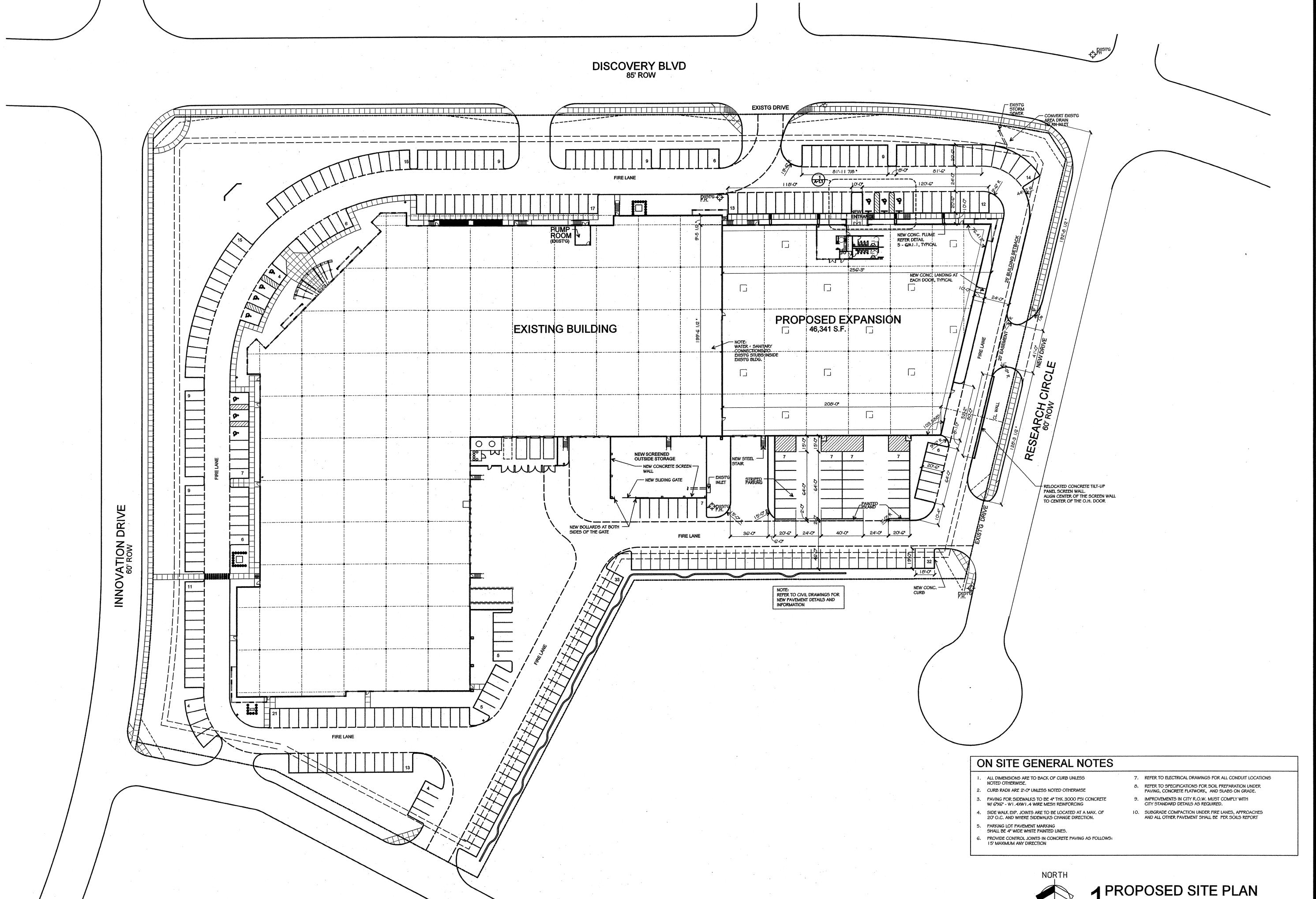
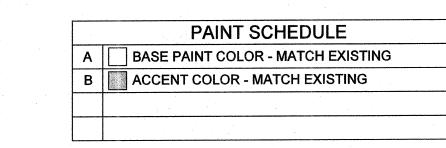
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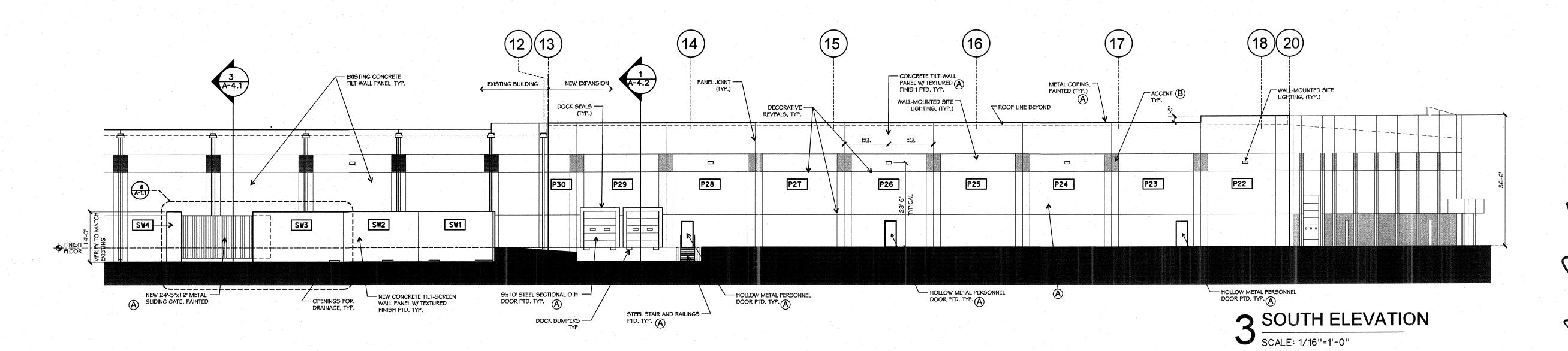
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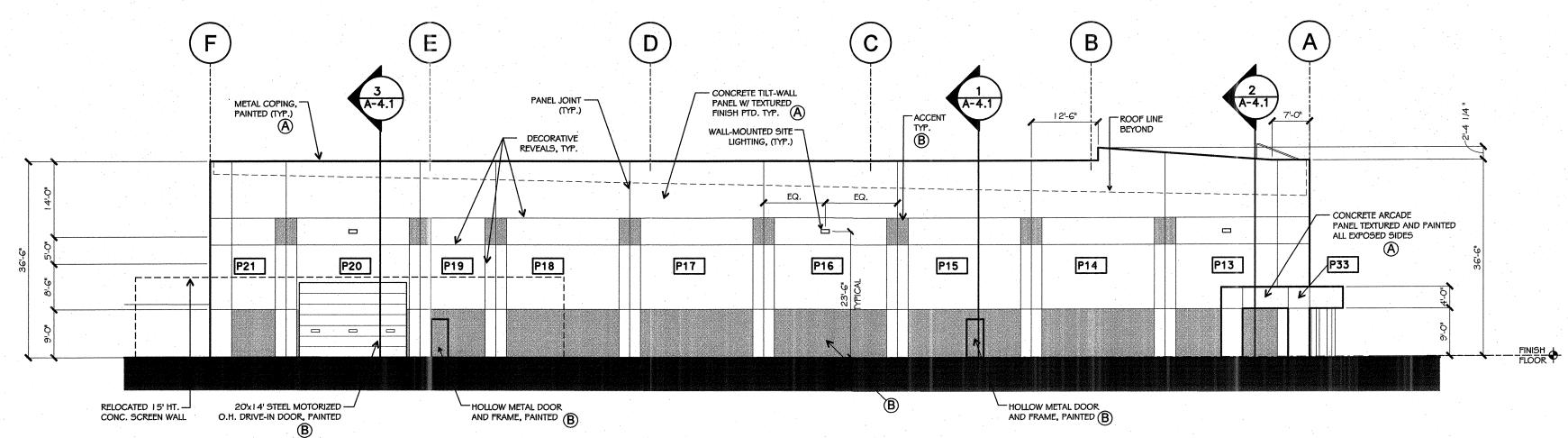


