

ATTN: DAVID HERMONAT

PHONE: 972-478-4388

12/01/15 1"=20'

AGG

ADR

ATTN: JAMES BENTON

PHONE: (972) 965-4323

PHONE: (972) 235-3031



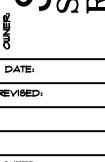
Case No. SP2015-024

FRANCIS COMMERCIA

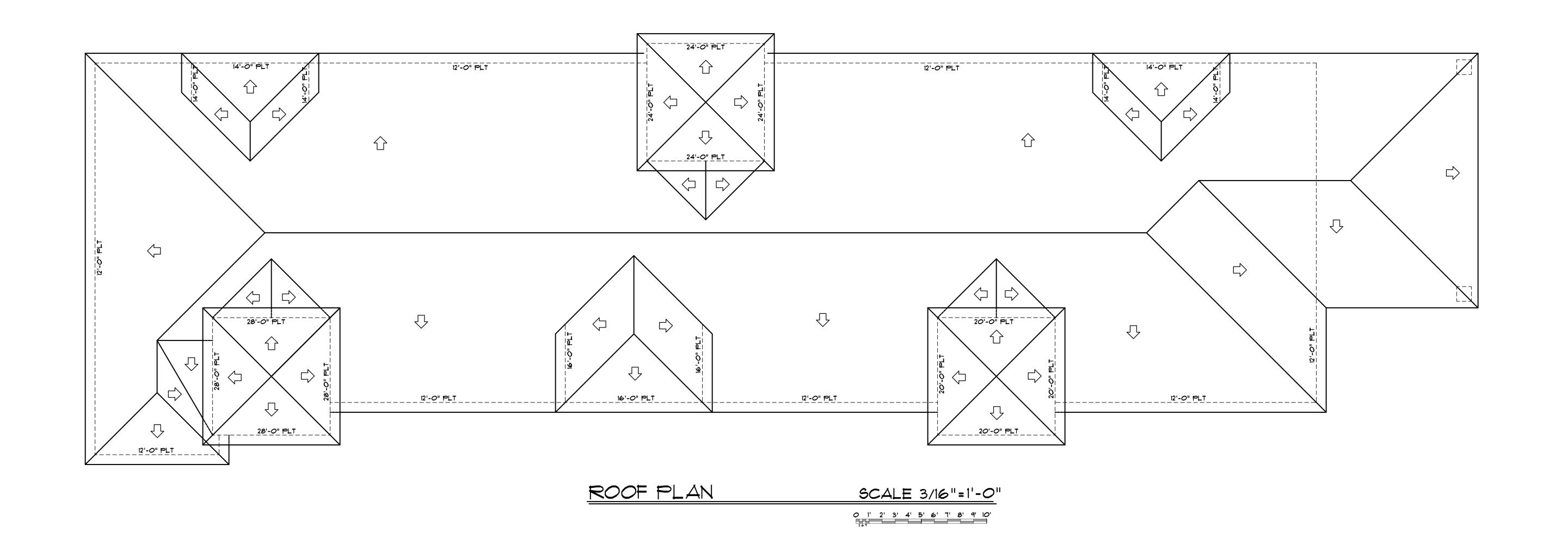
LIAD STREET
WALL, TEXAS

A3

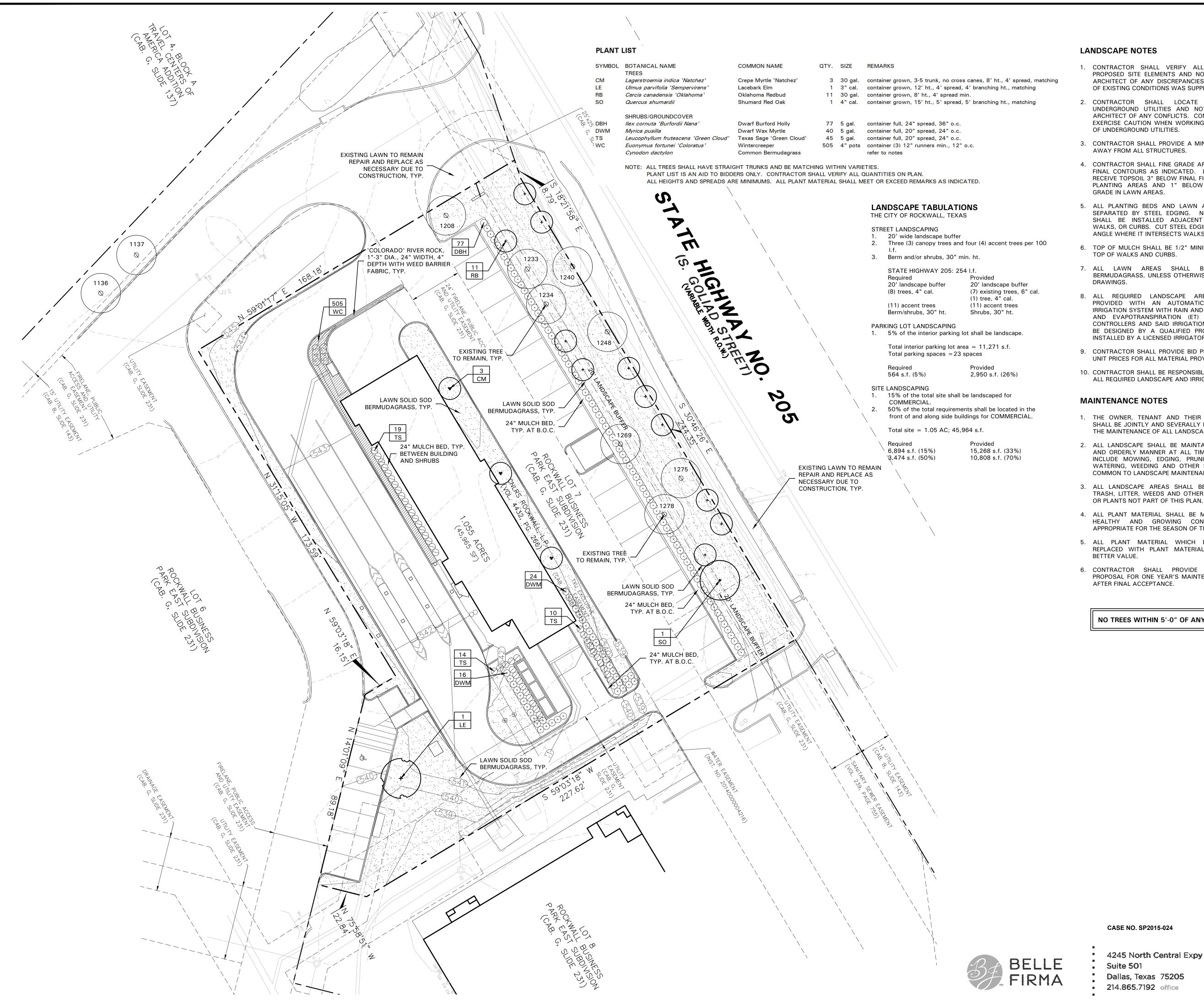












## LANDSCAPE NOTES

- 1. 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.
- 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.
- 4. 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
- 5. 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
- 8. 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.

- 1. THE OWNER, TENANT AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE.
- 2. 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.
- 4. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR.
- 5. ALL PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF EQUAL OR BETTER VALUE.
- 6. CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

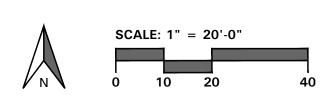
NO TREES WITHIN 5'-0" OF ANY UTILITIES

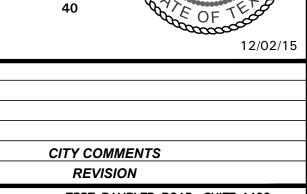
## **GENERAL LAWN NOTES**

- 1. 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.
- 3. 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.
- 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.

