3. Drawings: Any plan, elevation, section, detail or other drawing under the title

Specifications: All of the specifications bound in this volume, and addenda thereto which may be issued, and such descriptive data as may be incorpor-

5. Contractor: The bidder who is awarded this contract, his representatives, and his subcontractors and their representatives

6. Initial Acceptance: Owner acceptance of the initially completed landscape and irrigation installation at the start of the one (1) year warranty period.

7. Final Acceptance: Owner acceptance of the completed landscape and irrigation installation at the end of the one (1) year warranty period.

CHANGES IN THE WORK

The Landscape Architect or General Contractor shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time, and not inconsistent with the intent of the contract documents.

The Ouner, without invalidating the contract, may order changes in the work consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents

While no new or unforeseen items are anticipated, they shall be classed as extra work when they cannot be covered by any of the contract documents. The Contractor shall submit detailed prices for any extras to the Landscape Architect, and shall perform extras upon written acceptance from the Owner or Landscape Architect. In the absence of such written order, he shall not be entitled to payment for such extra work. All bills for extra work shall be submitted monthly. COOPERATION

The Owner shall have the right to do other work or to let other contracts for work to be done on the same site as specified for the work to be done under this contract. The Owner's arrangements as to precedence of work and the relationship between the Contractor and the Owner shall be decisive.

LANDSCAPE ARCHITECT'S STATUS

The Landscape Architect is the representative of the Owner.

As the Landscape Architect is the interpreter of the contract documents, he shall side neither with the Owner nor with the Contractor, but shall endeavor to enforce faithful performance by both. DAMAGES

The Contractor shall be responsible for all damage that may occur to the adjoining improvements or streets, or any accidents to any person or persons in and about the site or adjacent streets, and for all damage done to adjoining property or the work of others during the progress of the work under the contract, and caused by any act or omission of the Contractor or his employees.

The Contractor shall be responsible for damage to the site improvements thereon, including underground improvements, incurred through his execution of this work, and shall agree to have such damage repaired by qualified workmen. However, the cost of changing underground lines, unless otherwise specified, shall not be included in this

DIRECTION OF THE WORK

The Contractor shall be held responsible for the full direction and supervision of all work under this contract and shall follow all instructions or directions from the Land-

The Contractor shall have a competent Supervisor or Foreman on the job at all times while the work is in progress. This Foreman, acceptable to the Owner, shall direct operations and receive instructions in the absence of the Contractor. The Foreman shall correlate the work of the various subcontractors.

DRAWINGS AND SPECIFICATIONS

The Contractor shall keep one (1) copy of all drawings and specifications, memoranda and shop drawings at the job at all reasonable times, available to the Owner or Landscape Architect, and their representatives.

intent, meaning and spirit, whether taken separately or together. Taken together, the shall be desired mutually to explain each other and to be descriptive of the work per-

Should there be any discrepancy between the drawings and specifications, the drawings shall governs between the descriptive writing on the drawings and the plant list designating the materials, the descriptive writings shall govern. The large-scale details shall be followed in preference to the smaller-scale drawings.

Should there be anything shown on the drawings and not described in the specifications, or not shown on the drawings and described in the specifications, the same shall be fully executed and carried out as if drawn, shown or described in both: and the Contractor is not to make any alterations or corrections on the drawings or in the specifications. Should any error appear, the same is to be referred to the Landscape Architect before the bids are submitted or the work is commenced, or as otherwise

EXAMINATION OF THE SITE

All Contractors submitting proposals for this work shall first examine the site and all conditions at the site. All proposals shall take into consideration all such conditions as may effect the work under this contract

The Contractor and subcontractors shall be responsible for verifying all plant quantities shown on the plant list and plans. Any discrepancies shall be brought to the attention of the Landscape Architect prior to bidding. Extra charges or compensation will not be allowed due to differences between actual measurement and the dimensions shown on the drawings after the work is initiated.

UNIT COST SUBMITTAL As part of his bid, the Contractor shall submit a unit cost schedule of all products,

including labor, for the purpose of additions or deductions to the project. GUARANTEE-WARRANTY

The Contractor shall, and hereby does, warrant all materials and all work performed

by him for a period of one (1) year after initial acceptance as set out in the various sections and for which guarantees are required. INSUFRANCE

The Contractor and his subcontractor shall carry Property Damage and Public Liability Insurance, and Workmen's Compensation and Employers Liability Insurance in the amount required by the Owner. He shall furnish the Owner certificates of compliance before starting work on the job.