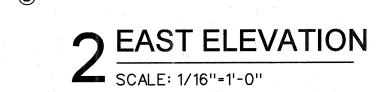
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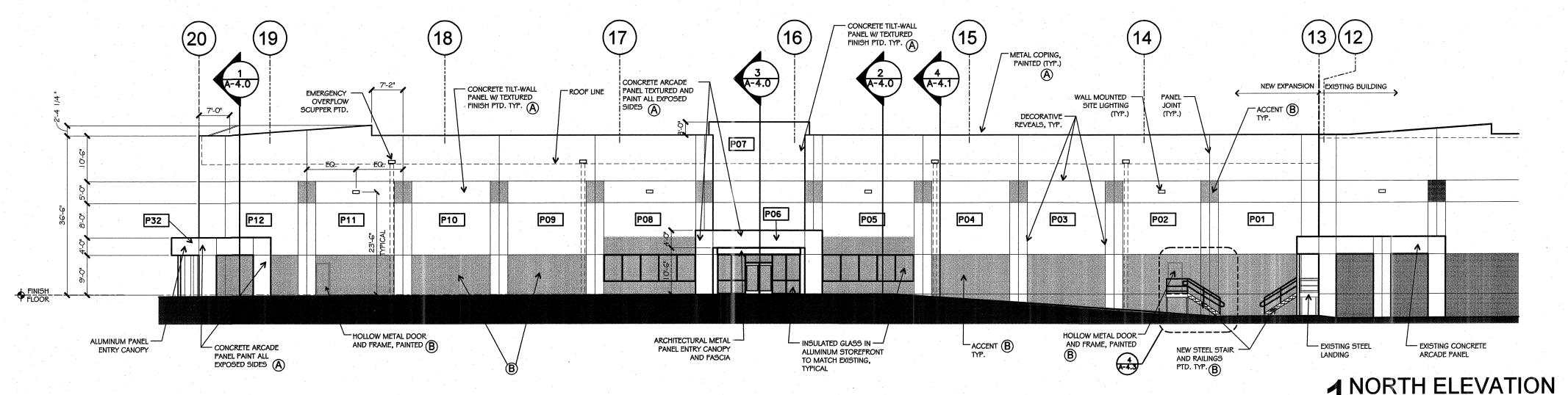








SCALE: 1/16"=1'-0"



1. EXISTING TREES TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION FROM TREE STRUCTURE DAMAGE AND COMPACTION OF SOIL UNDER AND

2. IF ANY ROOT STRUCTURE IS DAMAGED DURING ADJACENT EXCAVATION / CONSTRUCTION, NOTIFY REPRESENTATIVE IMMEDIATELY. IT IS RECOMMENDED THAT A LICENSED ARBORIST BE SECURED FOR THE TREATMENT OF ANY

3, NO DISTURBANCE OF THE SOIL GREATER THAN 4" SHALL BE LOCATED CLOSER TO THE TREE TRUNK THAN 1/2 THE DISTANCE OF THE DRIP LINE TO THE TREE TRUNK. A MINIMUM OF 75% OF THE DRIP LINE AND ROOT ZONE SHALL BE PRESERVED AT NATURAL

4. ANY FINE GRADING DONE WITHIN THE CRITICAL ROOT ZONES OF THE PROTECTED TREES MUST BE DONE WITH LIGHT MACHINERY SUCH AS A BOBCAT OR LIGHT TRACTOR. NO EARTH MOVING EQUIPMENT WITH TRACKS IS ALLOWED WITHIN THE CRITICAL

