QUANTIT 20

5,545 S.F.

52 L.F.

	SHRUBS									
	SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE AND CONDITION						
	BD	DWARF BURFORD HOLLY	llex cornuta 'Burfordii nana'	5 gallon, 20"-24" Ht./18"-20" spread, full, bushy, specimen						
TURF GRASS / MISSELLANEOUS										
F.		S.F. GRASS BERMUDA GRASS	Cynodon dactylon	Solid sod						
=.		RYERSON COMMERCIAL STEEL EDGE								

		LARGE		TREES						
QUANTITY	SYMBOL	COMMON NAME		SCIENTIFIC NAME						
2	\bigcirc	CEDAR ELM	EDAR ELM Ulmus crassifolia			3" cal 4-5' s straig				
в	+++++++++++++++++++++++++++++++++++++++	CHINKAPIN OAK		Quercus muhlenbergil		3" cal 4-5' s straig				
ORNAMENTAL TREES										
QUANTITY	SYMBOL	COMMON NAME	SCIENTIFIC NAME			SIZE				
з	\bigcirc	CHEYENNE CRAPE MYRTLE	Lagerstroemia indica 'Cheyene'		30	7' Ht./3' sp 30 Gallon full , bushy				



LANDSCAPING

PART I - GENERAL

- I.I SCOPE: Provide all labor, materials and equipment for complete installation of landscaping, as indicated on the drawings and specified herein.
- 1.2 RELATED WORK SPECIFIED ELSEWHERE:
- A. Irrigation System
- В. Lawn
- Earthwork С.
- General Requirements D.
- 1.3 QUALITY ASSURANCE:
 - Provide plant materials in compliance with applicable State and Federal laws relating to inspection for diseases and insect infestation at growing site.
 - Plants are subject to inspection and approval by the Landscape Architect. Plants required for the work may be inspected and tagged at the growing site before
 - Observation at growing site does not preclude right of rejection at job site. Plants С. damaged in transit or at job site may be rejected.
 - Employ only qualified personnel familiar with required work.
- E. Off-site topsoil and topsoil on-site Testing (paid by Landscape Contractor): Provide source of off-site soil (If Required For Job) to the Owners
 - representative for the purpose of soil investigation.
 - 2. Take random representative soil samples from areas to be planted.
- 3. Test soil samples from both sources for pH, alkalinity, total soluble salts, porosity, sodium content and organic matter.
- File Certificate of Inspection of plant material by State and Federal authorities with Landscape Architect, if required by State. F.

I.4 REFERENCED STANDARDS:

- American Standard for Nursery Stock, approved 1986 by American National Standards Institute, Inc. Plant materials.
- B. Hortus Third, 1976 Cornell University Plant nomenclature.
- C. ASTM American Standard Testing Material Sharp sand.
- 1.5 PRODUCT DELIVERY, STORAGE AND HANDLING:
- A. Delivery: Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.
 - 2. Do not deliver more plant materials than can be planted in one day unless adequate storage and watering facilities are available on job site. Storage of materials and equipment at the job site will be at the risk of the landscape contractor. The owner will not be held responsible for theft or
 - 3. If balled plants cannot be planted within 24 hours after delivery to site, protect root balls by heeling in with saw dust or other approved material.
 - Protect during delivery to prevent damage to root ball or desiccation of
 - Notify Landscape Architect of delivery schedule 48 hours in advance so plant material may be observed upon arrival at job site.
 - 6. Remove rejected plant material immediately from site.
- 1.6 JOB CONDITIONS:
- A. Planting Restrictions:
 - Perform actual planting only when weather and soil conditions are suitable in accordance with locally accepted practice. In no way shall any trees, plants, ground cover or seasonal color obstruct drainage or block a 2% minimum positive slope away from buildings.
- В. Utilities
 - Determine locations of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, if required, to minimize possibility of damage to underground utilities.
 - Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.
 - Coordinate work with irrigation contractor to prevent damage to underground sprinkler system.
- 1.7 WARRANTY
 - Warranty for plants and trees shall be for one year after final acceptance. Α. Replace dead materials and materials not in vigorous, thriving condition as soon as weather permits and on notification by Owner's Rep. Replace plants, including trees, which in opinion of Landscape Architect have partially died thereby damaging shape, size, or symmetry.
 - Replace plants and trees with same kind and size as originally planted, at no cost to the Owner. Provide one-year warranty on replacement plants. These should be B. replaced at start of next planting or digging season. In such cases, remove dead trees immediately. Protect irrigation system and other piping conduit or other work during replacement. Repair any damage immediately.
 - C. Warranty excludes replacement of plants after final acceptance because of
 - injury by storm, drought, drowning, hail, freeze, insects or diseases.
- D. At the end of the warranty period, staking and guying materials if required shall be removed from the site. 1.8 MAINTENANCE:
- A. Water: Will be available on site. Provide necessary hoses and other watering equipment required to complete work.
- B. Until final acceptance, maintain plantings and trees by watering, cultivating, mowing, weeding, spraying, cleaning and replacing as necessary to keep landscape in a vigorous, healthy condition and rake bed areas as required.
- A written notice requesting final inspection and acceptance should be submitted to Landscape Architect or owners representative within seven (7) days prior to completion. At that time owner and Landscape Architect will prepare a final punch list to be reviewed with the landscape contractor.
- Following final acceptance, maintenance of plant material will become the Owner's responsibility. The Contractor shall provide Owner with a recommended maintenance program.