# **SOLID SOD NOTES**

- 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.
- 3. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
- 4. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, OVER-SEED BERMUDAGRASS SOD WITH WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.





# DATE

7557 RAMBLER ROAD, SUITE 1400
DALLAS, TX 75231 972.235.3031
TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-10193805

LANDSCAPE PLAN **ROCKWALL CAR WASH** 

LOT 7

**ROCKWALL BUSINESS PARK EAST** CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

DATE | SCALE | NOTES DESIGN | DRAWN | **L2.01** | /12/15**|1" = 20' -0** KAH MUA

## **SECTION 32 9300 - LANDSCAPE**

## PART 1 - GENERAL

## 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 material
- 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

# 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 of maintenance.
- 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

# 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
- b. At the direction of the Owner, plants may be replaced cases, dead plants shall be removed from the premises 1.8 PRODUCT DELIVERY, STORAGE AND HANDLING
- . 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
- 2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods
- 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.
- lawn areas. At that time, the Owner will assume maintenance on the accepted work
- 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.

specified.

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

which will ensure the purchased materials will meet and / or

- 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
- 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 latent defects.
- 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:

- 1. 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.

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

schedule 72 hours in advance job site.

7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

## PART 2 - PRODUCTS

# 2.1 PLANTS

- 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.
- Quantities: The drawings and specifications are complimentary. 2.3 MISCELLANFOUS 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.

- 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
- 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

nearly equal diameter.)

## 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
- 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
- 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
- Sharp Sand: Sharp sand must be free of seeds, soil particles and
- Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
- 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 icronutrients
- Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

- Steel Edging: All steel edging shall be 3/16" thick x 4" deep x 16' long with 6 stakes per section, painted black at the factory as manufactured by The J.D. Russell Company and under its trade name DURAEDGE Heavy Duty Steel.
- 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.
- River Rock: 'Colorado' or native river rock, 2" 4" dia.

SHRUBS / GROUNDCOVER;

#### 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 earth base.

- A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.
- 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 (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 thousand (1,000) square feet.
- 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.

## C. Grass Areas:

1. 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.

- B. 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.
- C. 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.

- 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 plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.
- F. 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  $(\frac{3}{4})$  inch in diameter. Plants should be thoroughly moist before removing 3.3 CLEANUP AND ACCEPTANCE containers.
- G. Dig a wide, rough sided hole exactly the same depth 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
- 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

## 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
- 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
- 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 installation.
- 2. All steel curbing shall be free of kinks and abrupt bends.
- 3. Top of curbing shall be  $\frac{1}{2}$ " maximum height above final finished 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 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



# 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  $\frac{1}{3}$  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,

AND AT LEAST TWO INCHES ABOVE

GRADE. TREES SHALL BE REJECTED

WHEN GIRDLING ROOTS ARE PRESENT &

- ROOT FLARE IS NOT APPARENT. E. 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
- F. 'U' BRACKET.

RING.

