

	TREE PRESERVATION PLAN					
Number	DBH	Common Name	Comment-Reason			
101	8"	LIVE OAK	REMOVE-EXEMPT			
102	9"	RED OAK	REMOVE-EXEMPT			
103	4"	WAX MYRTLE	REMOVE-EXEMPT			
104	4"	LIVE OAK	REMOVE-EXEMPT			
105	4"	WAX MYRTLE	PRESERVE			
106	5"	RED OAK	PRESERVE			
107	4"	CRAPE MYRTLE	PRESERVE			
108	6"	CRAPE MYRTLE	PRESERVE			
109	8"	CRAPE MYRTLE	PRESERVE			
110	7"	CRAPE MYRTLE	PRESERVE			
111	6"	CRAPE MYRTLE	PRESERVE			
112	5"	CRAPE MYRTLE	PRESERVE			

REQUIRED SITE LANDSCAPING	15% OF TOTAL SITE TO BE LANDSCAPE AREA		
Date of a lite	REQUIRED	PROVIDED	
	61,312 SF X 15% = 9,197 SF	7,232 SF - VARIANCE REQUESTED	
REQUIRED LANDSCAPE SETBACK	MINIMUM 15' LANDSCAPE SETBACK		
	REQUIRED	PROVIDED	
	NA	NA NA	
REQUIRED STREET FRONTAGE TREES	1 TREE REQUIRED PER EVERY	50 FT OF FRONTAGE	
	REQUIRED	PROVIDED	
	NA	NA	
REQUIRED STREET FRONTAGE	1 SHRUB REQUIRED PER EVERY 5 FT OF FRONTAGE		
SHRUBS	REQUIRED	PROVIDED	
	NA	NA	
REQUIRED PARKING LOT	5% LANDSCAPE AREA REQUIRED		
LANDSCAPING	REQUIRED	PROVIDED	
	NA	NA	
REQUIRED PARKING LOT	1 TREE PER EVERY 20 SPACES		
TREES	REQUIRED	PROVIDED	
	NA	NA	
BUFFER YARD REGULATION	15' OF LANDSCAPING BETWEEN DISTRICTS		
	REQUIRED	PROVIDED	
	15'	VARIANCE REQUESTED	
BUFFER YARD TREES	1 TREE PER 30 LF, 40% EVERGREEN		
	REQUIRED	PROVIDED	

PLANTING NOTES:

1. ALL LANDSCAPE AREAS REQUIRE PERMANENT irrigation.
2. ALL LARGE AND ORNAMENTAL TREES MUST BE ON BUBBLER/DRIP IRRIGATION SEPARATE ZONES FROM TUBE GRASS.
3. RAIN FREEZE SENSOR CONTROLS ARE REQUIRED.

TEMPORARY IRRIGATION WILL BE REQUIRED TO ESTABLISH TURF IN ALL DISTURBED AREAS WITHOUT A PERMANENT IRRIGATION SYSTEM. INSTALL SOD TO ESTABLISH TURF IN ALL DISTURBED AREAS AS IDENTIFIED ON GRADING AND EROSION CONTROL PLANS.

CAUTIONIII
UNDEPGROUND UTILITES ARE LOCATED IN
THIS AREA. 48 HOURS PRIOR TO ANY
CONSTRUCTION ACTIVITES, CONTACT LINE
LOCATES FOR FRANCHISE UTILITY INFO.
CALL BEFORE YOU DIG:
TEXAS EXCAVATION SAFETY SYSTEM (TESS)
1-800-344-8377
TEXAS ONE CALL SYSTEMS
1-800-245-4545
LONE STAR NOTIFICATION CENTER
1-800-669-8344 EXT. 5



 
 Date
 FEB 15, 2017

 Drawn By
 RKR

 Checked By
 JRF
 NOV 23, 2016

NOV 30, 2016 DEC 6, 2016 JAN 3, 2017



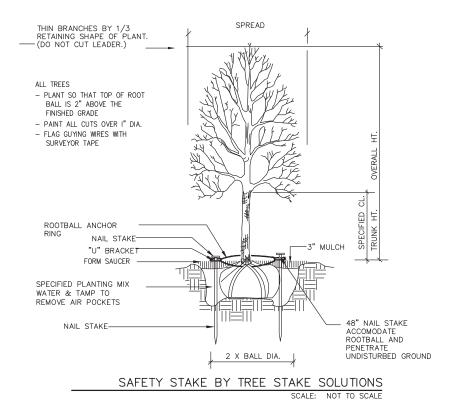


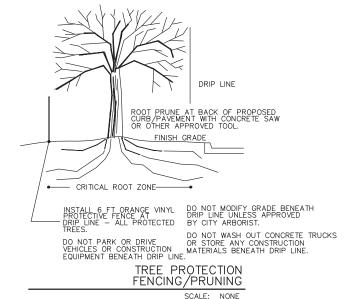
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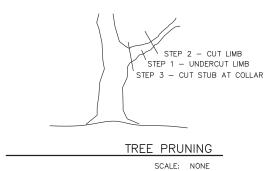
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OF 4



