Purchasing Office
P.O. Box 40197 • Lafayette, LA 70504-0197
Office: (337) 482-5396
Fax: (337) 482-5059

January 17, 2024

TITLE 38 ADDENDUM NO. 1

PROPOSAL FOR FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, SUPERVISION, PERMITS, ETC. NECESSARY FOR LANDSCAPE GATEWAY PROJECT – PHASE 1, LOCATED ON THE UL LAFAYETTE CAMPUS, LAFAYETTE, LOUISIANA.

Due February 15, 2024, 2:00 PM Solicitation No. 24211

The following is to be made part of the original specifications as though issued at the same time and shall be incorporated integrally therewith. This addendum shall be acknowledged on the BID FORM when submitted to the Purchasing Department prior to the bid due date/time.

Item No. 1 **– DRAWINGS ADDED:**
See attached drawings/plans associated with Solicitation File Number 24211.

This is a public works bid. The addendum **MUST** be acknowledged with your bid on the BID FORM. For questions related to bidding these projects, please contact the UL Lafayette Purchasing Department at bids@louisiana.edu or 337.482.9051.

Marie C. Frank, MPA, CPPB
Assistant Vice President for Administration & Finance
University of Louisiana at Lafayette
Department of Purchasing

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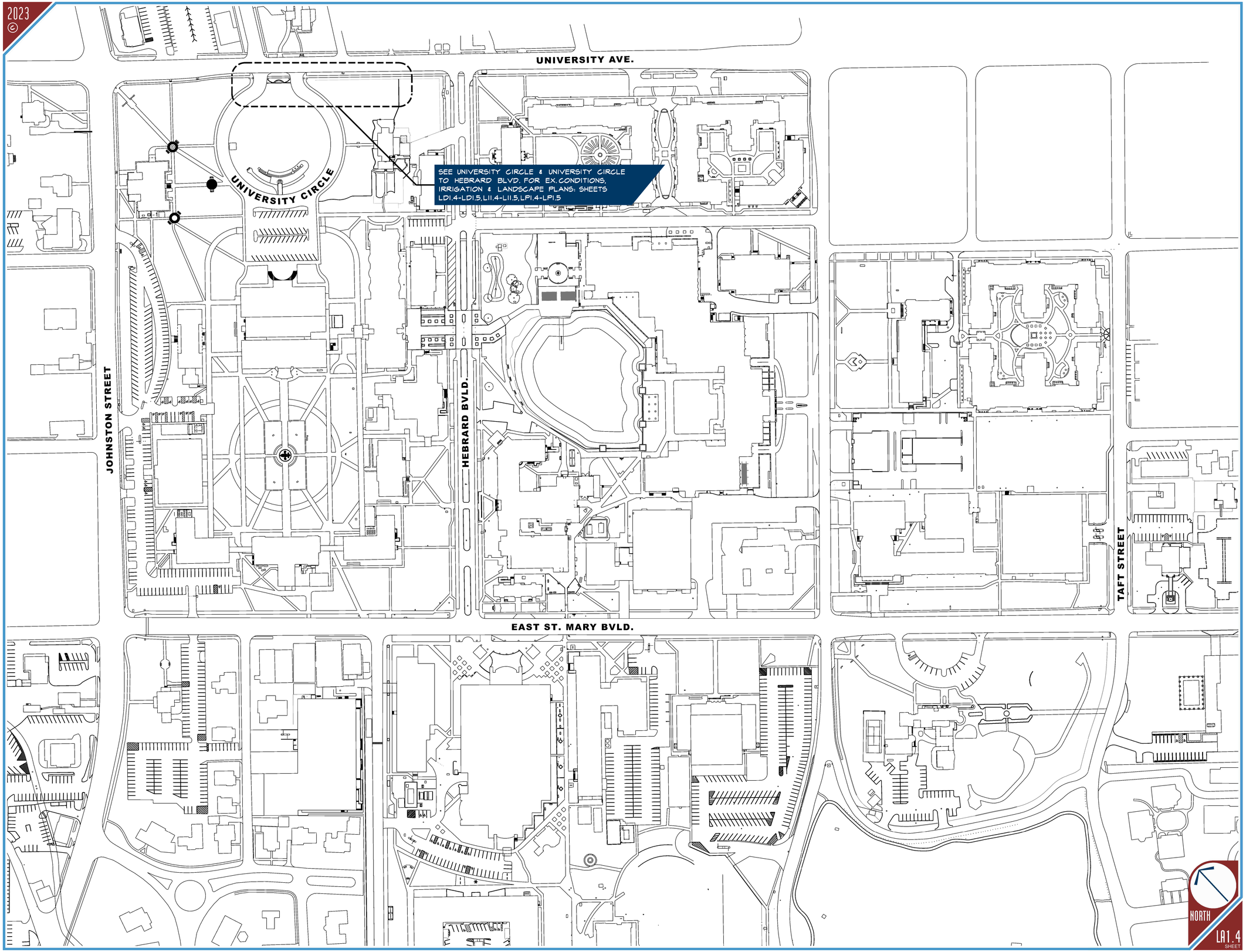

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE.THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION.OTHER UTILITIES MAY EXIST.)
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9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
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811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT - 22113.00

CAMPUS KEY PLAN

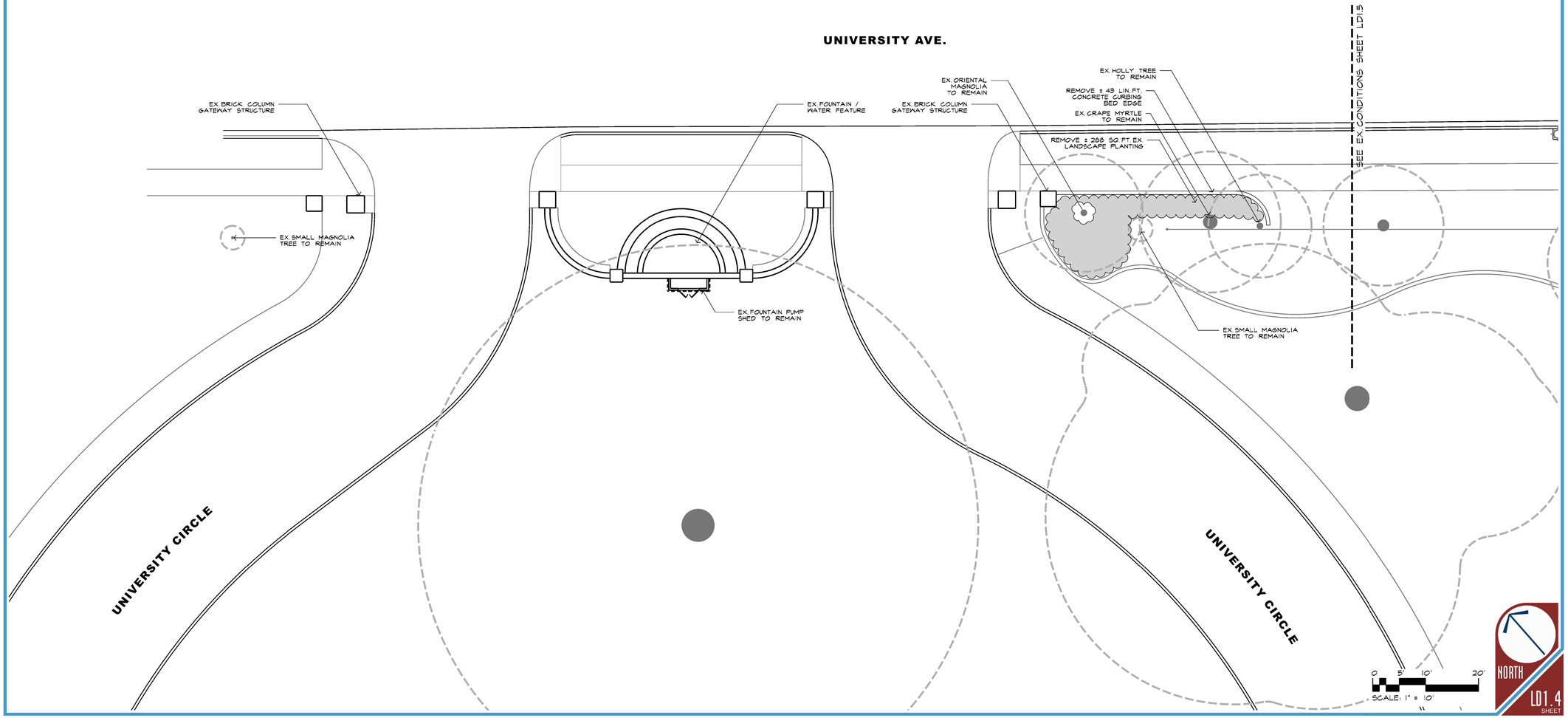
STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944

LA1.4
SHEET



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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

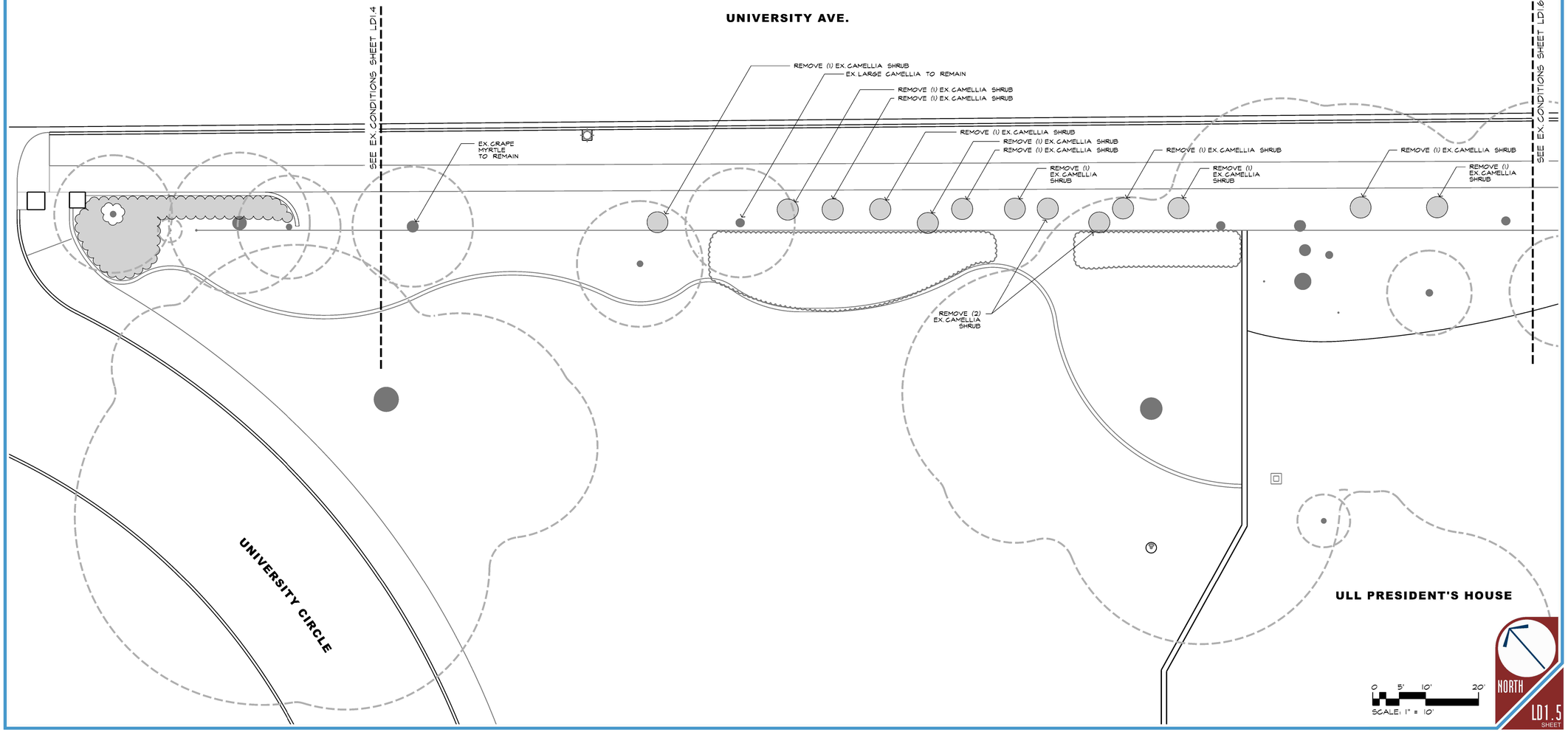
UNIVERSITY CIRCLE
DEMO & EX. CONDITIONS PLAN

STATE OF LOUISIANA
DANIEL W. SPIKER JR.
REG. NO. S-362
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944



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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT - 22113.00

UNIVERSITY CIRCLE TO HEBRARD BLVD. EX. CONDITIONS & DEMO PLAN

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944

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IRRIGATION NOTES

1. IRRIGATION CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S CURRENT SPECIFICATIONS AND RECOMMENDATIONS.
2. CALL 811 PRIOR TO DIGGING OR TRENCHING.IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING AND NON UTILITY LINES ABOVE OR BELOW GROUND AND SHALL REPAIR ANY DAMAGE CAUSED DURING IRRIGATION CONSTRUCTION ACTIVITIES AT NO COST TO THE OWNER.
3. WHEN TRENCHING UNDER THE DRIPLINE OF TREES,EXTREME CARE MUST BE GIVEN TO AVOID ROOT DAMAGE. IF AT ALL POSSIBLE AVOID TRENCHING INSIDE THE DRIPLINE BY GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR UNDER THE DRIPLINE,USE HAND-DIGGING METHODS RATHER THAN A MECHANICAL TRENCHER. MINIMIZE THE IMPACT OF ROOT SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER,KEEPING TREES WELL MATERED BEFORE AND AFTER DIGGING AND COVERING ROOTS WITH SOIL OR MULCH AS SOON AS POSSIBLE.
4. IRRIGATION CONTRACTOR SHALL VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 50psi WITH A FLOW RATE OF 30gpm AT THE WATER METER LOCATION PRIOR TO INSTALLATION.IRRIGATION CONTRACTOR SHALL NOTIFY ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
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9. ALL MAINLINE SHALL BE SCH40 PVC. ALL LATERAL PIPING SHALL BE CLASS 200 PVC PIPING. ALL PVC FITTINGS SHALL BE PVC TYPE I AND MUST BE OF DOMESTIC MANUFACTURE.PVC SOLVENT CEMENT AND PRIMER SHALL BE AS RECOMMENDED / APPROVED BY THE MANUFACTURER OF THE PIPE.
10. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF PVC SLEEVES AS INDICATED ON THE DRAWING. INSTALL FLOWLINE OF SLEEVES 1' BELOW ROADWAY BASE. EXTEND SLEEVES 18" BEYOND BACK OF CURB AND CAP UNTIL CONTRACTOR IS READY TO BEGIN THE INSTALLATION OF SPRINKLER SYSTEM. STAKE LOCATION OF SLEEVE WITH T-POSTS AND FLAGS. ALL JOINTS TO BE GLUED.
11. IRRIGATION CONTRACTOR TO USE 18 GAUGE MULTI-STRAND IRRIGATION CONTROL WIRE. COMMON WIRE TO BE 14 AWG COMMERICAL GRADE VALVE WIRE.

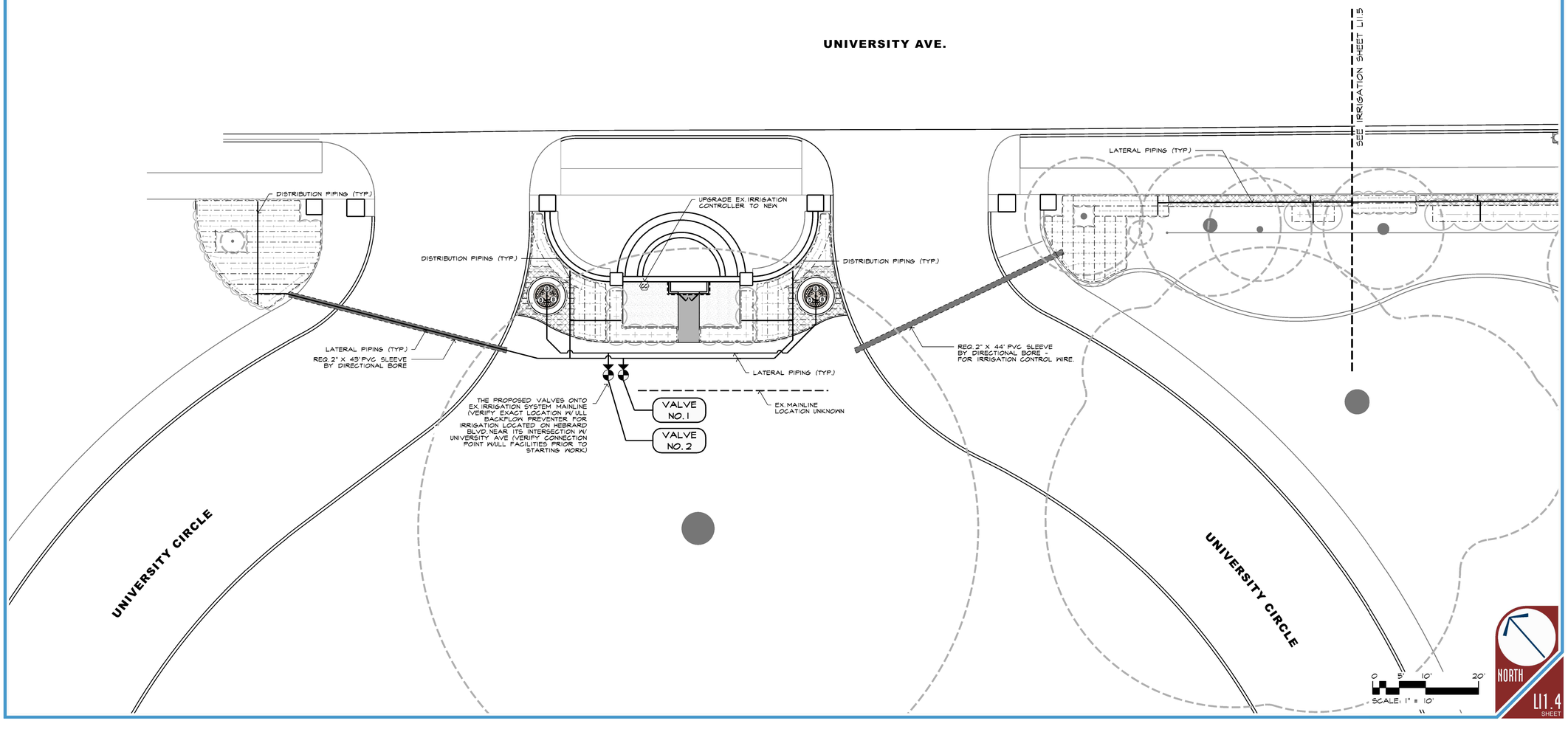
IRRIGATION EQUIPMENT LEGEND

SYMBOL	INFORMATION
	1" WATER METER (LOCATION AND METER TO BE PROVIDED BY THE OWNER PRIOR TO CONSTRUCTION) CONTRACTOR TO VERIFY FLOW AND PRESSURE PRIOR TO INSTALLAING SYSTEM (IF REQUIRED)
	WATTS 1 1/2" SERIES 911 REDUCED PRESSURE ZONE ASSEMBLY W/ FREEZE COVER (IF REQUIRED)
	GATE VALVE / MASTER VALVE (IF REQUIRED)
	RAINBIRD XCZ-PRB-100-COM 1" DRIP VALVE ASSY
	RAINBIRD ESP-LXME MODULAR CONTROLLER W/ (13) STATION MODULE - EXPANDABLE (IF REQUIRED)
	RAINBIRD RSD-BEX WIRED RAIN + FREEZE SENSOR (IF REQUIRED)
B	RAINBIRD XERI BUBBLER 1CB2 - .5 GPM FLOW
	RAINBIRD XFD-06-12 DRIPLINE TUBING
	DISTRIBUTION PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	LATERAL PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	MAINLINE - SCH 40 PVC (ALL PIPING TO BE 1-1/2" MIN UNLESS OTHERWISE NOTED)
	SCHEDULE 40 PVC SLEEVING BY DIRECTIONAL BORE - SEE PLAN FOR SIZE REQUIREMENT. NO JOINTS ALLOWED UNDER PAVEMENT

NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
2. ALL EQUIPMENT CAN BE SUBSTITUTED FOR AN EQUAL, APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR TO SUPPLY OWNER / LANDSCAPE ARCHITECT W/ (AS-BUILTS UPON COMPLETION)

IRRIGATION EQUIPMENT LEGEND

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	284
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	3	——
3	DRIP VALVE ASSEMBLY	——	847



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PROJECT • 22113.00

UNIVERSITY CIRCLE IRRIGATION PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPILLER JR.
REG. NO. 5-362
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

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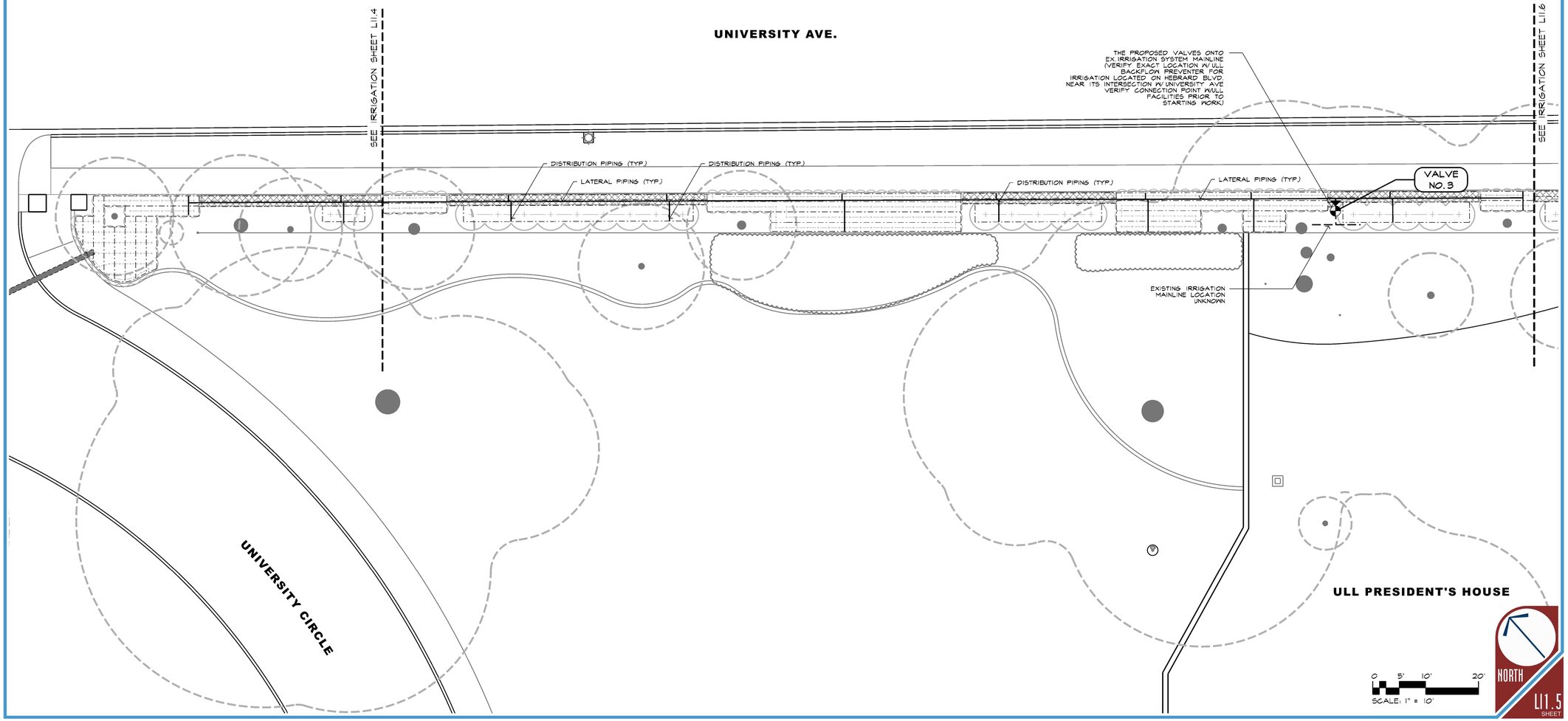
	RAINBIRD ESP-LXME MODULAR CONTROLLER W/ (12) STATION MODULE - EXPANDABLE (IF REQUIRED)
	RAINBIRD RSD-BEX WIRED RAIN + FREEZE SENSOR (IF REQUIRED)
	RAINBIRD XERI BUBBLER 1032 - 5 GPM FLOW
	RAINBIRD XFD-06-12 DRIPLINE TUBING
	DISTRIBUTION PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	LATERAL PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	MAINLINE = SCH 40 PVC (ALL PIPING TO BE 1-1/2" MIN UNLESS OTHERWISE NOTED)
	SCHEDULE 40 PVC SLEEVING BY DIRECTIONAL BORE - SEE PLAN FOR SIZE REQUIREMENT. NO JOINTS ALLOWED UNDER PAVEMENT

NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
2. ALL EQUIPMENT CAN BE SUBSTITUTED FOR AN EQUAL APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR TO SUPPLY OWNER / LANDSCAPE ARCHITECT W/ (AS-BUILTS UPON COMPLETION)

IRRIGATION EQUIPMENT LEGEND

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	284
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	3	——
3	DRIP VALVE ASSEMBLY	——	847



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SHEET

GENERAL NOTES

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2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES, STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK, ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
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6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION, THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS, SITE DIMENSIONS, RESTRICTIONS, AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE, TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT - 22113.00

UNIVERSITY CIRCLE TO HEBRARD BLVD. IRRIGATION PLAN

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-362
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944

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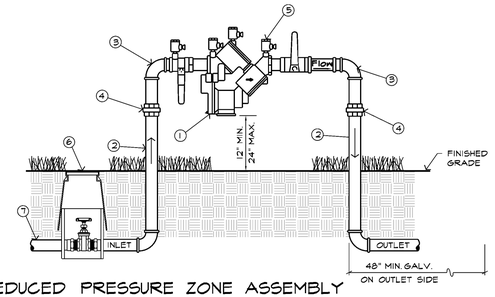


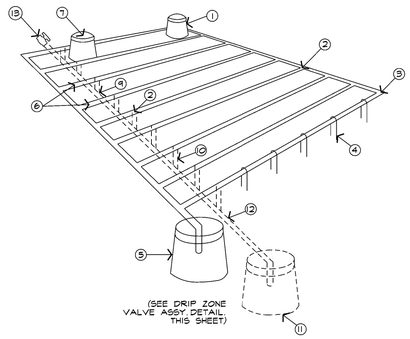
LIST OF MATERIALS

1. APPROVED ANTI-SIPHON PRESSURE VACUUM BREAKER ASSEMBLY,BALL VALVES INCLUDED.
2. GALV. PIPE, ¾" THRU 2".
3. 90° ELL,GALV., ¾" THRU 2 ½".
4. GALV. PIPE UNION.
5. TEST COCKS WITH BRASS PLUGS OR ADAPTORS WITH CAPS INSTALLED.(2 REQUIRED)
6. GATE VALVE IN BOX
7. COPPER NIPPLE AS REQUIRED BY CODE
8. CONTRACTOR TO PROVIDE INSULATED FIBERGLASS ENCLOSURE OR APPROVED EQUAL.