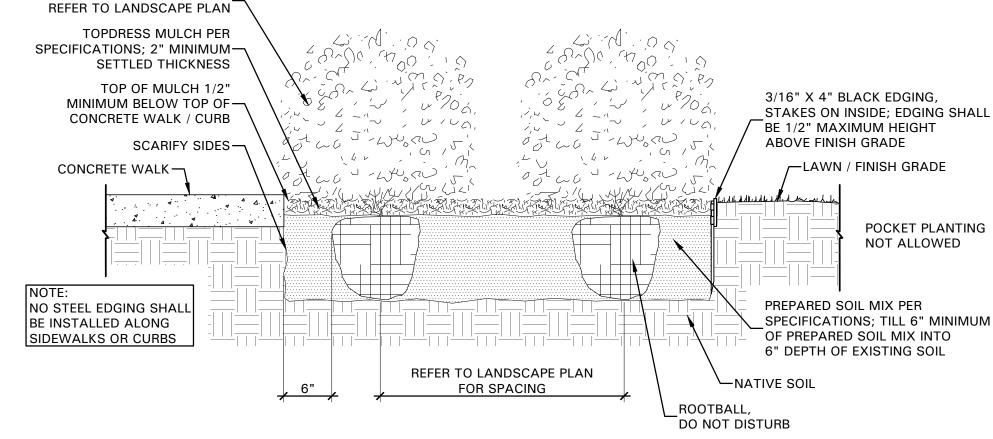
REFER G. NAIL STAKE: MANUFACTURER'S GUIDELINES FOR SIZING. INSTALL NAIL STAKES WITH HAMMER OR MALLET FIRMLY INTO UNDISTURBED GROUND. DRIVE NAIL STAKES FLUSH WITH "U" BRACKET ADJACENT TO ROOTBALL (DO NOT DISTURB ROOTBALL).

- H. BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.
- MULCH: 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.
- AVAILABLE FROM: Tree Stake Solutions ATTN: Jeff Tuley (903) 676-6143
- J. TREE STAKES: TREE STAKE SOLUTIONS 'SAFETY STAKE' BELOW GROUND MODEL

ieff@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.



2 SHRUB / GROUNDCOVER DETAIL NOT TO SCALE

# **CASE NO. SP2015-024**

4245 North Central Expy Suite 501 Dallas, Texas 75205

214.865.7192 office

12/02/2015 CITY COMMENTS DATE **REVISION** NO. 7557 RAMBLER ROAD, SUITE 1400 DALLAS, TX 75231 972.235.3031 X REG. ENGINEERING FIRM F-14439 TX REG. SURVEYING FIRM LS-10193805

# LANDSCAPE SPECIFICATIONS AND DETAILS **ROCKWALL CAR WASH** LOT 7

**ROCKWALL BUSINESS PARK EAST** CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

DATE | SCALE | NOTES DESIGN | DRAWN | **L2.02** KAH MUA /12/1

BELLE

TREE PLANTING DETAIL

replacements shall be immediately repaired. at the start of the next year's planting season. In such

- included under "Work" of this section.
- and cultivate beds once a month after final acceptance.
- 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

