

LANDSCAPE SPECIFICATIONS

SECTION 02900

PART 1 - GENERAL

1.01 REFERENCED DOCUMENTS

1.02 DESCRIPTION OF WORK

1.03 REFERENCES

1.04 NOTIFICATION OF SOURCES

1.05 JOB CONDITIONS

PART 2 - PRODUCTS (cont.)

F. Grass Areas:

1. Solid Sod: Blocks of sod should be laid joint to joint (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.

2. Hydromulch: Shall be extra hulled and treated lawn type seed, delivered to site in its original unopened container, and shall meet State Law requirements.

3. Steel Curbing: Shall be Ryerson "Natural Curbing", 1/8" x 4" w/ stakes 4" on center.

4. Hydromulching Fiber Mulch: Shall be natural wood fiber mulch produced from grinding clean, whole waste wood chips. The mulch shall be designed for use in conventional methods of spreading, or hydromulching of grass seed. The mulch shall be such that when applied the material shall form a strong, moisture retaining mat.

5. The hydromulch shall be composed of virgin wood cellulose fibers and contain no germination or growth-inhibiting factors. It shall have a consistent texture which disperses evenly and remains suspended in agitated water. It shall have a temporary green dye and the following property analysis:

| | |
|--|------------------------|
| Moisture Content | 9.0% +/- 3% O.D. Basis |
| Organic Matter | 99.2% +/- 0.5% |
| Ash Content | 0.8% +/- 0.2% |
| Water Holding Capacity (grams of water per 100 grams of fiber) | 1150 minimum |

6. The mulch shall contain a biodegradable tackifier agent included in its manufacture or as a separate additive in the rates specified by the manufacturer. The purpose of the tackifier is to further enhance the erosion control properties of the wood fiber mulch.

PART 3 - EXECUTION

3.01 BED PREPARATION & FERTILIZATION

A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Landscape Architect and General Contractor.

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1.06 MAINTENANCE AND GUARANTEE

A. Maintenance:

1. The Landscape Contractor will be held responsible for the maintenance of all work from the time of final delivery to the site, to the time of planting and until final acceptance by the Owner and Landscape Architect. No trees, groundcover or grass will be accepted unless they are approved by the Owner or Landscape Architect.

2. Maintenance shall include watering of trees and plants, cultivation, weeding, spraying, edging, pruning of trees, mowing of grass, cleaning up and all necessary work of maintenance.

3. A written notice requesting final inspection and acceptance should be submitted to the Owner or Landscape Architect at least seven (7) days prior to completion. An on-site inspection by Owner, Landscape Architect, and Landscape Contractor will be completed prior to written acceptance.

4. After final acceptance of installation, the Landscape Contractor will not be required to do any of the above listed work.

B. Quarantees:

1. Trees, shrubs, and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall replace all dead materials, plants rejected, or damaged as soon as weather permits and upon notification by the Owner and Landscape Architect. Plants, including trees, which have partially died so that shape, size, or symmetry has been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner or Landscape Architect shall be final.

2. Plants used for replacement shall be of the same kind and size as those originally planned and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall be at no cost to the Owner. Replacement plants shall carry a twelve (12) month guarantee from time of replacement. Any damage, including ruts in the lawn or bad areas, incurred as a result of making replacements shall be immediately repaired.

3. At the direction of the Landscape Architect, plants may be replaced at the start of the next year's planting season, but in such cases, dead plants shall be removed from the premises immediately.

4. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and inspected for full compliance with Contract requirements. All replacements are to be included under "Work" of this section.

2. The Owner agrees that for the guarantee to be effective, he will water plants per the Landscape Contractors recommended watering schedule and cultivate beds once a month after final acceptance.

3. The above guarantee shall not apply where plants die after acceptance because of storms, hail, freeze, insects, diseases, injury by humans, machines or theft.

3.02 BED PREPARATION & FERTILIZATION (cont.)

B. All planting areas shall be conditioned as follows:

1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six inches prior to fertilizer and compost application. Apply fertilizer as per manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the native soil. Apply organic fertilizer, such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.

2. All planting bed areas shall receive a two (2") inch layer of specified mulch.

3. Backfill for tree pits shall be as follows: Use existing topsoil on site, free from large clumps, rock, debris, caliche, silt/clods, etc., placed in nine (9") inch layers and watered in thoroughly.

C. Grass Areas:

1. Areas to be Solid Sod Bermudagrass: Blocks of sod should be laid joint to joint, (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.

2. Areas to be Hydromulch Common Bermudagrass: Hydromulch with bermudagrass seed at a rate of two (2) pounds per one thousand (1,000) square feet. Use a 4" x 8" batter board against the bed areas.

3.03 INSTALLATION

A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction work is done under this contract.

B. Plant materials shall be delivered to the site only after the beds are prepared and are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying wind during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and sun. Beds of earth of 8" & 8" plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.

C. Position the trees and shrubs or stake their intended locations as per the plans.

D. Contractor shall stake the location of trees, shrubs, groundcover beds, etc., and obtain Landscape Architect's approval prior to installation.

E. Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the tree shall bear the same relation to the finish grade that it did to soil surface in place of growth.

3.04 INSTALLATION (cont.)

F. Shrub and tree pits shall be no less than two (2') feet, twenty-four (24") inches wider than the lateral diameter of earth ball and six (6") inches deeper than its vertical dimension. Remove and haul from site all rocks or stones over one (1") inch in diameter. Plants should be thoroughly moist before removing containers.

G. Dig a wide, rough sided hole exactly the same diameter as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or glazed.

H. Run a perk line. Fill the hole with water and wait until the next day. If the water does not drain overnight, contact the Landscape Architect.

I. Backfill only with the existing soil that came from the hole. When the hole is dug in solid rock, topsoil from the same area should be used. Some rock mixed into the soil is beneficial. Topsoil from the immediate area should be used for the top one to three (1" - 3") inches of backfill, if possible. Remove burrs from the top of the ball, as well as all nylon, plastic string and even wire mesh. Container trees will usually be pot bound.

J. Do not wrap trees.

K. Do not wrap trees.

L. Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the grass above the top of the ball unmulched and mulch with at least two (2") inches of specified mulch.

M. All plant beds and trees to be mulched with shredded hardwood spread to a minimum settled thickness of two (2") inches over entire area of bed or pit.

N. Obstruction below ground: In the event rock or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this contract, alternate locations may be selected by the Landscape Architect. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.

3.05 INSTALLATION (cont.)

O. Pruning and Mulching: Each area shall be pruned in accordance with standard horticultural practice to preserve the natural character of the plant and to the manner fitting its use in the landscape design.

1. Dead wood or suckers and broken or badly bruised branches shall be removed.

2. Pruning shall be done with clean sharp tools.

3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of specified mulch two (2") inches in depth. This limit of the specified mulch for trees shall be the diameter of the plant pit.

P. Steel Curbing Installation:

1. Curbing shall be aligned as indicated on plans.

2. All steel curbing shall be free of kinks or abrupt bends.

3. Top of curbing shall be 3/4" maximum higher than existing grade.

4. Stakes are to be installed on the planting bed side of the curbing, as opposed to the grass side.

5. Do not install steel edging along sidewalks.

3.06 CLEANUP AND ACCEPTANCE

A. Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses.

B. Keep paved areas clean by sweeping or hosing at end of each day's work.

LANDSCAPE NOTES

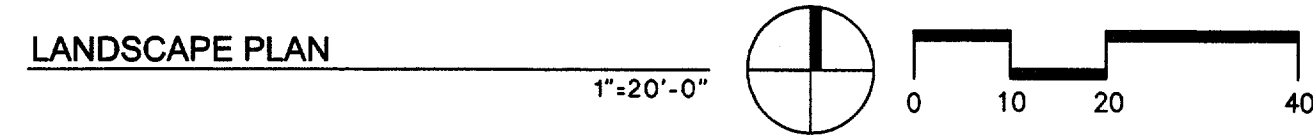
- Contractor shall verify all existing and proposed site elements and notify Architect of any discrepancies. Survey data of existing conditions was supplied by others.
- Contractor shall locate all existing underground utilities and notify Architect of any conflicts. Contractor shall exercise caution when working in the vicinity of underground utilities.
- Contractor is responsible for obtaining all required landscape and irrigation permits.
- Contractor to provide a minimum 2% slope away from all structures.
- All planting beds and lawn areas to be separated by steel edging. No steel to be installed adjacent to sidewalks or curbs.
- All landscape areas to be 100% irrigated with an underground automatic irrigation system.
- All lawn areas to be Solid Sod Bermudagrass, unless otherwise noted on the drawings.

SOLID SOD NOTES

- Fine grade areas to achieve final contours indicated. Leave areas to receive topsoil 3" below final desired grade in planting areas and 1" below final grade in turf areas.
- Adjust contours to achieve positive drainage away from buildings. Provide uniform rounding at top and bottom of slopes and other breaks in grade. Correct irregularities and areas where water may stand.
- All lawn areas to receive solid sod shall be left in a maximum of 1" below final finish grade. Contractor to coordinate operations with on-site Construction Manager.
- Topsoil shall be obtained from stockpile soil on site. In the event stockpiled topsoil is not available, imported topsoil shall be brought in. Imported topsoil shall be natural, friable soil from the region, known as bottomland soil, free from lumps, clay, toxic substances, roots, debris, vegetation, stones, containing no salt and black to brown in color.
- Contractor to coordinate with on-site Construction Manager for availability of existing topsoil.
- Plant sod by hand to cover indicated area completely. Insure edges of sod are touching. Top dress joints by hand with compost to fill voids.
- Roll grass areas to achieve a smooth, even surface, free from unnatural undulations.
- Water sod thoroughly as sod operation progresses.
- Contractor shall maintain all lawn areas until final acceptance. This shall include, but not limited to: mowing, watering, weeding, cultivating, cleaning and replacing dead or bare areas to keep plants in a vigorous, healthy condition.
- Contractor shall guarantee establishment of an acceptable turf area and shall provide replacement from local supply if necessary.
- If installation occurs between September 1 and March 1, all sod areas to be over-seeded with Winter Ryegrass, at a rate of (4) pounds per one thousand (1000) square feet.