PART 2 - PRODUCTS

2.I PLANTS:

- Quantities: The drawings and specifications are complementary: anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan. Α.
- Plants shall be equal to well formed No. I grade of better; symmetrical, heavily В. branched with an even branch distribution, densely foliated and/or budded, and a strong, straight, distinct leader where this is characteristic of species. Plants shall possess a normal balance between height and spread. The Landscape Architect will be the final arbiter of acceptability of plant form, either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plants as specified.
- С. Plants shall be healthy and vigorous, free of disease, insect pests and their eggs, and larvae.
- D. Plants shall have a well-developed fibrous root system.
- Plants shall be free of physical damage such as scrapes, broken or split branches, scars, bark abrasions, sun scalds, fresh limb cuts, disfiguring knots, or other defects.
- Pruning of all trees and shrubs, as directed by Landscape Architect, shall be executed by Landscape Contractor at no additional cost to the Owner. F.
- Plants shall meet the sizes indicated on the Plant List. Where a size or caliper G. range is stated, at least 50% of the material shall be closer in size to the top of the range stated.
- Plants indicated "B&B" shall be balled and burlapped. Plants shall be nursery H. grown unless otherwise specified in plant list. Balls shall be firm, neat, slightly tapered and well burlapped. Non-biodegradable ball wrapping material will not be accepted. Any tree loose in the ball or with broken ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter, measured six (6") inches above ball.
- Container grown plants shall be well rooted and established in the container in which they are growing. They shall have grown in the container for a sufficient length of time for the root system to hold the planting medium when taken from the container, but not long enough to become root bound.

2.2 SOIL PREPARATION MATERIALS:

- Peat Moss: Commercial sphagnum moss or hyphum peat.
- Pre mixed soils can be used as long as samples are subm submitted with manufacturer's data and laboratory test rep C. Sandy Loam:
- Friable, fertile, dark, loamy soil, free of clay lumps, su other extraneous material and reasonably free of w
- 2. Physical properties as follows:
- Clay between 7–27 percent Silt between 28–50 percent Sand - less than 52 percent
- D. Sharp Sand: Clean, washed sand, (fine aggregate) ASTM
- 2.3 COMMERCIAL FERTILIZER:
- Fertilizer shall be delivered in manufacturer's standard co A. manufacturer's name, material weight, and guaranteed analy N-P-K analysis other than that specified may be used prov rate per square foot of nitrogen, phosphorus, and potassi specified.
- Commercial Fertilizer for Planting Beds: Complete fertiliz with minimum 8% sulfur and 4% iron plus micro-nutrients.
- Controlled-Release fertilizer planting tablets for tree pla to Agriform 20-10-15 planting tablets as manufactured by 11|pitas, California 95035 or approved equal.
- 2.4 MULCH:
- Bark mulch shall be hardwood mulch chips, ranging in size from 1/4 size, medium fine texture, shredded.