All fixtures, equipment, and materials supplied by the Contractor shall remain his property until such time as accepted in writing or paid for by the Owner, and the Contractor shall protect them with appropriate insurance against theft or other loss.

The Contractor shall not cause any insurance to be cancelled or permit any insurance to lapse. All insurance policies shall include a clause to the effect that the policy shall not be cancelled or reduced, restricted, or limits changed until thirty (30) days

after the Owner has received written notice as evidenced by return receipt of registered Certificate of insurance shall contain transcripts from the proper office of the insurer,

evidencing in particular those insured, the extent of the insurance, location and operations to which the insurance applies, the expiration date, and the above mentioned notice of cancellation clause. MATERIAL INSPECTION

The Contractor shall inspect all materials upon their arrival at the job and see that they conform to the requirements of these specifications and prevent the unloading of unsatisfactory material or promptly remove same from the premises without awaiting instructions to do so. The Landscape Architect shall have the right to inspect all materials prior to and after delivery to the site and shall reserve the right to accept or reject said materials at any time before initial acceptance.

MATERIAL AND WORKMANSHIP

Materials shall be new. Both workmanship and materials shall be the best quality of their respective grades.

The Contractor shall submit samples of materials, etc., when required by the Landscape Architect as spelled out in other sections of these specifications. All samples shall be approved by the Landscape Architect before proceeding with the work. The Contractor shall be responsible for satisfactory completion of all work and shall provide, without extra charge, all incidental items required as a part of the work, even though every such item may not be specifically prescribed or indicated, but is neces-sary for proper and complete installation of the work. The Contractor shall submit evidence, if required by the Landscape Architect, that each item of material furnished under this contract fulfills the requirements of the specifications for such materials.

PERMITS AND REGULATIONS

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the work of this contract

The Contractor shall obtain all permits and pay all fees, licenses and deposits required by law or ordinances to comply with the work of these specifications. SUBSTITUTION OF MATERIALS

The Contractor, before submitting bid, shall locate all necessary materials as called for in the plane and epecifications, and shall be assured of their availability for

The Contract bide shall be based upon providing the specified materials, processes, products, etc., identified in this specification and/or indicated on the drawings, or

In the event substitutions are proposed by the Contractor to the Landscape Architect after the contract has been awarded, the Landscape Architect will record all time and materials used bu him and bu his consultants in evaluation of each such proposed substitution. Whether or not the Landscape Architect approves a proposed substitution, the Contractor, promptly upon receipt of the Landscape Architect's billing, shall reimbures the Landscape Architect and his consultant for time and materials spent by them in evaluating the proposed substitution.

RELATIONS OF CONTRACTOR AND SUBCONTRACTOR

The Contractor agrees to bind every subcontractor to the terms of the drawings and specifications and wherever practicable, to the agreement and General Conditions, as far as applicable to the subcontractor's work SUPERINTENDENCE

The Landscape Architect will not engage in any way to superintend or relieve the Contractor of responsibility for the complete and proper execution of the work, nor for the consequences of neglect or carelessness by him or his subordinates. SALES TAX

The Contractor shall include all applicable taxes.

The Contractor shall verify, prior to bidding, whether or not he will be allowed to store materials on the site at a location approved by Owner for use at a later date. Owner will not be responsible or liable for loss of stored materials. TEMPORARY UTILITIES

All necessary utilities may not be available at all areas of work. Owner may be

Water will be available on the site at no expense to the Contractor. Tap, meter fee, hose and other watering equipment required for the work shall be furnished by this Contractor at his expense. Additional water will be available as the irrigation system

TERMS OF THE CONTRACT

A copy of the Owner's standard contract form or General Contractor's subcontract form will be available to the bidder upon request, and will generally outline the terms

UNCOVERING AND CORRECTION OF WORK

If any work should be covered contrary to the request of the Landscape Architect, it must, if required by the Landscape Architect, be uncovered for his observation and replaced at the Contractor's expense.