5. NO MATERIALS INTENDED FOR USE IN CONSTRUCTION OR WASTE MATERIALS ACCUMULATED DUE TO EXCAVATION OR DEMOLITION SHALL BE PLACED

6. NO EQUIPMENT MAY BE CLEANED OR TOXIC SOLUTIONS, OR OTHER LIQUID CHEMICALS, SHALL BE DEPOSITED WITHIN THE LIMITS OF THE DRIP LINE OF A TREE, INCLUDING BUT NOT LIMITED TO: PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR, PRIMERS,

7. NO SIGNS, WIRES OR OTHER ATTACHMENTS, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE

OR PARKING IS ALLOWED WITHIN THE LIMITS OF THE

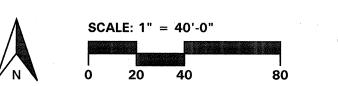
9. BORING OF UTILITIES MAY BE PERMITTED UNDER PROTECTED TREES IN CERTAIN CIRCUMSTANCES. THE MINIMUM LENGTH OF THE BORE SHALL BE THE WIDTH OF THE TREE'S CANOPY AND SHALL BE A MINIMUM

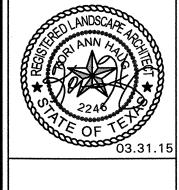
THE CRITICAL ROOT ZONE OF A TREE SHALL BE DUG BY HAND AND ENTER THE AREA IN A RADIAL MANNER.

11. ALL TREES TO BE REMOVED FROM THE SITE SHALL BE FLAGGED BY THE CONTRACTOR WITH BRIGHT RED VINYL TAPE (3" WIDTH) WRAPPED AROUND THE MAIN TRUNK AT A HEIGHT OF FOUR (4') FEET ABOVE GRADE. FLAGGING SHALL BE APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO ANY TREE REMOVAL. CONTRACTOR SHALL CONTACT OWNER'S AUTHORIZED REPRESENTATIVE WITH 72 HOURS

12. ALL TREES TO REMAIN, AS NOTED ON DRAWINGS, SHALL HAVE PROTECTIVE FENCING LOCATED AT THE TREE'S DRIP LINE. THE PROTECTIVE FENCING MAY BE COMPRISED OF SNOW FENCING, ORANGE VINYL CONSTRUCTION FENCING, CHAIN LINK FENCE OR OTHER SIMILAR FENCING WITH A FOUR (4') FOOT APPROXIMATE HEIGHT. THE PROTECTIVE FENCING SHALL BE LOCATED AS INDICATED ON THE TREE

COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR PRUNE ANY PORTION OF THE DAMAGED TREE WITHOUT THE PRIOR APPROVAL BY THE







job no 0426 sheet

Total site: 445,662 s.f.

44,566 s.f. (10%)

PARKING LOT LANDSCAPING 5% to be landscaped.

> Total parking area: 123,057 s.f. Total parking spaces: 332 spaces

6,153 s.f. (5%) 7,441 s.f. (6%) (17) trees, 3" cal. (11) small trees

**HYDROMULCH NOTES** 

INSTALLATION.

1. CONTRACTOR SHALL SCARIFY, RIP AND LOOSEN ALL AREAS TO BE HYDROMULCHED TO A MINIMUM DEPTH

OF 4" PRIOR TO TOPSOIL AND HYDROMULCH

BERMUDAGRASS SEED SHALL BE EXTRA HULLED AND

TREATED LAWN TYPE, SHALL BE DELIVERED TO THE

SITE IN ITS ORIGINAL UNOPENED CONTAINER AND

WOOD CELLULOSE FIBER, DELIVERED TO THE SITE IN

ITS ORIGINAL UNOPENED CONTAINER AS

ORIGINAL UNOPENED CONTAINER AND SHALL BE

'TERRO-TACK ONE', AS MANUFACTURED BY

OF TWO (2) POUNDS PER ONE THOUSAND (1000)

AND MAY 1, ALL HYDROMULCH AREAS TO BE WINTER

RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE

THOUSAND (1000) SQUARE FEET. CONTRACTOR

3. FIBER SHALL BE ONE HUNDRED PERCENT (100%)

4. FIBER TACK SHALL BE DELIVERED TO THE SITE IN ITS

5. HYDROMULCH WITH BERMUDAGRASS SEED AT A RATE

6. USE A 4'X8' BATTER BOARD AGAINST ALL BED AREAS.

7. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1

SHALL MEET STATE LAW REQUIREMENTS.

MANUFACTURED BY 'CONWEB' OR EQUAL.

GROWERS, INC. OR EQUAL.

AS PART OF THIS CONTRACT.

PRIOR TO FINAL ACCEPTANCE.

LANDSCAPE TABULATIONS

One (1) tree, 3" cal. per 30 l.f.

DISCOVERY BLVD.: 883 I.f.

RESEARCH CIRCLE: 407 I.f.

**INNOVATION DRIVE: 569 I.f.** 

THE CITY OF ROCKWALL, TEXAS

STREET LANDSCAPING

Required

Required

Required

(28) trees, 3" cal.

(14) trees, 3" cal.

(19) trees, 3" cal.

PARKING LOT LANDSCAPING

(17) trees, 3" cal.

SQUARE FEET.

CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.

**EXISTING LAWN TO** 

- REPLACE DISTURBED

**BUR OAK** 

(1) EXISTING

FOSTER HOLLY

TO REMAIN

(3) EXISTING

TO REMAIN

LAWN SOLID SOD

BERMUDAGRASS.