PART 3 - EXECUTION

- 3.1 CONDITION OF SURFACES:
 - New bed areas will be left within one tenth of a foot of fir trades. Contractor will be responsible for raking and smo
- В. Examine subgrade upon which work is to be performed. N Architect or owners representative of unsatisfactory conc

3.2 SHRUB PLANTING

- All shrubs to be pocket planted. Excavate planting hole Α. height of the root ball. Backfill with 1/3 (soil mix amd/or p and 1/3 sandloam.
- Plant where located, setting plants with tops of balls even compact soil carefully around each plant ball.
- С. Water each plant thoroughly with hoses to eliminate air poo
- Carefully prune plants to remove dead or broken branches hand-rake bed areas to smooth even surfaces, and mulch
- 3.3 GROUNDCOVER PLANTING
- Till 2 inches minimum of thoroughly mixed prepared soil or areas as follows:
 - l part sandy loam
 - I part peat moss I part sharp sand
- Add 4 pounds commercial fertilizer per 100 SF of be thoroughly.
- Plant where located, setting plants with tops of balls ever compact soil carefully around each plant ball.
- Water each plant thoroughly with hoses to eliminate air po
- D. Carefully prune plants to remove dead or broken branche areas to smooth even surfaces, and mulch bed areas I incl

3.4 TREE PLANTING:

- A. Stake tree locations for Owners Representative approva
- Plant ornamental trees in pits 12-inches larger than the ro В. in pits two feet greater in diameter than root ball and eq
- After excavation of tree pits, review water percolation. If tree pit does not drain adequately prepare hole for use PVC stand pipe and cover dark green. After tree is insto С. a daily basis.
- In the event rock or underground construction work or obs encountered in any plant pit excavation work to be done i alternate locations may be selected by the Landscape Ar cannot be changed the obstructions shall be removed to a six (6") inches below bottom of ball when plant is properly grade. The work of this section shall include the removal rock or underground obstructions encountered at the cost
- Prepare soil for planting by thoroughly mixing two parts sa peatmoss or other approved organic matter. If planting so the pH range of 5.5 to 7.0 add limestone or aluminum sulph E. the specified pH range.
- Backfill tree pits with a mixture of 1/2 prepared soil and F. Lightly tamp every 6-inches to fill all voids and pockets. I water thoroughly and leave water to soak in. Place fertili manufacturers recommendations. Complete backfilling and { the tree.
- Completely fill each tree saucer with mulch to a depth of G.
- Contractor shall keep trees plumb until established. Guyin maintain that plumb condition shall be at the Contractor's if trees are not plumb, the Contractor will be required to trees in a method acceptable to the Landscape Architect the Owner.
- Pruning: Prune trees to preserve the natural character o appropriate to its particular requirements in the landscape the Landscape Architect. In general, remove at least one thinning and pruning. DO NOT cut back terminal branches. plants heavier than nursery grown plants. Remove sucker badly bruised branches.