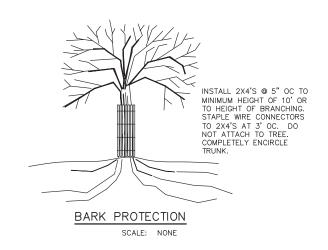




## PLANT LIST

SHRUBS	QTY	CODE	SCIENTIF	IC NAME	COMMO	N NAME	PLANTI	NG SIZE	COMME	NTS
$\odot$	(7)	ILVON	llex vomito	oria 'Nana'	Dwarf ya	upon holly	(Existing	g)		
	(1)	COSE	Cortaderia	a selloana	Pampas	grass	(Existino	g)		
(2)	(2)	Qush	Quercus s	shumardii	Shumard	Oak	4" Cal.		B & B	
		MISI	Miscanthu	ıs sinensis	Maiden g	rass	(Existino	<b>g</b> )		
GROUNDO	OVERS	QTY	CODE	SCIENTIF	IC NAME	COMMON	NAME	PLANTIN	G SIZE	COMMENTS
			CYDAC	Cynadon o	lactylon	Bermuda ç	grass	(Solid Soc	i)	

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING TREE AND SHRUB SIZES CONFORM TO CITY LANDSCAPE STANDARDS AND MITIGATION REQUIREMENTS.



CASE # SUP 2016-07 PLANTING DETAILS Date FEB 15, 2017

Drawn By RKR

Checked By JRF

Revisions

NOV 23, 2016

NOV 30, 2016





THIS ELECTRONIC DRAWNED FEE. S RELUSED DUICEN THE ALTHOSPIY OF ORGO CUPPETT,
LACK DRAWNED FEEL SHELD SEED ON ON ON THE ALTHOSPIY OF ORGO CUPPETT,
TO RELET SINGLY FEEL SHE SHELD AND SOFT FEEL SHE SHELD THE SHELD S

8405 HARWOOD NORTH RICHLAND HILLS, TEXAS

Sheet No.

L-2

TREES SHRUBS, AND GROUNDCOVERS

PART I GENERAL

1.01 DESCRIPTION OF WORK

A. Scope

Bed prep Metal edging Topoil

Plantina Mulching

Related Work Specified Elsewhere

General Requirements - All locations

Section 02740 - Irrigation Trenching Section 02750 - Irrigation Section 02800 - Lawns

1.02 QUALITY ASSURANCE

A. Contractor Qualifications

Minimum of three (3) years experience on projects of similar characteristics and size.

American Joint Committee Of Horticultural Nomenclature: Standardized Plant Names, Second Edition, 1942; American Association Of Nurserymen: American Standard For Nursery Stock, 1973

Substitutions accepted only upon written approval of Landscape Architect and Owner.
 Submit substitutions possessing same characteristics as indicated on plans and specifications.

D. Inspection and Testina

Contractor.

Inspection at place of growth does not preclude the right 2. Inspection of place or growth oces not preclude the right of rejection due to improper digging or handling.
3. Owner's representative reserves the right to request soil samples and analysis of soil and plant mix. Remove or correct unacceptable soil. Cost of testing by Contractor.

1.03 SUBMITTALS

Submit State and Federal certificates of inspection with invoice. (Only if required by Landscape Architect.)

2. File certificates with Owner's representative prior to

1.04 PRODUCT DELIVERY, STORAGE, & HANDLING

A. Preparation of Delivery

1. Balled & Burlaped (B&B) Plants

a. Dig and prepare for shipment in manner that will not damage roots, branches, shape, and future development after replanting.
b. Ball with firm, natural ball of soil, wrapped tightly with

burlap covering entire ball.

c. Ball size and ratios: conform to American Association of Nurserymen standards unless otherwise shown on plant list.

Pack piont indicated to protect against climidic & seasonal damage, as well as breakage injuries during transit.
 Securely cover plant tops with ventilated tarpaulin or canvas to minimize wind—whipping and drying in transit.
 Pack and ventilate to prevent sweating of plants during transit. Give special attention to insure prompt delivery and careful handling to point of delivery at job site.

Deliver fertilizer, fertilizer tablets, peat, mulch, soil additives, and amendment materials to site in original, unopened containers, bearing manufacturer's quaranteed chemical analysis, name, trade name, trademark, and conformance to State law.

2. Deliver plants with legible identification and size labels on

example plants. Protect during delivery to prevent damage to root ball or

 Notify Owner's representative of delivery schedule in advance so plant material may be inspected upon arrival at job site. 5. Deliver plants to job site only when areas are prepared

Protect roots of plant material from drying or other possible injury with wetted mulch or other acceptable material.
 Protect from weather.

Maintain and protect plant material not to be planted

Do not drop plants.
 Do not damage ball, trunk, or crown.
 Lift and handle plants from bottom of container or ball.

E. Planting Season Perform actual planting only when weather and soil conditions are suitable in accordance with locally acceptable practices.
F. Protection Before excavations are made, take precautionary measures to protect areas trucked over and where soil is temporarily stacked.