GENERAL NOTES

1. CONTACT THE LOCAL GOVERNING AUTHORITY FOR LATEST LIST OF APPROVED BACK-FLOW PREVENTION ASSEMBLIES.
2. BACKFLOW PREVENTERS MUST BE TESTED BEFORE FINAL APPROVAL IS ISSUED.
3. GALVANIZED FITTINGS SHALL BE CONNECTED USING PIPE DOPE OR TEFLON TAPE.
4. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
5. ALL NIPPLES TO BE COPPER OR BRASS.
6. PIPING UNDER THE CITY RIGHT OF WAY MUST BE PER CITY CODE.
7. CALL LANDSCAPE ARCHITECT FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.

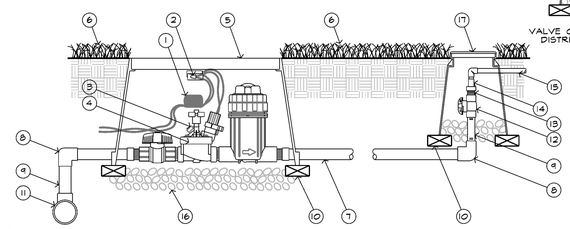
01 REDUCED PRESSURE ZONE ASSEMBLY
NOT TO SCALE



1. FLUSH CAP IN 6" VALVE BOX
2. MDCFTEE COMPRESSION TEE
3. MDCFEL COMPRESSION ELBOW
4. TDS-050 W/BEND TIE DOWN STAKE INSTALL 3'O.C.ON ALL TUBING
5. CONNECTION POINT TO PVC LATERAL LINE IN 10" VALVE BOX
6. SPACING - SEE PLANS
7. AIR/VACUUM RELIEF VALVE IN 6" VALVE BOX
8. PVC DISTRIBUTION PIPE TO BE USED ON LARGE ZONES.(SEE PLAN FOR PIPE SIZES & LOCATION)
9. PVC FITTINGS (TYPICAL)
10. PVC SCH.80 NIPPLE AND ¾" FHT ADAPTER
11. DISTRIBUTION VALVE (AS REQUIRED)
12. DISTRIBUTION PIPE (AS REQUIRED)
13. PVC FLUSH VALVE

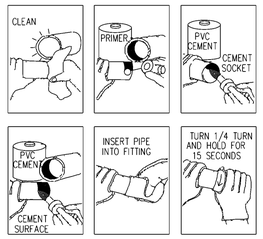
RAINBIRD XFD-06-12 DRIP TUBING
FLOW RATE = 0.6 GPH DRIPPER SPACING = 12"O.C.

02 DRIP TUBING LAYOUT - (DISTRIBUTION PIPE)
NOT TO SCALE



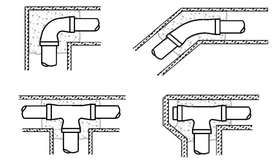
1. 30-INCH LINEAR LENGTH OF WIRE,COILED
2. WATERPROOF CONNECTION SPLICE-1 (1 OF 2)
3. ID TAG W/VALVE NUMBER
4. RAINBIRD XCZ-PRB-100-COM DRIP ZONE VALVE ASSY (INCL. VALVES,FILTER WITH PSI REG.)
5. VALVE BOX WITH COVER
6. FINISH GRADE/TOP OF MULCH
7. PVC CL200 PIPE
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4 PER BOX)
11. PVC MAINLINE PIPE
12. ¾" BALL VALVE
13. ¾" MPT x ¾" ADAPTER
14. ¾" FHT ADAPTER
15. RAINBIRD XFD DRIP LINE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. 10" VALVE BOX (CLEARLY LABELED NON-POTABLE WATER)

03 DRIP ZONE VALVE ASSY. (PRB),CONNECTION POINT & BOX
NOT TO SCALE



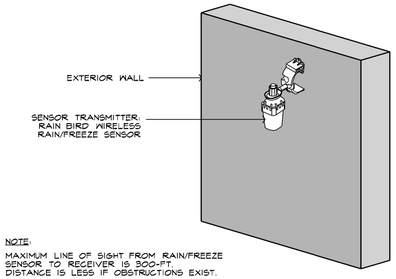
NOTES:
1. NEVER LAY PVC PIPE WHEN THERE IS WATER IN THE TRENCH
2. NEVER LAY PVC PIPE WHEN THE TEMPERATURE IS 32°F OR BELOW

04 PVC ASSEMBLING
NOT TO SCALE



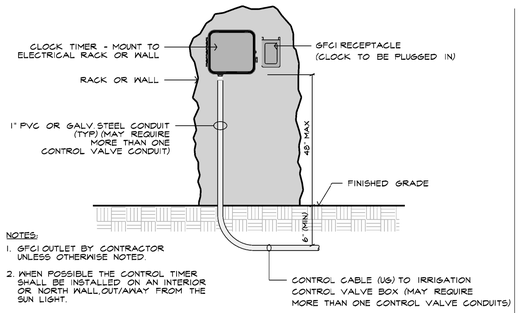
NOTE:
ALL FITTINGS SHALL BE WRAPPED IN POLY PLASTIC BEFORE THRUST BLOCKS ARE INSTALLED.CONCRETE SHALL NOT COVER THE TOP OF ANY FITTING.

05 TYPICAL THRUST BLOCKING
NOT TO SCALE



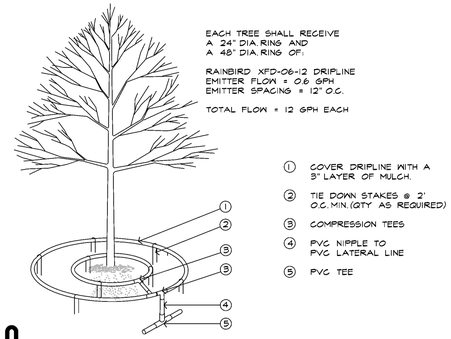
NOTE:
MAXIMUM LINE OF SIGHT FROM RAIN/FREEZE SENSOR TO RECEIVER IS 300-FT. DISTANCE IS LESS IF OBSTRUCTIONS EXIST.

06 RAIN/FREEZE SENSOR WALL/FENCE MOUNT - STANDARD
NOT TO SCALE



NOTES:
1. GFCI OUTLET BY CONTRACTOR UNLESS OTHERWISE NOTED.
2. WHEN POSSIBLE THE CONTROL TIMER SHALL BE INSTALLED ON AN INTERIOR OR NORTH WALL,OUT/AWAY FROM THE SUN LIGHT.

07 CONTROLLER MOUNTING - PLUG IN
NOT TO SCALE



1. COVER DRIPLINE WITH A 3" LAYER OF MULCH.
2. TIE DOWN STAKES @ 2' O.C.MIN.(QTY AS REQUIRED)
3. COMPRESSION TEES
4. PVC NIPPLE TO PVC LATERAL LINE
5. PVC TEE

08 TREE DRIP-RINGS
NOT TO SCALE

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPALLER JR.
REGISTERED
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. General provisions of the contract and other applicable parts of the construction documents apply to this Section.

1.2 SUMMARY:

A. Furnish all labor, materials, equipment and instructions necessary for the complete installation of the landscape irrigation system as drawn and specified. The work includes, but is not limited to:

1. Trenching, backfilling, and compaction for irrigation lines.
2. Provisions and installation for a turnkey automatic sprinkler system. Provide backflow preventer, controller, piping, heads, drip lines, valves, quick couplers, valve access boxes, low voltage wiring, applicable connection fees and all other items required for a complete system as shown on the Drawings, called for in the specifications or as may be required for proper operation of the system. The system shall be installed in strict accordance with all applicable codes, ordinances and regulations.
3. Test all systems, make operative and adjust.
4. Submit Record Drawings, Maintenance Manual and satisfactory evidence to show that all work has been installed in accordance with the ordinance and code requirements.
5. Maintain and operate until substantial completion.
6. One-year Guarantee Period.

B. Related work by others:

1. Water Meter as provided by the General Contractor.
2. Sch40 PVC Sleeves as provided by General Contractor.
3. Electrical work and Conduit as provided by General Contractor for the automatic controller & backflow preventer.

C. Provide drip tubing in all shrub and groundcover beds as designated. Provide pop up spray heads in turf areas. Provide the number of heads required to assure 100% coverage. Layout the system so that the shrub and groundcover beds are on separate zones from the turf areas.

D. Provide winterizing for the system using automatic drain valves in the low-points of lateral piping and heat-tape for the backflow preventer.

E. Coordinate exact locations of water meter and backflow preventer with the General Contractor.

F. The Contractor shall coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs.

G. The Contractor shall install the irrigation system in accordance with the schedule requirements provided by the General Contractor.

1.3 QUALITY CONTROL:

A. The sprinkler system shall be designed, to the extent possible, to promote water, soil and energy conservation. The system shall include a rain sensing device and shall be consistent with any water conservation ordinance enacted by the city.

B. Provide Installation by a licensed Irrigation contractor, skilled in work required and completely familiar with manufacturer's recommended method of installation requirements. Contractor must have a minimum of two (2) consecutive years experience in this area of work and having completely installed other jobs of similar size and scope. Evidence of the Contractor's qualifications shall be presented before the award of contract.

C. Approval and selection of Materials and Work: The selection of all materials and the execution of all operations required under the Contract Documents shall be subject to the approval of the General Contractor and Landscape Architect who shall have the right to reject any and all materials and any and all work which, in their opinion, does not meet the requirements of the Contract Documents at any stage of the operations. All rejected materials shall be removed from the site by the Contractor.

D. The successful Contractor shall maintain a competent, skilled and satisfactory work force during and through the completion of the construction period. In no case, shall unskilled labor be allowed to operate equipment, assemble, glue, install, wire, test or adjust components of the system. If in the opinion of the General Contractor or Landscape Architect, the labor furnished by the Contractor is incompetent or inexperienced in the practice assigned, the Contractor shall remove such persons or reassign them to a practice acceptable to the General Contractor and Landscape Architect.

E. Conform to all codes, statutes, laws and regulations governed by the following agencies for the protection of public safety:

ASTM	American Society for Testing Materials
AWWA	American Water Works Association
NEC	National Electric Code
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
UPC	Uniform Plumbing Code

F. The Contractor shall make application, acquire, comply and pay for all licenses and/or permits required by Local, State, or National Governing Agencies as may be required to perform and complete the work as described in the Contract Documents.

1.4 SUBMITTALS:

A. General: Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for possible revisions, and re-submittals, and for placing orders and securing delivery.

B. A design layout based on the equipment of Rainbird Corporation & Hunter Industries has been provided for bidding purposes. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to the layout as required to achieve full coverage of irrigated area at no additional cost to the Owner. It shall be the contractor's responsibility to establish the location of all sprinkler heads in order to ensure proper coverage of all areas.

C. Product Manual: Submit technical specification sheets and or performance data for all proposed system components. Submit the address and telephone number of the subcontractor installing the system and the local representative for the equipment.

1.5 PROJECT CONDITIONS:

A. The Contractor shall warrant that he has fully informed himself of the site conditions under which the work will be performed and is thoroughly familiar with the Contract Documents and all applicable codes and standards. Failure to have done so will not relieve the Contractor of his obligation to furnish all supervision, labor, tools, materials, equipment and supplies necessary to perform the provisions of the work detailed in the Contract Documents.

B. Make necessary adjustments in the layouts as may be required to connect to existing stub-outs, should such not be located exactly as shown, and as may be required to work around existing work at no increase in cost to the Owner.

C. The Contractor's attention is directed to the fact that there are other utilities located within the limits of the work. Before commencing any work required under the Contract, he shall determine the location of all utilities, subsurface drainage, structures and underground construction so that proper precaution may be taken not to disturb or damage during all operations. The Contractor shall be held responsible for making, at his own expense, all repairs to damaged utilities which could have been located or other construction resulting from the work covered by this Contract.

D. Should utilities not shown on plans be found during excavations, promptly notify the General Contractor for instructions as to further action.

1.6 PROTECTION OF WORK AND MATERIALS:

A. Use all means necessary to protect the work before, during and after installation and to protect the materials and installed work of all other trades.

B. The Contractor shall make every effort to safeguard the public during the Irrigation system installation operations. This includes, but is not limited to, erection of barricades around excavation, close supervision of all work and placement of warning flags wherever necessary. The Contractor shall insure that the personnel, equipment and materials involved in operations do not interfere with, or pose a hazard to, vehicular or pedestrian traffic.

C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the General Contractor and Landscape Architect at no additional cost to the Owner.

D. Store materials delivered to site, prior to actual use, in a secure place not to interfere with other trades or construction and protect from vandalism, damage by weather or other elements. All materials are to be stored off of the ground and away from soil or other contaminates.

E. The Contractor is completely responsible for replacement of materials due to acts of God, theft, vandalism and malicious mischief at the job site before, during and after installation. Such regulation shall continue until the date of final acceptance of the work in its entirety by the Owner.

1.7 ACCIDENT REACTION:

A. In the event of an accident causing injury or damage, the Contractor shall promptly report such to the Owner, General Contractor, Landscape Architect and required governmental agencies.

1.8 TRASH & DEBRIS:

A. The Contractor shall not permit trash and debris to accumulate on the grounds in the vicinity of his work. He shall establish and maintain a regular daily routine for removing trash and debris and hauling it away from the premises for no additional payment.

PART 2 - PRODUCTS

2.1 GENERAL:

A. The sprinkler system design shall be based on the equipment of Rainbird Corporation & Hunter Industries or approved equal.

B. Materials shall be newly manufactured and without flaws or defects, and of quality and performance as specified. Excess materials at completion are property of the Contractor, to be removed from the site.

C. The Contractor shall be responsible for computing and supplying the required quantities necessary to make the irrigation system complete and operational in every way. Quantities shown on the drawings are for convenience only.

2.2 PIPE AND FITTINGS:

A. Mainline piping above ground shall be Copper tube, Type K, drawn temper; copper tube fittings; soldered joints.

B. Mainline piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D1785, Sch40 for solvent weld and threaded connections.

C. Lateral piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D2241, Class 200 for solvent weld connections; Sch40 for threaded connections. The minimum pipe size shall be 3/4" in diameter.

D. Polyvinyl chloride (PVC) fittings; meeting ASTM D2466, Sch40 for solvent weld connections; Sch40 for threaded connections. All fittings must be of domestic manufacture and shall be identified as to pressure rating or schedule, with a working pressure no lower than that of the pipe.

E. Handling of Pipe and PVC Fittings: Exercise care in handling, loading, unloading and storing PVC pipe and fittings. Store under cover and transport in a vehicle with a bed long enough to allow no undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded until said section of pipe is cut out and rejoined with a coupling.

F. Visual Inspection: Provide pipe homogenous throughout, free from visible cracks, holes, blisters, wrinkles or foreign materials

G. PVC solvent cement shall comply with ASTM D2564, regular-bodied for pipe 2" and smaller, and medium for pipe 2 1/2" and larger. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints.

H. Use Teflon tape or an appropriate sealant for all threaded connections.

2.3 CONTROL WIRES AND CONNECTORS:

A. Single Conductor Wire for direct burial applications, meeting UL Standard 493, UF-14/1 for "Control" wiring and UF-14/1 for "Common" wiring. Color code the common neutral wiring from all other wires.

B. Wire Connectors shall be either 3M DBY / DBR or King "One Step" Connectors or approved equal.

2.4 AUTOMATIC CONTROLLER AND SENSORS:

A. The automatic controller shall be of a hybrid type that combines electromechanical and microprocessor-based circuitry capable of fully automatic and manual operation. The controller will be housed in a weather-proof, lockable, cabinet suitable for wall mounting.

B. The rain sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if approximately .10" of rainfall has accumulated due to precipitation at a rate equal to or greater than .25" per hour prior to or during an irrigation cycle.

C. The freeze sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if the ambient air temperature falls below 37 degrees Fahrenheit prior to or during an irrigation cycle.

2.5 VALVES:

A. The Rainbird remote control valves shall be a normally closed, 24VAC solenoid actuated, globe type valve. They shall have manual flow control stems for accurate regulation and/or shutoff of outlet flow.

B. The automatic drain valves shall be a pressure activated type, capable of opening when system pressure drops below 2.5psi, and closing when system pressure reaches 5.5psi.

C. Bronze gate valves for use as cut-off, isolation or manual drain valves on lines up to 3" in diameter shall be as manufactured by Nibco, Inc., Elkhart, IN or approved equal.

2.7 VALVE BOXES:

A. Provide valve boxes for all remote control valves and manual gate valves. The manufacturer shall be Armor, Plymouth Products Division, Sheboygan, WI or approved equal.

B. When used with a single valve use a #181104 - 10" round box with a twist lock cover. When used with multiple valves use #190106 - 20" x 14" rectangular box with snap lock cover.

2.8 SPRINKLER HEADS:

A. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.

B. Professional Series Spray Sprinkler: The sprinkler shall be capable of covering area shown at flow rates as designed.

1. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.
2. Provide pop-up spray heads in small turf areas or in clusters of trees where rotary heads are not feasible. The sprinkler shall have a pressure regulating device to prevent high-pressure fogging to the spray pattern and a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
3. Provide pop-up spray heads in all shrub and groundcover beds. The sprinkler shall include a pressure regulating device to prevent high pressure fogging to the nozzle stream. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
4. Provide pop-up rotary sprinklers in all large turf areas. The full or part circle sprinkler shall be a single stream, gear driven rotor with a rotating nozzle turret that is independent of the riser stem. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Matched precipitation shall be obtained by installing nozzles as shown on plan.
5. Provide check valve feature, as required, to prevent low head drainage from sprinklers at lower elevations.

2.9 DRIP IRRIGATION PRODUCTS:

A. Landscape Dripline (Inline Emitter Tubing): The Dripline tubing shall be brown in color and conform to an outside diameter (O.D.) of 0.630 inches and an inside diameter (I.D.) of 0.540 inches and wall thickness of 0.045 inches. The Dripline tubing shall have factory installed, pressure-compensating, inline emitters installed every 12 inches. The flow rate from each installed inline emitter shall be a consistent 0.6 gallons per hour when inlet pressure is between 8.5 and 60 psi.

B. Drip Control Zone Kit: The control zone kit shall have a 1" automatic irrigation control valve with a pressure rating not to be less than 150 psi. The valve body and bonnet shall be constructed of high-impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of a durable Buna-N rubber material reinforced with nylon.

The control zone kit shall have a 1" inline Quick Check Basket Filter body constructed of heavy-duty, glass-filled, UV resistant polypropylene capable of withstanding pressures of not less than 150 psi. The design shall be a basket style body with jar-top cap. The cap shall incorporate an indicator that goes from green to red during operation when the filters element needs cleaning. The screen shall be serviceable for cleaning purposes by unscrewing the cap from the body and removing the filters element.

The control zone kit shall have a 1" inline pressure regulator. The pressure regulator shall be constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 psi. The pressure regulating device is a normally open device that allows full flow with little pressure loss unless the inlet pressure is greater than the preset level. As the inlet pressure increases above the preset level it compresses a spring and begins to reduce the flow and downstream pressure. The inline pressure regulators shall have a preset outlet pressure of approximately 40 psi.

C. Landscape Dripline Compression Fittings: The Compression Fitting System shall consist of 3 fittings (tee, coupling and elbow) plus connection adapters and removable flush caps. The Compression Fittings shall accept all polyethylene tubing with an outside diameter (O.D.) from .630 to .710 inches and shall provide a leak-free compression fit. They also shall provide connections to threaded components when used with the adapters. The removable flush caps shall be used to close off a line and for manual draining. Air/vacuum relief valves shall be capable of venting air or preventing vacuum. The operating pressure range for the Compression Fitting System shall be 0 to 60 psi.

PART 3 - EXECUTION:

3.1 GENERAL:

A. Verify that the work of this section is installed in strict accordance with all applicable codes, regulations the design and the approved submittals. Contractor shall install all equipment as per manufacturer's current specifications and recommendations.

B. VERIFY THAT WATER PRESSURE IS ADEQUATE FOR EFFICIENT OPERATION OF THE SPRINKLER SYSTEM AS DESIGNED AND INSTALLED. Coordinate exact location of Point-of-Connection with the General Contractor.

C. Coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs, and parking, paving and site electrical plans. Verify existing and proposed locations of all site utilities (i.e. gas, water, electric, telephone, fiber optics) prior to any trenching and laying of pipe.

D. When sprinkler system work is to be installed close to or will interfere with the work of other trades, the Contractor shall assist in working out space conditions to permit all work to be installed satisfactorily at no additional cost to the owner. If a Contractor installs his work before coordination with other trades, he shall make necessary changes in his work to correct the condition without additional compensation.

E. Flag the location of all sprinklers & valves in accordance with the approved design and submittals. In the event of a discrepancy, immediately notify the Landscape Architect and General Contractor. Do not proceed with installation in areas of discrepancies until all such discrepancies have been fully resolved.

F. The irrigation design is shown in schematic form only. All piping to be installed directly behind curb where possible.

G. The Contractor is responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at any time, at no additional cost to the Owner.

3.2 WATER METER & BACKFLOW PREVENTER:

A. The Project Owner shall provide Water Meter as shown on the drawings All materials, operations, installed conditions and personnel shall be in strict accordance with all applicable codes, ordinances and regulations.

B. Immediately after Contract award, conduct tests at the designated Point-of-Connection and note as such on the written results provided to the General Contractor and Landscape Architect for the following:

1. Static Water Pressure
2. Dynamic Water Pressure
3. Gallons per minute

C. Install a temporary meter on a fire hydrant if necessary for water access due to site work, phasing schedule and/or landscape installation. Verify location and obtain approval from the General Contractor prior to installing temporary meter.