(7) EXISTING

TO REMAIN

**EASTERN REDCEDAR** 

**PLANT LIST** 

CE

CM

ERC

SYMBOL BOTANICAL NAME

TREES

Taxodium distichum

Quercus macrocarpa

Juniperus virginiana

Quercus virginiana Quercus shumardii

Myrica pusilla Cynodon dactylon

Lagerstroemia indica 'Natchez'

SHRUBS/GROUNDCOVER

Ulmus crassifolia

**EXISTING SHRUBS** 

TO REMAIN

EASTERN REDCEDAR

TO REMAIN

DISCOVERY BLVD

- BALD CYPRESS

**EXISTING SHRUBS** 

TO REMAIN

EXISTING BUILDING

(5) EXISTING

**CEDAR ELM** 

TO REMAIN

(2) EXISTING

- CEDAR ELM

TO REMAIN

(2) EXISTING

TO REMAIN

BALD CYPRESS

TO REMAIN

(3) EXISTING

TO REMAIN

**EXISTING GRAVEL** 

TO REMAIN

EXISTING LANDSCAPE

IN THIS AREA TO REMAIN

(2) EXISTING

TO REMAIN

LIVE OAK

TO REMAIN

-\ BUR OAK

- RED OAK

EXISTING SHRUBS

TO REMAIN

(7) EXISTING

TO REMAIN

CREPE MYRTLE

(7) EXISTING

TO REMAIN

- BALD CYPRESS

(1) EXISTING

LIVE OAK -

TO REMAIN

(8) EXISTING

TO REMAIN

(4) EXISTING

CREPE MYRTLE

(2) EXISTING

TO REMAIN

(2) EXISTING

LIVE OAK

(1) EXISTING

TO REMAIN

LIVE OAK

EXISTING SHRUBS

(3) EXISTING

TO REMAIN

TO REMAIN

(1) EXISTING

TO REMAIN

**EXISTING GRAVEL** 

- EASTERN REDCEDAR

(2) EXISTING

TO REMAIN

BALD CYPRESS

TO REMAIN

FOSTER HOLLY

TO REMAIN

(1) EXISTING

TO REMAIN

- LIVE OAK

(3) EXISTING

BALD CYPRESS TO REMAIN **EASTERN REDCEDAR** 

EXISTING SHRUBS

TO REMAIN

(3) EXISTING

RED OAK -

TO REMAIN

TO REMAIN 🔉

LIVE OAK

BUR OAK TO

TO REMAIN

(2) EXISTING

**BALD CYPRESS** 

TO REMAINS

(2) EXISTING

**RED OAK** 

TO REMAIN

) BC ON N

(1) EXISTING

TO REMAIN

BALD CYPRESS

4) EXISTING

TO REMAIN

BUR OAK

TO REMAIN \*

**CREPE MYRTLE** 

(3) EXISTING

TO REMAIN

BALD CYPRESS

- LIVE OAK

(1) EXISTING

TO REMAIN

REMAIN, REPAIR AND

AREAS AS NECESSARY,

**DUE TO CONSTRUCTION** 

- LIVE OAK

TO REMAIN

**EXISTING GRAVEL** 

TO REMAIN, REPAIR

AND REPLACE AS

CONSTRUCTION

СМ

(5) EXISTING

- TO REMAIN

CEDAR ELM

**NECESSARY DUE TO** 

LAWN HYDROMULCH

(2) EXISTING

TO REMAIN

(2) EXISTING

- BALD CYPRESS

BC

2"-4" DIA., 4" DEPTH

WITH WEED BARRIER

FABRIC, TYP.

TYP.

'CINNAMON' RIVER ROCK

LAWN SOLID SOD

BERMUDAGRASS,

2"-4" DIA., 4" DEPTH

WITH WEED BARRIER

WALL AND B.O.C.

'CINNAMON' RIVER ROCK

FABRIC, TYP. BETWEEN

TO REMAIN

(1) EXISTING

24" MULCH

BED TYP.

AT B.O.C.

RED OAK

(1) EXISTING

RED OAK

LAWN HYDROMULCH

BERMUDAGRASS.

(2) EXISTING

TO REMAIN

(1) EXISTING

TO REMAIN

container grown, 12' ht., 4' spread, 4' branching ht., matching

container grown, 12' ht., 4' spread, 4' branching ht., matching

container grown, 12' ht., 4' spread, 4' branching ht., matching

B&B or container grown, full to base, 3' spread

container full, 20" spread, 36" o.c.

4 3" cal. container grown, 12' ht., 4' spread, 4' branching ht., matching

B&B or container grown, 12' ht., 4' spread, 4' branching ht., matching

container grown, 3-5 trunk, no cross canes, 8' ht., 4' spread, matching

- CREPE MYRTLE

**EXISTING LAWN TO** 

REMAIN, REPAIR AND

REPLACE DISTURBED

AREAS AS NECESSARY, AREAS AS NECESSARY,

RED OAK

TO REMAIN

TO REMAIN

- BUR OAK

TO REMAIN

BERMUDAGRASS,

RED OAK

so

1 80

DWM

LAWN SOLID SOD

BERMUDAGRASS, .

EXPANSION

CE

**COMMON NAME** 

Crepe Myrtle 'Natchez'

Eastern Redcedar

Shumard Red Oak

Dwarf Wax Myrtle

Common Bermudagrass

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.

Bald Cypress

Bur Oak

Cedar Elm

Live Oak

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

 $\mathcal{X} [1]$ 

QTY. SIZE

REMARKS

LAWN SOLID SOD

BERMUDAGRASS,

2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.

3. CONTRACTOR SHALL PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.

CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL FINISHED GRADE IN PLANTING AREAS AND 1" BELOW FINAL FINISHED **GRADE IN LAWN AREAS.** 

ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS, WALKS, OR CURBS. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE IT INTERSECTS WALKS AND CURBS.

6. TOP OF MULCH SHALL BE 1/2" MINIMUM BELOW THE TOP OF WALKS AND CURBS.

7. ALL LAWN AREAS SHALL BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLERS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND

INSTALLED BY A LICENSED IRRIGATOR. 9. CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING

UNIT PRICES FOR ALL MATERIAL PROVIDED.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.

## **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 SUCH ACTIVITIES COMMON TO LANDSCAPE MAINTENANCE.

3. 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

CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

# **GENERAL LAWN NOTES**

CONTRACTOR SHALL COORDINATE OPERATIONS AND AVAILABILITY OF EXISTING TOPSOIL WITH ON-SITE CONSTRUCTION MANAGER.