3.5 SEASONAL COLOR PLANTING:

	LAWNS	
2 SOIL PREPARATION MATERIALS:	PART I - GENERAL I.I SCOPE:	
A. Peat Moss: Commercial sphagnum moss or hyphum peat.	Furnish all labor, tools, transportation, materials, equipment, supervision, etc., required	
B. Pre mixed soils can be used as long as samples are submitted with submitted with manufacturer's data and laboratory test reports.	to adequately establish a dense lawn of permanent grasses, free from lumps and depressions as indicated by plans and specifications.	
C. Sandy Loam:	Redo any part of the area failing to show uniform cover until a dense lawn is established. The cost of miscellaneous labor and materials for topsoil, weeding, tilling, pest control, fertilizing, etc., are not separate pay items and shall be included in the bid price for	
l. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones, and other extraneous material and reasonably free of weeds and foreign	grassing.	
2. Physical properties as follows:	I.2 RELATED WORK SPECIFIED ELSEWHERE: A. Irrigation System	PRUNE D BRANCH FOLIAGE
Clay - between 7-27 percent Silt - between 28-50 percent	B. Landscaping	MAINTAI TREE SH
Sand - less than 52 percent	I.3 MAINTENANCE OF GRASS: The contractor shall maintain the grass until final acceptance. Such maintenance shall	CUTS MI
D. Sharp Sand: Clean, washed sand, (fine aggregate) ASTM C-33.	include spraying, weeding, cultivation, fertilizing, watering, disease and insect control, top dressing low spots, plus any procedures consistent with horticultural practice pacess and to insure particulture, and healthy apacs	
3 COMMERCIAL FERTILIZER:	necessary to insure normal, vigorous, and healthy grass. 1.4 JOB CONDITIONS:	
A. Fertilizer shall be delivered in manufacturer's standard container printed with manufacturer's name, material weight, and guaranteed analysis. Fertilizers with N-P-K analysis other than that specified may be used provided that the application	A. Water: Will be available on site. Provide necessary hoses and other watering equipment required to complete work.	
rate per square foot of nitrogen, phosphorus, and potassium is equal to that specified.	B. Lawn areas will be left within I/IO of a foot of finish grade by other trades. Fine grading, raking and smoothing will be the responsibility of the contractor.	
B. Commercial Fertilizer for Planting Beds: Complete fertilizer 5-10-5 element ratio with minimum 8% sulfur and 4% iron plus micro-nutrients.	1.5 SCHEDULE: A. Seeding/hydromulching – Bermudagrass: Complete only between May I to	
C. Controlled-Release fertilizer planting tablets for tree planting pits, shall be equal to Agriform 20-10-15 planting tablets as manufactured by Sierra Chemical Co.,	August 31 under favorable conditions. (warm season) B. Seeding/hydromulching - Perennial Ryegrass: Complete only between September	NOTE: TREE PITS
Milpitas, California 95035 or approved equal.	I to April 30, except at front of project, as determind by owner, under favorable climatic conditions.	SIDES AND WIDER THA
Bark mulch shall be hardwood mulch chips, ranging in size from 1/4-inch to 1-inch in	C. Sodding: Sod bermuda between March 15 and September 30. Between October 1 and March 14 overseed sod with Perennial rye under favorable conditions. (Use	WATERING
size, medium fine texture, shredded.	nursery overseeded sod, in lieu of seeding after installation, if available.) D. Qualifications: Due to unseasonable weather, the above dates may vary;	
ART 3 - EXECUTION I CONDITION OF SURFACES:	however, do not proceed with grassing operations beyond these dates without assuming full responsibility for a stand of grass.	SET TOP (3" MIN. HT FINISH GR
A. New bed areas will be left within one tenth of a foot of finish grade by other	1.6 ACCEPTANCE: The work will be accepted when a completed, undamaged stand of grass is achieved, as	
trades. Contractor will be responsible for raking and smoothing of grade. B. Examine subgrade upon which work is to be performed. Notify the Landscape	approved by the Owner's Representative.	
Architect or owners representative of unsatisfactory conditions.	PART 2 - MATERIALS 2.1 TOPSOIL:	
2 SHRUB PLANTING A. All shrubs to be pocket planted. Excavate planting hole 3" larger than the width and	A. (If specified on the plans as a requirement)Friable, fertile, dark, loamy soil, free of clay lumps, sub-soil stones, and other extraneous material and reasonable free of weeds	NOTE:
height of the root ball. Backfill with 1/3 (soil mix amd/or peatmoss), 1/3 native soil and 1/3 sandloam.	and foreign grasses. Topsoil containing dallisgrass or nutgrass shall be rejected. B. Physical properties as follows:	REFER SPECIFI