D. The Contractor shall comply with the requirements and codes of the local governing authority regarding backflow prevention. In addition, the Contractor shall provide the necessary materials, insulation/ winterization capabilities and acceptable concealment. General contractor is responsible for providing a GFI outlet with 115VAC; 1Phase power to the Backflow Preventer location.

3.3 SLEEVING:

A. The General Contractor shall provide Sch40 PVC sleeving, buried at a minimum of 18" and maximum of 24" depth.

B. Upon completion of site filling and compaction operations, and prior to the construction of foundations, roadways, walks or other pavements or obstructions, the General Contractor shall install sleeves in sufficient sizes to accommodate future irrigation piping and/or control wiring. Ends of sleeves shall extend 18 inches past the edges of all paving or construction. The ends of the sleeves shall be clearly marked for future use by the Irrigation Contractor.

3.4 TRENCHING AND BACKFILLING:

A. Carefully install system in areas of existing vegetation designated to remain to provide minimal disturbance feasible. When trenching under the drip-line of existing trees, extreme care must be given to avoid root damage. If at all possible avoid trenching inside the drip-line by going around the tree rather than under it. If trenching must occur under the drip-line, use either tunnelling or hand-digging methods rather than a mechanical trencher. Minimize the impact of root severing by avoiding construction during hot, dry weather, keeping trees well watered before and after digging and covering roots with soil or mulch as soon as possible.

B. Perform all excavation required for the installation of the work included under this Section. Including shoring and bracing of earth banks to prevent cave in. Restore all surfaces and existing underground installations damaged or cut as a result of the excavations, to their original condition and in a manner approved by the Owner and the General Contractor.

C. Excavate trenches to a depth of minimum pipe coverage plus six inches. Remove all lumber, rubbish and large rocks from the trenches. Provide a uniform bearing for the entire length of each pipe line to prevent uneven settlement. Make the width of the trench a minimum of 1 1/2 times the diameter of the piping but not less than 4 inches.

D. Upon completion of pipe installation and system testing, backfill the trenches with clean soil. Backfill material shall be free from rocks or any heavy unsuitable substances which could damage the pipe or create unusual settling problems. Backfilling shall be done in six inch layers and tamped down after each layer is put back as required to avoid settling in landscape areas and to 98% standard proctor in paved areas.

E. If settling occurs within the warranted period, the Contractor shall be responsible for bringing the trenches up to finish grade and repairing plant damage without additional compensation.

3.5 PIPE INSTALLATION:

A. Never Install PVC pipe when there is water in the trench. Never Install PVC pipe when the temperature is 32 degrees Fahrenheit or below.

B. Install the mainline at a bury depth of 18 Inches and the lateral lines at a bury depth of 12 inches below finished grade. Maintain a 4 inch clearance between pipes that cross at an intersection and a 2 inch clearance between pipes that are buried in the same trench.

C. Remove all foreign matter or dirt from the inside of the pipe before joining. Cap or plug all lines after installation and prior to testing to minimize infiltration of foreign matter or dirt.

D. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Install main lines and lateral lines in common trenches wherever possible.

3.6 PIPE AND FITTING CONNECTIONS:

A. Meet ASTM D2855 Standard Practice for making solvent-cemented joints with PVC pipe and fittings. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.

B. Make solvent welds with a non-synthetic bristle brush In the following sequence: Apply an even coat of solvent to the outside of the pipe. Then apply solvent to the inside of the fittings and then re-apply a light coat of solvent to the outside of the pipe, making sure that coated area on the pipe is equal to the depth of the fitting socket. Insert pipe quickly into the fitting and turn the pipe approximately 1/4 turn to distribute the solvent and remove air bubbles. Check all tees and ells for correct position, then hold joint for approximately 15 seconds so that pipe does not push out from the fitting. Allow at least 15 minutes drying time for each weld joint before moving.

C. Allow all joints to set and cure for a minimum of 12 hours prior to pressurization of system.

3.7 WIRE INSTALLATION:

A. Verify that the work of this section is installed in strict accordance with the latest edition of the National Electric Code and local electrical codes.

B. Install neutral and control wires, 12 inches below finish grade, in the same trenches as the main and lateral lines. The wires shall be installed in a neat and orderly fashion and bundled together and taped every 10 feet. Snake wires in trench to allow for expansion and contraction and provide slack loops at every splice, change of direction, at the valves, where the wire enters the conduit for the automatic controller and at least every 100 feet in runs more than 100 feet in length. The slack loops shall be created by wrapping 3 feet of wire around a 1/2 inch diameter pipe to form a coil.

C. Connect each solenoid to the controller with a "control wire" which is typically red in color. Connect a "common neutral wire" to all solenoids which is typically white in color.

D. Solder or join all wire connections by positive mechanical connectors. Splices must be properly insulated and waterproofed. Control wire splices will be allowed only in runs more than 500 feet and only in valve boxes.

3.8 CONTROLLER AND SENSOR INSTALLATION:

A. Coordinate with the General Contractor the exact location where the automatic controller will be located. Connect all wiring and grounding In accordance with manufacturer's instructions. Provide separate, secured to the wall, conduits for both power supply and control wiring.

B. General contractor Is responsible for providing a J-box with 115VAC; 1Phase power to the Controller location. Irrigation Contractor shall hard wire controller to j-box.

C. Install the rain and freeze sensors in an open area where the device is exposed to rain water but not sprinkler water. Mount away from overhanging objects that may Interfere with rainfall. Connect wiring In accordance with manufacturer's instructions.

3.9 VALVE INSTALLATION:

A. The remote control valves shall be Installed In accordance with manufacturer's instructions. Valves shall be installed in Armor valve boxes or approved equal. Boxes shall be Installed to a height that will not cause them to Interfere with maintenance machinery and which is sufficient to prevent soil or mulch from washing Into the box. Provide a 6 Inch layer of washed gravel In the bottom of the valve box. Valves shall be set a minimum of two feet behind curbs. Valves shall not be set in curves which are vulnerable to damage by truck trailers over running curbs.

B. The quick coupling valves shall be installed on PVC threaded swing joints on the Irrigation mainline. Space quick coupling valves as shown on the plans. Provide a 1"x1"x3" piece of angle iron next to the quick coupling valve and anchor with two (2) stainless steel hose clamps.

C. The automatic drain valves shall be installed in the low points of the lateral lines. Dig a minimum two (2) cubic foot hole where the drain valve is to be located. Install the drain valve in a PVC tee pointing downward at a 45 degree angle. Surround the drain valve with a minimum one (1) cubic foot of gravel. Place an 18"x18" piece of weed cloth or burlap on top of the gravel. Finish to grade with top soil.

D. Install in the low points of the mainline, manual gate valves as needed for draining. Install 24" off of the mainline in 10" valve boxes.

3.10 FLUSHING AND PRESSURE TESTING:

A. Prior to backfilling and installation of sprinkler heads, open all control valves and use full line pressure to completely flush lines of foreign matter and dirt. INITIAL FLUSHING OF LINES SHALL NEVER BE THROUGH SPRINKLER HEADS OR DRIP TUBING.

B. With zone valves closed, pressure test mainlines by supplying and maintaining full static pressure continuously for one full hour. Observe for evidence of leakage by monitoring flow meter and by visual inspection of the exposed lines. Repair all leaks and retest until no water flow is observed.

3.11 SPRINKLER HEAD INSTALLATION:

A. After landscape finish grading is accomplished, Install heads to finished grade in lawn and shrub areas and backfill with clean topsoil so head is stabilized and no lateral motion is exhibited during operation. Heads shall be set so the tips of the heads are 1/2" above the top of the mulch in planting beds. Heads In the turf areas shall be set flush with the finished grade and not a hazard to pedestrians and/or maintenance machinery. Set sprinkler heads to plumb within 1/16" and a minimum of 4 inches and a maximum of 6 inches from walls, walks and curbs.

B. Sprinkler heads to be spaced so as not to throw water on the buildings, walks or driveways. Heads shall be adjusted as required so that foliage of plants will not obstruct the spray and that the system has 100% coverage.

C. Provide connection to the PVC lateral lines, for spray heads, with barbed fittings and swing pipe. Do not use more than 18 inches of swing pipe for each sprinkler head.

3.12 DRIP SYSTEM INSTALLATION:

A. Drip Control Zone Kit: Install Drip Control Zone Kit level and below grade with a minimum of 4 inches clearance to the top and sides of the inside of a rectangular valve box. Place a minimum of 6 inches of gravel in the bottom of the valve box.

B. Landscape Dripline (Inline Emitter Tubing): Landscape bed areas shall be supplied with rigid PVC lateral piping. Landscape Dripline connection points shall be made in 6 inch valve boxes using compression adapter tees or ells as required. For under mulch Installation, place tubing rows at 18 inch lateral spacing as Indicated on the plans and hold In place with galvanized tie-down stakes spaced evenly every 2 to 3 feet, and with two stakes on each change of direction. Install tubing in a serpentine manner and bending is allowed provided the radius is sufficient enough that kinking does not occur. Backfill with mulch as noted In the landscaping specifications.

C. Landscape Dripline Compression Fittings: Landscape Dripline Compression Fittings shall be used at connection points to the PVC lateral piping, where tubing layout requires a tee and at bends or changes of direction to prevent kinking of the Landscape Dripline.

Removable flush caps shall be Installed at the low point of each dripline section. Depending on the site conditions and tubing layout, more than one flush cap may be required. Provide a 6 inch valve box for each flush cap.

Air/vacuum relief valves shall be installed at the highest elevation within each dripline section. Depending on the site conditions and tubing layout, more than one air/vacuum relief valve may be required. Provide a 6 inch valve box for each air/vacuum relief valve.

3.13 FLUSHING, OPERATION, TESTING AND BALANCING:

A. Flushing: All air and foreign objects and debris shall be flushed from the system.

1. Dripline and Emitter Lateral Flushing Procedures.
   a. Flush the system every two weeks for the first six (6) weeks and check the water that is flushed out for cleanliness. Establish a regular system flushing schedule for the future based on results from the initial six-week flushing schedule.
   b. Flush the system completely after any repairs are made and monitor system operation closely under regular system flushing schedule.
   c. Check the pressure at the supply and flush headers on a regular basis and compare with the pressure readings taken after installation.

B. General Testing: Upon completion of the irrigation system, and after pressure/leak testing and head installation, the entire system shall be tested for proper operation. All components checked for proper operation by the Contractor under supervision of the General Contractor. The system shall be tested in strict accordance with all applicable codes, ordinances and regulations.

C. Dripline and Emitter Lateral Leakage Testing Procedures:

1. Subject installed drip tubing and emitter lateral piping to water pressure equal to specified operating pressure for ten (10) minutes. Test with control zone components and drip flush valve components installed.
2. Partially backfill buried pipe and tubing to prevent movement under pressure. Expose couplings, fittings, and valve components.
3. Visually Inspect valve assemblies and fittings for leakage and replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until test segment is free from leaks. Cement or caulking to seal leaks is prohibited.

D. Dripline and Emitter Lateral Operational Testing Procedures:

1. Activate each dripline and emitter lateral control zone valve in sequence from controller. Provide either one additional person with radio or use handheld remote to activate remote control valves from controller. Manually activating remote control valve using manual bleed mechanism at remote control valve is not an acceptable method of activation.
2. Replace or adjust defective valve, fitting, dripline segment, emitter lateral segment, or appurtenance to correct operational and coverage uniformity deficiencies.
3. Repeat test(s) until each dripline or emitter lateral test segment passes testing procedures. Repeat tests, replace components, and correct deficiencies at no additional cost.
4. Any portions requiring repair shall be replaced or repaired and test repeated. No testing shall be done until the last solvent welded joint has had 12 hours to set and cure.

C. Balancing and Adjustment: The Contractor shall balance and adjust the various components of the system so that the overall operation is most efficient. This work shall include adjustment to all sprinkler heads and individual station adjustments on the controller. Observe that all zones function properly and in the correct sequence.

3.14 MAINTENANCE AND COMPLETION OF THE WORK:

A. The Contractor shall complete the irrigation system as drawn and specified, according to Schedule herein, and operate and maintain same until time of substantial completion of the project.

B. Any changes made in the layout and/or arrangement of the proposed Irrigation system, or any other differences between the proposed system and actual Installed conditions shall be recorded by the Contractor In the form of an "As-Built" drawing. The Contractor shall provide the Owner and the Landscape Architect with a copy of this drawing before work under this contract will be considered acceptable. All adjustments in the layout and/or arrangement of the Irrigation system are subject to the approval of the Landscape Architect.

C. The Contractor shall orient the Owner's personnel to the operation and adjustments of the controller according to local seasonal requirements. The Contractor shall also familiarize the Owner with sprinkler and valve adjustments. The Owner is, In general, to be totally familiarized with the overall operation, adjustment, maintenance and intent of the Irrigation system, Including the measures that should be taken to provide winterization for the system. Such instructions should be in written form. The contractor shall also provide a color coded laminated plan, in the controller door, showing the locations of all zones.

3.15 INSPECTION AND SUBSTANTIAL COMPLETION:

A. When Contractor is satisfied that the entire system is operating properly, that it is balanced and adjusted so that all work and clean-up is completed, he shall submit a written request for Initial Inspection to the General Contractor and Landscape Architect at least one week prior to anticipated date of Inspection and testing.

B. Submit reproducible as-built Record Drawings and Maintenance Manual to General Contractor with request for inspection.

C. Upon completion of repairs and replacements found necessary at time of Inspection, the Landscape Architect will confirm the date of substantial completion.

E. The date of substantial completion will determine:
   1. The final date of maintenance as part of this Section.
   2. The beginning date of the One-Year Guarantee Period.

3.16 GUARANTEE:

A. Guarantee all work, products, equipment and materials for one (1) year period beginning upon substantial completion.

B. Guarantee applies to all losses with the exception of those due to Acts of God, vandalism, occupancy of the project or Owner neglect, as determined by the Landscape Architect and/or Owner.

3.17 FINAL INSPECTION:

A. At end of Guarantee Period and upon request for final inspection, jointly review all guaranteed work for Final Acceptance with the Owner and General Contractor.

B. Submit written request for final inspection to the General Contractor and Owner at least two weeks prior to anticipated date of Inspection.

3.18 FINAL ACCEPTANCE:

A. Upon completion by the Contractor of all required repairs and replacements found at time of final Inspection, the Owner and General Contractor will confirm the date of Final Acceptance of the work.

B. Confirmation of Final Acceptance by the Owner and the General Contractor will constitute completion of the work of this Section.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR · REG. NO. 5-330 · LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

L12.2 SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

2023 ©

PLANTING LEGEND

CODE	COMMON NAME & VARIETY-SPACING	MIN. SIZE	PATTERN	QTY.
ANG1	ANNUAL COLOR 4" - 12"	4" CUP		
ANG3	ANNUAL COLOR 18" - 24"	4" CUP		
AZF	AZALEA 'FORMOSA RED'	7 GAL		
AZG	AZALEA 'G.G.GERBING'	7 GAL		
HBD	DWARF BURFORD HOLLY	4'HT		
HCR	HOLLY 'CARISSA'	3 GAL		
HEB	HOLLY 'EMILY BRUNER'	6'HT		
HEG	HOLLY 'EAGLESTON'	16-18'HT		
HLY	HURRICANE LILY BULB (SPACE APPROX ± 30" O.C.)	1 GAL		
HYL	HYDRANGEA 'LIME LIGHT'	7 GAL		
MDO	MONDO GRASS 8" O.C.(TYP.) W/ HURRICANE LILY SPACED +-30" O.C.	4" CUP		
MLC	MUHLY GRASS 'WHITE CLOUD'	3 GAL		
OKL	LIVE OAK	15'HT		
OLR	OLEANDER 'RED'	7 GAL		
SPB	SPIREA 'BRIDAL WREATH'	7 GAL		
VSSH	VIRGINIA SWEETSPIRE 'LITTLE HENRY'	3 GAL		
YEW	JAPANESE YEW	6'HT		
WHF	WHITE FRINGE TREE	8'HT		
LIM	LIMESTONE NO.8	SF		
ROCK 1	LARGE RED GRAVEL 3/4" - 2" SIZE @ JIMSTONE CO. www.jimstoneco.com (3" THICK OVER LANDSCAPE FABRIC)	SF		
ROCK 2	15-30 LB. STONE RIP RAP - TAN (8"-11" THICK OVER LANDSCAPE FABRIC)	SF		
MULP	PINE STRAW MULCH, CRIMPED	SF		
MULH	HARDWOOD MULCH, SHREDDED	SF		
SOA	ST. AUGUSTINE 'PALMETTO' -SQUARE YARD	SY		
STEEL 6	6 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		
STEEL 8	8 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		

PLANTING NOTES

1. PLANT MATERIAL TO BE FULLY GROWN AND MATCHING.
2. BEDS TO BE SLOPED TO DRAIN - MOUNDED W/ 20% SLOPE FROM CENTER TO EDGE
3. DEBRIS TO BE REMOVED FROM BEDS.
4. BEDS TO BE TILLED TO A DEPTH OF 12" FOR ANNUALS & GROUND COVER AND 16" FOR SHRUBS.
5. ALL TREES TO HAVE CLEAR TRUNK OF FIVE FEET MINIMUM.
6. UNLESS OTHERWISE NOTED ALL TREES TO BE STRAIGHT,MATCHING,SINGLE TRUNK.
7. B/D SHOULD NOTE CONTAINER OR B&B MATERIAL.
8. UNLESS OTHERWISE NOTED ALL BEDS, & NEW TREES ARE TO BE IRRIGATED W/ DRIP IRRIGATION.
9. ALL DRAIN LINES TO FALL ≥ 1% SLOPE OR GREATER.
10. AS-BUILT DRAWINGS OF THE IRRIGATION & DRAINAGE SYSTEM TO BE SUBMITTED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
11. SLOPE ALL BEDS TO DRAIN AWAY FROM THE BUILDING IN THE EVENT THAT THE DRAINAGE SYSTEM BECOMES CLOGGED.
12. SOIL SAMPLES HAVE BEEN TAKEN FOR THIS PROJECT. THE PLANT PALETTE WAS DESIGNED TO WORK WITH THE PARENT OR NATIVE SOIL ON SITE. SUBSTITUTIONS OF PLANT MATERIAL ARE NOT PERMITTED W/ OUT APPROVAL OF THE LANDSCAPE ARCHITECT.
13. UNITS OF ANNUAL COLOR SHOWN ON PLAN ARE IN SQUARE FEET. USE CHART BELOW TO DETERMINE QUANTITY OF PLANTS. QUANTITY MAY BE AFFECTED BY SELECTED VARIETIES.

ANG1 = 3.0 PLANTS PER SQUARE FOOT
ANG2 = 2.5 PLANTS PER SQUARE FOOT
ANG3 = 2.25 PLANTS PER SQUARE FOOT

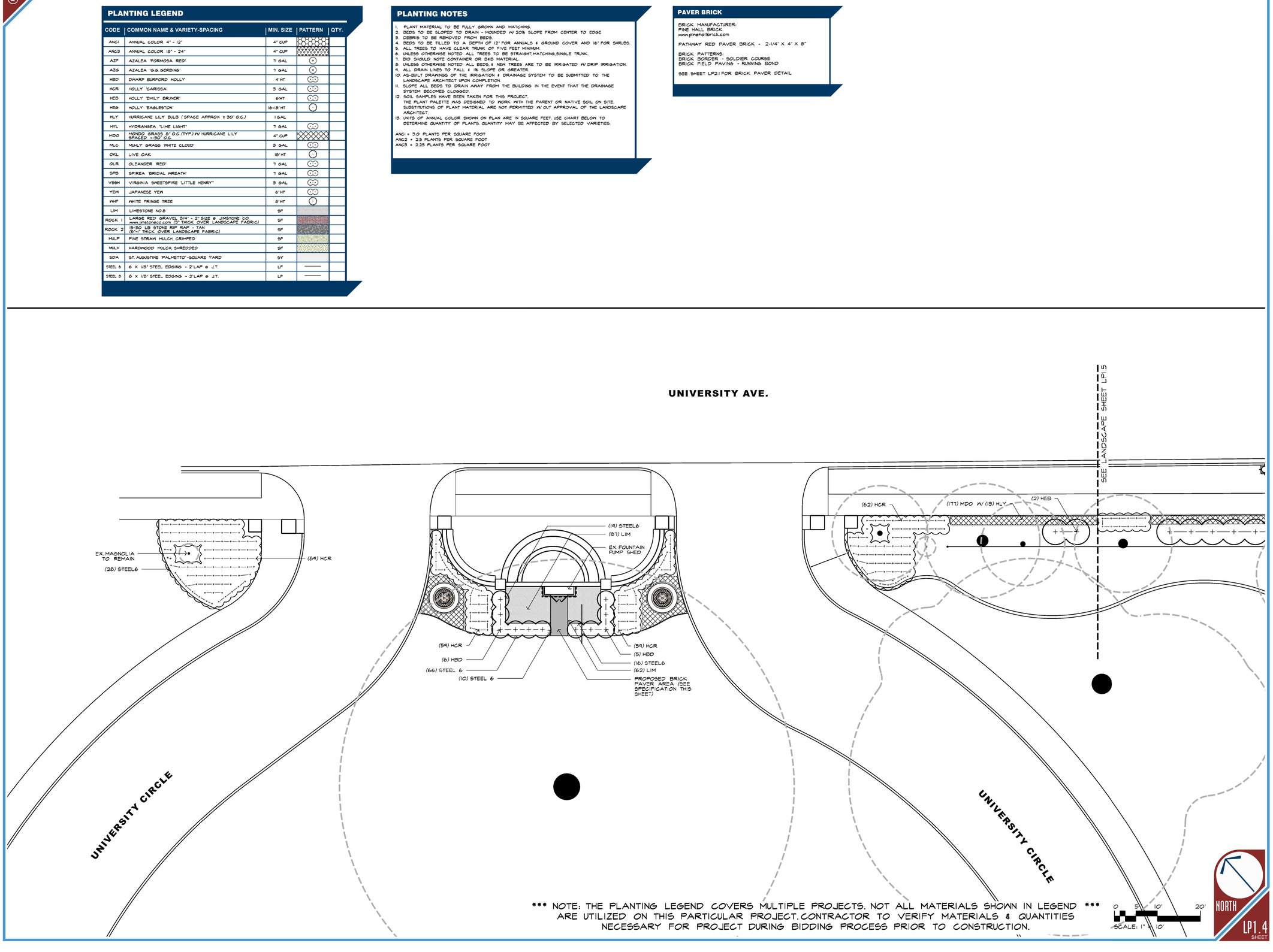
PAVER BRICK

BRICK MANUFACTURER:
PINE HALL BRICK
www.pinehallbrick.com

PATHWAY RED PAVER BRICK - 2-1/4" X 4" X 8"

BRICK PATTERNS:
BRICK BORDER - SOLDIER COURSE
BRICK FIELD PAVING - RUNNING BOND

SEE SHEET LP2.1 FOR BRICK PAVER DETAIL



*** NOTE: THE PLANTING LEGEND COVERS MULTIPLE PROJECTS. NOT ALL MATERIALS SHOWN IN LEGEND ARE UTILIZED ON THIS PARTICULAR PROJECT. CONTRACTOR TO VERIFY MATERIALS & QUANTITIES NECESSARY FOR PROJECT DURING BIDDING PROCESS PRIOR TO CONSTRUCTION. ***

GENERAL NOTES

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19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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LAFAYETTE, LA 70504
PROJECT • 22113.00

UNIVERSITY CIRCLE LANDSCAPE PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPILLER JR.
REG. NO. 5-362
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944