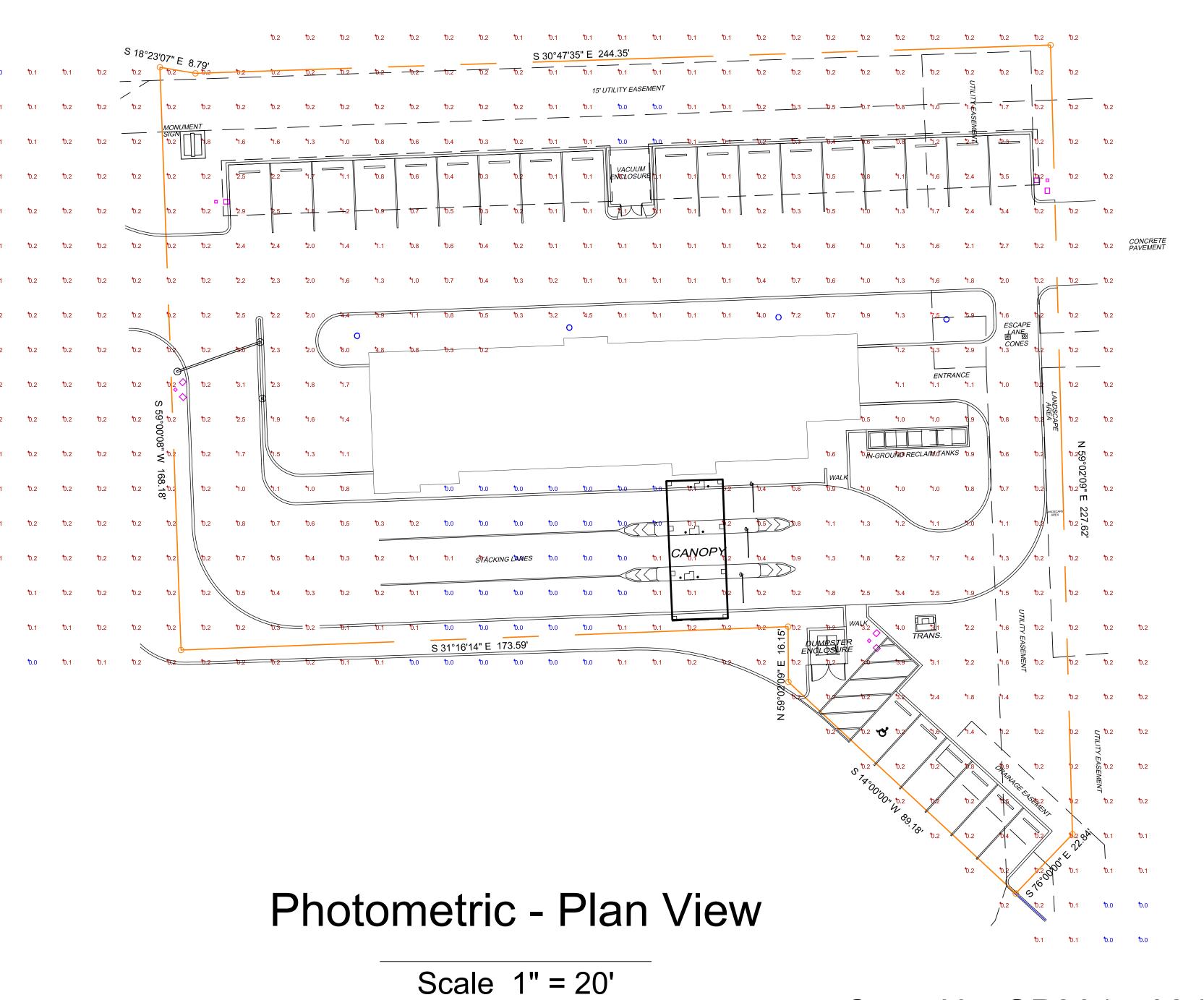
STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.9 fc	7.5 fc	0.0 fc	N / A	N/A

LUMIN	AIRE S	CHEE	DULE					
Symbol	Label	Qty	Catalog Number	Description	Lamp	Lumens	LLF	Watts
	P1	1	DSX0 LED 40C 700 40K TFTM MVOLT	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE TFTM OPTIC, 4000K, @ 700mA	LED	Absolute	0.95	91.22
	P2	3	DSX0 LED 40C 700 40K TFTM MVOLT	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE TFTM OPTIC, 4000K, @ 700mA	LED	Absolute	0.95	182.44
	С	4	AF 1/42TRT 6AR	AF 6" APERTURE OPEN DOWNLIGHT 1/42TRT	ONE 42-WATT TRIPLE TUBE COMPACT FLUORESCENT, HORIZONTAL POSITION.	3200	0.75	48

NOTES

OVERALL HEIGHT OF LIGHTING POLE STANDARDS, INCLUDEING POLE, BASE AND FIXTURES, ARE NOT TO EXCEED 20'
 CANOPY FIXTURES MOUNTED AT 10'

S. GOLIAD STREET (STATE HIGHWAY NO. 205) (VARIABLE WIDTH RIGHT-OF-WAY)



FRANCIS COMMERCIA



GOLIAD STREET

CKWALL, TEXAS

PhM

Contact

Check out more Lighting and Controls Solutions from Acuity Brands, Click here for details.