1.06 GUARANTEE

A. Guarantee new plant material for one year after acceptance of final installation (ie Final Acceptance of

B. Make replacement (one per plant) during one year guarantee period at appropriate season with original plant type, size and planting mixture.

C. Repair damage to other plants, lawns, & irrigation caused

during plant replacement at no cost to Owner.

D. Use only plant replacements of indicated size and

species. E. Ten days before end of guarantee period, notify Owner's representative in writing for year end inspection. Failure to do so, shall automatically extend guarantee until notification is

PART II PRODUCTS

2.01 MATERIALS

A. Plant Materials

1. Hardy under climatic conditions similar to locality of

project.
2. True to botanical and common name variety.
3. Sound, healthy, vigorous, well branched, and densely foliated when in leaf; with healthy well-developed root system.
4. Free from disease, insects, and defects such as knots, sun-scald, windburn, injuries, disfigurement, or abrasions.
5. Conform to measurements after pruning with branches in program of the state of the sta normal positions.

standards unless shown differently on plant lis

Single, straight trunks, unless indicated otherwise
Trees with weak, thin trunks not capable of support will

ot be accepted.

c. All multi-stem trees are to have a minimum of three stems, similar in size and shape, with a spread of approximately 2/3 of the height. All yaupons to be female. Crape myrtle color selection by Landscape Architect.

Nursery grown stock only.

Subject to approval of Landscape Architect.

Annuals in 4" pots or as specified Perennials in 4" pots, clumps, bulbs as specified

Natural, fertile, friable soils having a textural classification of loam or sandy loam possessing characteristics of soils in vicinity which produce heavy growth of crops, grass, or other

vegetation.

2. Free of subsoil, brush, organic litter, objectionable weeds, clods, shale, stones % diameter or larger, stumps, roots or other material harmful to grading, planting, plant growth, or scients are constituted.

naintenance operations.

Presence of vegetative parts of Bermuda grass ( Cynodon dactylon), Johnson grass, nut grass (Cyperus rotundus), and other hard to eradicate weeds or grass will be cause for rejection of topsoil.

4. Test topsoil (cost by Contractor):

Available phosphorus

Available potash

Ph: 5.5 to 7.0

Decomposed organic matter: 6-10%

Top Dressing Mulch - Shredded cypress or hard wood only Mulch for soil prep - Shredded pine bark In pre-packaged bags only; bulk shredded material is

D. Peat Moss Commercially available baled peat moss or

E. Staking Material

1. Stakes for tree support

a. Construction grade yellow pine, stain brownb. Size as noted on plans

Padded with rubbed hose to protect tree Galvanized

with galvanized turnbuckle
 Evenly tighten turnbuckles with plant in vertical position.

Free of oils, acids, alkali, salt, and other substances harmful to plant growth
Location: Furnish temporary hoses and connections on

G. Sand Washed builders sand

H. Antidesicant - "Wilt-proof" or equal.

I. Edging -3/16" X 4" green, new and unused; with stakes.

Existing topsoil -50%
3. Shredded pine bark -50%
4. Fertilizer 10:20:10 at 30 lb./1000 SF

B. Planting Mix for Annuals/Perennials

C. Azalea mix: solid peat moss in hole 9" wider than root ball each direction. Plant in solid peat moss and provide mound at base of plant to allow for drainage.

D. Japanese maple, dogwood, camellias: Provide 50/50 peat moss to topsoil mix, raise for drainage.

PART III - EXECUTION

3.01 UTILITIES — verify location of all utilities prior to initiating construction; repair any damage caused by construction at no cost to owner.

Inspect plants for injury and insect infestation; prune prior to installation. B. Inspect site to verify suitable job conditions.

3.03 FIELD MEASUREMENTS

A. Location of all trees and shrubs to staked in the field and approved by Owner's representative prior to installation.

B. Location of all groundcover and seeding limits as shown

A. Pits

Shape — Vertical hand scarified sides and flat bottom. Size for trees — 2 feet wider or twice the root ball,

chever is greater.
Size for shrubs -Size of planting bed as shown on

drawings of must stage or planting ded as shown of drawings.

4. Rototill soil mix thoroughly, full depth.

5. NOTE: If beds are proposed beneath drip line of existing tree canopy, pocket prep plants. Do not roto—till beneath existing trees.

B. Obstructions Below Ground

Remove rock or underground obstructions to depth necessary to permit planting.
 If underground obstructions cannot be removed, notify Owner's representative for instruction.

A. General

Set plants 2° above existing grade to allow for settling. Set plants plumb and rigidly braced in position until planting mixture has been tamped solidly around ball.

Apply soil in accordance with standard industry practice for the region

Thoroughly settle by water jetting and tamping soil in

Stake trees and large shrubs as indicated on plans. Apply anti-desicant according to manufacturer's

9. Apply commercially manufactured root stimulator as directed by printed instruction.
10. Plant and fertilize bedding plants per trade standards.
11. Apply 3" mulch top dressing.

Place in pit of planting mixture that has been hand

tamped prior to placing plant.