If any other work has been covered which the Landscape Architect has not specifically requested to observe prior to being covered, the Landscape Architect may request see such work, and it shall be uncovered by the Contractor. If such work is found to be in accordance with the contract documents, the cost of uncovering and replacement shall, by apporopriate change order, be charged to the Owner. If such work is found not in accordance with the contract documents, the Contractor shall pay such costs unless it is found that this condition was caused by a separate contractor employed by the Owner under a separate contract: and in that event, the Owner shall be responsible for the payment of such costs.

The Contractor shall promptly correct all work rejected by the Owner or Landscape served before or after substantial completion and whether or not fabricated, installed. or completed. The Contractor shall bear all costs of correcting such rejected work STARTING WORK

The Contractor agrees to begin the on-site work not later than ten (10) calendar days after the date of written notice from the Owner or General Contractor authorizing the Contractor to proceed with the work, and that he will work continuously, barring bad weather, until the job is completed and as noted herein. Actual gathering of material, etc., may start after the contract is executed and the Owner issues any necessary purchase orders for the contract amount.

INITIAL COMPLETION AND ACCEPTANCE

Upon written notice that the work is ready for initial inspection and acceptance, the Landscape Architect or his representative will promptly make an observation visit to the project and, when he finds the work acceptable under the contract documents, he will promptly declare in writing that to the best of his knowledge, and on the basis of his observations, the work has been completed in accordance with the terms and conditions of the contract documents.

## TECHNICAL SPECIFICATIONS

PART ONE - GENERAL

WORK INCLUDED

Perform all work required to complete and maintain, until acceptance by the Owner, the landscape installation, including all labor, materials, services, and equipment necessary and described herein and shown on the accompanying drawings.

RELATED WORK

Drawings and general provisions of Contract, including General and Supplementary Conditions and Specification sections, apply to work of this section. Coordinate with work of other trades. QUALITY ASSURANCE

Approval: The selection of materials and execution of operations required under these drawings and specifications are subject to the approval of the Landscape Architect or

Rejection: The Landscape Architect or Owner will, at any stage of the operation, have the right to reject material and work which in his opinion does not conform to the contract documents. All rejected material shall be promptly removed and corrected

SOURCE QUALITY CONTROL

The Landscape Architect has the right to select all plant materials at the nursery, field source or Contractor's holding yard, when so authorized by the Owner. The Contractor is to include in the base contract cost the amount for transportation, lodging, meals, etc. for the Landscape Architect to tag, at the source of supply, the plants indicated on the materials list. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work

REFERENCES

STANDARDS FOR NURSERY STOCK, by the American National Standards Institute, Z60.1, May 1986 HORTUS THIRD, 1976 - Cornell University

SUBMITTALS

Submit for approval, when requested, sufficient representative quantities of topsoil, compost, peat moss, sod, stone, gravel, etc. Samples shall be approved by the Landscape Architect before use on project.

Submit signed truck quantity delivery receipts upon request.

Submit one (1) representative sample of each tree, shrub, and groundcover plant, when requested, for the Landscape Architect's approval. When approved, they will be tagged and maintained as representative samples. Samples may be used to complete installation provided they remain tagged until initial acceptance of entire installation.

ACCEPTANCE

to installation of plant materials.

Maintain all trees, shrubs, and groundcover under this Contract until Ouner's accept-ance, by adequate watering, cultivating the top two (2) inches, weeding every two (2) weeks, spraying, and replacing as necessary to keep plants in a healthy, vigorous condition, remulching and raking bed areas as may be required to keep them neat.

Maintain all grass areas under this Contract until acceptance by watering, mowing, edging, fertilizing, spraying, etc. JOB CONDITIONS

Water will be available on the site at no expense to the Contractor. Hose and other watering equipment required for the work shall be furnished by the Contractor at his expense. Additional water will be available as the irrigation system is installed. Work notification: Notify the Landscape Architect at least seven (1) working days prior

Protect existing utilities, paving, and other site amenities from damage caused by land-scape operations. It shall be the Contractor's responsibility to notify utility companies of impending planting operations and have all utility lines flagged.

The irrigation system will be installed prior to planting. Locate, protect, and maintain the irrigation system during planting operations. Repair irrigation system components damaged during planting operations at this Contractor's expense.