LP1.4
SHEET

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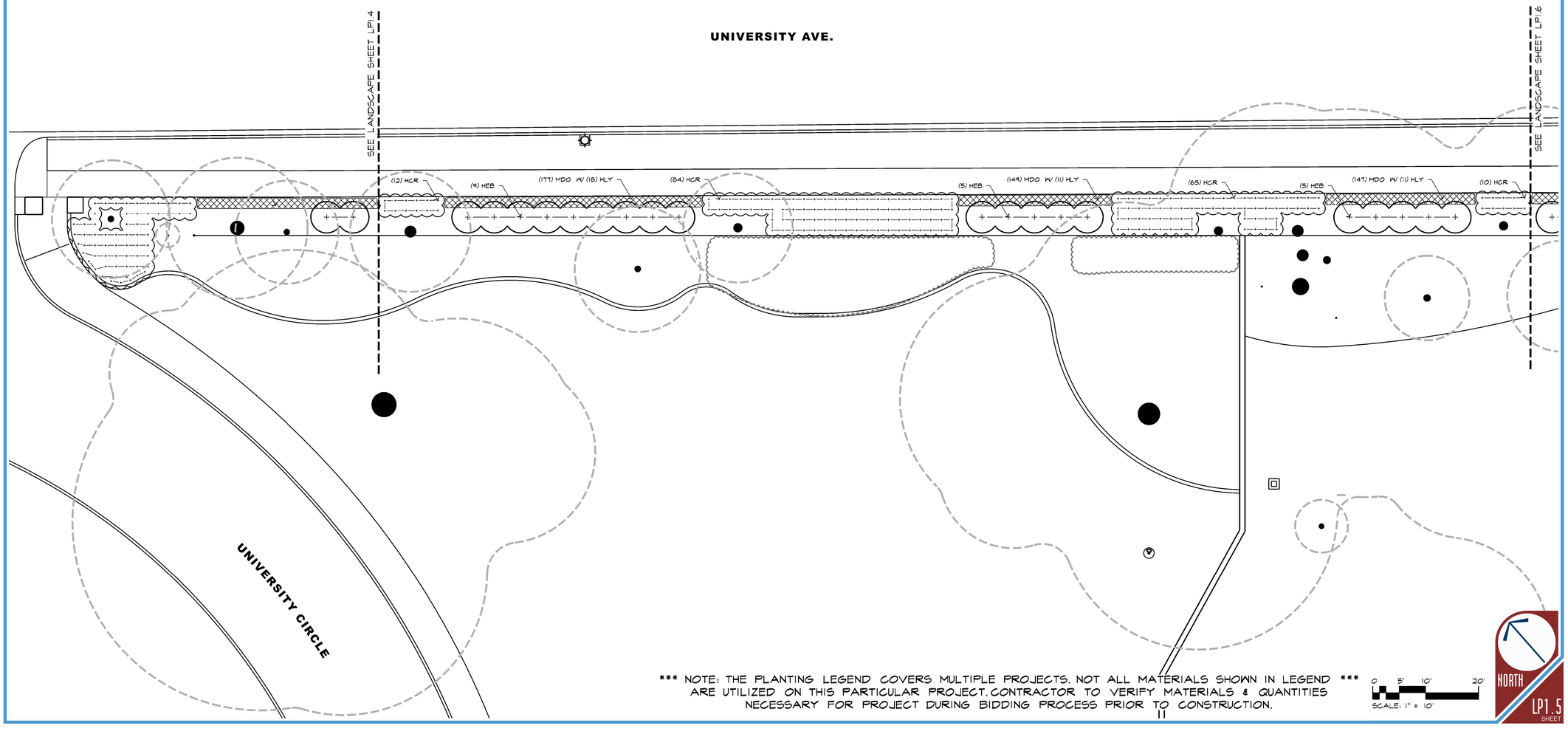
PLANTING LEGEND

CODE	COMMON NAME & VARIETY-SPACING	MIN. SIZE	PATTERN	QTY.
ANC1	ANNUAL COLOR 4" - 12"	4" CUP		
ANC3	ANNUAL COLOR 18" - 24"	4" CUP		
AZF	AZALEA 'FORMOSA RED'	7 GAL		
AZG	AZALEA 'G.G.GERBING'	7 GAL		
HBD	DWARF BURFORD HOLLY	4'HT		
HCR	HOLLY 'CARISSA'	3 GAL		
HEB	HOLLY 'EMILY BRUNER'	6'HT		
HES	HOLLY 'EAGLESTON'	16-18'HT		
HLY	HURRICANE LILY BULB (SPACE APPROX 2 30" O.C.)	1 GAL		
HYL	HYDRANGEA 'LIME LIGHT"	7 GAL		
MDO	MONDO GRASS 8" O.C.(TYP.) W/ HURRICANE LILY SPACED +-30" O.C.	4" CUP		
MLG	MUHLY GRASS 'WHITE CLOUD'	3 GAL		
OKL	LIVE OAK	18' HT		
OLR	OLEANDER 'RED'	7 GAL		
SPB	SPIREA 'BRIDAL WREATH'	7 GAL		
VSSH	VIRGINIA SWEETSPIRE 'LITTLE HENRY"	3 GAL		
YEW	JAPANESE YEW	6'HT		
WHF	WHITE FRINGE TREE	8'HT		
LIM	LIMESTONE NO.8	SF		
ROCK 1	LARGE RED GRAVEL 3/4" - 2" SIZE @ LIMSTONE CO. www.limstoneco.com (3"- THICK OVER LANDSCAPE FABRIC)	SF		
ROCK 2	15-50 LB STONE RIP RAP - TAN (8-11 THICK OVER LANDSCAPE FABRIC)	SF		
MULP	PINE STRAW MULCH, CRIMPED	SF		
MULH	HARDWOOD MULCH, SHREDDED	SF		
SOA	ST. AUGUSTINE 'PALMETTO' -SQUARE YARD	SY		
STEEL 6	6 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		
STEEL 8	8 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		

PLANTING NOTES

1. PLANT MATERIAL TO BE FULLY GROWN AND MATCHING.
2. BEDS TO BE SLOPED TO DRAIN - MOUNDED W/ 30% SLOPE FROM CENTER TO EDGE
3. DEBRIS TO BE REMOVED FROM BEDS.
4. BEDS TO BE TILLED TO A DEPTH OF 12" FOR ANNUALS & GROUND COVER AND 16" FOR SHRUBS.
5. ALL TREES TO HAVE CLEAR TRUNK OF FIVE FEET MINIMUM.
6. UNLESS OTHERWISE NOTED ALL TREES TO BE STRAIGHT,MATCHING,SINGLE TRUNK.
7. BID SHOULD NOTE CONTAINER OR B&B MATERIAL.
8. UNLESS OTHERWISE NOTED ALL BEDS & NON TREES ARE TO BE IRRIGATED W/ DRIP IRRIGATION.
9. ALL DRAIN LINES TO FALL @ 1% SLOPE OR GREATER.
10. AS-BUILT DRAWINGS OF THE IRRIGATION & DRAINAGE SYSTEM TO BE SUBMITTED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
11. SLOPE ALL BEDS TO DRAIN AWAY FROM THE BUILDING IN THE EVENT THAT THE DRAINAGE SYSTEM BECOMES CLOGGED.
12. SOIL SAMPLES HAVE BEEN TAKEN FOR THIS PROJECT. THE PLANT PALETTE WAS DESIGNED TO WORK WITH THE PARENT OR NATIVE SOIL ON SITE. SUBSTITUTIONS OF PLANT MATERIAL ARE NOT PERMITTED W/ OUT APPROVAL OF THE LANDSCAPE ARCHITECT.
13. UNITS OF ANNUAL COLOR SHOWN ON PLAN ARE IN SQUARE FEET. USE CHART BELOW TO DETERMINE QUANTITY OF PLANTS. QUANTITY MAY BE AFFECTED BY SELECTED VARIETIES.

ANC1 = 3.0 PLANTS PER SQUARE FOOT
ANC2 = 2.5 PLANTS PER SQUARE FOOT
ANC3 = 2.25 PLANTS PER SQUARE FOOT



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0 5' 10' 20'
SCALE: 1" = 10'

NORTH

LP1.5 SHEET

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104 E. UNIVERSITY AVE. LAFAYETTE, LA 70504
PROJECT • 22113.00

UNIVERSITY CIRCLE TO HEBRARD BLVD. LANDSCAPE PLAN

STATE OF LOUISIANA
DANIEL M. SPILLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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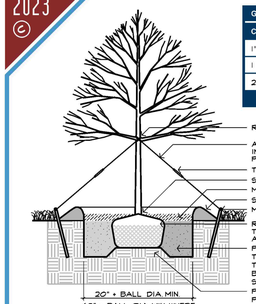
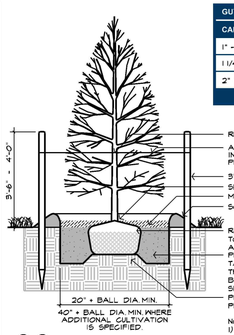
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

01 TREE PLANTING - STANDARD
NOT TO SCALE

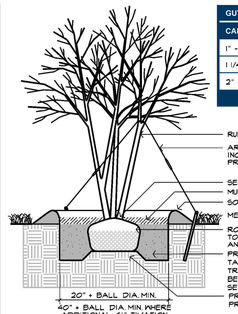
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

02 TREE PLANTING - FULL TO GROUND
NOT TO SCALE

GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



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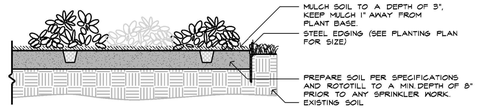
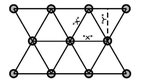
03 TREE PLANTING - MULTI-TRUNKED
NOT TO SCALE





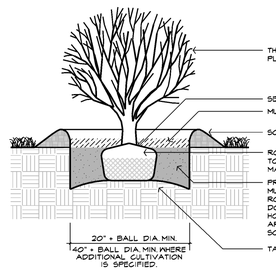
ALL GROUND COVERS TO BE PLANTED ON CENTER IN A TRIANGULAR PATTERN. (SEE PLANTING & PLANTING SPACING LEGEND)
X = O.C. DIMENSION AS NOTED IN LEGEND
Y = ROW SPACING DIMENSION

PLANT SPACING LEGEND

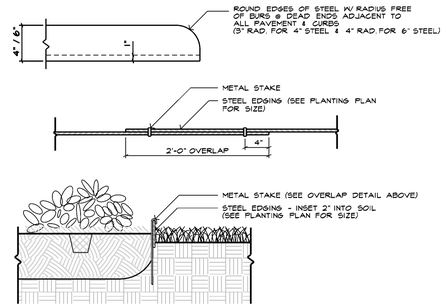
SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.	SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.
6" O.C.	5.2"	4.61	6' O.C.	5.2'	0.032
8" O.C.	6.93"	2.6	8' O.C.	6.93'	0.018
10" O.C.	8.66"	1.66	10' O.C.	8.66'	0.016
12" O.C.	10.4"	1.15	12' O.C.	10.4'	0.008
15" O.C.	13.0"	0.739	15' O.C.	13.0'	0.0059
18" O.C.	15.6"	0.512	20' O.C.	17.3'	0.00288
24" O.C.	20.8"	0.29	25' O.C.	21.65'	0.00185
30" O.C.	26.0"	0.186	30' O.C.	26.0'	0.00128
36" O.C.	30.0"	0.128	40' O.C.	34.6'	0.000722
4'O.C.	3.46'	0.0125			
5'O.C.	4.33'	0.0461			

NOTES:
1. SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES,SIZE,AND SPACING DIMENSION.
2. SMALL ROOTS (1/4" OR LESS) THAT GROW AROUND,UP,OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING.ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING.(SEE ROOT BALL SHAVING CONTAINER DETAIL).
3. SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

04 PLANT SPACING
NOT TO SCALE

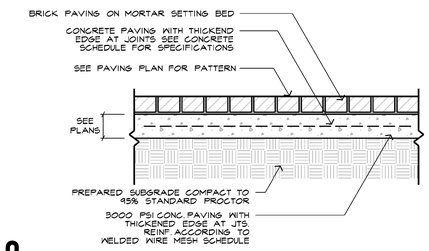


05 SHRUB PLANTING
NOT TO SCALE

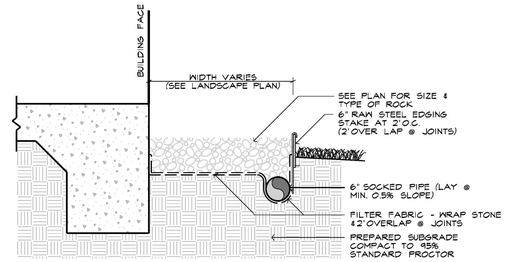


06 STEEL EDGING
NOT TO SCALE

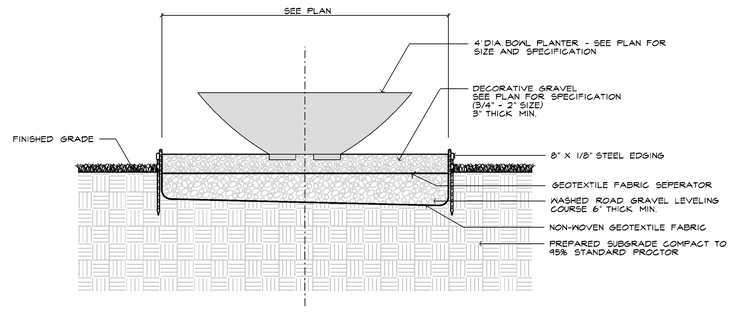
CONCRETE SCHEDULE	
4" PAVING	6X6 * 10/10
6" PAVING	6X6 * 6/6
8" PAVING	6X6 * 4/4



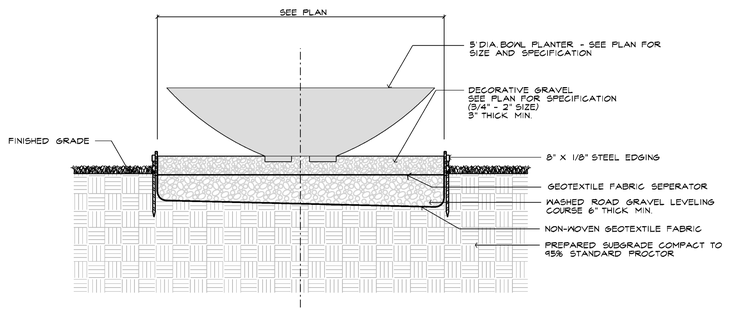
09 BRICK PAVING ON CONCRETE BASE
NOT TO SCALE



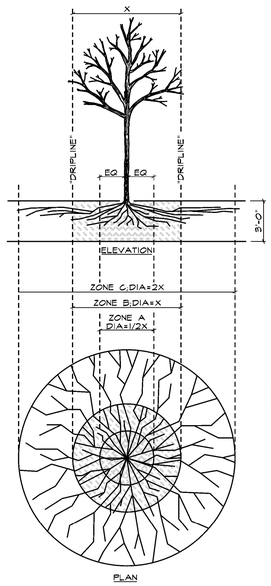
11 FOUNDATION STRIP
NOT TO SCALE



07 RAISED ROCK AREA W/ 4' BOWL PLANTER
NOT TO SCALE



08 RAISED ROCK AREA W/ 5' BOWL PLANTER
NOT TO SCALE



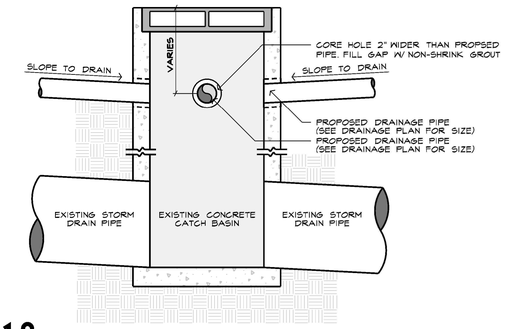
TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
1) NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
2) SEVERANCE OF ROOTS LARGER THAN 2"DIA REQUIRES LANDSCAPE ARCHITECT'S APPROVAL.
3) BORING OR TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER.

ZONE B (DRIPLINE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES REQUIRED.
2) TRENCHING ALLOWED AS FOLLOWS:
- EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED.
- LIMIT TRENCH WIDTH.DO NOT DISTURB ZONE A.MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
- BORING & TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

ZONE C (FEEDER ROOT ZONE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES MAY BE REQUIRED
2) TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
- MINIMIZE TRENCH WIDTH.
- MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION.

10 TREE PRESERVATION DETAIL
NOT TO SCALE



12 CATCH BASIN TIE-IN
NOT TO SCALE

GENERAL NOTES

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR. · REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work in this Section is based on these specifications and the landscape drawings. The scope of work is based on furnishing all labor, materials, tools, transportation, equipment and supervision by the Contractor as required to complete the specified work.

B. In addition to the requirements of these specifications, manufacturer's instructions and recommendations for proper preparation and application of all materials shall be complied with in all respects.

C. Related Work: PLANTING IRRIGATION

1.2 QUALITY ASSURANCE

A. Contractor shall be fully qualified, licensed, capable and experienced in the installation of the described landscape. Evidence of the Contractor's qualifications shall be presented prior to the award of the Contract.

B. The following industry standards shall govern landscape materials and installation. The most stringent requirement shall rule when conflicts between the standards occur and as determined by the Landscape Architect.

1. American Standard for Nursery Stock (Most Current Edition)
2. Horticultural Standards, American Association of Nurserymen.
3. Recommended Standard Specifications for Planting Trees, Shrubs and vines and Fine Grading and Seeding Lawns, second printing - December 1968.
4. American Joint Committee on Horticultural Nomenclature: Latest Edition.

1.3 SUBMITTALS

A. Digital photographs representing each variety shall be submitted for approval by the Landscape Architect prior to ordering any plant material. (The submittal of photographs does not in any way relieve the Contractor of his responsibility to comply with the specifications and applicable standards.)

B. The selection of all materials and the execution of all operations required under the drawings and these specifications are subject to the approval of the Landscape Architect or Owner.

C. The Landscape Architect or Owner shall have the right to reject all material and all work which, in his opinion, does not meet the requirements of the drawings and/or specifications at any stage of the operation. All rejected material shall be removed by the Contractor, as directed, at the Contractor's expense.

1.4 PROTECTION OF EXISTING WORK

A. Location of underground infrastructure such as existing water, telephone, cable, electrical, gas, sewer and drainage lines, and other utilities, shall be ascertained or verified by the Contractor prior to initiating work. The Contractor shall protect the same by means acceptable to the Owner before commencing construction and maintain such protection until the job is accepted by the Owner.

B. Protective measures shall be taken to secure walls, walks, driveways, parking lots, light poles, grass and structures from damage or discoloration. The Contractor shall furnish and install necessary pads, tarpaulins, burlap, building paper, or clean straw to protect existing work.

1.5 EXTRAS, OMITTED OR CHANGES IN WORK

A. While no new unforeseen items are anticipated, they shall be classified as extra work when they cannot be covered by any of the specifications. The Contractor shall submit detailed prices for any extras to the Landscape Architect, and shall perform extras only upon prior written acceptance from the Owner. All such extra work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents. In the absence of such written order, the Contractor shall not be entitled to payment for such extra work.

B. The Landscape Architect shall have the authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time, and not inconsistent with the contract documents. Such changes may be effected by field order or by other written order. Such changes shall be binding on the Contractor.

C. The Owner, without invalidating the contract, may order changes in the work consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents.

1.6 MEASUREMENTS, LAYOUT & LEVELS

A. The Contractor shall layout all lines and levels necessary for the location and erection of the landscape construction and for all excavation, filling and grading work and set necessary markers and stakes, and be responsible for their correctness.

B. The Contractor shall take his own measurements of the site verifying same with the drawings, and shall be responsible for proper fit of his portion of the completed work.

C. The spacing of plants shall conform to the spacing designated on landscape plans and specifications, but variations are permissible when unforeseen site conditions such as underground pipes, etc., make uniform spacing impractical, in which case the Contractor shall abide by instructions, furnished by the Landscape Architect or Owner. Departure from specified spacing will be allowed when site conditions do not permit the specified number of plants in a grouping in which case the minimum spacing shall govern the number of plants to be placed in the group and the excess plants shall be located as directed by the Landscape Architect or Owner.

D. Where proposed grades are not indicated, the Contractor shall in all cases provide the necessary pitch on semi-level areas to drain them to a point designated by the Landscape Architect or Owner.

E. The Landscape Architect reserves the right to relocate shrubs and trees from positions on the plans prior to their planting.

1.7 SUBSTITUTION OF MATERIALS

A. The Contractor, before submitting his bid, shall locate all necessary materials as called for in the plans and specifications, and shall be assured of their availability for use on this job.

B. The contract bids shall be based upon providing the specified materials, processes, products, etc., identified in the specifications and/or indicated on the drawings.

C. Substitutions will not be permitted unless upon admission of proof that specified plants are not obtainable and with the authorization of the Landscape Architect. Written requests with nearest available size, variety of plant and price adjustments are to be submitted to the Landscape Architect.

1.8 PLANT & MATERIAL LIST

A. The Contractor shall furnish the plant material as specified and described in this section.

B. Quantities shall be determined by referring to the Drawings.

C. Names, species, and varieties of all material furnished by the Contractor shall be in accordance with the Drawings and Specifications.

D. The Contractor shall furnish, on request of the Owner, satisfactory proof as to the names and species, variety, and size and shall be made only on written authorization of the Owner.

1.9 MEASUREMENT

A. The quantities for payment will be the design quantities specified in the plans and adjustments thereto.

B. Design quantities will be adjusted if the Landscape Architect makes changes to adjust to field conditions, if plan errors are proven or if design changes are necessary.

C. Design quantities are based on the horizontal dimensions shown on the plans.

PART 2 - PRODUCTS

2.1 TOPSOIL: The Contractor shall use salvaged onsite topsoil to the extent possible and topsoil from offsite borrow to supplement that salvaged. The topsoil shall be a fertile, friable, natural topsoil of a loamy character. It shall contain a normal amount of decomposed organic matter and shall be free of stones, lumps, clay, toxic materials, plants or their roots, stacks and other extraneous matter. The topsoil shall be within a pH range of 5.0 to 6.5. Topsoil testing shall be at the Owner's expense and by a third party entity.

2.2 SOIL CONDITIONER MIX: Finely chopped pine bark mulch to be incorporated into the soil, shall be free from weeds, moss, sticks and other debris but shall contain a generous amount of sand (average 20% by volume) and shall be well decomposed.

2.3 PEAT MOSS: Peat moss shall be a horticultural grade, sphagnum peat moss containing partially decomposed fibrous or cellular stems and leaves of any of the many species of sphagnum mosses from fresh water sources conforming to the following requirements:

A. Peat moss shall be a homogeneous material free of decomposed colloidal residue lumps, roots, stones, and other foreign matter; and of such consistency that peat can pass a 1/2 in. mesh and can be readily incorporated with the topsoil.

B. The pH shall not be less than 3.5 nor greater than 5.5 at 25 degrees C.

C. Organic matter content shall not be less than 90% by weight, on an oven-dry basis.

D. Ash content shall not be more than 10% by weight, on an oven-dry basis.

E. Moisture absorption capacity shall not be less than 800%, by weight, on an oven-dry basis.

2.4 TOP DRESS MULCH: Top dress mulch shall be clean and free from weeds, moss, sticks, soil and any other objectionable material.

A. The pH shall not be less than 3.5 nor greater than 5.3 at 25 degrees C.

B. The Contractor shall submit a one cubic foot sample of the mulch for approval by the Landscape Architect.

2.5 FERTILIZER: Osmocote 14-14-14, or approved equal, shall be used in bed areas and for trees. The fertilizer shall be stored in a cool, dry place in unopened bags until it is ready to be incorporated into the backfill mixture. Agriform tree tablets can be used in lieu of the Osmocote for tree plantings only, and must be applied at the manufacturer's recommended rate.

2.6 SOD: Class "A" premium grade sod consistent with the variety(s) called out in the plans.

A. Sod shall be machine cut at a uniform soil thickness at a height appropriate to the specified species.

B. Pad Size: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 0.5 inch (15 mm) on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.

C. Strength of Turf Sod Sections: Standard size sections of sod shall be strong enough that it can be picked up and handled without damage.

D. Moisture Content: Sod shall not be harvested or transplanted when its moisture content (excessively dry or wet) may adversely affect its survival.

E. Mowing Height: Before harvesting, the sod shall be mowed uniformly at a height of 1 to 2.5 inches (25 to 60 mm) on cool season grasses (i.e., bluegrass, bent grass, rye and fescue), and 0.75 to 1.50 inches (20 to 40 mm) on warm season grasses (i.e., zoysia grass, Bermuda grass, St. Augustine grass, etc.)

F. Time Limitations: Sod shall be harvested, delivered and installed/transplanted within a period of 24 hours, unless a suitable preservation method is approved prior to delivery. Sod not transplanted within this period shall be inspected and approved by the inspecting officer or his representative prior to its installation.

G. Thatch: Sod shall be relatively free of thatch, up to 0.5-inch (15mm) allowable (uncompressed).

H. Diseases, Nematodes and Insects: Sod shall be reasonably free of diseases, nematodes and soil-borne insects. Specific nursery and/or plant materials laws may require that all sod entering inter-state commerce be inspected and approved for sale. The inspections and approval must be made by the appropriate government representative of the agriculture department or office of entomologist.

I. Weeds: Nursery grown turf grass sod shall be free of objectionable grassy and broad leaf weeds. Turf grass sod shall be considered free of such weeds if less than 5 such plants are found per 100 square feet (10 sq m) of area. Sod will not be acceptable if it contains any of the following weeds: common Bermuda, johnson grass, poison ivy, nutsedge, thistle, bindweed, bent grass or wild garlic.