2. Place with burlap intact to ground line. Top of ball to be 2' above surrounding soil to allow for settling.

3. Remove binding at top of ball and lay top of burlap

back 6°.
4. Do not pull wrapping from under ball, but cut all Do not plant if ball is cracked or broken before or

during planting process or if stem or trunk is loose 6. Backfill with planting mixture in 6" lifts.

Place in pit on planting mixture that has been hand tamped prior to placing plant.
 Cut cans on two sides with an acceptable can cutter,

Carefully remove plants without injury or damage to

and remove root ball from can.

root balls.
4. Backfill with planting mixture in 6" lifts.

D. Mulching

Cover planting bed evenly with  $3^{\circ}$  of mulch. Water immediately after mulching. Where mulch has settled, add additional mulch to regain

Hose down planting area with fine spray to wash leaves

 Prune minimum necessary to remove injured twigs and branches, dead wood, and succors; remove approximately 1/3 of twig growth as directed by landscape architect; do not cut leaders or other major branches of plant unless

directed by landscape architect.

4. Do not prune evergreens except to remove injured

3.06 EDGING

A. Stake edging alignment with string line prior to installation. Use framing square to insure right angles are

B. Install all edging straight and true as indicated on drawings. Where edging layout is circular in design, maintain true and constant radii as shown. When required on slopes, make vertical cuts

c. Main required on spless, index extend calling (approximately 6° on center) on bottom of edging to allow bending without crimping edging.

D. Install edging so that approximately 1° is exposed on lawn side. Edging should not be visible from bed side after Align edging with architectural features (ie pavement

joints, windows, columns, wall, etc.) when drawings indicate. Bend all corners, do not cut corners, Interlock all pieces with pre-fabricated connectors. Install with all stakes on inside of planting bed. Remove, file off all sharp corners and burrs.

3.07 CLEAN-UP

A. Sweep and wash all paved surfaces.

Pruning

Mowing (weekly)

B. Provide Owner and Landscape Architect with preferred maintenance schedule in writing. Schedule shall include the above—listed tasks and shall

Remove all planting and construction debris from site, including rocks, trash and all other miscellaneous materials.

A. Contractor responsible for routine, and regular maintenance of site until Final Acceptance is awarded by Owner. Work includes:

Watering (as required)

Spraying Fertilizing Mulching

address all frequencies, rates, times, levels, etc.

378, LLG



FEB 15, 2017 Drawn By RKR
Checked By JRF Revisions



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Sheet No.

OF 4

CASE # SUP 2016-07 PLANTING SPECIFICATIONS

FINISH GRADING, LAWN WORK, WILD FLOWERS

PART I - GENERAL

1.01 DESCRIPTION

- A. Work includes turf establishment (sod, hydromulch, etc.) as described on drawings.
- B. Make required analysis and material tests for topsoil, fertilizers, and other materials of similar character per current methods of the Association of Official Agricultural Chemists, when required.
- C. Grass seed shall conform to tolerances for germination and purity per applicable standards of U.S. Department of Agriculture.
- D. The turf contractor shall have a stand of grass established prior to substantial completion of the project. If this is not possible due to time of year or schedule, he shall maintain and protect the seeded areas until the grass is established.

2.01 TOPSOIL MATERIAL

- A. Topsoil material (stockpiled, as specified in Specifications) has been saved for use in finish grading. After sifting out all plant growth, rubbish, and stones, use for areas designated to receive grass. If stockpiled topsoil is not sufficient quantity to complete work, furnish acceptable topsoil from another approved source to provide four inches (4") of topsoil for grass areas unless otherwise noted on drawings. Grass areas shall be defined as the graded areas disturbed during construction not to be paved or built upon.
- B. Acceptable topsoil material shall be defined as natural, fertile, agricultural soil, capable of sustaining vigorous plant growth, uniform composition throughout admixture of subsoil, free of stones, lumps, plants, and their roots, sticks, or other extraneous matter; do not deliver while in a frozen or muddy

- A. Provide a commercial balanced fertilizer delivered to the job in bags labeled with manufacturer's guaranteed analysis. Store in weatherproof storage, place in such a manner that its effectiveness will not be impaired.
- B. Fertilizer shall be a grade containing the percentages of plant food elements by weight as specified elsewhere in these specifications.
- C. Availability of various elements shall be per Standards of the Association of Official Agricultural Chemists.

2.03 GRASS SEED

- A. Grass seed shall be of the previous season's crop and the date of analysis shown on each bag shall be within nine (9) months of the time of delivery to the project. When requested by the Owner or Representative, the seeding contractor shall furnish a sample of seed from each bag for testing.
- B. The seed shall comply with all provisions of the U.S. Department of Agriculture as to labeling, purity, and germination.

- A. Dry straw or hay of good quality, free of seeds of competing plants and at such rate of 1 1/2-2 tons per acre; or,
- B. Wood cellulose or cane fiber mulch at a rate of 1,000 pounds per acre when the slope is 3/4:1 and steeper; or,
- C. A combination of good quality dry straw or hay free of seeds of competing plants at a rate of 2 1/2 tons per acre and wood cellulose or cane fiber mulch at a rate of 500 pounds per acre. This combination shall be used when the slope is flatter than 3/4:1; or,
- D. Sericea lespedza seed bearing hay at a rate of 3 tons per acre. This mulch may be applied green or air dried, but must contain mature seed.
- E. Manufactured mulch materials, such as soil retention blankets, erosion control netting, or others that may be required on special areas of high water concentration or unstable soils. When these materials are used, follow the manufacturer's recommendations for installation.