Training

Distributors

Sales

Sustainability

C SHARE

Resources



**Lithonia Lighting Products** Outdoor Area Lighting Bollards Floodlighting Parking Garage and Canopy Poles Pole Brackets and Accessories Roadway Lighting Rough Service Security Lighting Wall Mounted

- Commercial and Industrial Indoor
- Fluorescent and LED High Bay
- Special Applications
- Indoor HID
- Emergency
- Downlighting and Track
- Decorative Indoor and Outdoor
- The Stock Guide
- LED Lighting



#### **ABL Wiring and Controls**

- RELOC Wiring Solutions
- Acuity Controls

#### **Additional ABL Companies**

### Resources

- Specification Sheets
- Photometrics
- Building Information Models
- PSG Catalog
- Acrylic/Polycarb Compatibility Table
- Warranty Information
- More Resources

#### Did you find what you need?



# D-Series Area Size 0

#### **LED Area Luminaire**

Company

Home



Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.8 ft2) for optimized pole wind loading.

#### Construction

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Low EPA (0.9 ft2) for optimized pole wind loading.

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

#### **Optics**

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 4000K (70 minimum CRI) or optional 3000K (80 minimum CRI) or 5000K (67 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime FriendlyTM product, meaning it is consistent with the LEED® and Green GlobesTM criteria for eliminating wasteful uplight.

#### **Electrical**

Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L96/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV or 6kVsurge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

#### Installation

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERISTM series pole drilling pattern. Optional terminal block, tool-less entry, and NEMA photocontrol receptacle are also available.

CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.



**Building Information Models** 

Installation Instructions

Additional Images

Sell Sheets

FAOs

Questions about this product?

#### Related Products





D-Series KADRD Area Pole LED





D-Series Area Size Area Size 1 Mast







D-Series Area Size





KAD-LED





CSX1-LED

#### Warranty

Five year limited warranty. Full warranty terms located at www.AcuityBrands.com/CustomerResources/Terms\_and\_conditions.aspx.

AST1-LED





Note: Specifications subject to change without notice.

Link to Mounting Bracket video.

Our Brands
Lithonia Lighting • Acculamp • American Electric Lighting • Antique Street Lamps • Carandini • Dark To Light • eldoLED • Gotham
Healthcare Lighting • Holophane • Hydrel • Lighting Control & Design • Mark Architectural Lighting • Pathway Connectivity • Peerless
Reloc • ROAM • Sensor Switch • Sunoptics • Synergy • Tersen • Winona Lighting

Customer Service Contact Us Con Comments Site Terms Privacy Po





© 2015 Acuity Brands Lighting, Inc. All rights reserved

#### **OUTDOOR PHOTOMETRIC REPORT**

CATALOG: DSX0 LED 40C 530 AMBPC T1S MVOLT

TEST #:

LTL23422P7

TEST LAB:

SCALED PHOTOMETRY

TEST DATE:

4/23/2013

CATALOG:

DSX0 LED 40C 530 AMBPC T1S MVOLT

**DESCRIPTION:** 

DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE T1S

OPTIC, AMBER PC, @ 530MA

Series:

D-SERIES AREA SIZE 0

LAMP CAT #:

LAMP:

LED

LAMP OUTPUT:

TOTAL LUMINAIRE LUMENS: 4878, ABSOLUTE

**PHOTOMETRY** \*

NICHIA 219B

BALLAST / DRIVER: INPUT WATTAGE:

LED DRIVER 68.04

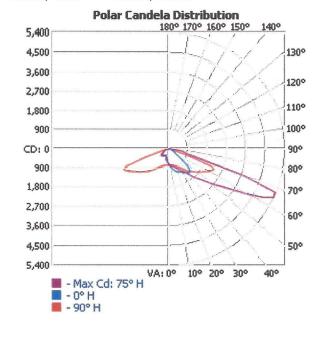
LUMINOUS OPENING: RECTANGLE (L: 6.24", W: 5.28")