2.7 PLANTS: TREES, SHRUBS & GROUND COVER

A. Caliper measurement of trees shall be taken at six inches above natural ground up to and including four inch caliper material. If the caliper six inches above natural ground exceeds four inches, the caliper will be measured twelve inches above natural grade.

B. Shrubs shall be well shaped, full branched plants with heights measured to point in the main perimeter of branches or foliage rather than to single shoots or leaders. Plants with single stems shall have sufficient, well spaced side branches to give them weight equal to one grown with numerous canes. Canes shall be considered as primary stems starting from the ground or from a point not higher than one-fourth (1/4) the height of the plant.

C. Sizes of balls shall be at least six inches (6") greater in diameter than the minimum sizes established for individual plant types as recommended by "Horticultural Standards" latest edition of American Association of Nurserymen, Inc. Depth shall be sufficient to encompass the fibroid and feeding root system necessary for the full recovery of the plant and in no case shall be less than recommended ratios to diameter as recommended by "Horticultural Standards", latest edition of the American Association of Nurserymen, Inc. All balls shall be firm, intact, slightly tapered, well burlapped and securely fastened with twine or nails or both. Any tree which is determined to be loose in the ball or with a broken ball at the time of planting will be rejected.

D. Any plants having any of the following unnatural or objectionable features will be rejected: excessive abrasions of the bark; dried out root system; excessive dead or dried up wood; excessive sun scald injuries; undeveloped and weak top or roots or both; crooked or one-sided development of tops; no straight leaders on trees naturally and normally having them; broken or removed leaders; untrue types or sizes; root-bound container grown plants; excessively damaged or loose balls of soil; plants actually dead, diseased or insect infested and plants not otherwise complying with the plant specification herein.

E. The rejected material shall be removed from the site and replaced as quickly as possible with new plant material of the same kind, meeting the requirements, at the expense of the Contractor.

PART 3 - EXECUTION

3.1 PLANT DELIVERY, UNLOADING & STORAGE

A. All plants shall be delivered to the job in good condition and unloaded with care so that balls and tops are not damaged. Balled & burlapped plants shall not be handled or lifted by their tops or trunks.

B. The Contractor shall be responsible for the protection of plants from damage through weather conditions, improper storage, vandalism, theft, and injury, and shall unload plants in a location approved by the Owner, requiring the minimum amount of moving to locations where they are to be planted.

C. Whenever and wherever possible, delivery shall be made within a reasonable time of completion of planting pits or beds and if unforeseen conditions prevent immediate planting, the Contractor shall heel in plants, watering same if necessary and protect from drying winds and sun in accordance with good nursery practices.

D. If in the opinion of the Owner, plants have been damaged through prolonged intervals between delivery and storage, they shall not be used in planting, and shall be replaced by new plants conforming to original specifications.

3.2 TREE & SHRUB PIT PLANTING

A. Pits shall not be prepared and left open for prolonged periods prior to planting. Pits shall be protected until used so that sides do not crumble and so pits do not become saturated with water. All damaged pits shall be restored to original condition and shall be drained of surface water before usage.

B. Depth of pits shall not be more than two inches (2") greater than depth of the ball to be received. Diameter of pits shall be such that there is no less than ten inches (10") of space all around the balls or root spread of bare-root plants, except in the case of trees in which case the space shall be increased to twenty inches (20"). Bottom of pit shall be thoroughly loosened to a depth of eight inches (8") before plant is placed in pit. Tops of plants shall not be cut loose until plant is set to correct depth in pit.

C. Excavated earth shall be piled sufficiently far back from the edge of the pit to prevent earth sliding back into pit when plants are placed. Surplus excavated earth shall be disposed of immediately after planting is completed to prevent mixing of same with topsoil.

D. Mixture used in backfilling pits shall consist of 75% topsoil, 10% peat moss, 10% pine bark mulch and 5% sand mixed by volume with a slow release fertilizer at the manufacturer's recommended rate. Mixing shall not be done in the pits. Refer to Article 16, MATERIALS, of this specification.

E. After plant has been set and pit has been backfilled to two-thirds (2/3) of its depth, mixture shall be tamped thoroughly and settled with water. When settling has been accomplished, pit shall be brought to level of adjacent ground with same mixture. Slope finished grade slightly toward center of plant.

F. A six inch saucer shall be constructed for all trees planted outside of prepared landscape beds.

3.3 BED ALIGNMENT

A. The Contractor is responsible for planting all material at the correct grades, locations and alignment.

B. The location of plant material and the outline of beds and other areas indicated on the plans shall be followed as closely as possible.

C. Any questions regarding bed alignment shall be brought to the attention of the Landscape Architect immediately.

3.4 BED PREPARATION & PLANTING

A. Conventional Bed Preparation: This technique shall be used unless otherwise noted.

1. Before the start of conventional bed preparation, all areas to be prepared shall be stripped of any grass, weeds, etc., to a minimum depth of (1) inch.
2. All beds shall be rototilled to a depth of ten (10) inches to completely blend the topsoil with one and a half (1.5) cubic yards of soil conditioner mix (see 'PRODUCTS' section) per one hundred (100) square feet of bed prior to rototilling.
3. All bed areas shall then be treated with a granular weed pre-emergent (Eptam or approved equal) at a rate and the method specified by the manufacturer.
4. All beds shall be fertilized with Osmocote 14-14-14, or an approved equal at the manufacturer's recommended rate of one (1) pound per fifty (50) square feet or per any project-specific recommendation.
5. Before planting, the bed area shall be raked and leveled to a fine grade, allowing for proper surface drainage.

3.5 PLANTING

A. After completion of fine grading, the plants shall be placed at the positions indicated on the plans. All plants shall be set so that when settled, they will bear the same relation to finish grade as they did before transplanting. No filling will be permitted around trunks or stems.

3.6 SODDING

A. The soil shall be thoroughly tilled to a depth of four (4) inches.

B. The trees specified on the plans shall already have been planted and guyed before laying sod.

C. The sod bed shall be fine graded to remove all ridges or depressions and the surface cleared of all stones and debris.

D. The sod shall be laid perpendicular to the direction of the slope and in a manner which will permit joints to alternate.

E. Sod panels shall be fitted together tightly so that no joint is visible and tamped firmly and evenly by hand.

F. Immediately following sod placement, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered.

G. During delivery, prior to and during the planting of lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun.

H. Top dressing with washed, clean, weed free builder's sand may be required if deemed necessary by the Owner or Landscape Architect to level depressions in the grade or imperfections in the sod.

3.7 MULCHING

A. After completion of all planting operations, beds and tree pits are to be mulched.

B. Tree pits shall have a 3" covering of top-dress mulch and bed areas shall have a minimum of 3" throughout.

3.8 WATERING

A. Watering of areas planted shall be done on the same day planting is done.

B. All planted areas shall be watered as often as necessary as the work progresses, if weather conditions require same.

C. Watering shall be done by competent workmen, with minimum disturbance of adjoining areas and following the direct instruction of the licensed Contractor.

D. Contractor shall supply necessary topsoil or soil mix to compensate for any settling that takes place due to watering.

3.9 PRUNING & REPAIR

A. Pruning for shape shall be done by the Contractor only if so instructed by the Landscape Architect.

B. Pruning shall consist of shaping the plant to a pleasing outline in accordance with good nursery practices.

C. Pruning shall be done in such a manner so as not to change the natural habit or shape of the plant.

D. Cut-back pruning of all dead wood and injured branches shall be done immediately after planting.

E. Injured branches or damaged branches shall be cut back to sound live wood in accordance with good nursery practices.

F. Shade trees shall be cut back only on authorization of the Landscape Architect.

G. Pruning shall be done before final watering and application of mulch.

H. All debris and trimmings shall be removed immediately.

3.10 TREE STAKING & GUYING

A. Guys shall be furnished and erected by the Contractor for all trees to prevent wind movement, in accordance with the following instructions:

1. Trees up to one and one-fourth inch (1-1/4") caliper: Three (3) supports spaced triangularly around trunk at a distance of fifteen inches (15").
2. Trees one and one-fourth inch (1-1/4") to two inch (2") caliper: Three (3) supports spaced triangularly around trunk at a distance of twenty inches (20").
3. Trees two inches (2") and over in caliper: Three (3) supports spaced triangularly around trunk in clear areas between perimeter ball and edge of plant pit.

B. Supports (stakes) shall be as specified on the drawings and of sufficient length that on being driven substantially into the ground, tops of stakes will be no less than two-thirds (2/3) the distance from ground to lowest branches or forks.

C. Method of fastening supports to tree shall be by means of aluminum wire or No. 12 gauge galvanized wire looped through sections of rubber hose and fastened to supports in such a manner that hose sections prevent damage to bark of tree or by use of ArborTie brand guy line (or approved equal).

D. When the tree has been steadied erect, guy lines shall be tightened to equalize pressure to prevent any wind movement.

E. Contractor shall see that there is no twisting strain thrown on tree trunks when slack is taken up on wires and that rubber hose sections are installed in a manner that there will be no friction damage to bark.

3.11 PROTECTION

A. The Contractor shall protect all plants and lawns from damage at all times.

B. If plants or lawns are damaged, they shall be replaced or treated by the Contractor at his expense to the satisfaction of the Owner or his representative.

3.12 MAINTENANCE

A. The Contractor shall maintain all trees, shrubs and groundcover under this contract until final acceptance, by watering, cultivating, weeding, spraying and replacing as necessary to keep plants in a healthy, vigorous condition, and shall rake bed areas as may be required to keep them neat.

B. The Contractor shall maintain all grass areas under this contract until acceptance by watering, mowing, spraying, etc.

C. Watering: All lawn areas shall be watered once a day with a minimum of 1/2" of water up until final acceptance. Thereafter, watering shall be turned over to the Owner where the Contractor shall provide him with the proper procedures for continued watering. All trees, shrubs and groundcover shall be watered twice a week until final acceptance by the Contractor, providing 1" of water each time unless a comparable amount of rain has been provided.

D. Weeding: Shall consist of pulling or digging out all plant material other than the desired shrubs and groundcover until final acceptance.

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REGISTERED
LICENSED
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

LP2.2 SHEET

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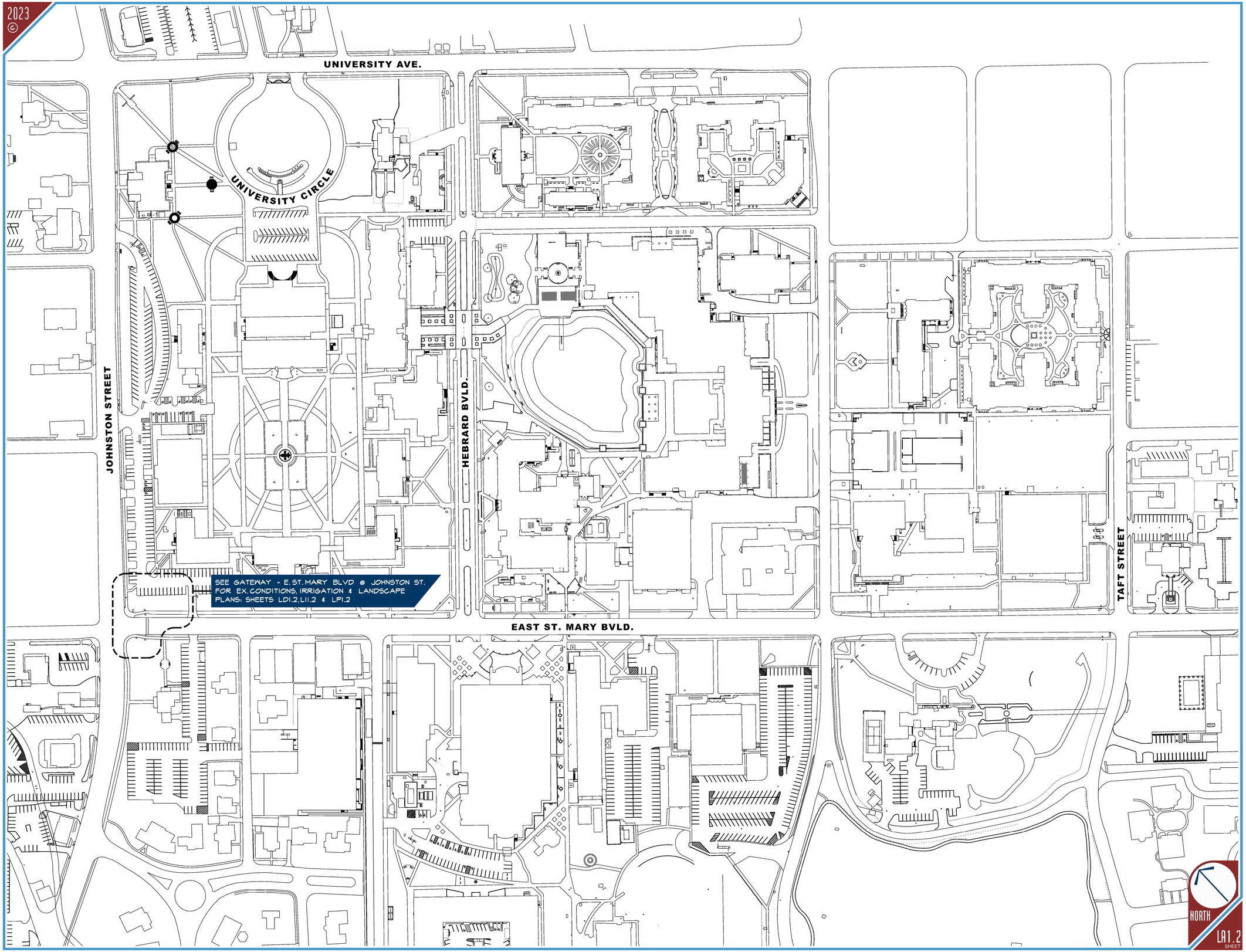

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SHEET

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT - 22113.00

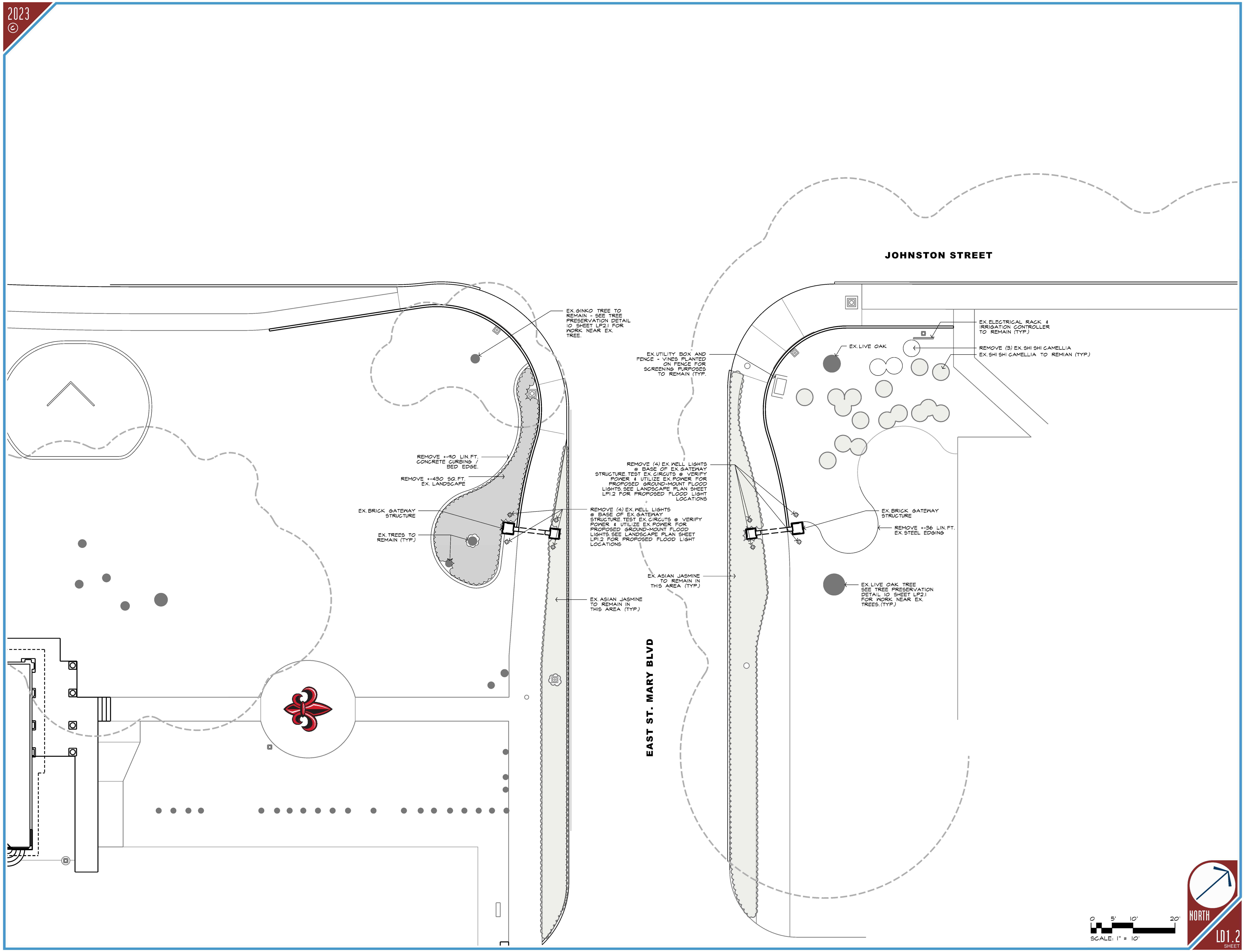
CAMPUS KEY PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944



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18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE, TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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LAFAYETTE, LA 70504
PROJECT • 22113.00

GATEWAY - E. ST MARY BLVD @ JOHNSTON ST. EX. CONDITIONS AND DEMOLITION PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL L. SPILLER JR.
REG. NO. S-362
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

LD1.2
SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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IRRIGATION NOTES

1. IRRIGATION CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S CURRENT SPECIFICATIONS AND RECOMMENDATIONS.
2. CALL 811 PRIOR TO DIGGING OR TRENCHING IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING AND NEW UTILITY LINES ABOVE OR BELOW GROUND AND SHALL REPAIR ANY DAMAGE CAUSED DURING IRRIGATION CONSTRUCTION ACTIVITIES AT NO COST TO THE OWNER.
3. WHEN TRENCHING UNDER THE DRIPLINE OF TREES,EXTREME CARE MUST BE GIVEN TO AVOID ROOT DAMAGE. IF AT ALL POSSIBLE AVOID TRENCHING INSIDE THE DRIPLINE BY GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR UNDER THE DRIPLINE,USE HAND-DIGGING METHODS RATHER THAN A MECHANICAL TRENCHER. MINIMIZE THE IMPACT OF ROOT SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER,KEEPING TREES WELL MATERED BEFORE AND AFTER DIGGING AND COVERING ROOTS WITH SOIL OR MULCH AS SOON AS POSSIBLE.
4. IRRIGATION CONTRACTOR SHALL VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 50psi WITH A FLOW RATE OF 50gpm AT THE WATER METER LOCATION PRIOR TO INSTALLATION.IRRIGATION CONTRACTOR SHALL NOTIFY ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
5. IRRIGATION CONTRACTOR TO COORDINATE WITH THE ARCHITECT AND OWNER EXACT LOCATION OF WATER METER,BACKFLOW PREVENTER,CONTROLLER AND SENSORS.
6. THE OWNER SHALL VERIFY OPERABLE WATER SERVICE
7. OWNER TO PROVIDE DEDICATED 15 AMP CIRCUIT & GCFI OUTLET W/ WEATHER PROOF COVER IN LOCATIONS WHERE NEW CONTRACTER IS REQ.
8. THE IRRIGATION DESIGN IS DIAGRAMMATIC. THE INTENT OF THE DRAWINGS IS TO SHOW THE GENERAL LAYOUT AND LOGIC OF THE SYSTEM. SCALED MEASUREMENTS MAY NOT BE ACCURATE. ACTUAL LOCATIONS AND QUANTITIES OF PIPE AND FITTINGS MAY VARY DUE TO FIELD ADJUSTMENTS FOR EXISTING CONDITIONS AND OTHER OBSTRUCTIONS TO PROVIDE THE PROPER AND INTENDED COVERAGE.
9. ALL MAINLINE SHALL BE SCH40 PVC. ALL LATERAL PIPING SHALL BE CLASS 200 PVC PIPING. ALL PVC FITTINGS SHALL BE PVC TYPE 1 AND MUST BE OF DOMESTIC MANUFACTURE. PVC SOLVENT CEMENT AND PRIMER SHALL BE AS RECOMMENDED / APPROVED BY THE MANUFACTURER OF THE PIPE.
10. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF PVC SLEEVES AS INDICATED ON THE DRAWING.INSTALL FLOWLINE OF SLEEVES 1' BELOW ROADWAY BASE. EXTEND SLEEVES 18" BEYOND BACK OF CURB AND CAP UNTIL CONTRACTOR IS READY TO BEGIN THE INSTALLATION OF SPRINKLER SYSTEM. STAKE LOCATION OF SLEEVE WITH T-POSTS AND FLAGS. ALL JOINTS TO BE GLUED
11. IRRIGATION CONTRACTOR TO USE 18 GAUGE MULTI-STRAND IRRIGATION CONTROL WIRE. COMMON WIRE TO BE 14 AWG COMMERICAL GRADE VALVE WIRE.