Wood cellulose fiber or cane fiber mulch will be applied with hydraulic seeding and fertilizing equipment. All slurry ingredients shall be mixed to form a homogeneous slurry and spray applied within one hour after the mixture is made.

When wood cellulose or cane fiber mulch is used at the 500 pound per acre rate, straw or hay mulch with asphalt emulsion is applied over this to complete the mulch.

Wood cellulose or cane fiber mulch at the 1,000 pound per acre rate is used alone where other mulch material will not stick.

Wood cellulose or cane fiber mulch is self anchoring.

PART III - EXECUTION

3.01 RESPONSIBILITY

The site grading contractor will be responsible to stockpile acceptable topsoil in a sufficient quantity to provide four inches (4") minimum cover for all grass areas, including but not limited to all curbed islands, and topsoil planting mounds/berms at the appropriate height and width as defined and shown on the landscaping and/or planting drawings. The topsoil and grass areas shall be further defined as any area disturbed during the grading and construction process.

The site grading contractor, shall be responsible to spread the topsoil within all perimeter graded areas and future building areas only.

The site grading contractor shall be responsible for backfilling of all curbed islands and planting mounds/berms. They shall also be responsible for removal of all Iney shall also be responsible for removal of all stones, roots, and raking of all topsoil areas hat are to be seeded and/or planted. It will also be the site grading contractor's responsibility to provide fertilizer, grass seed, and any additional topsoil required and mulching.

- A. Remove stones, roots, rubbish and other deleterious materials from topsoiled areas that are to be seeded.
- B. Immediately prior to sowing seed, scarify ground as necessary; rake until surface is smooth and friable. Sow seed evenly, lightly wood rake into 02800—3 C. ground, then roll ground with suitable roller; water thoroughly with fine spray. During any weather, keep lawn watered with sprinklers or other approved methods. Re-seed any areas not doing well or damaged. At intervals as may be required according to seasonal conditions, mow and water grass and execute necessary weeding until acceptable and full stand of grass has been obtained.
- D. Provide permanent grass seeding for lawn areas so indicated. Seed in accordance with the following schedule (unless otherwise directed by Owner or Owner's Representative::
- Sow areas ready for seeding between March 1 and October
   with Hulled Common Bermuda at a rate of 85 pounds per
- Sow areas ready for seeding between October 1 and March 1 with Unhulled Common Bermuda at a rate of 90 pounds per acre, and Annual Rye Grass at the rate of 50 pounds per acre.
- 3. Apply fertilizer at a rate of 20/25 pounds per 1,000 square feet.

3.03 WILD FLOWERS

- A. Areas indicated on plans to receive wild flower coverage shall br fine graded, fertilized, and prepared in a manner similar to traditional turf establishment.
- B. Area to be hydromulched with seed mix as follows:

Tickseed 10 pounds/acre 15 pounds/acre 5 pounds/acre Side Oats Grama 4 pounds/acre Showy Primrose Plains Coreopsis 0.5 pounds/acre 2 pounds/acre Black Eyed Susan 2 pounds/acre Indian Blanket 10 pounds/acre
Texas Bluebonnet 4 pounds/acre Little Bluestem 4 pounds/acre

- A. All areas to be seeded shall be mulched.
   B. Mulch materials shall be applied uniformly over the seeded area. Mulch shall be straw and shall be at the rate of 1 1/2 2 tops per core.
- B. Mulch shall be anchored with an emulsified asphalt binder at the rate of 10 gallons per 1,000 square feet.

Provide, at no additional cost to Owner, fencing, railing, wire or other types of protection for topsoiled and seeded areas against trespassing and damage. If lawns are damaged prior to Final Acceptance, treat or replace them as directed. Remove protection when so directed.

Provide maintenance from start of work until Final Acceptance. Maintenance includes watering of lawns, weeding, mowing, edging, repairs of wash—outs and gullies, repairs to protection, and other necessary work of mainten

The Owner's representative will designate areas to be replanted. Areas on which a stand of growing grass is not present in a reasonable length of time, (Bermuda grass seed should be germinating in 6–8 days) shall be prepared, reseeded and remulched, as specified for original planting at no additional cost to Owner. A stand shall be defined as live plants from seed occurring at a rate of not less than 1,000 growing plants per square foot. Replanting required because of faulty operations or negligence on the part of the Contractor shall be performed without

3.08 FINAL CLEAN-UP

- A. At time of final inspection of work, and before final acceptance, clean paved areas that are soiled or stained by operations of work of this section. washing, and remove all defacements or stains.
- Cart away from site any debris resulting from work of this section and dispose of as directed.