MAINTENANCE NOTES

- The Owner, tenant and their agent, if any, shall be jointly and severally responsible for the maintenance of all landscape.
- All landscape shall be maintained in a neat and orderly manner at all times. This shall include mowing, edging, pruning, fertilizing, watering, weeding and other activities common to landscape maintenance.
- All landscape areas shall be kept free of trash, litter, weeds and other such material or plants not part of this plan.
- All plant material shall be maintained in a healthy and growing condition as is appropriate for the season of the year.
- All plant material which dies shall be replaced with plant material of equal or better value.
- Contractor shall provide separate bid proposal for one year's maintenance to begin after final acceptance.



PLANT LEGEND

| QUANTITY | PLANT TYPE | SYMBOL | PLANT TYPE |
|----------|--------------|--------|------------|
| B.C. | Bald Cypress | EL. | Elaeagnus |
| L.O. | Live Oak | | |

PLANT LIST

| TREES | BOTANICAL NAME | COMMON NAME | QTY. | SIZE | REMARKS |
|-------|--------------------|--------------|------|---------|--|
| | Quercus virginiana | Live Oak | 7 | 65 gal. | cont., 3" caliper, 15' ht., 5' spread min., matching |
| | Taxodium distichum | Bald Cypress | 6 | 65 gal. | cont., 3" caliper, 15' ht., 5' spread min., matching |

NOTE: ALL TREES TO HAVE STRAIGHT TRUNKS AND BE MATCHING WITHIN VARIETIES

| SHRUBS/GROUNDCOVER | BOTANICAL NAME | COMMON NAME | QTY. | SIZE | REMARKS |
|--------------------|-------------------|---------------------|------|--------|----------------------------------|
| | Elaeagnus pungens | Elaeagnus | 92 | 5 gal. | cont. full, 24" spread, 24" o.c. |
| | Cynodon dactylon | Common Bermudagrass | | | Provided |

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated.

LANDSCAPE TABULATIONS

SITE REQUIREMENTS
Requirements: 20% of gross site to be landscape
Total Site: 21,897 s.f.
Required Provided
4,379.4 s.f. (20%) 5,323.59 s.f. (24.31%)

STREET FRONTAGE
Requirements: 20' buffer along street frontage
(1) tree 4" cal. per 20 l.f., (8) shrubs per 20 l.f.
Westgrove Drive: 97.5 l.f.
Required Provided
(5) trees, 4" cal. (1) trees, existing refer to notes
(40) shrubs, 5 gal. (40) shrubs, 5 gal.

PARKING LOT SCREEN
Requirements: 20' ht., 3' o.c., double staggered row
Provided

PERIMETER LANDSCAPE
Requirements: 5' wide buffer, (1) 4" cal. tree and (8) shrubs per 35 l.f.
East Property Line: 224.57 l.f.
Required Provided
(7) trees, 4" cal. (7) trees, 4" cal.
(52) shrubs, 5 gal. (52) shrubs, 5 gal.

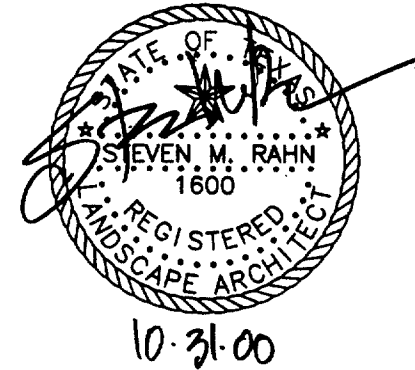
PARKING LOT - INTERIOR LANDSCAPE
Requirement: 10% of the parking area must be landscape
Parking lot: 16,846.95 s.f.
Required Provided
1,684.70 s.f. (10%) 1,724.40 s.f. (10.24%)

PARKING LOT
Requirement: (1) tree per 10 regular spaces
Total Parking: 57 spaces
Required Provided
(6) trees (6) trees, 4" cal.

01 SHRUB/GROUNDCOVER DETAIL



02 TREE PLANTING DETAIL



smr
landscape architecture
STEVEN M. RAHN, INC.
The Brewery Building
703 McKinney Ave.
Suite 438 LB 107
Dallas, Texas 75202
Tel 214.871.0063
Fax 214.871.0545
email smr@smrmail.net

| LANDSCAPE PLAN | | | | | |
|---|-------|----------|--------|-------|------|
| 4397 WESTGROVE RD | | | | | |
| TOWN OF ADDISON, TEXAS | | | | | |
| RAYMOND L. GOODSON JR., INC. CONSULTING ENGINEERS | | | | | |
| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE |
| BDA | BKR | 10.31.00 | 1"=20' | | |
| | | | | | L1.0 |