2. CONTRACTOR SHALL LEAVE LAWN AREAS 1" BELOW FINAL FINISHED GRADE PRIOR TO TOPSOIL INSTALLATION.

. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED ON CIVIL PLANS. 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.

4. ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT PRIOR TO LAWN INSTALLATION.

5. CONTRACTOR SHALL REMOVE ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. PRIOR TO PLACING TOPSOIL AND LAWN INSTALLATION.

6. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.

7. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

1. PLANT SOD BY HAND TO COVER INDICATED AREAS COMPLETELY. ENSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL

2. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.

AND MARCH 1, OVER-SEED BERMUDAGRASS SOD WITH WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.

(19) trees, 3" cal.

(28) trees, 3" cal.

(14) trees, 3" cal.

(19) trees, 3" cal.

SITE LANDSCAPING 10% of the total site shall be landscaped for LIGHT INDUSTRIAL. 50% of the total requirements shall be located in the

One (1) tree, 3" cal. per 20 parking spaces.

Total parking spaces: 332 spaces

Total site: 10.23 AC; 445,662 s.f.

Required 44,566 s.f. (10%) 22,283 s.f. (50%)

CCR REQUIREMENTS **ROCKWALL TECHNOLOGY PARK** 

SITE REQUIREMENTS 1. 10% of the site area to be landscaped.

92,559 s.f. (21%)

One (1) tree, 3" cal. per 20 parking spaces. One (1) small tree per 30 parking spaces.

> (19) trees, 3" cal. (16) small trees

**SOLID SOD NOTES** 

3. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.

4. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1



Suite 501

4245 North Central Expv sheet

Dallas, Texas 75205 • 214.865.7192 office

job no 0426

S S

## 1.1 REFERENCED DOCUMENTS

A. Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

## 1.2 DESCRIPTION OF WORK

- A. Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:
- 1. Planting (trees, shrubs and grasses)
- 2. Bed preparation and fertilization
- 3. Notification of sources
- 4. Water and maintenance until final acceptance
- Guarantee

### 1.3 REFERENCE STANDARDS

- A. American Standard for Nursery Stock published by American Association of Nurserymen: 27 October 1980, Edition: by American National Standards Institute, Inc. (Z60.1) - plant
- B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.
- C. Texas Association of Nurserymen, Grades and Standards
- D. Hortis Third, 1976 Cornell University

## 1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

A. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel and crushed stone. Samples shall be approved by Owner's Authorized Representative before use on the project.

## 1.5 JOB CONDITIONS

- A. General Contractor to complete the following punch list: Prior to 1.7 QUALITY ASSURANCE Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below final finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the final finish grade of sidewalks, drives and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- B. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

## 1.6 MAINTENANCE AND GUARANTEE

## A. Maintenance:

- 1. The Landscape Contractor shall be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show healthy growth and satisfactory foliage conditions.
- 2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary
- 3 A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by the Owner's Authorized Representative will be completed prior to written acceptance.

# B. Guarantee:

- 1. Trees, shrubs and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry have been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
- a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
- b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises 1.8 PRODUCT DELIVERY, STORAGE AND HANDLING immediately.
- c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and re-inspected for full compliance with the 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 at least twice a week during dry periods and cultivate beds once a month after final acceptance.
- 3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.
- 4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a complete, undamaged condition and there is a stand of grass in all lawn areas. At that time, the Owner will assume maintenance on the accepted work.
- C. Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting. In the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense to the Landscape Contractor.

- A. General: Comply with applicable federal, state, county and local regulations governing landscape materials and work.
- B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.
- C. Selection of Plant Material: 1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will ensure the purchased materials will meet and / or

exceed project specifications.

- 2. Substitutions: Do not make plant material substitutions. If the specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material. At the time bids are submitted, the Contractor is assumed to have located the materials necessary to complete the job as
- 3. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules
- 4. Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches above ground for trees up to and including 4" caliper size, and twelve inches above ground for larger sizes. Measure main body of all plant material of height and spread dimensions,

## do not measure from branch or root tip-to-tip.

- 5. Owner's Authorized Representative shall inspect all plant material with requirements for genus, species, cultivar / variety size and quality.
- 6. Owner's Authorized Representative retains the right to further inspect all plant material upon arrival to the site and during installation for size and condition of root balls and root systems, limbs, branching habit, insects, injuries and
- 7. Owner's Authorized Representative may reject unsatisfactory or defective material at any time during the process work. Remove rejected materials immediately from the site and replace with acceptable material at no additional cost to the Owner. Plants damaged in transit or at job site shall be rejected.

## A. Preparation

- Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape and future development.
- 2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

- Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored
- Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available
- 3. Protect root balls by heeling in with sawdust or other approved moisture retaining material if not planted within 24 hours of delivery.
- balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport. 5. Notify Owner's Authorized Representative of delivery schedule 72 hours in advance job site.

4. Protect plants during delivery to prevent damage to root

- 6. Remove rejected plant material immediately from job site.
- 7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

## 2.1 PLANTS

PART 2 - PRODUCTS

- A. General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Owner's Authorized Representative and his decision as to their acceptability shall be final.
- B. Quantities: The drawings and specifications are complimentary. 2.3 MISCELLANEOUS MATERIALS 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.
- C. Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae, and are to be of specimen quality.
- D. Approval: All plants which are found unsuitable in growth, or are in any unhealthy, badly shaped or undersized condition will be rejected by the Owner's Authorized Representative either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plant as

## specified at no additional cost to the Owner.

- E. Trees shall be healthy, full-branched, well-shaped, and shall meet the minimum trunk and diameter requirements of the plant schedule. Balls shall be firm, neat, slightly tapered and well wrapped in burlap. Any tree loose in the ball or with a broken PART 3 - EXECUTION root ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter. 3.1 BED PREPARATION & FERTILIZATION measured six (6") inches above ball. (Nomenclature confirms to the customary nursery usage. For clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.)
- F. Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect prior to final acceptance, shall be executed by the Landscape Contractor at no additional cost to the Owner.