SECTION 02922 SODDING

PART I - GENERAL

1.01 DESCRIPTION A. Work Included

- Sod bed preparation Fertilizing Sodding
- 4. Miscellaneous management practices
- B. Related Work Specified Elsewhere
- Finish Grading, Section 02800
   Lawns and Grasses, Section 02930
- 1.02 REFERENCE STANDARDS
- A. Standardized Plant Names

American Joint Committee of Horticultural Nomenclature, Second Edition, 1942.

B. Texas Highway Department — Standard Specifications for Construction, Item 164, Seeding for Erosion Control.

1.03 SUBMITTALS

- A. Vendors Certification That Sod Meets Texas State Sod Law
- Include labeling requirements.
   Include purity and type.

PRODUCT DELIVERY, STORAGE AND HANDLING

- Previous season's crop with date of analysis on each
- bag. 2. Furnish and deliver each variety in separate bags or
- Sod to be cut no more than three days before delivery.

- Unopened bags labeled with the analysis.
   Conform to Texas Fertilizer Law.

JOB CONDITIONS

- Only during suitable weather and soil conditions.
   As specifically authorized by the Owner's Representative.
- B. Schedule Only after all other construction is complete
- From traffic and all other use.
   Until sodding is complete and accepted.

PART II - PRODUCTS

2.01 MATERIALS

- Sod: As specified on drawings, weed, insect, and disease free having a minimum of 1 inch of topsoil attached to the roots and cut no more than three days prior to installation.
- installation.

  2. The sod shall be cut in strips of at least 1/2 sq. yd. and not more than 1 sq. yd. Sod shall be cut into strips not less than 12" in width or more than 9 in length. At the time of harvest, the top growth shall not exceed 3" in length. 3. All sod shall conform to the laws of the State and shall be obtained from sources meeting the approval of the Department of Agriculture, Division of Entomology.

- Uniform in composition, free flowing.
   Suitable for application in approved equipment.
   Analysis of 16-20-0, 16-8-8 or as directed.

Free of oil, acid, alkali, salts or other substances harmful to growth of grasses.

PART III - EXECUTION

3.01 SOD BED PREPARATION

A. Cultivate to a depth of four (4") inches by disking and tilling with a power tiller.

- B. Clear surfaces of all materials:
- 1. Stumps, stones, and other objects larger than one inch
- Stumps, c...
   (1").
   Roots, brush, wire, stakes, etc.
   Any objects that may interfere with sodding or maintenance.
- C. Prepare sod bed:
- Remove soil clods larger than one inch (1").
   Grade areas to smooth, even surface, removing ridges and filling depressions. Final grade to be below finish grade of curbing and edging as shown on details. All grades shall meet approval of Owner's Representative before sodding.

1. Lighty water prepared grade, lay sod with staggered joints and with edges touching. Topdress with topsoil at edges if necessary to provide smooth surface. On slopes of 2 to 1 and greater, fasten sod in place with wood pegs (two each piece) or other approved method. Sod damaged by storage or during installation shall be rejected. Following settling, topdress with screened, approved topsoil.

2. Water and fertilize at 5 lbs. per 1,000 sq. ft.

3. Sod shall not be placed during a drought, nor during periods when sod is not normally placed in the area, and shall not be placed on frozen ground. No dry or frozen sod is acceptable.

4. The contractor shall keep all keep all sodded areas moist and growing until Final Acceptance. All areas shall be maintained in an acceptable condition until acceptance by Owner.

- After placing sod, roll with a hand roller, weighing not more than 100 lbs. per foot of width, in two directions.
   Eliminate all air pockets; finished surface should be free of excessive undulations.

- A. Includes protection, replanting, maintaining grades, repair of erosion damage. Also includes weekly mowing at 1  $1/2^{\prime\prime}$  height until final acceptance.

- Resod damaged or unacceptable areas.
   Ruts, ridges, and other surface irregularities shall be

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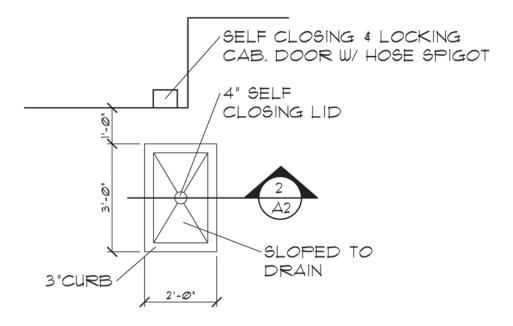


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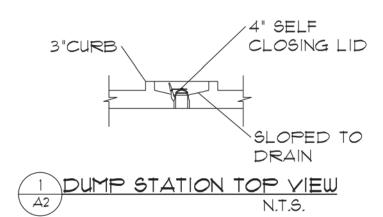
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CASE # SUP 2016-07 TURF SPECIFICATIONS



# DUMP STATION TOP VIEW N.T.S.



#### DESCRIPTION

The patented Lumark Crosstour™ MAXX LED wall pack series of luminaries provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/ surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

Catalog #	Туре
<b>3</b>	
Project	
Comments	Date
Prepared by	

#### **SPECIFICATION FEATURES**

#### Construction

Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 58W and 81W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

#### Optical

Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Solid state LED Crosstour MAXX luminaries are

thermally optimized with eight lumen packages in cool 5000K or neutral 4000K (58W, 81W models) LED color temperature (CCT).