All work is warranted for one (1) full year after initial acceptance. The Contractor is obligated to correct any work found to be defective or nonconforming. Upon notice, remove dead materials and all materials not in vigorous, thriving condition, as soon as weather permits and on notification by the Landscape Architect or Owner. Plants, including trees, which have partially died so that shape, size or symmetry has been damaged shall be considered for replacement. In such cases, the opinion of the Landecape Architect will be final. Annual plants will be guaranteed for a period coinciding with their normal season of growth.

Plants used for replacement shall be of the same kind and size as those originally planted, and shall be planted as originally specified. All work, including materials, labor, and equipment used in replacement, will be at no cost to the Owner. Replacement plants shall carry a one (1) year warranty. Any damage, including ruts in lawn or bed areas, incurred in making replacements shall be repaired to the satisfaction of the Owner or Landscape Architect by this Contractor.

At the direction of the Landscape Architect, plants may be replaced at the start of the next planting or digging seasons but in such cases, dead plants shall be immediately and completely removed from the premises.

Should the Owner not elect to contract for a one (I) year Maintenance Contract with the successful bidder, he agrees that for the warranty to be effective, he will follow and perform a permanent maintenance program including proper mowing, trimming, prun-ing, weeding of bede, fertilizing, and watering (including deep root watering of trees and removal of water from tree underdrain systems).

PART TWO - PRODUCTS

PLANT MATERIALS

Plant material shall be delivered to the site after the beds are prepared and are readu for planting. Shipments of plant materials shall be thoroughly protected from the sun and from drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected. Plant materials remain the property of the Contractor until initial acceptance.

SHRUBS AND GROUNDCOVERS

Plante shall be nursery grown, healthy, vigorous, compact, bushy to the ground, well branched, of normal habit of growth for the species, and shall be free from defects, decay, girdling roots, sun-scald injuries, abrasions of the bark or limbs, disease, insect eggs, and larvae. They shall have ball sizes that meet the standard set forth by the American Association of Nurserymen, Inc. The specified sizes shall be before pruning, and the plants shall be measured from their nominal top branches in normal position to the top of the ball or soil level. Plants shall not be pruned prior to delivery,

All plants shall be of specimen quality. Specimen means an exceptionally heavy, symmetrical, tightly knit plant, so trained or favored in its development that its appearance is unquestionable and outstandingly superior in form, number of branches, compact-

All plants shall be hardy under climatic conditions similar to those in the locality of the

Shade trees shall be healthy, vigorous, full-branched on all sides, well-shaped, speci-men quality, symmetrical, and shall meet the trunk diameter, height and spread requirements as specified. Single trunk trees shall have a straight trunk. Trees which have a damaged or crooked leader or trunk or are one-sided, or do not have a full, symmetrical branch structure and crown, will be rejected. Ball shall be firm, neat, slightly tapered, and well burlaped. Any tree loose in the ball or with broken ball at the time of planting will be rejected. Trees with abrasions on the bark disfiguring knots, or wounds over two (2) inches which have not calloused will be rejected. Tree ball sizes shall be as outlined in ANSI Z60.1 - 1980.

Multi-trunk Trees: No division of the trunk which branches more than six (6) inches from the ground level, as determined by the root crown of the plant, shall be consid-ORNAMENTAL TREES

Ornamental trees shall be healthy, vigorous, full branched, well shaped, and shall meet the height and spread, caliper and branching character as specified. Trees not having a full, symmetrical branch structure and crown will be rejected. Single trunk ornamental trees shall have straight trunks with branching beginning a minimum of forty-two (42) inches above the top of the ball or container.

Multi-trunk ornamental trees shall be pruned so all "sucker" type branching is removed from around trunk canes as well as extransous branching on trunk canes below crown of tree. Pruning shall be such that at least one-half of the plant is trunk branching and approximately one-half is crown foliage. All multi-trunk trees will conform to the number of trunk canes and/or caliper specified.

MATERIALS

Compost: 100% organic, aerobically composted humus, fully composted under proper C/H ratios with sustained temperatures to 170 degrees F., possessing excellent air porosity, water holding capacity and drainage, optimum cation exchange capacity, free of weeds, weed seeds, insect pests and with a pH averaging 65 to 70. As supplied by Living Earth Technology, Dallas, Texas, or approved equ

Fertilizer: Complete slow release fertilizer with an organic base, uniform in composition, dry and free flowing. Deliver fertilizer to site in original unopened containers, each bearing manufacturer's guaranteed statement of analysis. Fertilizer shall contain 20% nitrogen, 10% phosphoric acid, 10% potash, unless otherwise specified or approved. "Agriform" by Sierra Chemical Company, or approved equal.