## 2.2 SOIL PREPARATION MATERIALS

### A. Sandy Loam:

- 1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallasgrass or Nutgrass shall be rejected.
- 2. Physical properties as follows: a. Clay - between 7-27 percent
- b. Silt between 15-25 percent c. Sand - less than 52 percent
- 3. Organic matter shall be 3%-10% of total dry weight.
- 4. If requested, Landscape Contractor shall provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.
- B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of 3.2 INSTALLATION course and fine textured material.
- C. Premixed Bedding Soil as supplied by Vital Earth Resources. Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved
- D. Sharp Sand: Sharp sand must be free of seeds, soil particles and
- E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
- F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.
- G. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulfur and 4% iron, plus
- H. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

- Steel Edging: 3/16" x 4" x 16' dark green, DURAEDGE® steel landscape edging manufactured by The J.D. Russell Company under its trade name DURAEDGE Heavy Duty Steel.
- B. Staking Material for Shade Trees: refer to details.
- C. Gravel: Washed native pea gravel, graded 1 inch to 1-1/2 inch.
- D. Filter Fabric: 'Mirafi Mirascape' by Mirafi Construction Products available at Lone Star Products, Inc., (469) 523-0444 or approved equal.
- E. River Rock: 'Colorado' or native river rock, 2" 4" dia.

## F. Decomposed Granite: Base material shall consist of a natural material mix of granite aggregate not to exceed 1/8" diameter in size and shall be composed of various stages of decomposed

- A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.
- B. All planting areas shall be conditioned as follows:

thousand (1,000) square feet.

- Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per Manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one
- 2. All planting areas shall receive a two (2") inch layer of specified mulch.
- 3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

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.

- A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.
- Plant materials shall be delivered to the site only after the beds are prepared and areas are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds 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 Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.
- Position the trees and shrubs in their intended location as per
- D. Notify the Owner's Authorized Representative for inspection and approval of all positioning of plant materials.
- 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 plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.
- Shrub and tree pits shall be no less than twenty-four (24") inches wider than the lateral dimension of the earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over three-quarter (3/4") inch in diameter. Plants should be thoroughly moist before removing 3.3 CLEANUP AND ACCEPTANCE

G. Dig a wide, rough sided hole exactly the same depth as the

H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another END OF SECTION

location or have drainage added. Install a PVC stand pipe per

height of the ball, especially at the surface of the ground. The

sides of the hole should be rough and jagged, never slick or

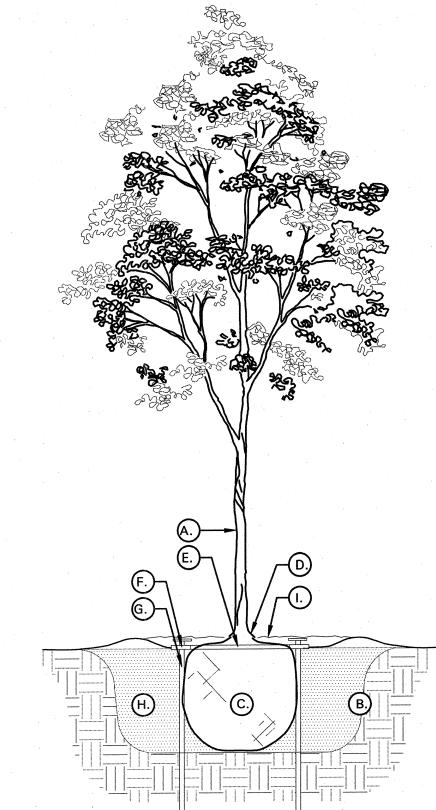
- tree planting detail as approved by the Landscape Architect if the percolation test fails.
- Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top  $\frac{1}{3}$  of the ball, as well as all nylon, plastic string and wire. Container trees will usually be root bound, if so follow standard nursery practice of 'root scoring'.
- J. Do not wrap trees.
- K. Do not over prune.
- Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.
- M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.
- N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. 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 the 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.
- O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure trees against seasonal prevailing winds.
- P. Pruning and Mulching: Pruning shall be directed by the Landscape Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by the National Arborist Association.
- 1. Dead wood, suckers, broken and badly bruised branches shall be removed. General tipping of the branches is not permitted. Do not cut terminal branches.
- 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 organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

## Q. Steel Curbing Installation:

- 1. Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and obtain Owners approval prior to
- 2. All steel curbing shall be free of kinks and abrupt bends.
- 3. Top of curbing shall be ½" maximum height above final
- 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 or curbs. 6. Cut steel edging at 45 degree angle where edging meets

# sidewalks or curbs.

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 so that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing them at end of each work day.



TREE PLANTING DETAIL NOT TO SCALE

# TREE PLANTING DETAIL LEGEND **AND NOTES**

- A. TREE: TREES SHALL CONFORM WITH LATEST AMERICAN STANDARD FOR NURSERY STOCK. www.anla.org
- B. TREE PIT: WIDTH TO BE AT LEAST TWO (2) TIMES THE DIAMETER OF THE ROOT BALL CENTER TREE IN HOLE & REST ROOT BALL ON UNDISTURBED NATIVE
- C. ROOT BALL: REMOVE TOP 1/3 BURLAP AND ANY OTHER FOREIGN OBJECT; CONTAINER GROWN STOCK TO BE INSPECTED FOR GIRDLING ROOTS. D. ROOT FLARE: ENSURE THAT ROOT FLARE IS EXPOSED, FREE FROM MULCH,
- ROOT FLARE IS NOT APPARENT. ROOTBALL ANCHOR RING: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. PLACE ROOTBALL ANCHOR RING ON BASE OF ROOTBALL, TRUNK SHOULD BE IN THE CENTER OF THE

AND AT LEAST TWO INCHES ABOVE

GRADE. TREES SHALL BE REJECTED

WHEN GIRDLING ROOTS ARE PRESENT &

- F. 'U' BRACKET.
- G. NAIL STAKE: REFER MANUFACTURER'S GUIDELINES FOR SIZING. INSTALL NAIL STAKES WITH HAMMER OR MALLET FIRMLY INTO UNDISTURBED GROUND. DRIVE NAIL STAKES FLUSH WITH "U" BRACKET ADJACENT TO ROOTBALL (DO NOT DISTURB ROOTBALL).

H. BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.

DOUBLE SHREDDED

- HARDWOOD MULCH 2 INCH SETTLED THICKNESS, WITH 2" HT. WATERING RING; ENSURE THAT ROOT FLARE IS EXPOSED. BELOW GROUND STAKE SHOULD NOT BE VISIBLE. J. TREE STAKES:
  - **AVAILABLE FROM:** Tree Stake Solutions ATTN: Jeff Tuley (903) 676-6143

TREE STAKE SOLUTIONS 'SAFETY

STAKE' BELOW GROUND MODEL

jeff@treestakesolutions.com

www.treestakesolutions.com

K. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A COPY MANUFACTURER'S **SPECIFICATIONS** PRIOR INSTALLATION OF TREE STAKES. CONTRACTOR SHALL ADHERE TO MANUFACTURER'S INSTALLATION GUIDELINES, SPECIFICATIONS, AND OTHER REQUIREMENTS FOR TREE STAKE INSTALLATION.

### SHRUBS / GROUNDCOVER; REFER TO LANDSCAPE PLAN **TOPDRESS MULCH PER** SPECIFICATIONS; 2" MINIMUM -SETTLED THICKNESS TOP OF MULCH 1/2" 3/16" X 4" GREEN STEEL EDGING, MINIMUM BELOW TOP OF -STAKES ON INSIDE; EDGING SHALL CONCRETE WALK / CURB BE 1/2" MAXIMUM HEIGHT ABOVE FINISH GRADE SCARIFY SIDES --LAWN / FINISH GRADE CONCRETE WALK -かんしょっからい **POCKET PLANTING** NOT ALLOWED PREPARED SOIL MIX PER NO STEEL EDGING SHALL SPECIFICATIONS; TILL 6" MINIMUM BE INSTALLED ALONG OF PREPARED SOIL MIX INTO SIDEWALKS OR CURBS 6" DEPTH OF EXISTING SOIL REFER TO LANDSCAPE PLAN -NATIVE SOIL FOR SPACING ROOTBALL DO NOT DISTURB