B. Plant where located, setting plants with tops of balls even with tops of beds, and compact soil carefully around each plant ball.	Clay – between 7-27 percent Silt – between 28-50 percent Sand – less than 52 percent	
C. Water each plant thoroughly with hoses to eliminate air pockets.	2.2 GRASS: A. Bermuda Grass: Extra fancy, hulled and treated, lawn type seed, delivered to	
D. Carefully prune plants to remove dead or broken branches, various tags, and hand-rake bed areas to smooth even surfaces, and mulch bed areas I inch deep.	site in original, unopened containers meeting requirements of Texas State Seed Law. Minimum purity germination 90 percent.	
.3 GROUNDCOVER PLANTING	B. "Raleigh" St. Augustine Grass: Solid Sod, live, rich, dark green in color, free of foreign grasses, weeds, nutgrass, cut with a full 3/4 inch of heavy clay	
A. Till 2 inches minimum of thoroughly mixed prepared soil or equal in all planting bed areas as follows:	covering roots. Deliver to site in 12 inch squares or 12 inch wide rolls. Do not stack for more than 24 hours between time of cutting and time of delivery.	
I. I part sandy loam I part peat moss I part sharp sand	2.3 FERTILIZER:	
Add 4 pounds commercial fertilizer per 100 SF of bed area and mix thoroughly.	Fertilizer shall be organic base, uniform in composition, dry and free flowing. Deliver fertilizer to site in original, unopened containers, each bearing manufacturer's	
B. Plant where located, setting plants with tops of balls even with tops of beds, and compact soil carefully around each plant ball.	guaranteed statement of analysis. A. First application: 12-12-12 element percentage with minimum 8% sulfur and	
C. Water each plant thoroughly with hoses to eliminate air pockets.	4% iron, plus micro nutrients. B. Second application: 3:1:2 element ratio. Nitrogen source to be a minimum 50% slow release organic nitrogen (SCU or UF) plus minimum 8% sulfur and	
D. Carefully prune plants to remove dead or broken branches and hand-rake bed areas to smooth even surfaces, and mulch bed areas I inch deep.	4% iron plus micro nutrients.	
.4 TREE PLANTING:	PART 3 - EXECUTION 3.1 PREPARATION:	
A. Stake tree locations for Owners Representative approval prior to digging.	A. Scarify lawn areas where excessive compaction is greater than 85% Standard Proctor to a depth of 4-inches by discing or rototilling. Repeat cultivation as	<u>8</u>
B. Plant ornamental trees in pits 12-inches larger than the root ball. Plant shade trees in pits two feet greater in diameter than root ball and equal to depth of root ball.	required to thoroughly loosen soil. B. Leave areas free of weeds and ready for final grading.	
C. After excavation of tree pits, review water percolation. If tree pit does not drain adequately prepare hole for use with a tree sump. Paint	C. Provide barricades around scarified areas to prevent compaction by construction vehicles.	
PVC stand pipe and cover dark green. After tree is installed, pump water out on a daily basis. D. In the event rock or underground construction work or obstructions are	3.2 FINAL GRADING: A. Remove from site and legally dispose of stones 3/4-inch and larger, sticks and other	4 0
encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Landscape Architect. Where locations	debris exposed during this operation. B. Provide finish grading leaving surface uniform without depressions and undulations, graded approximately 1-inch below paving.	 2
cannot be changed the obstructions shall be removed to a depth of not 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	C. Secure approval from the Landscape Architect prior to proceeding with grassing operation.	
rock or underground obstructions encountered at the cost of the Landscape Contractor.	3.3 HERBICIDE: Apply herbicide to remove any remaining weeds. This work is to be performed by a	8"
E. Prepare soil for planting by thoroughly mixing two parts sandy loam and one part peatmoss or other approved organic matter. If planting soil does not fall within	licensed applicator following the manufacturer's recommendations. 3.4 FERTILIZER:	
the pH range of 5.5 to 7.0 add līmestone or aluminum sūlphate to bring soil into the specified pH range.	A. Place first application with hydromulch at rate of 12 pounds per 1,000 square feet.	<u></u>