Filter Fabric: Terra Tex 3D as supplied by Sneary, Inc., Dallas, Texas, or approved equal. Jute Mesh: Smolder Resistant, No. 715-1006. Ludlow Soil Saver as supplied by Lofland Company, Dallas, Texas, or approved equal.

Peat Moss: Clean hypnum peat, free of noxious weeds and rubble, dark brown in Pine Bark Mulch: Fine, textured, one (1) inch to one and one-half (15) inch size as supplied by Hope-Agri Products, Hope, Arkansas, or approved equal.

Hardwood Bark Mulch: Hardwood barks, consisting of oak, gum and hickory, hammermilled through a one and one-half (15) inch screen. Initial pH to be in the 60 - 70 range, with long term buffering. As supplied by Living Earth Technology, Dallas, Texas, or approved equal.

Cypress Bark Mulch: Decomposed cypress bark having a pH between 60 and 70, sterilized, containing no harmful active residues (i.e., posticides, disease organisms and foreign chemicals), and screened to a particle size of one (1) inch or smaller.

Steel Edging: Four (4) inches wide, 1/8" thick, painted dark green with rust resistant paint and stake loops welded or formed onto backside. Spikes shall be similar material, 18 inches long. As supplied by J.T. Ryerson & Son, Inc., or approved equal. Tree Stakes and Guys: Standard domestic steel "T" posts, six (6) foot length, painted green, with white reflective top. Adj-a-Tye Model 5100 tie straps. As supplied by AM. Leonard Company, Piqua, Ohio, or approved equal.

Topsoil: Fertile natural surface soil, uniform in composition, similar to site topsoil if approved, free of stones, lumps, weeds, and roots. Minimum 20 percent organic matter, 50 to 70 percent sand, 15-20 percent clay.

Espalier Wire: 16 gauge galvanized wire with appropriate fasteners and ties.

PART THREE - EXECUTION

TAGGING

The Contractor shall make an initial selection and tag, with a permanent tree tag, the trees he proposes to furnish that meet all the specification requirements and deliver required samples to the site for approval when requested. Tree tags to be removed after final planting is complete.

The Contractor shall lay out his work and set necessary markers and stakes. All plants are to be in straight and even rows or as shown on plans. The Landscape Architect o Owner reserves the right to relocate shrubs and trees from positions on the plans prior to their planting. All tree locations are to be approved by the Landscape Architect. TREE PITS AND PLANTING

Ornamental Trees: Plant ornamental trees in pits twelve (12) inches larger than the tree ball. After setting the tree, the pit shall be backfilled with four (4) parts of topsoil to one (1) part of compost and carefully settled by watering to prevent air pockets. Form a three (3) inch high watering ring for each ornamental tree. All cord or wire to secure burlap on tree ball shall be cut from top of ball and around trunk. Place a (2) inch layer of compost inside the watering ring.

Shade Trees: Plant shade trees in a tree pit two (2) feet greater in diameter than the

tree ball. The crown of the tree ball should be approximately one (1) inch higher than the existing grade. After setting the tree, the pit shall be backfilled with five (5) parti of acceptable existing soil or topsoil to one (1) part compost and carefully settled by watering to prevent air pockets. Form a four (4) inch high watering ring around the tree. All cord or wire used to secure burlap on tree ball shall be cut from top onethird of ball and from around trunk after setting. Place a two (2) inch layer of compost or bark mulch inside the watering ring. Percolation Test Pite: The Contractor shall excavate at least four (4) test pits on the

site and fill with water to test for percolation. Size of pits shall be comparable to largest tree pit to be excavated. Location can be in conjunction with proposed shade tree location. Monitor pit for forty-eight (48) hours. If, at the end of that time, water has not significantly percolated, a Stand Pipe underdrain system should be installed for Stand Pipe Installation: Should it be determined that tree pits will not percolate, or do so very slowly, shade trees shall have sump pipes installed in specially excavated tree pite per details shown on plans. Pipe shall be four (4) inch diameter class 200 PVC,