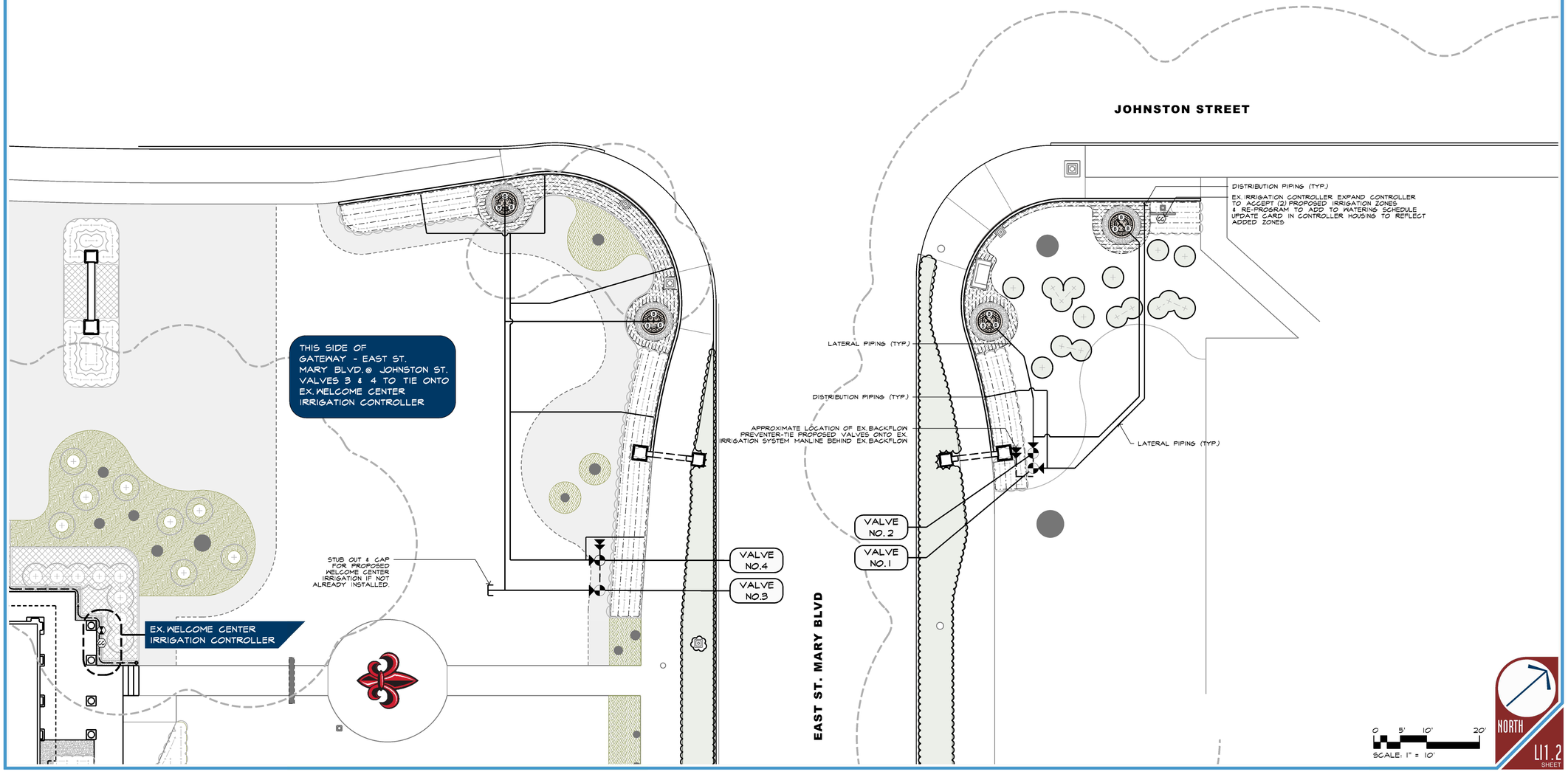
IRRIGATION EQUIPMENT LEGEND

SYMBOL	INFORMATION
	1" WATER METER (LOCATION AND METER TO BE PROVIDED BY THE OWNER PRIOR TO CONSTRUCTION) CONTRACTOR TO VERIFY FLOW AND PRESSURE PRIOR TO INSTALLAING SYSTEM (IF REQUIRED)
	WATTS 1-1/2" SERIES 911 REDUCED PRESSURE ZONE ASSEMBLY W/ FREEZE COVER (IF REQUIRED)
	GATE VALVE / MASTER VALVE (IF REQUIRED)
	RAINBIRD XCZ-PRB-100-COM 1" DRIP VALVE ASSY
	RAINBIRD ESP-LXME MODULAR CONTROLLER W/ (12) STATION MODULE - EXPANDABLE (IF REQUIRED)
	RAINBIRD RSD-BEX WIRED RAIN + FREEZE SENSOR (IF REQUIRED)
B	RAINBIRD XERI BUBBLER 1032 - 5 GPM FLOW
	RAINBIRD XFD-06-12 DRIPLINE TUBING
	DISTRIBUTION PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	LATERAL PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	MAINLINE - SCH 40 PVC (ALL PIPING TO BE 1-1/2" MIN UNLESS OTHERWISE NOTED)
	SCHEDULE 40 PVC SLEEVING BY DIRECTIONAL BORE - SEE PLAN FOR SIZE REQUIREMENT. NO JOINTS ALLOWED UNDER PAVEMENT

NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
2. ALL EQUIPMENT CAN BE SUBSTITUTED FOR AN EQUAL APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR TO SUPPLY OWNER / LANDSCAPE ARCHITECT W/ (AS-BUILTS UPON COMPLETION)

IRRIGATION EQUIPMENT LEGEND

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	309
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	3	——
3	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	3	——
4	DRIP VALVE ASSEMBLY	——	415



GENERAL NOTES

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2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
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LAFAYETTE, LA 70504
PROJECT • 22113.00

GATEWAY - E. ST MARY BLVD @ JOHNSTON ST. IRRIGATION PLAN

STATE OF LOUISIANA — DANIEL M. SPILLER JR. — REG. NO. 5-362 — LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
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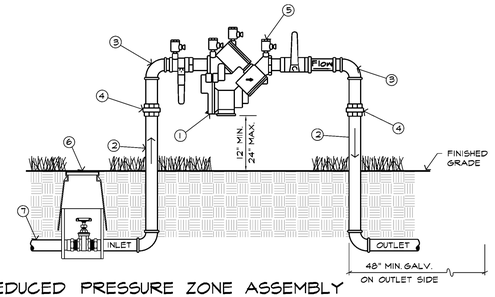


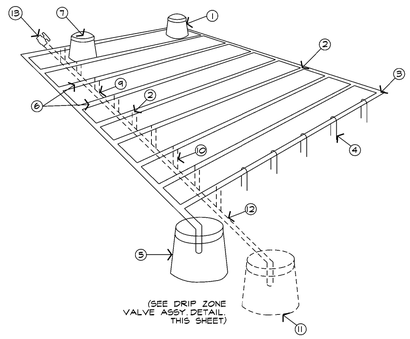
LIST OF MATERIALS

1. APPROVED ANTI-SIPHON PRESSURE VACUUM BREAKER ASSEMBLY,BALL VALVES INCLUDED.
2. GALV. PIPE, ¾" THRU 2".
3. 90° ELL,GALV., ¾" THRU 2 ½".
4. GALV. PIPE UNION.
5. TEST COCKS WITH BRASS PLUGS OR ADAPTORS WITH CAPS INSTALLED.(2 REQUIRED)
6. GATE VALVE IN BOX
7. COPPER NIPPLE AS REQUIRED BY CODE
8. CONTRACTOR TO PROVIDE INSULATED FIBERGLASS ENCLOSURE OR APPROVED EQUAL.

GENERAL NOTES

1. CONTACT THE LOCAL GOVERNING AUTHORITY FOR LATEST LIST OF APPROVED BACK-FLOW PREVENTION ASSEMBLIES.
2. BACKFLOW PREVENTERS MUST BE TESTED BEFORE FINAL APPROVAL IS ISSUED.
3. GALVANIZED FITTINGS SHALL BE CONNECTED USING PIPE DOPE OR TEFLON TAPE.
4. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
5. ALL NIPPLES TO BE COPPER OR BRASS.
6. PIPING UNDER THE CITY RIGHT OF WAY MUST BE PER CITY CODE.
7. CALL LANDSCAPE ARCHITECT FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.

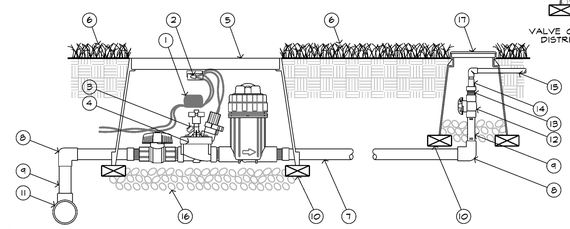
01 REDUCED PRESSURE ZONE ASSEMBLY
NOT TO SCALE



1. FLUSH CAP IN 6" VALVE BOX
2. MDCFTEE COMPRESSION TEE
3. MDCFEL COMPRESSION ELBOW
4. TDS-050 W/BEND TIE DOWN STAKE INSTALL 3'O.C.ON ALL TUBING
5. CONNECTION POINT TO PVC LATERAL LINE IN 10" VALVE BOX
6. SPACING - SEE PLANS
7. AIR/VACUUM RELIEF VALVE IN 6" VALVE BOX
8. PVC DISTRIBUTION PIPE TO BE USED ON LARGE ZONES.(SEE PLAN FOR PIPE SIZES & LOCATION)
9. PVC FITTINGS (TYPICAL)
10. PVC SCH.80 NIPPLE AND ¾" FHT ADAPTER
11. DISTRIBUTION VALVE (AS REQUIRED)
12. DISTRIBUTION PIPE (AS REQUIRED)
13. PVC FLUSH VALVE

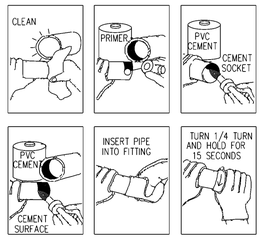
RAINBIRD XFD-06-12 DRIP TUBING
FLOW RATE = 0.6 GPH DRIPPER SPACING = 12"O.C.

02 DRIP TUBING LAYOUT - (DISTRIBUTION PIPE)
NOT TO SCALE



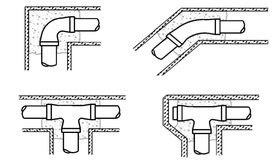
1. 30-INCH LINEAR LENGTH OF WIRE,COILED
2. WATERPROOF CONNECTION SPLICE-1 (1 OF 2)
3. ID TAG W/VALVE NUMBER
4. RAINBIRD XCZ-PRB-100-COM DRIP ZONE VALVE ASSY (INCL. VALVES,FILTER WITH PSI REG.)
5. VALVE BOX WITH COVER
6. FINISH GRADE/TOP OF MULCH
7. PVC CL200 PIPE
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4 PER BOX)
11. PVC MAINLINE PIPE
12. ¾" BALL VALVE
13. ¾" MPT x ¾" ADAPTER
14. ¾" FHT ADAPTER
15. RAINBIRD XFD DRIP LINE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. 10" VALVE BOX (CLEARLY LABELED NON-POTABLE WATER)

03 DRIP ZONE VALVE ASSY. (PRB),CONNECTION POINT & BOX
NOT TO SCALE



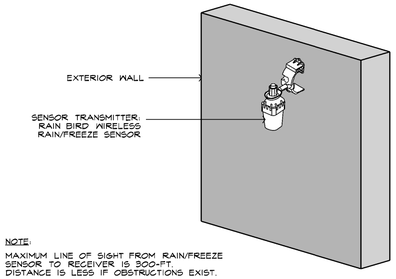
NOTES:
1. NEVER LAY PVC PIPE WHEN THERE IS WATER IN THE TRENCH
2. NEVER LAY PVC PIPE WHEN THE TEMPERATURE IS 32°F OR BELOW

04 PVC ASSEMBLING
NOT TO SCALE



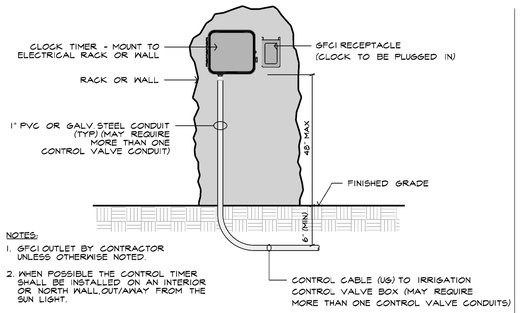
NOTE:
ALL FITTINGS SHALL BE WRAPPED IN POLY PLASTIC BEFORE THRUST BLOCKS ARE INSTALLED.CONCRETE SHALL NOT COVER THE TOP OF ANY FITTING.

05 TYPICAL THRUST BLOCKING
NOT TO SCALE



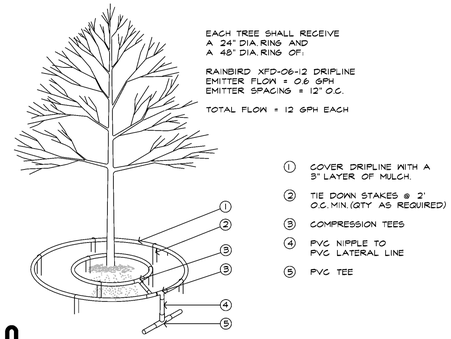
NOTE:
MAXIMUM LINE OF SIGHT FROM RAIN/FREEZE SENSOR TO RECEIVER IS 300-FT. DISTANCE IS LESS IF OBSTRUCTIONS EXIST.

06 RAIN/FREEZE SENSOR WALL/FENCE MOUNT - STANDARD
NOT TO SCALE



NOTES:
1. GFCI OUTLET BY CONTRACTOR UNLESS OTHERWISE NOTED.
2. WHEN POSSIBLE THE CONTROL TIMER SHALL BE INSTALLED ON AN INTERIOR OR NORTH WALL,OUT/AWAY FROM THE SUN LIGHT.

07 CONTROLLER MOUNTING - PLUG IN
NOT TO SCALE



1. COVER DRIPLINE WITH A 3" LAYER OF MULCH.
2. TIE DOWN STAKES @ 2' O.C.MIN.(QTY AS REQUIRED)
3. COMPRESSION TEES
4. PVC NIPPLE TO PVC LATERAL LINE
5. PVC TEE

08 TREE DRIP-RINGS
NOT TO SCALE

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPALLER JR.
REGISTERED
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

L12.1
SHEET

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. General provisions of the contract and other applicable parts of the construction documents apply to this Section.

1.2 SUMMARY:

A. Furnish all labor, materials, equipment and instructions necessary for the complete installation of the landscape irrigation system as drawn and specified. The work includes, but is not limited to:

1. Trenching, backfilling, and compaction for irrigation lines.
2. Provisions and installation for a turnkey automatic sprinkler system. Provide backflow preventer, controller, piping, heads, drip lines, valves, quick couplers, valve access boxes, low voltage wiring, applicable connection fees and all other items required for a complete system as shown on the Drawings, called for in the specifications or as may be required for proper operation of the system. The system shall be installed in strict accordance with all applicable codes, ordinances and regulations.
3. Test all systems, make operative and adjust.
4. Submit Record Drawings, Maintenance Manual and satisfactory evidence to show that all work has been installed in accordance with the ordinance and code requirements.
5. Maintain and operate until substantial completion.
6. One-year Guarantee Period.

B. Related work by others:

1. Water Meter as provided by the General Contractor.
2. Sch40 PVC Sleeves as provided by General Contractor.
3. Electrical work and Conduit as provided by General Contractor for the automatic controller & backflow preventer.

C. Provide drip tubing in all shrub and groundcover beds as designated. Provide pop up spray heads in turf areas. Provide the number of heads required to assure 100% coverage. Layout the system so that the shrub and groundcover beds are on separate zones from the turf areas.

D. Provide winterizing for the system using automatic drain valves in the low-points of lateral piping and heat-tape for the backflow preventer.

E. Coordinate exact locations of water meter and backflow preventer with the General Contractor.

F. The Contractor shall coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs.

G. The Contractor shall install the irrigation system in accordance with the schedule requirements provided by the General Contractor.

1.3 QUALITY CONTROL:

A. The sprinkler system shall be designed, to the extent possible, to promote water, soil and energy conservation. The system shall include a rain sensing device and shall be consistent with any water conservation ordinance enacted by the city.

B. Provide Installation by a licensed Irrigation contractor, skilled in work required and completely familiar with manufacturer's recommended method of installation requirements. Contractor must have a minimum of two (2) consecutive years experience in this area of work and having completely installed other jobs of similar size and scope. Evidence of the Contractor's qualifications shall be presented before the award of contract.

C. Approval and selection of Materials and Work: The selection of all materials and the execution of all operations required under the Contract Documents shall be subject to the approval of the General Contractor and Landscape Architect who shall have the right to reject any and all materials and any and all work which, in their opinion, does not meet the requirements of the Contract Documents at any stage of the operations. All rejected materials shall be removed from the site by the Contractor.

D. The successful Contractor shall maintain a competent, skilled and satisfactory work force during and through the completion of the construction period. In no case, shall unskilled labor be allowed to operate equipment, assemble, glue, install, wire, test or adjust components of the system. If in the opinion of the General Contractor or Landscape Architect, the labor furnished by the Contractor is incompetent or inexperienced in the practice assigned, the Contractor shall remove such persons or reassign them to a practice acceptable to the General Contractor and Landscape Architect.

E. Conform to all codes, statutes, laws and regulations governed by the following agencies for the protection of public safety:

ASTM	American Society for Testing Materials
AWWA	American Water Works Association
NEC	National Electric Code
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
UPC	Uniform Plumbing Code

F. The Contractor shall make application, acquire, comply and pay for all licenses and/or permits required by Local, State, or National Governing Agencies as may be required to perform and complete the work as described in the Contract Documents.

1.4 SUBMITTALS:

A. General: Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for possible revisions, and re-submittals, and for placing orders and securing delivery.

B. A design layout based on the equipment of Rainbird Corporation & Hunter Industries has been provided for bidding purposes. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to the layout as required to achieve full coverage of irrigated area at no additional cost to the Owner. It shall be the contractor's responsibility to establish the location of all sprinkler heads in order to ensure proper coverage of all areas.

C. Product Manual: Submit technical specification sheets and or performance data for all proposed system components. Submit the address and telephone number of the subcontractor installing the system and the local representative for the equipment.

1.5 PROJECT CONDITIONS:

A. The Contractor shall warrant that he has fully informed himself of the site conditions under which the work will be performed and is thoroughly familiar with the Contract Documents and all applicable codes and standards. Failure to have done so will not relieve the Contractor of his obligation to furnish all supervision, labor, tools, materials, equipment and supplies necessary to perform the provisions of the work detailed in the Contract Documents.

B. Make necessary adjustments in the layouts as may be required to connect to existing stub-outs, should such not be located exactly as shown, and as may be required to work around existing work at no increase in cost to the Owner.

C. The Contractor's attention is directed to the fact that there are other utilities located within the limits of the work. Before commencing any work required under the Contract, he shall determine the location of all utilities, subsurface drainage, structures and underground construction so that proper precaution may be taken not to disturb or damage during all operations. The Contractor shall be held responsible for making, at his own expense, all repairs to damaged utilities which could have been located or other construction resulting from the work covered by this Contract.

D. Should utilities not shown on plans be found during excavations, promptly notify the General Contractor for instructions as to further action.

1.6 PROTECTION OF WORK AND MATERIALS:

A. Use all means necessary to protect the work before, during and after installation and to protect the materials and installed work of all other trades.

B. The Contractor shall make every effort to safeguard the public during the Irrigation system installation operations. This includes, but is not limited to, erection of barricades around excavation, close supervision of all work and placement of warning flags wherever necessary. The Contractor shall insure that the personnel, equipment and materials involved in operations do not interfere with, or pose a hazard to, vehicular or pedestrian traffic.

C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the General Contractor and Landscape Architect at no additional cost to the Owner.

D. Store materials delivered to site, prior to actual use, in a secure place not to interfere with other trades or construction and protect from vandalism, damage by weather or other elements. All materials are to be stored off of the ground and away from soil or other contaminates.

E. The Contractor is completely responsible for replacement of materials due to acts of God, theft, vandalism and malicious mischief at the job site before, during and after installation. Such regulation shall continue until the date of final acceptance of the work in its entirety by the Owner.

1.7 ACCIDENT REACTION:

A. In the event of an accident causing injury or damage, the Contractor shall promptly report such to the Owner, General Contractor, Landscape Architect and required governmental agencies.

1.8 TRASH & DEBRIS:

A. The Contractor shall not permit trash and debris to accumulate on the grounds in the vicinity of his work. He shall establish and maintain a regular daily routine for removing trash and debris and hauling it away from the premises for no additional payment.

PART 2 - PRODUCTS

2.1 GENERAL:

A. The sprinkler system design shall be based on the equipment of Rainbird Corporation & Hunter Industries or approved equal.

B. Materials shall be newly manufactured and without flaws or defects, and of quality and performance as specified. Excess materials at completion are property of the Contractor, to be removed from the site.

C. The Contractor shall be responsible for computing and supplying the required quantities necessary to make the irrigation system complete and operational in every way. Quantities shown on the drawings are for convenience only.

2.2 PIPE AND FITTINGS:

A. Mainline piping above ground shall be Copper tube, Type K, drawn temper; copper tube fittings; soldered joints.

B. Mainline piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D1785, Sch40 for solvent weld and threaded connections.

C. Lateral piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D2241, Class 200 for solvent weld connections; Sch40 for threaded connections. The minimum pipe size shall be 3/4" in diameter.

D. Polyvinyl chloride (PVC) fittings; meeting ASTM D2466, Sch40 for solvent weld connections; Sch40 for threaded connections. All fittings must be of domestic manufacture and shall be identified as to pressure rating or schedule, with a working pressure no lower than that of the pipe.

E. Handling of Pipe and PVC Fittings: Exercise care in handling, loading, unloading and storing PVC pipe and fittings. Store under cover and transport in a vehicle with a bed long enough to allow no undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded until said section of pipe is cut out and rejoined with a coupling.

F. Visual Inspection: Provide pipe homogenous throughout, free from visible cracks, holes, blisters, wrinkles or foreign materials

G. PVC solvent cement shall comply with ASTM D2564, regular-bodied for pipe 2" and smaller, and medium for pipe 2 1/2" and larger. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints.

H. Use Teflon tape or an appropriate sealant for all threaded connections.

2.3 CONTROL WIRES AND CONNECTORS:

A. Single Conductor Wire for direct burial applications, meeting UL Standard 493, UF-14/1 for "Control" wiring and UF-14/1 for "Common" wiring. Color code the common neutral wiring from all other wires.

B. Wire Connectors shall be either 3M DBY / DBR or King "One Step" Connectors or approved equal.

2.4 AUTOMATIC CONTROLLER AND SENSORS:

A. The automatic controller shall be of a hybrid type that combines electromechanical and microprocessor-based circuitry capable of fully automatic and manual operation. The controller will be housed in a weather-proof, lockable, cabinet suitable for wall mounting.

B. The rain sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if approximately .10" of rainfall has accumulated due to precipitation at a rate equal to or greater than .25" per hour prior to or during an irrigation cycle.

C. The freeze sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if the ambient air temperature falls below 37 degrees Fahrenheit prior to or during an irrigation cycle.

2.5 VALVES:

A. The Rainbird remote control valves shall be a normally closed, 24VAC solenoid actuated, globe type valve. They shall have manual flow control stems for accurate regulation and/or shutoff of outlet flow.

B. The automatic drain valves shall be a pressure activated type, capable of opening when system pressure drops below 2.5psi, and closing when system pressure reaches 5.5psi.

C. Bronze gate valves for use as cut-off, isolation or manual drain valves on lines up to 3" in diameter shall be as manufactured by Nibco, Inc., Elkhart, IN or approved equal.

2.7 VALVE BOXES:

A. Provide valve boxes for all remote control valves and manual gate valves. The manufacturer shall be Armor, Plymouth Products Division, Sheboygan, WI or approved equal.

B. When used with a single valve use a #181104 - 10" round box with a twist lock cover. When used with multiple valves use #190106 - 20" x 14" rectangular box with snap lock cover.

2.8 SPRINKLER HEADS:

A. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.

B. Professional Series Spray Sprinkler: The sprinkler shall be capable of covering area shown at flow rates as designed.

1. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.
2. Provide pop-up spray heads in small turf areas or in clusters of trees where rotary heads are not feasible. The sprinkler shall have a pressure regulating device to prevent high-pressure fogging to the spray pattern and a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
3. Provide pop-up spray heads in all shrub and groundcover beds. The sprinkler shall include a pressure regulating device to prevent high pressure fogging to the nozzle stream. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
4. Provide pop-up rotary sprinklers in all large turf areas. The full or part circle sprinkler shall be a single stream, gear driven rotor with a rotating nozzle turret that is independent of the riser stem. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Matched precipitation shall be obtained by installing nozzles as shown on plan.
5. Provide check valve feature, as required, to prevent low head drainage from sprinklers at lower elevations.

2.9 DRIP IRRIGATION PRODUCTS:

A. Landscape Dripline (Inline Emitter Tubing): The Dripline tubing shall be brown in color and conform to an outside diameter (O.D.) of 0.630 inches and an inside diameter (I.D.) of 0.540 inches and wall thickness of 0.045 inches. The Dripline tubing shall have factory installed, pressure-compensating, inline emitters installed every 12 inches. The flow rate from each installed inline emitter shall be a consistent 0.6 gallons per hour when inlet pressure is between 8.5 and 60 psi.

B. Drip Control Zone Kit: The control zone kit shall have a 1" automatic irrigation control valve with a pressure rating not to be less than 150 psi. The valve body and bonnet shall be constructed of high-impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of a durable Buna-N rubber material reinforced with nylon.

The control zone kit shall have a 1" inline Quick Check Basket Filter body constructed of heavy-duty, glass-filled, UV resistant polypropylene capable of withstanding pressures of not less than 150 psi. The design shall be a basket style body with jar-top cap. The cap shall incorporate an indicator that goes from green to red during operation when the filters element needs cleaning. The screen shall be serviceable for cleaning purposes by unscrewing the cap from the body and removing the filters element.

The control zone kit shall have a 1" inline pressure regulator. The pressure regulator shall be constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 psi. The pressure regulating device is a normally open device that allows full flow with little pressure loss unless the inlet pressure is greater than the preset level. As the inlet pressure increases above the preset level it compresses a spring and begins to reduce the flow and downstream pressure. The inline pressure regulators shall have a preset outlet pressure of approximately 40 psi.

C. Landscape Dripline Compression Fittings: The Compression Fitting System shall consist of 3 fittings (tee, coupling and elbow) plus connection adapters and removable flush caps. The Compression Fittings shall accept all polyethylene tubing with an outside diameter (O.D.) from .630 to .710 inches and shall provide a leak-free compression fit. They also shall provide connections to threaded components when used with the adapters. The removable flush caps shall be used to close off a line and for manual draining. Air/vacuum relief valves shall be capable of venting air or preventing vacuum. The operating pressure range for the Compression Fitting System shall be 0 to 60 psi.

PART 3 - EXECUTION:

3.1 GENERAL:

A. Verify that the work of this section is installed in strict accordance with all applicable codes, regulations the design and the approved submittals. Contractor shall install all equipment as per manufacturer's current specifications and recommendations.

B. VERIFY THAT WATER PRESSURE IS ADEQUATE FOR EFFICIENT OPERATION OF THE SPRINKLER SYSTEM AS DESIGNED AND INSTALLED. Coordinate exact location of Point-of-Connection with the General Contractor.

C. Coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs, and parking, paving and site electrical plans. Verify existing and proposed locations of all site utilities (i.e. gas, water, electric, telephone, fiber optics) prior to any trenching and laying of pipe.

D. When sprinkler system work is to be installed close to or will interfere with the work of other trades, the Contractor shall assist in working out space conditions to permit all work to be installed satisfactorily at no additional cost to the owner. If a Contractor installs his work before coordination with other trades, he shall make necessary changes in his work to correct the condition without additional compensation.

E. Flag the location of all sprinklers & valves in accordance with the approved design and submittals. In the event of a discrepancy, immediately notify the Landscape Architect and General Contractor. Do not proceed with installation in areas of discrepancies until all such discrepancies have been fully resolved.

F. The irrigation design is shown in schematic form only. All piping to be installed directly behind curb where possible.

G. The Contractor is responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at any time, at no additional cost to the Owner.

3.2 WATER METER & BACKFLOW PREVENTER:

A. The Project Owner shall provide Water Meter as shown on the drawings All materials, operations, installed conditions and personnel shall be in strict accordance with all applicable codes, ordinances and regulations.

B. Immediately after Contract award, conduct tests at the designated Point-of-Connection and note as such on the written results provided to the General Contractor and Landscape Architect for the following:

1. Static Water Pressure
2. Dynamic Water Pressure
3. Gallons per minute

C. Install a temporary meter on a fire hydrant if necessary for water access due to site work, phasing schedule and/or landscape installation. Verify location and obtain approval from the General Contractor prior to installing temporary meter.

D. The Contractor shall comply with the requirements and codes of the local governing authority regarding backflow prevention. In addition, the Contractor shall provide the necessary materials, insulation/ winterization capabilities and acceptable concealment. General contractor is responsible for providing a GFI outlet with 115VAC; 1Phase power to the Backflow Preventer location.

3.3 SLEEVING:

A. The General Contractor shall provide Sch40 PVC sleeving, buried at a minimum of 18" and maximum of 24" depth.

B. Upon completion of site filling and compaction operations, and prior to the construction of foundations, roadways, walks or other pavements or obstructions, the General Contractor shall install sleeves in sufficient sizes to accommodate future irrigation piping and/or control wiring. Ends of sleeves shall extend 18 inches past the edges of all paving or construction. The ends of the sleeves shall be clearly marked for future use by the Irrigation Contractor.

3.4 TRENCHING AND BACKFILLING:

A. Carefully install system in areas of existing vegetation designated to remain to provide minimal disturbance feasible. When trenching under the drip-line of existing trees, extreme care must be given to avoid root damage. If at all possible avoid trenching inside the drip-line by going around the tree rather than under it. If trenching must occur under the drip-line, use either tunnelling or hand-digging methods rather than a mechanical trencher. Minimize the impact of root severing by avoiding construction during hot, dry weather, keeping trees well watered before and after digging and covering roots with soil or mulch as soon as possible.

B. Perform all excavation required for the installation of the work included under this Section. Including shoring and bracing of earth banks to prevent cave in. Restore all surfaces and existing underground installations damaged or cut as a result of the excavations, to their original condition and in a manner approved by the Owner and the General Contractor.

C. Excavate trenches to a depth of minimum pipe coverage plus six inches. Remove all lumber, rubbish and large rocks from the trenches. Provide a uniform bearing for the entire length of each pipe line to prevent uneven settlement. Make the width of the trench a minimum of 1 1/2 times the diameter of the piping but not less than 4 inches.

D. Upon completion of pipe installation and system testing, backfill the trenches with clean soil. Backfill material shall be free from rocks or any heavy unsuitable substances which could damage the pipe or create unusual settling problems. Backfilling shall be done in six inch layers and tamped down after each layer is put back as required to avoid settling in landscape areas and to 98% standard proctor in paved areas.

E. If settling occurs within the warranted period, the Contractor shall be responsible for bringing the trenches up to finish grade and repairing plant damage without additional compensation.

3.5 PIPE INSTALLATION:

A. Never Install PVC pipe when there is water in the trench. Never Install PVC pipe when the temperature is 32 degrees Fahrenheit or below.

B. Install the mainline at a bury depth of 18 Inches and the lateral lines at a bury depth of 12 inches below finished grade. Maintain a 4 inch clearance between pipes that cross at an intersection and a 2 inch clearance between pipes that are buried in the same trench.

C. Remove all foreign matter or dirt from the inside of the pipe before joining. Cap or plug all lines after installation and prior to testing to minimize infiltration of foreign matter or dirt.

D. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Install main lines and lateral lines in common trenches wherever possible.

3.6 PIPE AND FITTING CONNECTIONS:

A. Meet ASTM D2855 Standard Practice for making solvent-cemented joints with PVC pipe and fittings. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.

B. Make solvent welds with a non-synthetic bristle brush In the following sequence: Apply an even coat of solvent to the outside of the pipe. Then apply solvent to the inside of the fittings and then re-apply a light coat of solvent to the outside of the pipe, making sure that coated area on the pipe is equal to the depth of the fitting socket. Insert pipe quickly into the fitting and turn the pipe approximately 1/4 turn to distribute the solvent and remove air bubbles. Check all tees and ells for correct position, then hold joint for approximately 15 seconds so that pipe does not push out from the fitting. Allow at least 15 minutes drying time for each weld joint before moving.

C. Allow all joints to set and cure for a minimum of 12 hours prior to pressurization of system.

3.7 WIRE INSTALLATION:

A. Verify that the work of this section is installed in strict accordance with the latest edition of the National Electric Code and local electrical codes.

B. Install neutral and control wires, 12 inches below finish grade, in the same trenches as the main and lateral lines. The wires shall be installed in a neat and orderly fashion and bundled together and taped every 10 feet. Snake wires in trench to allow for expansion and contraction and provide slack loops at every splice, change of direction, at the valves, where the wire enters the conduit for the automatic controller and at least every 100 feet in runs more than 100 feet in length. The slack loops shall be created by wrapping 3 feet of wire around a 1/2 inch diameter pipe to form a coil.

C. Connect each solenoid to the controller with a "control wire" which is typically red in color. Connect a "common neutral wire" to all solenoids which is typically white in color.

D. Solder or join all wire connections by positive mechanical connectors. Splices must be properly insulated and waterproofed. Control wire splices will be allowed only in runs more than 500 feet and only in valve boxes.

3.8 CONTROLLER AND SENSOR INSTALLATION:

A. Coordinate with the General Contractor the exact location where the automatic controller will be located. Connect all wiring and grounding In accordance with manufacturer's instructions. Provide separate, secured to the wall, conduits for both power supply and control wiring.

B. General contractor Is responsible for providing a J-box with 115VAC; 1Phase power to the Controller location. Irrigation Contractor shall hard wire controller to j-box.

C. Install the rain and freeze sensors in an open area where the device is exposed to rain water but not sprinkler water. Mount away from overhanging objects that may Interfere with rainfall. Connect wiring In accordance with manufacturer's instructions.

3.9 VALVE INSTALLATION:

A. The remote control valves shall be Installed In accordance with manufacturer's instructions. Valves shall be installed in Armor valve boxes or approved equal. Boxes shall be Installed to a height that will not cause them to Interfere with maintenance machinery and which is sufficient to prevent soil or mulch from washing Into the box. Provide a 6 Inch layer of washed gravel In the bottom of the valve box. Valves shall be set a minimum of two feet behind curbs. Valves shall not be set in curves which are vulnerable to damage by truck trailers over running curbs.

B. The quick coupling valves shall be installed on PVC threaded swing joints on the Irrigation mainline. Space quick coupling valves as shown on the plans. Provide a 1"x1"x3" piece of angle iron next to the quick coupling valve and anchor with two (2) stainless steel hose clamps.

C. The automatic drain valves shall be installed in the low points of the lateral lines. Dig a minimum two (2) cubic foot hole where the drain valve is to be located. Install the drain valve in a PVC tee pointing downward at a 45 degree angle. Surround the drain valve with a minimum one (1) cubic foot of gravel. Place an 18"x18" piece of weed cloth or burlap on top of the gravel. Finish to grade with top soil.

D. Install in the low points of the mainline, manual gate valves as needed for draining. Install 24" off of the mainline in 10" valve boxes.

3.10 FLUSHING AND PRESSURE TESTING:

A. Prior to backfilling and installation of sprinkler heads, open all control valves and use full line pressure to completely flush lines of foreign matter and dirt. INITIAL FLUSHING OF LINES SHALL NEVER BE THROUGH SPRINKLER HEADS OR DRIP TUBING.

B. With zone valves closed, pressure test mainlines by supplying and maintaining full static pressure continuously for one full hour. Observe for evidence of leakage by monitoring flow meter and by visual inspection of the exposed lines. Repair all leaks and retest until no water flow is observed.

3.11 SPRINKLER HEAD INSTALLATION:

A. After landscape finish grading is accomplished, Install heads to finished grade in lawn and shrub areas and backfill with clean topsoil so head is stabilized and no lateral motion is exhibited during operation. Heads shall be set so the tips of the heads are 1/2" above the top of the mulch in planting beds. Heads In the turf areas shall be set flush with the finished grade and not a hazard to pedestrians and/or maintenance machinery. Set sprinkler heads to plumb within 1/16" and a minimum of 4 inches and a maximum of 6 inches from walls, walks and curbs.

B. Sprinkler heads to be spaced so as not to throw water on the buildings, walks or driveways. Heads shall be adjusted as required so that foliage of plants will not obstruct the spray and that the system has 100% coverage.

C. Provide connection to the PVC lateral lines, for spray heads, with barbed fittings and swing pipe. Do not use more than 18 inches of swing pipe for each sprinkler head.

3.12 DRIP SYSTEM INSTALLATION:

A. Drip Control Zone Kit: Install Drip Control Zone Kit level and below grade with a minimum of 4 inches clearance to the top and sides of the inside of a rectangular valve box. Place a minimum of 6 inches of gravel in the bottom of the valve box.

B. Landscape Dripline (Inline Emitter Tubing): Landscape bed areas shall be supplied with rigid PVC lateral piping. Landscape Dripline connection points shall be made in 6 inch valve boxes using compression adapter tees or ells as required. For under mulch Installation, place tubing rows at 18 inch lateral spacing as Indicated on the plans and hold In place with galvanized tie-down stakes spaced evenly every 2 to 3 feet, and with two stakes on each change of direction. Install tubing in a serpentine manner and bending is allowed provided the radius is sufficient enough that kinking does not occur. Backfill with mulch as noted In the landscaping specifications.

C. Landscape Dripline Compression Fittings: Landscape Dripline Compression Fittings shall be used at connection points to the PVC lateral piping, where tubing layout requires a tee and at bends or changes of direction to prevent kinking of the Landscape Dripline.

Removable flush caps shall be Installed at the low point of each dripline section. Depending on the site conditions and tubing layout, more than one flush cap may be required. Provide a 6 inch valve box for each flush cap.

Air/vacuum relief valves shall be installed at the highest elevation within each dripline section. Depending on the site conditions and tubing layout, more than one air/vacuum relief valve may be required. Provide a 6 inch valve box for each air/vacuum relief valve.

3.13 FLUSHING, OPERATION, TESTING AND BALANCING:

A. Flushing: All air and foreign objects and debris shall be flushed from the system.

1. Dripline and Emitter Lateral Flushing Procedures.
   a. Flush the system every two weeks for the first six (6) weeks and check the water that is flushed out for cleanliness. Establish a regular system flushing schedule for the future based on results from the initial six-week flushing schedule.
   b. Flush the system completely after any repairs are made and monitor system operation closely under regular system flushing schedule.
   c. Check the pressure at the supply and flush headers on a regular basis and compare with the pressure readings taken after installation.

B. General Testing: Upon completion of the irrigation system, and after pressure/leak testing and head installation, the entire system shall be tested for proper operation. All components checked for proper operation by the Contractor under supervision of the General Contractor. The system shall be tested in strict accordance with all applicable codes, ordinances and regulations.

C. Dripline and Emitter Lateral Leakage Testing Procedures:

1. Subject installed drip tubing and emitter lateral piping to water pressure equal to specified operating pressure for ten (10) minutes. Test with control zone components and drip flush valve components installed.
2. Partially backfill buried pipe and tubing to prevent movement under pressure. Expose couplings, fittings, and valve components.
3. Visually Inspect valve assemblies and fittings for leakage and replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until test segment is free from leaks. Cement or caulking to seal leaks is prohibited.

D. Dripline and Emitter Lateral Operational Testing Procedures:

1. Activate each dripline and emitter lateral control zone valve in sequence from controller. Provide either one additional person with radio or use handheld remote to activate remote control valves from controller. Manually activating remote control valve using manual bleed mechanism at remote control valve is not an acceptable method of activation.
2. Replace or adjust defective valve, fitting, dripline segment, emitter lateral segment, or appurtenance to correct operational and coverage uniformity deficiencies.
3. Repeat test(s) until each dripline or emitter lateral test segment passes testing procedures. Repeat tests, replace components, and correct deficiencies at no additional cost.
4. Any portions requiring repair shall be replaced or repaired and test repeated. No testing shall be done until the last solvent welded joint has had 12 hours to set and cure.

C. Balancing and Adjustment: The Contractor shall balance and adjust the various components of the system so that the overall operation is most efficient. This work shall include adjustment to all sprinkler heads and individual station adjustments on the controller. Observe that all zones function properly and in the correct sequence.

3.14 MAINTENANCE AND COMPLETION OF THE WORK:

A. The Contractor shall complete the irrigation system as drawn and specified, according to Schedule herein, and operate and maintain same until time of substantial completion of the project.

B. Any changes made in the layout and/or arrangement of the proposed Irrigation system, or any other differences between the proposed system and actual Installed conditions shall be recorded by the Contractor In the form of an "As-Built" drawing. The Contractor shall provide the Owner and the Landscape Architect with a copy of this drawing before work under this contract will be considered acceptable. All adjustments in the layout and/or arrangement of the Irrigation system are subject to the approval of the Landscape Architect.

C. The Contractor shall orient the Owner's personnel to the operation and adjustments of the controller according to local seasonal requirements. The Contractor shall also familiarize the Owner with sprinkler and valve adjustments. The Owner is, In general, to be totally familiarized with the overall operation, adjustment, maintenance and intent of the Irrigation system, Including the measures that should be taken to provide winterization for the system. Such instructions should be in written form. The contractor shall also provide a color coded laminated plan, in the controller door, showing the locations of all zones.

3.15 INSPECTION AND SUBSTANTIAL COMPLETION:

A. When Contractor is satisfied that the entire system is operating properly, that it is balanced and adjusted so that all work and clean-up is completed, he shall submit a written request for Initial Inspection to the General Contractor and Landscape Architect at least one week prior to anticipated date of Inspection and testing.

B. Submit reproducible as-built Record Drawings and Maintenance Manual to General Contractor with request for inspection.

C. Upon completion of repairs and replacements found necessary at time of Inspection, the Landscape Architect will confirm the date of substantial completion.

E. The date of substantial completion will determine:
   1. The final date of maintenance as part of this Section.
   2. The beginning date of the One-Year Guarantee Period.

3.16 GUARANTEE:

A. Guarantee all work, products, equipment and materials for one (1) year period beginning upon substantial completion.

B. Guarantee applies to all losses with the exception of those due to Acts of God, vandalism, occupancy of the project or Owner neglect, as determined by the Landscape Architect and/or Owner.

3.17 FINAL INSPECTION:

A. At end of Guarantee Period and upon request for final inspection, jointly review all guaranteed work for Final Acceptance with the Owner and General Contractor.

B. Submit written request for final inspection to the General Contractor and Owner at least two weeks prior to anticipated date of Inspection.

3.18 FINAL ACCEPTANCE:

A. Upon completion by the Contractor of all required repairs and replacements found at time of final Inspection, the Owner and General Contractor will confirm the date of Final Acceptance of the work.

B. Confirmation of Final Acceptance by the Owner and the General Contractor will constitute completion of the work of this Section.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR · REG. NO. 5-330 · LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

L12.2 SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PLANTING LEGEND

CODE	COMMON NAME & VARIETY-SPACING	MIN. SIZE	PATTERN	QTY.
ANG1	ANNUAL COLOR 4" - 12"	4" CUP		
ANG3	ANNUAL COLOR 18" - 24"	4" CUP		
AZF	AZALEA 'FORMOSA RED'	7 GAL		
AZG	AZALEA 'G.G. GERBING'	7 GAL		
HBD	DWARF BURFORD HOLLY	4'HT		
HCR	HOLLY 'CARISSA'	3 GAL		
HEB	HOLLY 'EMILY BRUNER'	6'HT		
HEG	HOLLY 'EAGLESTON'	16-18'HT		
HLY	HURRICANE LILY BULB (SPACE APPROX = 30" O.C.)	1 GAL		
HYL	HYDRANGEA 'LIME LIGHT'	7 GAL		
MDO	MONDO GRASS 8" O.C.(TYP.) W/ HURRICANE LILY SPACED +-30" O.C.	4" CUP		
MLC	MUHLY GRASS 'WHITE CLOUD'	3 GAL		
OKL	LIVE OAK	18'HT		
OLR	OLEANDER 'RED'	7 GAL		
SPB	SPIREA 'BRIDAL WREATH'	7 GAL		
VSSH	VIRGINIA SWEETSPIRE 'LITTLE HENRY'	3 GAL		
YEW	JAPANESE YEW	6'HT		
YNF	WHITE FRINGE TREE	8'HT		
LIM	LIMESTONE NO.8	SF		
ROCK 1	LARGE RED GRAVEL 3/4" - 2" SIZE @ JIMSTONE CO. www.jimstoneco.com (3" THICK OVER LANDSCAPE FABRIC)	SF		
ROCK 2	15-30 LB STONE RIP RAP - TAN (8"-11" THICK OVER LANDSCAPE FABRIC)	SF		
MLP	PINE STRAW MULCH, CRIMPED	SF		
MLH	HARDWOOD MULCH, SHREDDED	SF		
SOA	ST. AUGUSTINE 'PALMETTO'-SQUARE YARD	SY		
STEEL 6	6 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		
STEEL 8	8 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		

PLANTING NOTES

1. PLANT MATERIAL TO BE FULLY GROWN AND MATCHING.
2. BEDS TO BE SLOPED TO DRAIN - MOUNDED W/ 20% SLOPE FROM CENTER TO EDGE
3. DEBRIS TO BE REMOVED FROM BEDS.
4. BEDS TO BE TILLED TO A DEPTH OF 12" FOR ANNUALS & GROUND COVER AND 16" FOR SHRUBS.
5. ALL TREES TO HAVE CLEAR TRUNK OF FIVE FEET MINIMUM.
6. UNLESS OTHERWISE NOTED ALL TREES TO BE STRAIGHT,MATCHING,SINGLE TRUNK.
7. BID SHOULD NOTE CONTAINER OR B&B MATERIAL.
8. UNLESS OTHERWISE NOTED ALL BEDS & NEW TREES ARE TO BE IRRIGATED W/ DRIP IRRIGATION.
9. ALL DRAIN LINES TO FALL @ 1% SLOPE OR GREATER.
10. AS-BUILT DRAWINGS OF THE IRRIGATION & DRAINAGE SYSTEM TO BE SUBMITTED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
11. SLOPE ALL BEDS TO DRAIN AWAY FROM THE BUILDING IN THE EVENT THAT THE DRAINAGE SYSTEM BECOMES CLOGGED.
12. SOIL SAMPLES HAVE BEEN TAKEN FOR THIS PROJECT. THE PLANT PALETTE WAS DESIGNED TO WORK WITH THE PARENT OR NATIVE SOIL ON SITE. SUBSTITUTIONS OF PLANT MATERIAL ARE NOT PERMITTED W/ OUT APPROVAL OF THE LANDSCAPE ARCHITECT.
13. UNITS OF ANNUAL COLOR SHOWN ON PLAN ARE IN SQUARE FEET. USE CHART BELOW TO DETERMINE QUANTITY OF PLANTS. QUANTITY MAY BE AFFECTED BY SELECTED VARIETIES.

ANG1 = 3.0 PLANTS PER SQUARE FOOT
ANG2 = 2.5 PLANTS PER SQUARE FOOT
ANG3 = 2.25 PLANTS PER SQUARE FOOT

NOTE: ALL ELECTRICAL WORK TO BE PREFORMED BY LICENSED ELECTRICIAN

LED FLOODLIGHT

FLOODLIGHT MANUFACTURER:
HYDREL
One Lithonia Way
Conyers,GA 30012
888-034-5684
nnnhydrel.acuitybrands.com
800-845-3503

LIGHT MODEL:
SAPT LED SPECIALTY ARCHITECTURAL FLOOD
LIGHT ORDER SPEC:
SAPT LED P1 40 80CRI MVOLT CAL KM CSM_48" L2 FGS BL
COLOR- BLACK TEXTURED

NOTE: ALL ELECTRICAL WORK TO BE PERFORMED BY A LICENSED ELECTRICIAN

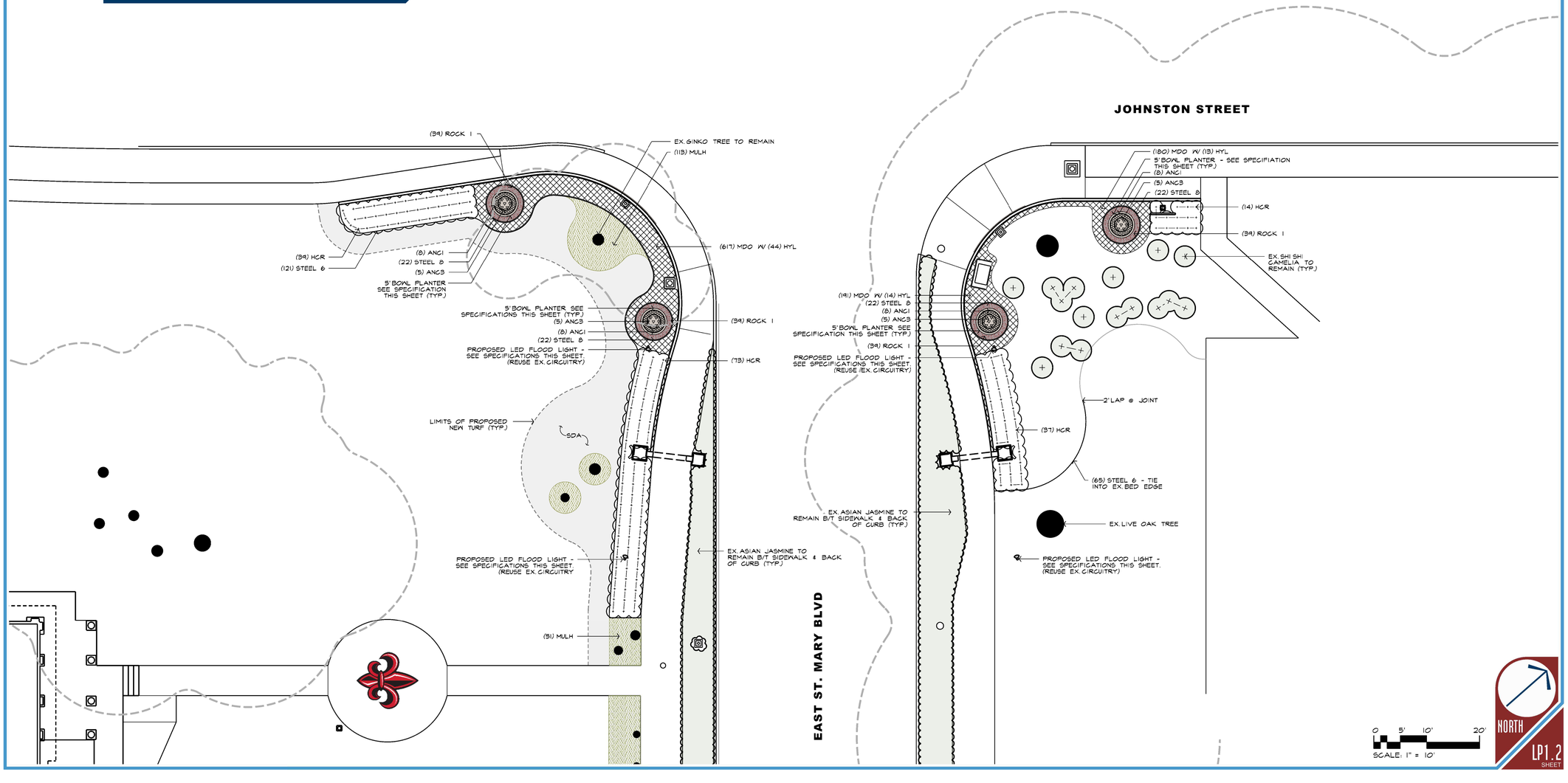
5' BOWL PLANTER

PLANTER MANUFACTURER:
POLYMADE
4520 S.39th Street,
Kansas City, KS 66106
www.polymade.com
913-213-3740