#### **Electrical**

LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 58W and 81W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available in 58W and 81W models only. Crosstour MAXX luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation. 480V is compatible for use with 480V Wye systems only.

## **Emergency Egress**

Optional integral cold weather battery emergency egress includes emergency operation test switch (available in 58W and 81W models only), an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

#### **Area and Site Pole Mounting** Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits

2-3/8" or 3-1/2" O.D. Tenon.

#### **Finish**

Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

## Warranty

Five-year warranty.



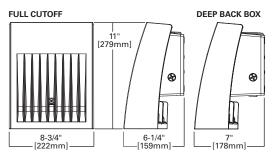
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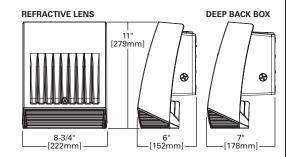


## **XTOR CROSSTOUR** MAXX LED

APPLICATIONS: WALL / SURFACE INVERTED SITE LIGHTING

## **DIMENSIONS**





## CERTIFICATION DATA

UL/cUL Wet Location Listed LM79 / LM80 Compliant **ROHS Compliant** NOM Compliant Models 3G Vibration Tested UL924 Listed (CBP Models)

#### TECHNICAL DATA 40°C Ambient Temperature

External Supply Wiring 90°C Minimum

## EPA

Projected Area (Sq. Ft.): XTOR6B, XTOR8B=0.54 With Pole Mount Arm=0.98

SHIPPING DATA: Approximate Net Weight: 12-15 lbs. [5.4-6.8 kgs.]



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## DIMENSIONS

#### OPTIONAL POLE MOUNT ARM ESCUTCHEON PLATES ARM DRILLING TYPE "C" 2-5/8" [67mm] 3/4" [19mm] Dia. Hole 4-1/2" [114mm] 19-1/4" [489mm] ⊗ 0 3" [77mm] 1-1/2" [39mm] 6-1/2" -[165mm] -(2) 9/16" [15mm] Dia. Holes —13-1/2" [343mm]-

## POWER AND LUMENS BY FIXTURE MODEL

58W Series						
LED Information	XTOR6B	XTOR6BRL	XTOR6B-W	XTOR6BRL-W		
Delivered Lumens	6,129	6,225	6,038	6,133		
B.U.G. Rating	B1-U0-G1	B2-U4-G3	B1-U0-G1	B2-U4-G3		
CCT (Kelvin)	5000K	5000K	4000K	4000K		
CRI (Color Rendering Index)	70	70	70	70		
Power Consumption (Watts)	58W	58W	58W	58W		
81W Series						
LED Information	XTOR8B	XTOR8BRL	XTOR8B-W	XTOR8BRL-W		
Delivered Lumens	8,502	8,635	8,373	8,504		
B.U.G. Rating	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3		
CCT (Kelvin)	5000K	5000K	4000K	4000K		
CRI (Color Rendering Index)	70	70	70	70		
Power Consumption (Watts)	81W	81W	81W	81W		

EGRESS Information	XTOR6B, and XTOR8B Full Cutoff CBP Egress LED	XTOR6B, and XTOR8B Refractive Lens CBP Egress LED	
Delivered Lumens	509	468	
B.U.G. Rating	N.A.	N.A.	
CCT (Kelvin)	4000K	4000K	
CRI (Color Rendering Index)	65	65	
Power Consumption (Watts)	1.8W	1.8W	

## LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)		
XTOR6B Mode	el			
25°C	> 90%	246,000		
40°C	> 88%	217,000		
50°C	> 88%	201,000		
XTOR8B Model				
25°C	> 89%	219,000		
40°C	> 87%	195,000		
50°C	> 86%	181,000		

## CURRENT DRAW

	Model Series					
Voltage	XTOR6B	XTOR8B	XTOR6B-CBP (Fixture/Battery)	XTOR8B-CBP (Fixture/Battery)		
120V	0.51	0.71	0.60/0.25	0.92/0.25		
208V	0.25	0.39				
240V	0.25	0.35				
277V	0.22	0.31	0.36/0.21	0.50/0.21		
347V	0.19	0.25				
480V	0.14	0.19				