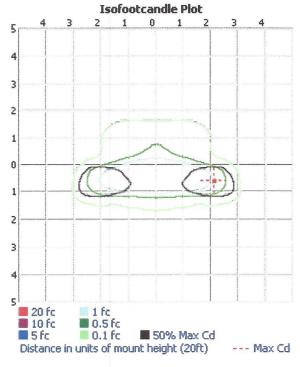
Max Cd:

5,371.2 AT HORIZONTAL: 75°, VERTICAL: 65°

Roadway Class:

SHORT, TYPE II





#### \*TEST BASED ON ABSOLUTE PHOTOMETRY WHERE LAMP LUMENS=LUMENS TOTAL. \*CUTOFF CLASSIFICATION AND EFFICIENCY CANNOT BE PROPERLY CALCULATED FOR ABSOLUTE PHOTOMETRY.

VISUAL PHOTOMETRIC TOOL 1.2.47 COPYRIGHT 2015, ACUITY BRANDS LIGHTING. THIS PHOTOMETRIC REPORT HAS BEEN GENERATED USING METHODS RECOMMENDED BY THE IESNA. CALCULATIONS ARE BASED ON PHOTOMETRIC DATA PROVIDED BY THE MANUFACTURER, AND THE ACCURACY OF THIS PHOTOMETRIC REPORT IS DEPENDENT ON THE ACCURACY OF THE DATA PROVIDED. END-USER ENVIRONMENT AND APPLICATION (INCLUDING, BUT NOT LIMITED TO, VOLTAGE VARIATION AND DIRT ACCUMULATION) CAN CAUSE ACTUAL PHOTOMETRIC PERFORMANCE TO DIFFER FROM THE PERFORMANCE CALCULATED USING THE DATA PROVIDED BY THE MANUFACTURER. THIS REPORT IS PROVIDED WITHOUT WARRANTY AS TO ACCURACY, COMPLETENESS, RELIABILITY OR OTHERWISE. IN NO EVENT WILL ACUITY BRANDS LIGHTING BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF THIS REPORT.



PAGE 1 OF 4





#### **OUTDOOR PHOTOMETRIC REPORT**

CATALOG: DSX0 LED 40C 530 AMBPC T1S MVOLT



ZONA	L LUMEN	SUMMARY
Zone	Lumens 9	% Luminaire
0-30	668.8	13.7%
0-40	1,267.3	26%
0-60	3,245.2	66.5%
60-90	1,632.8	33.5%
70-100	540.8	11.1%
90-120	0	0%
0-90	4,878.0	100%
90-180	0	0%
0-180	4,878.0	100%

KUADWAI SUPPAKI	ROA	DWAY	SUMMARY	7
-----------------	-----	------	---------	---

Distribution:	TY	PE II, SHORT
Max Cd, 90 Deg Vert:		0
Max Cd, 80 to <90 Deg:		655.6
	Lumens	% Lamp
Downward Street Side:	3,556.2	72.9%
Downward House Side:	1,321.6	27.1%
Downward Total:	4,877.8	100%
Upward Street Side:	0	0%
Upward House Side:	0	0%
Upward Total:	0	0%
Total Lumens:	4,877.8	100%

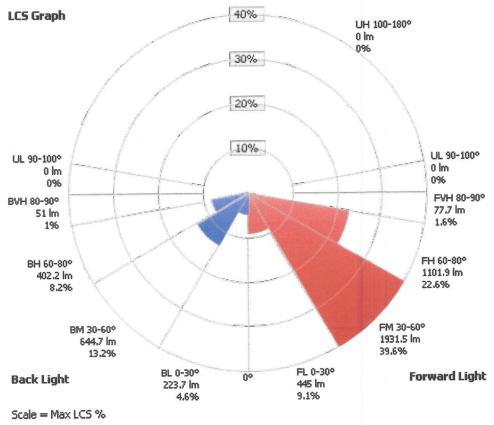
LUME	NS PER	ZONE			
Zone L	umens	% Total	Zone	Lumens '	% Total
0-10	71.2	1.5%	90-100	0	0%
10-20	218.8	4.5%	100-110	0	0%
20-30	378.8	7.8%	110-120	0	0%
30-40	598.5	12.3%	120-130	0	0%
40-50	894.9	18.3%	130-140	0	0%
50-60	1,083.1	22.2%	140-150	0	0%
60-70	1,092.0	22.4%	150-160	0	0%
70-80	412.0	8.4%	160-170	0	0%
80-90	128.8	2.6%	170-180	0	0%

