:

1. Upon completion of all Work, including maintenance, the Contractor shall arrange for a final inspection. The landscape work may be reviewed for acceptance in parts, provided the work comprises one full unit or area of substantial size. 2. Date of Final Acceptance shall mark the beginning of the Guarantee Period. C. Guarantee Inspection: At the end of the guarantee period, inspection of plants will be made by the Owner or his designee upon written notice requesting such inspection, submitted by the contractor at least ten (10) days before the anticipated inspection. All defects discovered shall be repaired or replaced by the Contractor.

3.06 ADJUSTMENT AND CLEANING

A. Cleaning up the Site: Upon completion of any landscape project the Contractor must thoroughly clean up the project site. In addition to removing all equipment, unused materials, deleterious material, and surplus excavated material, the Contractor shall fine grade all disturbed areas and the areas adjacent to the new plantings to provide a neat and uniform site. All damaged or altered existing structures, as a result of the landscape work, shall be corrected. END OF SECTION 3

PART 4 -- TREE PROTECTION SPECIFICATIONS 1. Groups of trees and individual trees selected for retention shall be accurately located from the plan and designated with colored flagging tape as "tree(s) to be saved." Individual specimens that are not part of a tree group shall also be flagged for preservation. 2. Marking: Prior to construction and before the pre-construction conference, individual trees and strands of trees to be retained within the limits of clearing shall be visibly marked with a bright colored surveyor's ribbon applied in a band circling the tree at a height visible to equipment operators. Color flagging is to be consistent on all trees to be preserved. 3. Pre-Construction Conference: During the pre-construction conference, tree preservation and protection measures should be reviewed with the contractor as they apply to the specific project. The contractor will be responsible for familiarizing himself/herself with all local tree properties and removal ordinance prior to this meeting. Copies of the ordinance are available from the applicable local government.

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establish the new plantings. Care shall be taken to prevent staining of new construction where

4. Equipment Operation and Storage: Heavy equipment, vehicular traffic or stockpiles of any construction material, including topsoil shall not be permitted within the drip line of any tree to be retained. Trees being removed shall not be felled, pushed or pulled into trees being retained. Equipment operators shall not clean any part of their equipment by slamming it against the trunks of trees to be retained.

5. Fires: Fires shall not be permitted within 100 feet from the drip line of any trees to be retained. Fires shall be limited in size to prevent adverse effects on trees, and kept under surveillance.

6. Storage and Disposal of Toxic Materials: No toxic materials shall be stored closer than 100 feet to the drip line of any trees to be retained. Paint, acid, nails, gypsum board, wire, chemicals, fuels, and lubricants shall not be disposed of in such a way as to injure vegetation. 7. Fencing: The use of new or used chainlink fence (minimum 5' height) may be used which will effectively protect the roots, trunk and tops of trees retained on the site at the dripline. However, trees to be retained within 100 feet of a proposed building or excavation shall be protected by fencing. Personnel must be instructed to honor protective devices. The devices described are minimum requirements only (and are not intended to exclude the use of other devices which

may be approved by the applicable local government) and will protect the trees to be retained. a. Field Fence -- Standard 48-inch high field fence shall be placed at the drip line of the preserved tree on standard steel posts set 6 feet apart. b. Board Fence -- Board fencing consisting of 4 inch square posts set securely in the ground and

protruding at least 4 feet above the ground shall be placed a maximum of 10 feet at the limits of the drip line with a minimum of two horizontal boards between posts. c. Additional Trees -- Additional trees may be left standing as protection between the trunks of the trees to be retained and the limits of clearing. However, in order for this alternative to be used, the trunks of the trees in the buffer must be no more than 6 feet apart to prevent passage of equipment and material through the buffer or around the tree to be preserved. These

additional trees shall be reexamined prior to the completion of construction and either given sufficient treatment to ensure survival or removed. d. Trunk Armoring -- When fine grading is required around tree trunks, a tree trunk should be

armored with burlap wrapping and 2 inch studs wired vertically no more than 2 inches apart to a height of 5 feet encircling the trunk. If this alternative is used, the root zone within the drip line will still require protection. Nothing is to ever be nailed to the preserved trees. Fencing and armoring devices shall be in place before any excavation or grading is begun, shall be kept in good repair for the duration of construction activities, and shall be the last items removed during the final cleanup after the completion of the project. It is the responsibility of the l contractor to schedule the required tree preservation armoring inspections with the appropriate governmental agency prior to, during and after, clearing operations and final clean up. END OF SECTION 4

NOTE:

BE ADDED

IN EVENT INADEOUATE

PERCOLATION A SUMP PIT SHALL



PREPARE PLANTING BACKFILL AS SPECIFIED

**GROUNDCOVER/SHRUB PLANTING DETAIL** 



SABAL PALM PLANTING DETAIL N.T.S.

MULCH TO BACK OF CURB,

EDGE OF PAVEMENT OR DRIPLINE UNLESS INDICATED OTHERWISE ON THE PLANS

EXISTING CURB (TYP.) -

SET ROOT BALL AND FIRST EMERGING -