## ORDERING INFORMATION

#### Sample Number: XTOR6B-W-WT-PC1

	LED Kelvin Color	Housing Color	Options (Add as Suffix)
Full Cutoff XTOR6B=58W XTOR8B=81W Refractive Lens XTOR6BRL=58W XTOR8BRL=81W	[Blank]=Bright White (Standard) 5000K <b>W</b> =Neutral, 4000K <sup>1</sup>	[Blank]=Carbon Bronze (Standard) WT=Summit White BK=Black BZ=Bronze AP=Grey GM=Graphite Metallic	347V=347V <sup>2,3,4,5</sup> 480V=480V <sup>2,3,4,5,6</sup> PC1=Photocontrol 120V <sup>7</sup> PC2=Photocontrol 208-277V <sup>7,8</sup> PMA=Pole Mount Arm (C Drilling) with Round Adapter <sup>3,9</sup> HA=50°C High Ambient <sup>6</sup> MS-L20=Motion Sensor for ON/OFF Operation <sup>2,3,10,11</sup> MS/DIM-L20=Motion Sensor for Dimming Operation <sup>2,3,10,11,12,13,14</sup> CBP=Cold Weather Battery Pack <sup>2,3,11,15</sup>
Accessories (Order Separa	ately)		
WG-XTORMX=Crosstour MAXX Wire Guard PB120V=Field Installed 120V Photocontrol PB277V BUTTON PC=Field Installed 208-277V Photocontrol VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon 16 VA1041-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon 16 VA1042-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon 16 VA1043-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon 16 VA1044-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon 16 VA1045-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon 16		VA1033-XX=Single Tenon Adapter for VA1034-XX=2@180° Tenon Adapter for VA1035-XX=3@120° Tenon Adapter for VA1036-XX=4@90° Tenon Adapter for VA1037-XX=2@90° Tenon Adapter for VA1039-XX=2@120° Tenon Adapter for VA1038-XX=2@120° T	for 2-3/8" O.D. Tenon <sup>16</sup>

#### NOTES:

- NOTES:

  1. Available in 58W and 81W only.

  2. Not available with HA option.

  3. Deep back box is standard for 347V, 480V, CBP, PMA, MS-L20 and MS/DIM-L20.

  4. Not available with CBP option.

  5. Thru-branch wiring not available with HA option or with 347V.

  6. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).

  7. Not available with MS-L20 and MS/DIM-L20 options.

  8. Use PC2 with 347V or 480V option for photocontrol. Factory wired to 208-277V lead.

  9. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.

- 9. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.

  10. For use in downlight orientation only. Optimal coverage at mounting heights of 9'-20'.

  11. 120V or 277V only.

- 12. Factory set to 50% power reduction after 15-minutes of inactivity. Dimming driver included.

  13. Includes integral photo sensor.

  14. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff, and more. Consult your lighting representative at Eaton for more information.
- 15. Operating temperatures -20°C to 25°C.

  16. Replace XX with housing color.

## STOCK ORDERING INFORMATION

58W Series	81W Series	
Full Cutoff		
XTOR6B=58W, 5000K, Carbon Bronze	XTOR8B=81W, 5000K, Carbon Bronze	
XTOR6B-PC1=58W, 5000K, 120V PC, Carbon Bronze	XTOR8B-PC1=81W, 5000K, 120V PC, Carbon Bronze	
XTOR6B-WT= 58W, 5000K, Summit White	XTOR8B-WT=81W, 5000K, Summit White	
XTOR6B-W=58W, 4000K, Carbon Bronze	<b>XTOR8B-PC2</b> =81W, 5000K, 208-277V PC, Carbon Bronze	
XTOR6B-PMA= 58W, 5000K, Pole Mount Arm, Carbon Bronze	XTOR8B-PMA=81W, 5000K, Pole Mount Arm, Carbon Bronze	
XTOR6B-W-PMA=58W, 4000K, Pole Mount Arm, Carbon Bronze	XTOR8B-W=81W, 4000K, Carbon Bronze	
<b>XTOR6B-PC2</b> = 58W, 5000K, 208-277V PC, Carbon Bronze	XTOR8B-W-PC1=81W, 4000K, 120V PC, Carbon Bronze	
XTOR6B-W-PC2=58W, 4000K, 208-277V PC, Carbon Bronze	XTOR8B-W-PC2=81W, 4000K, 208-277V PC, Carbon Bronze	
XTOR6B-W-PC1=58W, 4000K, 120V PC, Carbon Bronze	XTOR8B-W-PMA=81W,4000K, Pole Mount Arm, Carbon Bronze	
Refractive Lens		
XTOR6BRL=58W, 5000K, Refractive Lens, Carbon Bronze	XTOR8BRL=81W, 5000K, Refractive Lens, Carbon Bronze	
XTOR6BRL-PC1=58W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR8BRL-PC1=81W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	
XTOR6BRL-WT=58W, 5000K, Refractive Lens, Summit White	XTOR8BRL-WT=81W, 5000K, Refractive Lens, Summit White	
XTOR6BRL-W=58W, 4000K, Refractive Lens, Carbon Bronze	XTOR8BRL-PC2=81W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	
XTOR6BRL-PMA=58W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR8BRL-PMA=81W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	
XTOR6BRL-W-PMA=58W,4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR8BRL-W=81W, 4000K, Refractive Lens, Carbon Bronze	
XTOR6BRL-PC2=58W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR8BRL-W-PC1=81W, 4000K, Refractive Lens, 120V PC, Carbon Bronze	
XTOR6BRL-W-PC2=58W, 4000K, Refractive Lens, 208- 277V PC, Carbon Bronze	XTOR8BRL-W-PC2=81W, 4000K, Refractive Lens, 208-277V PC, Carbon Bronze	
XTOR6BRL-W-PC1=58W, 4000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR8BRL-W-PMA=81W,4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	