extending into gravel backfill and projecting four (4) inches above tree ball, inside water ring. PVC cape will be placed on all pipes. Exposed portion of pipe to be painted flat black, or color approved by Landscape Architect. BED PREPARATION Groundcover Beds: Loosen all groundcover beds to a depth of six (6) inches. Two (2) inches of peat moss or compost shall be applied and worked into the upper six (6) inches of bed. Beds shall be thoroughly tilled and pulverized to a depth of six (6) inches and raked smooth. Work fertilizer into soil at the rate of twelve (12) pounds per 1000

Loosen all seasonal color bade to a depth of six (6) inches. Four (4) inches of peat moss or compost shall be applied and worked into the upper six (6) inches of the bed. Beds shall be thoroughly tilled and pulverized to a depth of six (6) inches and raked smooth. Beds shall be left two (2) to three (3) inches higher than surrounding grade

square feet. Delivery receipts of soil amendments may be requested.

Shrub Pocket Planting: Loosen the shrub planting area by rototilling. Excavate shrub pits six (6) inches wider and four (4) inches desper than the shrub root ball. Backfill with one (1) part compost or peat moss and six (6) parts existing good topsoil. Broadcast fertilizer and work lightly into the soil around the shrubs at the rate of (12) twelve pounds per 1000 square feet. Beds shall be left high to prevent poor drainage or ponding of water within the bed.

Care shall be taken to prevent planting beds from blocking drainage against building or impeding site drainage in any way.

TREE GUYING AND STAKING

Submit unit cost in bid for staking all trees four (4) inch caliper and under, with three (3) steel stakes and three (3) Adj-A-Tye straps, Model 5100. Stakes should be located equal distant around tree, and outside of tree pit. Stakes to be embedded a minimum of two (2) feet into stable soil.

Stakes and guys shall be removed following the one (1) year warranty period. BED ALIGNMENT AND PLANT PLACEMENT

Shrube and groundcover shall be planted in string line straight rows using alternate spaces between rows. The specified quantity of shrubs or groundcover shall be placed in the bed prior to planting to assure even coverage. The specified quantity of seasonal color shall be placed in the bed prior to planting to assure even coverage.

After the planting is completed, all cultivated areas shall be leveled, loosened, and raked, and the edges carefully trimmed so that the tree pits and bede shall present a neat appearance. Care shall be used that these bed edges conform as closely as possible with the lines shown on the Planting Plan. Steel edging stakes shall be on the inside of the beds.

After the work of planting has been completed and approved by the Landscape Architect, mulch all bede and tree rings with two (2) inches of bark mulch, lightly cultivated into area. Do not disturb watering saucer and do not cover root flair.

Prune all dead and broken branches and stubs flush. Selectively thin out twenty (20) percent of the branches of all trees and ornamentals at time of planting. Yaupon Holly and Crape Myrtle are to be pruned so that at least one-half of the tree is trunk branching and approximately one-half is crown foliage. Remove tags, labels, ribbons, etc. Tip prune all shrubs to maintain a neat, uniform appearance.

ESPALIER WIRE INSTALLATION

Attach one (1) vertical wire to surface as follows:

1. Wrought Iron - wire fasteners Masonry - masonry nails
 Wood - galvanized nails

Use one (1) fastener per three (3) feet of height. Wire shall continue to the top of the vertical surface. Patterns shall be designated on the plan if different from that specified. GRASS AND WEED REMOVAL

Existing grass and weeds in areas of proposed beds shall be removed either chemically or by excavation, including root systems. Existing weeds shall be removed either chemically or by excavation, including root system, from all proposed lawn areas prior to installation of grass. Contractor shall re-fill excavated areas with topsoil to finish grade before bed preparation or grass installation. SOIL EROSION PROTECTION

Install jute mesh in planting beds with slopes greater than three to one prior to planting. Mesh shall have a minimum overlap of twelve (12) inches where sections join. Material shall be installed in lengthwise sections running parallel with the slope, providing the length of slope is in excess of ten (10) linear feet from top to bottom. Jute mesh on slopes with lengths less than ten (10) linear feet shall be installed across the slope and double pinned at the twelve (12) inch overlap. Pine shall be installed so that no gaps