O2 SHRUB / GROUNDCOVER DETAIL NOT TO SCALE



# LANDSCAPE SPECIFICATIONS AND DETAILS

4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

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	LIGHT FIXTURE	SCHE	DULI			
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TYPE	DESCRIPTION	VOLTAGE	LAMPS	WATTAGE	NOTES	
	HE WILLIAMS GL-4-854T5H-EB4-4-UNV		(8)F54WT5/		MOUNT BOTTOM OF FIXTURES	
Α	FLUORESCENT HIGH BAY W/ 8 LAMPS, 2 ELECTRONIC BALLASTS & WHITE	120/277	741/ECO	458	EVEN W/ BOTTOM OF BAR JOIST	
	FINISH				PROVIDE UNISTRUT FOR MTG	
	LUSIO ES2-UL-6MS-40-WIDE-NL-MBR-277-CORDN-EMBN	277	LED	341	MOUNT BOTTOM OF FIXTURES	
A-ALT	LED HIGH BAY W/ ALUMINUM HOUSING, 6 LED MODULES, 4000K, WIDE		INCLUDED		EVEN W/ BOTTOM OF BAR JOISTS	
	DISTRIBUTION, NO LENS, MOUNTING BRACKET & ALUMINUM FINISH				PROVIDE UNISTRUT FOR MTG	
	HE WILLIAMS 50G-S24-332-S-A12125-EB3-UNV	120/277	(3)F32T8/			
В	FLUORESCENT TROFFER W/ 3 LAMPS, 1 ELECTRONIC BALLAST, .125		741/ECO	90		
	THICK PRISMATIC LENS & WHITE FINISH					
	HE WILLIAMS 50G-S24-332-S-A12125-EB3-UNV-EM	<u>, , , , , , , , , , , , , , , , , , , </u>	(3)F32T8/		BATTERY PACK IS UNSWITCHED	
BE	FLUORESCENT TROFFER W/ 3 LAMPS, 1 ELECTRONIC BALLAST, .125	120/277	741/ECO	90		
	THICK PRISMATIC LENS, EMERGENCY BATTERY PACK & WHITE FINISH					
	HE WILLIAMS 17-4-232-A-EB2-UNV		(2)F32T8/			
С	FLUORESCENT WRAP AROUND W/ 2 LAMPS, 1 ELECTRONIC BALLAST &	120/277	741/ECO	60		
Ç	WHITE FINISH	LUILIT				
	HE WILLIAMS 50F-S24-232-S-A12125-EB3-UNV		(2)F32T8/			
D	FLUORESCENT TROFFER W/ 3 LAMPS, 1 ELECTRONIC BALLAST, .125	120/277	741/ECO	60		
,	THICK PRISMATIC LENS & WHITE FINISH	120/2//	74000			
	HE WILLIAMS 50F-S24-332-S-A12125-EB3-UNV-EM		(2)F32T8/		BATTERY PACK IS UNSWITCHED	
DE		120/277	741/ECO	90	BATTERT FACR 13 GNOWN CHED	
UE	FLUORESCENT TROFFER W/ 3 LAMPS, 1 ELECTRONIC BALLAST, .125 THICK PRISMATIC LENS, EMERGENCY BATTERY PACK & WHITE FINISH	120/2/1	/4//LCO	30		
	PHILIPS CHLORIDE CNM75-C-2-IC-BM-SMMP-SKIT				MOUNT SUPPORT PLATE ON	
-		120/277	INCLUDED	75	COLUMN AT 25' A.F.F.	
E	EMERGENCY EGRESS LIGHT W/ 2 HEADS, NICKEL CADMIUM BATTERY,	120/2/1	INCLUDED	75	COLONIN AT 25 A.T.J.	
	MOUNTING PLATE & WHITE FINISH		(1)F32TBX/			
_	HE WILLIAMS PV60-132T-CS-MWT-EB1-UNV	120/277	741/4/ECO	32		
F	FLUORESCENT DOWN LIGHT W/ 1 LAMP, ELECTRONIC BALLAST, WHITE	1201211	141/4/ECO	32		
	TRIM RING & SEMI SPECULAR CLEAR REFLECTOR		(A)Egottov/		DATTERY DACK IS LINEWITCHED	
	HE WILLIAMS PV60-132T-CS-MWT-AC/CGS-EB1-UNV-EM	400/077	(1)F32TBX/	1	BATTERY PACK IS UNSWITCHED	
G	FLUOR DOWN LIGHT W/ 1 LAMP, ELECTRONIC BALLAST, WHT TRIM RING,	120/277	741/4/ECO	32		
	SEMI SPEC CLEAR REFLECTOR, EMERG BATTERY PACK & CLEAR LENS		/OUNTEDOE		MOUNT FINTURES AT SAME	
	PHILIPS CHLORIDE DE1-EM-O-WH	400/077	(2)WEDGE		MOUNT FIXTURES AT SAME	
Н	HALOGEN EMERGENCY EGRESS FIXTURE W/ 2 LAMPS, POLYCARBONATE	120/277	BASE/4W	8	HEIGHT AS EXISTING. COORD	
<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	HOUSING, EMERGENCY BATTERY PACK & WHITE FINISH			<del></del>	W/ ARCH PRIOR TO ROUGH-IN	
2.2	PHILIPS HADCO PA31-S-W-B-4-320H-H-H	<u> </u>	(1)MVR400/	العقاق	MOUNT FIXTURES AT SAME	
K	METAL HALIDE WALL MOUNT W/ 1 LAMP, PULSE START BALLAST, TYPE IV	277	HOR/BT28	465	HEIGHT AS EXISTING. COORD	
	DISTRIBUTION, HOUSE SIDE SHIELD & WHITE FINISH				W/ ARCH PRIOR TO ROUGH-IN	
	PHILIPS CHLORIDE CCTXL-R-1-R-W-H	rigging age to the continued	LED		MOUNT BOTTOM OF SIGN AT 24"	
X	LED EXIT SIGN W/ 2 REMOTE HEADS, THERMOPLASTIC HOUSING, RED	120/277	INCLUDED	5/12	ABOVE THE TOP OF DOOR	
	LETTERS, EMERGENCY BATTERY PACK & WHITE FINISH				FRAME. FIXTURE IS UNSWITCHE	
	PHILIPS CHLORIDE CCXL-3-R-W		LED		FIXTURE IS UNSWITCHED	
X1	LED EXIT SIGN W/ THERMOPLASTIC HOUSING, RED LETTERS, EMERG	120/277	INCLUDED	5		
	BATTERY PACK & WHITE FINISH					

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		LOAD			
CCT	SERVES	(KVA)	SWITCH	FUSE	FEEDER
1	NORTH BUS DUCT	265.9	400/3	400	2 SETS (4#3/0,1#3G., 2"C.)
2	SOUTH BUS DUCT	265.9	400/3	400	2 SETS (4#3/0,1#3G., 2°C.)
3	PANEL'ACC'	628.2	1200/3	1000	3 SETS (4#400KCMIL, 1#2/0G., 3°C.)
4	PANEL'HC'	72.7	200/3	200	4#3/0,1#6G., 2°C.
5	TRANSFORMER T-LC	10.1	200/3	125	3#1,1#6G., 1 1/4°C.
"Ball"	<del> </del>	0.0	800/3	T	<u> </u>

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	O AMPS, RMS, SYM, INTEG			
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		LOAD	BREAKER	
CCT	SERVES	(KVA)	FRAME/POLES/TRIP	FEEDER
1	RTU-30	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
2	RTU-31	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
3	RTU-32	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
4	RTU-33	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
5	RTU-34	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
6	RTU-35	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
7	RTU-36	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
8	RTU-37	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
9	RTU-38	69.8	225/3/110	3#1,1#6G., 1 1/4"C.
10	SPACE	0.0	225/3/	
11	SPACE	0.0	225/3/	
12	SPACE	0.0	225/3/	
13	SPACE	0.0	225/3/	
14	SPACE	0.0	225/3/	

Consulting Engineers 4140 LEMMON AVE. SUITE 260, LB 110 DALLAS, TEXAS 75219-3763 PH. (214) 520-7799 FAX. (214) 520-7897 TEXAS REGISTERED ENGINEERING FIRM F-33

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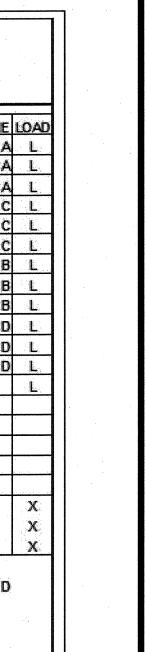
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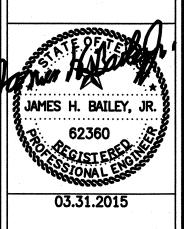
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40,000 AMPS RMS SYM I.C. INTEGRATED EQUIPMENT RATING PANEL 'HC' 480Y/277VOLTS, 3 PHASE, 4 WIFE 225 AMPS MAIN LUGS ONLY 
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SPM EXPANSION ROCKWALL, TEXAS

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