LCS TABLE							
<b>BUG RATING</b>	B1 - U0 - G1						
FORWARD LIGHT	LUMENS	LUMENS %					
Low(0-30):	445.0	9.1%					
Medium(30-60):	1,931.5	39.6%					
High(60-80):	1,101.9	22.6%					
Very High(80-90):	77.7	1.6%					
<b>BACK LIGHT</b>							
Low(0-30):	223.7	4.6%					
Medium(30-60):	644.7	13.2%					
High(60-80):	402.2	8.2%					
Very High(80-90):	51.0	1%					
UPLIGHT							
Low(90-100):	0	0%					
High(100-180):	0	0%					
TRAPPED LIGHT:	0.2	0%					



### OUTDOOR PHOTOMETRIC REPORT CATALOG: DSX0 LED 40C 530 AMBPC T1S MVOLT





O Trapped Light: 0.2lm, 0%



## OUTDOOR PHOTOMETRIC REPORT

CATALOG: DSX0 LED 40C 530 AMBPC T1S MVOLT



#### **CANDELA TABLE - TYPE C**

CAN	IDELA	TABI	LE - T	YPE C	3														
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	739	739	739	739	739	739	739	739	739	739	739	739	739	739	739	739	739	739	739
5	843	854	849	846	840	841	841	841	841	837	840	836	832	831	830	832	829	825	822
10	954	965	959	956	950	949	948	949	948	944	943	939	934	929	927	924	920	913	908
15	1071	1077	1071	1067	1060	1061	1060	1058	1056	1053	1050	1045	1038	1034	1031	1027	1019	1012	1005
20	1137	1141	1134	1133	1124	1129	1127	1126	1127	1121	1119	1116	1113	1112	1111	1111	1108	1102	1099
25	1195	1197	1192	1192	1182	1187	1187	1185	1187	1184	1182	1179	1174	1174	1178	1178	1178	1175	1177
30	1272	1277	1277	1273	1262	1269	1269	1269	1273	1267	1265	1259	1253	1251	1250	1255	1258	1259	1264
35	1369	1381	1380	1374	1365	1374	1377	1380	1387	1385	1385	1383	1380	1377	1377	1380	1382	1389	1399
40	1461	1461	1461	1457	1454	1468	1479	1488	1500	1503	1506	1512	1516	1520	1527	1547	1569	1593	1624
45				1283												1706			
50	794	689	695	714	742	780	840	907	983	1060	1151	1242	1338	1442	1553	1668	1797	1932	2091
55	380	360	351	349	352	361	374	390	415	446	495	561	662	781	931	1108	1305	1536	1821
60	289	270	262	265	270	278	287	294	300	307	316	333	362	398	434	485	558	670	847
65	230	214	209	213	220	231	241	252	261	266	276	289	302	316	336	365	394	404	418
70	170	167	169	174	181	190	199	208	215	222	231	241	253	264	277	290	303	317	347
75	124	119	123	127	132	135	141	150	160	171	185	197	206	214	220	223	230	247	270
80	97	91	93	96	99	105	112	118	126	135	145	158	167	169	169	171	175	182	193
85	56	44	44	49	51	53	57	63	71	76	82	88	92	94	95	96	97	105	114
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