Loosen and rake smooth all areas to be grassed. Remove all weeds, debris and any clumps, stones, clods, etc. larger than three quarter (3/4) inch diameter. Ensure lawn areas and swales are graded for proper drainage. Areas next to sidewalks and curbs shall be graded down to one (1) inch below finished grade to allow for thickness of

Sod: Areas will be planted with sod as indicated on the plans. All sod shall be dark, rich green, free of weeds and nut grass and placed so joints are flush between pieces Sod is to have root development that will support its own weight without tearing, when suspended vertically by holding the upper two corners. Sodded areas shall be rolled with a 200 pound roller immediately after laying, watered thoroughly and rerolled. All sodded grass areas shall be fertilized at the rate of twenty-five (25) pounds per 1000 square feet, prior to laying sod. Dead patches of sod shall be removed and replaced

Bermudagrass Hydromulch (May 1 - September 15):
The hydromulch is to be composed of virgin wood, green color additive, cellulose fiber by Conwed or Weyerhauser. Certified hulled Common Bermudagrass seed shall have minimum purity of 98 percent and a minimum germination rate of 95 percent. The fertilizer shall be granular form and be homogenized. Apply at the following rates per 1000 square feet: fifty (50) pounds hydromulch, two and one-half (2,5) pounds seed, and eighteen (16) pounds fertilizer. Areas of hydromulch that do not germinate will be rehydromulched immediately. Substantial stand of grass must be apparent prior to

When climatic conditions are such that a healthy stand of grass cannot be developed prior to onset of cool weather, seed with Winter Rys as an interim groundcover, and return in the spring when conditions are appropriate for active seed germination. Remove either chemically or by excavation, including entire root system, all existing Winter Rys and prepare soil for new application of Bermudagrass seed hydromulch by the steps previously specified. Apply hydromulch mixture as previously specified.

Winter Rye Grass (September 15 - November 15): Seed with Winter Rye Grass seed at the rate of five (5) pounds per 1000 square feet.

LAWN ESTABLISHMENT

It is the responsibility of the Contractor to establish a dense lawn of permanent grasses, free from weeds, lumps and depressions. Any part of the area that fails to show a uniform germination shall be reseeded or resodded, and such reseeding or resodding shall continue until a dense lawn is established, regardless of amount of rain.

Water, mow and edge the lawn until initial acceptance. Mow each time after the lawn has reached a height of three (3) inches. Mow to a height of two (2) inches, returning the clippings to the lawn. Damage to seeded areas resulting from erosion shall be repaired by the Contractor. Scattered bare spots will not be allowed over one (1) foot square in the lawn area. Never mow off more than one-third of the grass leaves.

During the work, the premises are to be kept neat and orderly at all times. Storage areas for plant and other materials shall be so organized that they, too, are neat and orderly. All trash, including debris resulting from removing weeds or rock from planting area, preparing beds, or planting plants, shall be removed from the site daily as the work progresses. All walks and drives shall be kept clean by sweeping and ho Excavated soil may be distributed on the site or hauled off site as directed by Owner MAINTENANCE

The Contractor shall maintain all trees, shrubs, and groundcover under this Contract until initial acceptance, by adequate watering, cultivating the top two (2) inches, weeding every two (2) weeks, spraying, and replacing as necessary to keep plants in a healthy, vigorous condition. Bed areas shall be raked as may be required to keep them neat.

The Contractor shall maintain all grass areas under this Contract until initial acceptance by watering, mowing, spraying, fertilizing, etc.

The Contractor shall submit a separate price for maintenance of the landscape and irrigation installation for a period of one (1) year after initial acceptance. Maintenance shall be based on the Maintenance Specifications included in this set.

## LANDSCAPE & IRRIGATION MAINTENANCE SPECIFICATIONS

One (1) year Landscape and Irrigation Maintenance shall include the following listed services and schedules:

STANDARD MAINTENANCE SERVICES

Mow weekly during growing season.

Edge as necessary to maintain neat curb and bedlines.

Prune shrubbery as needed to maintain uniform shape and eventually form a

Keep all beds free of debris and weeds. 5. Trim around buildings and fences.6. Police sidewalks and parking lots.

FERTILIZATION AND WEED CONTROL Fertilize turf areas three (3) times and ornamentals one (1) time annually.