F. Backfill tree pits with a mixture of 1/2 prepared soil and 1/2 existing site soil. Lightly tamp every 6-inches to fill all voids and pockets. When pit is 2/3 full, water therewishly and large water to coak in Place factilizes planting tablets per	B. Uniformly distribute second application using a rotary type fertilizer spreader 3-4 weeks after first application at 12 pounds per 1,000 square feet. 3.5 HYDROMULCH/SEEDING:	
water thoroughly and leave water to soak in. Place fertilizer planting tablets per manufacturers recommendations. Complete backfilling and form a saucer around the tree.	A. At the time of hydromulch/seeding, soil shall be moist but not muddy, and wind velocity shall not exceed ten (10) miles per hour. Add water if required to	
 G. Completely fill each tree saucer with mulch to a depth of two inches. H. Contractor shall keep trees plumb until established. Guying and/or staking to 	moisten soil. B. Hydromulch seed uniformly at the rate of 2 pounds of Bermudagrass seed per	
maintain that plumb condition shall be at the Contractor's discretion. However, if trees are not plumb, the Contractor will be required to quy and/or stake those	1,000 square feet. C. Add tackifier to hydromulch mix for slopes 5:1 or greater at the rate of 1 lb. per	
trees in a method acceptable to the Landscape Architect at no additional cost to the Owner.	bag of mulch. D. Use a 4' x 8' batter board against bed areas.	
I. Pruning: Prune trees to preserve the natural character of the plant in a manner appropriate to its particular requirements in the landscape design as directed by the Landscape Architect. In general, remove at least one-third of wood by	3.6 MECHANICAL SEEDING: Seed uniformly at a rate of 125 pounds of Bermudagrass seed per acre. Use grass drill, brillion seeder, or viking roller.	
thinning and pruning. DO NOT out back terminal branches. Thin native grown plants heavier than nursery grown plants. Remove sucker growth and broken or badly bruised branches.	3.7 SOLID SOD:	Ma
3.5 SEASONAL COLOR PLANTING:	A. Solid Sod: Plant grass by hand, edge to edge with staggered joints. Topdress with sharp sand raked in carefully to fill joints. Roll to eliminate undulations and	/
A. Beds shall be excavated to a depth of 2 inches. Soil shall be replaced with 100% Living Earth Technology Complete Mix or equal.	provide complete soil contact.	
B. Plant where located, setting plants with tops of balls even with tops of beds, and	B. Fertilizing: Fertilize immediately after grass is planted at rate of 4 lbs.per 1,000 square foot. Repeat fertilizing at the same rate 3-4 weeks later.	E
compact soil carefully around each plant ball. C. Water each plant thoroughly with hoses to eliminate air pockets.	3.8 ESTABLISHMENT AND MAINTENANCE OF LAWN AREAS: A. Watering:	1
D. Carefully prune plants to remove dead or broken branches and hand- rake bed areas to smooth even surfaces and mulch bed areas I inch deep.	I. Water lawn areas immediately after grassing operation.	
3.6 CLEANUP:	 Continue watering as required to keep soil uniformly moist to a minimum depth of 4-inches. Be cleat to every starting people planted areas particularly in barry clay. 	Ν
During work, keep premises neat and orderly including organization of storage area. Remove trash, including debris resulting from removing weeds or rocks from planting areas, preparing beds, or planting plants from site daily as work progresses. Keep walk	3. Be alert to over-watering newly planted grass, particularly in heavy clay soils. B. Replanting/Erosion Control:	
and driveway area clean by sweeping or hosing.	I. Correct any erosion that may occur during the establishment of grass.	
END OF LANDSCAPING SECTION	2. Reseed (sod) any areas not showing sufficient growth within 3 weeks after initial grassing. Continue seeding (sodding) until a stand of grass is achieved.	
	3. A stand of grass will be defined as a uniform cover of actively growing	
	turf. C. Mowing/Weed Control:	
	l. Mow lawn areas weekly until a stand of grass is achieved. Begin mowing when the lawn reaches a height of 3-inches; set mower to cut at 2-inches. A minimum of two mowings is required.	
	A minimum of two mowings is required. 2. Weed lawn areas until acceptance, removing all foreign vegetation, either by hoeing or pulling. If approved, herbicide spot treatments may be used.	
	by noting or pulling. If approved, nerdicide spot treatments may be used. 3.9 CLEANUP: During work, keep premises neat and orderly, including organization of storage areas.	
	Remove trash, including debris resulting from removing weeds and rocks from site daily as work progresses. Keep paved areas clean by sweeping or hosing.	
	END OF LAWN SECTION	