7. Monitor, adjust and repair irrigation system as needed.

. Apply pre-emergent annually in apring.

. Control Broad-Leaf weeds in turf areas PESTICIDES AND FUNGICIDES

Carefully inspect all planting weekly and recommend any needed control.

Apply EPA approved chemicals as needed to control fungus, insects and disease in the turf and ornamental areas. SEASONAL COLOR

1. Two (2) change outs of seasonal color shall be included during the one (1)

. Additional plantings of seasonal color, as requested by the management, will

year period. Selection by Owner. Installation of seasonal color shall be per Technical Specifications.

GRASS

dispose of properly.

Mowing: Frequency and mowing height to be determined by the season of the year. According to respective seasons, mowing shall be required one (1) time every seven (7) to ten (10) days, depending upon the rate of growth.

Clippings shall be returned to lawn. Tupe of Grass: See Technical Specifications for types of grass.

Curbs, walks, walls and fences will be edged as needed. 4. Planting beds, tree rings and other objects in grass areas shall receive

caused by Contractor's mowing and edging. Collect refuse material and

edging as needed. Soil analysis samples are to be taken when grass fails to respond to scheduled fertilization program. Approved corrective measures will be handled on 6. Blower's will be used to clear walks, curbs and streets of organic material

MISCELLANE OUS Scheduling for maintenance visits shall be determined by seasonal needs. Trash and leaves on lawn areas and in planting beds will be picked up and

disposed of during routine maintenance visits. Fire ants will be treated with recommended chemicals Contractor will be responsible for proper instruction of all safety measures to their personnel. All work equipment and supplies in performance of these specifications will be subject to inspection at any or all times, by the duly

authorized management representative.

5. The schedule of work hours for the accomplishment of landscape maintenance service will in no way interfere with the normal routine of the facility

tenants or visitors. 6. All labor, materials, equipment, supervision, insurance and labor taxes will be furnished by the Contractor. Said Contractor must be fully covered by public liability and property damage insurance, and must be certified by the State in which project is being completed for commercial pesticide application. Contractor will not be liable for loss or damage to plant or irrigation material.

caused by persons not employed by Contractor or by extreme acts of nature. MULCH

mulchings per year shall be included. Additional mulching will be done as needed on a cost plus basis.

SHRUBBERY, GROUNDCOVER, YINES AND TREES 1. Fertilization will be done one (1) time during the normal season using a sur-

face granular application. The fertilizer will be custom blended and contain a

controlled release nitrogen for season long feeding.

Pruning: Timing, frequency and technique will be determined by the plants' growth rate, habit and management preference. For the purpose of budgeting, management preference must be expressed and written into this proposal.

Tree Pruning: Complete this work with experienced personnel only. Thin out and remove crossing, damaged, diseased or dead wood. Cuts to be clean and flush, leaving no stubs.

4. Deep root water trees as needed to prevent stress in dry periods. Monitor excess water levels in tree underdrain systems (if applicable) and remove 5. Chemicals for weed control in shrub bads, around tress and in all open

I. Periodically check guy wires and adjust to keep wire taut. Straighten and

(2) times a month during the growing season by walking the entire system to inspect all heads and valves for proper operation.

Raise or lower and align irrigation heads as needed for proper operation.

At the end of the one (1) year maintenance period, provide the Owner with a

record of the watering program and complete instructions for system operation.

mulched areas shall be applied as needed. TREE AND YINE GUYING

guy trees and large shrubs as needed.

2. Espailer wire for vines shall be maintained and vines attached as they grow. RRIGATION SYSTEM inspect the system one (1) time per month during the winter months and two

2. Set watering program on automatic controllers and monitor or re-program controller as necessary during the maintenance period to insure normal plant growth. Take into consideration apacific site conditions and compensate ustem's timing for areas in shade, sloping areas and weather conditions. Broken or damaged irrigation heads and piping shall be promptly repaired. Equipment damaged, broken or missing through no fault of the Contractor shall be reported to the management as such, and authorization obtained for

REFERENCE SHEET 3L FOR PLANT

MATERIALS LIST.

Mulch shall be as specified in the Technical Specifications. Two (2) complete

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19 AUG 2011

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LANDSCAPE

SHEET