PLANTER MODEL:
SAUCER BOWL PLANTER 60"d x 16-1/2"t
COLOR- WHITE

SEE SHEET LP2.1 FOR PLANTER DETAIL

*** NOTE: THE PLANTING LEGEND COVERS MULTIPLE PROJECTS. NOT ALL MATERIALS SHOWN IN LEGEND ARE UTILIZED ON THIS PARTICULAR PROJECT. CONTRACTOR TO VERIFY MATERIALS & QUANTITIES NECESSARY FOR PROJECT DURING BIDDING PROCESS PRIOR TO CONSTRUCTION. ***



GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE.THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS,AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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GATEWAY - E. ST MARY BLVD @ JOHNSTON ST. LANDSCAPE PLAN

STATE OF LOUISIANA
DANIEL M. SPELLER JR.
REG. NO. 5-362
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

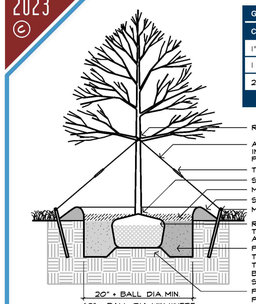
NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944

LP1.2 SHEET

2023 ©

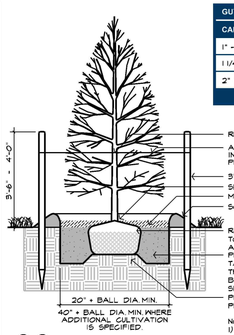
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

01 TREE PLANTING - STANDARD
NOT TO SCALE

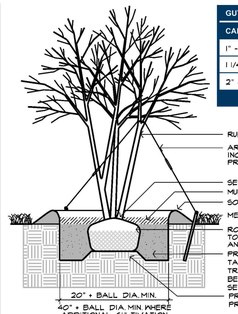
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

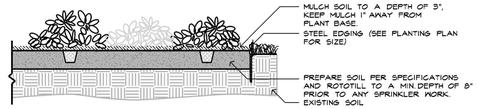
02 TREE PLANTING - FULL TO GROUND
NOT TO SCALE

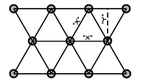
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

03 TREE PLANTING - MULTI-TRUNKED
NOT TO SCALE





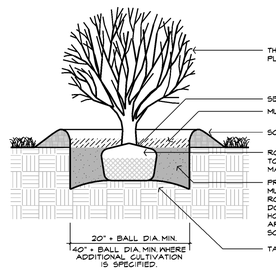
ALL GROUND COVERS TO BE PLANTED ON CENTER IN A TRIANGULAR PATTERN. (SEE PLANTING & PLANTING SPACING LEGEND)
X = O.C. DIMENSION AS NOTED IN LEGEND
Y = ROW SPACING DIMENSION

PLANT SPACING LEGEND

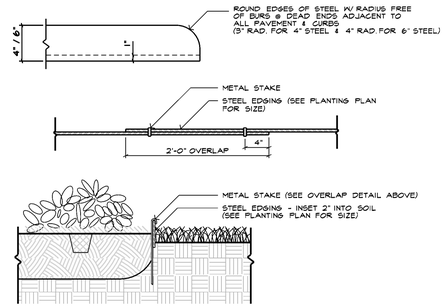
SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.	SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.
6" O.C.	5.2"	4.61	6' O.C.	5.2'	0.032
8" O.C.	6.93"	2.6	8' O.C.	6.93'	0.018
10" O.C.	8.66"	1.66	10' O.C.	8.66'	0.016
12" O.C.	10.4"	1.15	12' O.C.	10.4'	0.008
15" O.C.	13.0"	0.739	15' O.C.	13.0'	0.0059
18" O.C.	15.6"	0.512	20' O.C.	17.3'	0.00288
24" O.C.	20.8"	0.29	25' O.C.	21.65'	0.00185
30" O.C.	26.0"	0.186	30' O.C.	26.0'	0.00128
36" O.C.	30.0"	0.128	40' O.C.	34.6'	0.000722
4'O.C.	3.46'	0.0125			
5'O.C.	4.33'	0.0461			

NOTES:
1. SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES,SIZE,AND SPACING DIMENSION.
2. SMALL ROOTS (1/4" OR LESS) THAT GROW AROUND,UP,OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING.ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING.(SEE ROOT BALL SHAVING CONTAINER DETAIL).
3. SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

04 PLANT SPACING
NOT TO SCALE

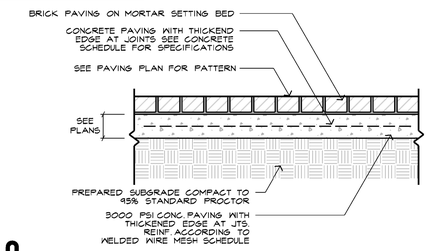


05 SHRUB PLANTING
NOT TO SCALE

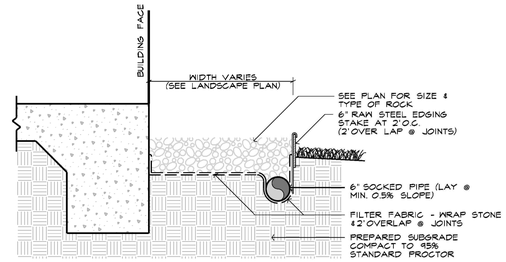


06 STEEL EDGING
NOT TO SCALE

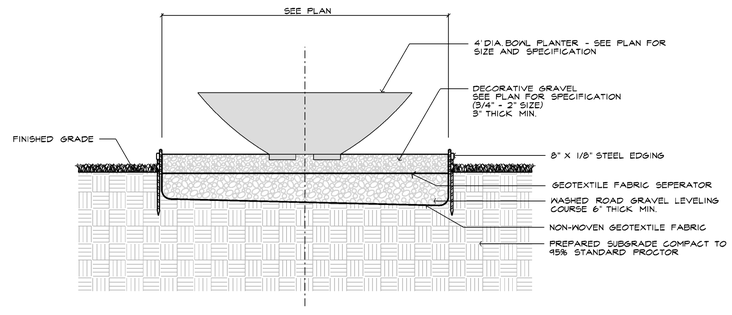
CONCRETE SCHEDULE	
4" PAVING	6X6 * 10/10
6" PAVING	6X6 * 6/6
8" PAVING	6X6 * 4/4



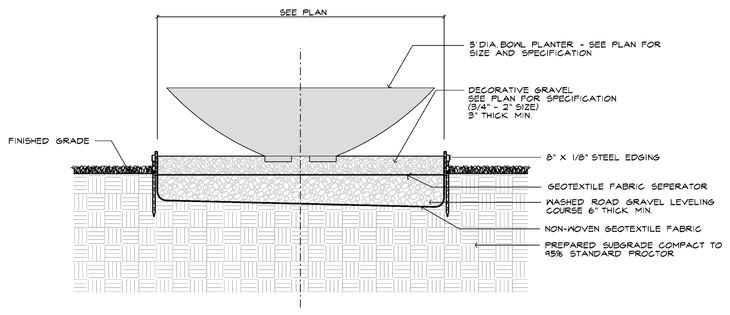
09 BRICK PAVING ON CONCRETE BASE
NOT TO SCALE



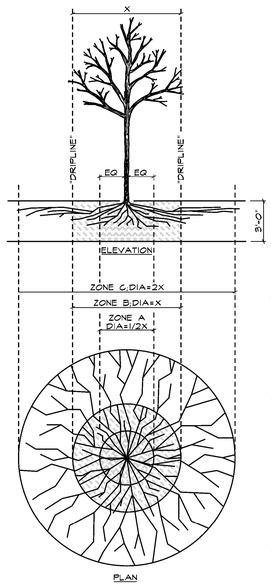
11 FOUNDATION STRIP
NOT TO SCALE



07 RAISED ROCK AREA W/ 4' BOWL PLANTER
NOT TO SCALE



08 RAISED ROCK AREA W/ 5' BOWL PLANTER
NOT TO SCALE



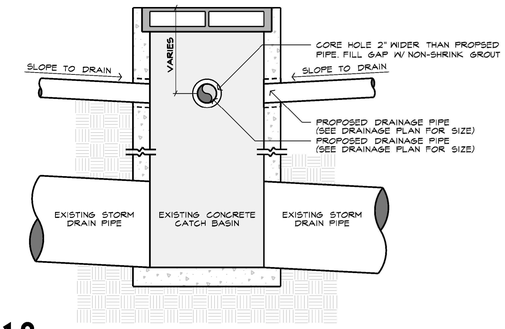
TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
1) NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
2) SEVERANCE OF ROOTS LARGER THAN 2"DIA REQUIRES LANDSCAPE ARCHITECT'S APPROVAL.
3) BORING OR TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER.

ZONE B (DRIPLINE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES REQUIRED.
2) TRENCHING ALLOWED AS FOLLOWS:
- EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED.
- LIMIT TRENCH WIDTH.DO NOT DISTURB ZONE A.MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
- BORING & TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

ZONE C (FEEDER ROOT ZONE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES MAY BE REQUIRED
2) TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
- MINIMIZE TRENCH WIDTH.
- MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION.

10 TREE PRESERVATION DETAIL
NOT TO SCALE



12 CATCH BASIN TIE-IN
NOT TO SCALE

GENERAL NOTES

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR. · REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work in this Section is based on these specifications and the landscape drawings. The scope of work is based on furnishing all labor, materials, tools, transportation, equipment and supervision by the Contractor as required to complete the specified work.

B. In addition to the requirements of these specifications, manufacturer's instructions and recommendations for proper preparation and application of all materials shall be complied with in all respects.

C. Related Work: PLANTING IRRIGATION

1.2 QUALITY ASSURANCE

A. Contractor shall be fully qualified, licensed, capable and experienced in the installation of the described landscape. Evidence of the Contractor's qualifications shall be presented prior to the award of the Contract.

B. The following industry standards shall govern landscape materials and installation. The most stringent requirement shall rule when conflicts between the standards occur and as determined by the Landscape Architect.

1. American Standard for Nursery Stock (Most Current Edition)
2. Horticultural Standards, American Association of Nurserymen.
3. Recommended Standard Specifications for Planting Trees, Shrubs and vines and Fine Grading and Seeding Lawns, second printing - December 1968.
4. American Joint Committee on Horticultural Nomenclature: Latest Edition.

1.3 SUBMITTALS

A. Digital photographs representing each variety shall be submitted for approval by the Landscape Architect prior to ordering any plant material. (The submittal of photographs does not in any way relieve the Contractor of his responsibility to comply with the specifications and applicable standards.)

B. The selection of all materials and the execution of all operations required under the drawings and these specifications are subject to the approval of the Landscape Architect or Owner.

C. The Landscape Architect or Owner shall have the right to reject all material and all work which, in his opinion, does not meet the requirements of the drawings and/or specifications at any stage of the operation. All rejected material shall be removed by the Contractor, as directed, at the Contractor's expense.

1.4 PROTECTION OF EXISTING WORK

A. Location of underground infrastructure such as existing water, telephone, cable, electrical, gas, sewer and drainage lines, and other utilities, shall be ascertained or verified by the Contractor prior to initiating work. The Contractor shall protect the same by means acceptable to the Owner before commencing construction and maintain such protection until the job is accepted by the Owner.

B. Protective measures shall be taken to secure walls, walks, driveways, parking lots, light poles, grass and structures from damage or discoloration. The Contractor shall furnish and install necessary pads, tarpaulins, burlap, building paper, or clean straw to protect existing work.

1.5 EXTRAS, OMITTED OR CHANGES IN WORK

A. While no new unforeseen items are anticipated, they shall be classified as extra work when they cannot be covered by any of the specifications. The Contractor shall submit detailed prices for any extras to the Landscape Architect, and shall perform extras only upon prior written acceptance from the Owner. All such extra work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents. In the absence of such written order, the Contractor shall not be entitled to payment for such extra work.

B. The Landscape Architect shall have the authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time, and not inconsistent with the contract documents. Such changes may be effected by field order or by other written order. Such changes shall be binding on the Contractor.

C. The Owner, without invalidating the contract, may order changes in the work consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents.

1.6 MEASUREMENTS, LAYOUT & LEVELS

A. The Contractor shall layout all lines and levels necessary for the location and erection of the landscape construction and for all excavation, filling and grading work and set necessary markers and stakes, and be responsible for their correctness.

B. The Contractor shall take his own measurements of the site verifying same with the drawings, and shall be responsible for proper fit of his portion of the completed work.

C. The spacing of plants shall conform to the spacing designated on landscape plans and specifications, but variations are permissible when unforeseen site conditions such as underground pipes, etc., make uniform spacing impractical, in which case the Contractor shall abide by instructions, furnished by the Landscape Architect or Owner. Departure from specified spacing will be allowed when site conditions do not permit the specified number of plants in a grouping in which case the minimum spacing shall govern the number of plants to be placed in the group and the excess plants shall be located as directed by the Landscape Architect or Owner.

D. Where proposed grades are not indicated, the Contractor shall in all cases provide the necessary pitch on semi-level areas to drain them to a point designated by the Landscape Architect or Owner.

E. The Landscape Architect reserves the right to relocate shrubs and trees from positions on the plans prior to their planting.

1.7 SUBSTITUTION OF MATERIALS

A. The Contractor, before submitting his bid, shall locate all necessary materials as called for in the plans and specifications, and shall be assured of their availability for use on this job.

B. The contract bids shall be based upon providing the specified materials, processes, products, etc., identified in the specifications and/or indicated on the drawings.

C. Substitutions will not be permitted unless upon admission of proof that specified plants are not obtainable and with the authorization of the Landscape Architect. Written requests with nearest available size, variety of plant and price adjustments are to be submitted to the Landscape Architect.

1.8 PLANT & MATERIAL LIST

A. The Contractor shall furnish the plant material as specified and described in this section.

B. Quantities shall be determined by referring to the Drawings.

C. Names, species, and varieties of all material furnished by the Contractor shall be in accordance with the Drawings and Specifications.

D. The Contractor shall furnish, on request of the Owner, satisfactory proof as to the names and species, variety, and size and shall be made only on written authorization of the Owner.

1.9 MEASUREMENT

A. The quantities for payment will be the design quantities specified in the plans and adjustments thereto.

B. Design quantities will be adjusted if the Landscape Architect makes changes to adjust to field conditions, if plan errors are proven or if design changes are necessary.

C. Design quantities are based on the horizontal dimensions shown on the plans.

PART 2 - PRODUCTS

2.1 TOPSOIL: The Contractor shall use salvaged onsite topsoil to the extent possible and topsoil from offsite borrow to supplement that salvaged. The topsoil shall be a fertile, friable, natural topsoil of a loamy character. It shall contain a normal amount of decomposed organic matter and shall be free of stones, lumps, clay, toxic materials, plants or their roots, stacks and other extraneous matter. The topsoil shall be within a pH range of 5.0 to 6.5. Topsoil testing shall be at the Owner's expense and by a third party entity.

2.2 SOIL CONDITIONER MIX: Finely chopped pine bark mulch to be incorporated into the soil, shall be free from weeds, moss, sticks and other debris but shall contain a generous amount of sand (average 20% by volume) and shall be well decomposed.

2.3 PEAT MOSS: Peat moss shall be a horticultural grade, sphagnum peat moss containing partially decomposed fibrous or cellular stems and leaves of any of the many species of sphagnum mosses from fresh water sources conforming to the following requirements:

A. Peat moss shall be a homogeneous material free of decomposed colloidal residue lumps, roots, stones, and other foreign matter; and of such consistency that peat can pass a 1/2 in. mesh and can be readily incorporated with the topsoil.

B. The pH shall not be less than 3.5 nor greater than 5.5 at 25 degrees C.

C. Organic matter content shall not be less than 90% by weight, on an oven-dry basis.

D. Ash content shall not be more than 10% by weight, on an oven-dry basis.

E. Moisture absorption capacity shall not be less than 800%, by weight, on an oven-dry basis.

2.4 TOP DRESS MULCH: Top dress mulch shall be clean and free from weeds, moss, sticks, soil and any other objectionable material.

A. The pH shall not be less than 3.5 nor greater than 5.3 at 25 degrees C.

B. The Contractor shall submit a one cubic foot sample of the mulch for approval by the Landscape Architect.

2.5 FERTILIZER: Osmocote 14-14-14, or approved equal, shall be used in bed areas and for trees. The fertilizer shall be stored in a cool, dry place in unopened bags until it is ready to be incorporated into the backfill mixture. Agriform tree tablets can be used in lieu of the Osmocote for tree plantings only, and must be applied at the manufacturer's recommended rate.

2.6 SOD: Class "A" premium grade sod consistent with the variety(s) called out in the plans.

A. Sod shall be machine cut at a uniform soil thickness at a height appropriate to the specified species.

B. Pad Size: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 0.5 inch (15 mm) on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.

C. Strength of Turf Sod Sections: Standard size sections of sod shall be strong enough that it can be picked up and handled without damage.

D. Moisture Content: Sod shall not be harvested or transplanted when its moisture content (excessively dry or wet) may adversely affect its survival.

E. Mowing Height: Before harvesting, the sod shall be mowed uniformly at a height of 1 to 2.5 inches (25 to 60 mm) on cool season grasses (i.e., bluegrass, bent grass, rye and fescue), and 0.75 to 1.50 inches (20 to 40 mm) on warm season grasses (i.e., zoysia grass, Bermuda grass, St. Augustine grass, etc.)

F. Time Limitations: Sod shall be harvested, delivered and installed/transplanted within a period of 24 hours, unless a suitable preservation method is approved prior to delivery. Sod not transplanted within this period shall be inspected and approved by the inspecting officer or his representative prior to its installation.

G. Thatch: Sod shall be relatively free of thatch, up to 0.5-inch (15mm) allowable (uncompressed).

H. Diseases, Nematodes and Insects: Sod shall be reasonably free of diseases, nematodes and soil-borne insects. Specific nursery and/or plant materials laws may require that all sod entering inter-state commerce be inspected and approved for sale. The inspections and approval must be made by the appropriate government representative of the agriculture department or office of entomologist.

I. Weeds: Nursery grown turf grass sod shall be free of objectionable grassy and broad leaf weeds. Turf grass sod shall be considered free of such weeds if less than 5 such plants are found per 100 square feet (10 sq m) of area. Sod will not be acceptable if it contains any of the following weeds: common Bermuda, johnson grass, poison ivy, nutsedge, thistle, bindweed, bent grass or wild garlic.

2.7 PLANTS: TREES, SHRUBS & GROUND COVER

A. Caliper measurement of trees shall be taken at six inches above natural ground up to and including four inch caliper material. If the caliper six inches above natural ground exceeds four inches, the caliper will be measured twelve inches above natural grade.

B. Shrubs shall be well shaped, full branched plants with heights measured to point in the main perimeter of branches or foliage rather than to single shoots or leaders. Plants with single stems shall have sufficient, well spaced side branches to give them weight equal to one grown with numerous canes. Canes shall be considered as primary stems starting from the ground or from a point not higher than one-fourth (1/4) the height of the plant.

C. Sizes of balls shall be at least six inches (6") greater in diameter than the minimum sizes established for individual plant types as recommended by "Horticultural Standards" latest edition of American Association of Nurserymen, Inc. Depth shall be sufficient to encompass the fibroid and feeding root system necessary for the full recovery of the plant and in no case shall be less than recommended ratios to diameter as recommended by "Horticultural Standards", latest edition of the American Association of Nurserymen, Inc. All balls shall be firm, intact, slightly tapered, well burlapped and securely fastened with twine or nails or both. Any tree which is determined to be loose in the ball or with a broken ball at the time of planting will be rejected.

D. Any plants having any of the following unnatural or objectionable features will be rejected: excessive abrasions of the bark; dried out root system; excessive dead or dried up wood; excessive sun scald injuries; undeveloped and weak top or roots or both; crooked or one-sided development of tops; no straight leaders on trees naturally and normally having them; broken or removed leaders; untrue types or sizes; root-bound container grown plants; excessively damaged or loose balls of soil; plants actually dead, diseased or insect infested and plants not otherwise complying with the plant specification herein.

E. The rejected material shall be removed from the site and replaced as quickly as possible with new plant material of the same kind, meeting the requirements, at the expense of the Contractor.

PART 3 - EXECUTION

3.1 PLANT DELIVERY, UNLOADING & STORAGE

A. All plants shall be delivered to the job in good condition and unloaded with care so that balls and tops are not damaged. Balled & burlapped plants shall not be handled or lifted by their tops or trunks.

B. The Contractor shall be responsible for the protection of plants from damage through weather conditions, improper storage, vandalism, theft, and injury, and shall unload plants in a location approved by the Owner, requiring the minimum amount of moving to locations where they are to be planted.

C. Whenever and wherever possible, delivery shall be made within a reasonable time of completion of planting pits or beds and if unforeseen conditions prevent immediate planting, the Contractor shall heel in plants, watering same if necessary and protect from drying winds and sun in accordance with good nursery practices.

D. If in the opinion of the Owner, plants have been damaged through prolonged intervals between delivery and storage, they shall not be used in planting, and shall be replaced by new plants conforming to original specifications.

3.2 TREE & SHRUB PIT PLANTING

A. Pits shall not be prepared and left open for prolonged periods prior to planting. Pits shall be protected until used so that sides do not crumble and so pits do not become saturated with water. All damaged pits shall be restored to original condition and shall be drained of surface water before usage.

B. Depth of pits shall not be more than two inches (2") greater than depth of the ball to be received. Diameter of pits shall be such that there is no less than ten inches (10") of space all around the balls or root spread of bare-root plants, except in the case of trees in which case the space shall be increased to twenty inches (20"). Bottom of pit shall be thoroughly loosened to a depth of eight inches (8") before plant is placed in pit. Tops of plants shall not be cut loose until plant is set to correct depth in pit.

C. Excavated earth shall be piled sufficiently far back from the edge of the pit to prevent earth sliding back into pit when plants are placed. Surplus excavated earth shall be disposed of immediately after planting is completed to prevent mixing of same with topsoil.

D. Mixture used in backfilling pits shall consist of 75% topsoil, 10% peat moss, 10% pine bark mulch and 5% sand mixed by volume with a slow release fertilizer at the manufacturer's recommended rate. Mixing shall not be done in the pits. Refer to Article 16, MATERIALS, of this specification.

E. After plant has been set and pit has been backfilled to two-thirds (2/3) of its depth, mixture shall be tamped thoroughly and settled with water. When settling has been accomplished, pit shall be brought to level of adjacent ground with same mixture. Slope finished grade slightly toward center of plant.

F. A six inch saucer shall be constructed for all trees planted outside of prepared landscape beds.

3.3 BED ALIGNMENT

A. The Contractor is responsible for planting all material at the correct grades, locations and alignment.

B. The location of plant material and the outline of beds and other areas indicated on the plans shall be followed as closely as possible.

C. Any questions regarding bed alignment shall be brought to the attention of the Landscape Architect immediately.

3.4 BED PREPARATION & PLANTING

A. Conventional Bed Preparation: This technique shall be used unless otherwise noted.

1. Before the start of conventional bed preparation, all areas to be prepared shall be stripped of any grass, weeds, etc., to a minimum depth of (1) inch.
2. All beds shall be rototilled to a depth of ten (10) inches to completely blend the topsoil with one and a half (1.5) cubic yards of soil conditioner mix (see 'PRODUCTS' section) per one hundred (100) square feet of bed prior to rototilling.
3. All bed areas shall then be treated with a granular weed pre-emergent (Eptam or approved equal) at a rate and the method specified by the manufacturer.
4. All beds shall be fertilized with Osmocote 14-14-14, or an approved equal at the manufacturer's recommended rate of one (1) pound per fifty (50) square feet or per any project-specific recommendation.
5. Before planting, the bed area shall be raked and leveled to a fine grade, allowing for proper surface drainage.

3.5 PLANTING

A. After completion of fine grading, the plants shall be placed at the positions indicated on the plans. All plants shall be set so that when settled, they will bear the same relation to finish grade as they did before transplanting. No filling will be permitted around trunks or stems.

3.6 SODDING

A. The soil shall be thoroughly tilled to a depth of four (4) inches.

B. The trees specified on the plans shall already have been planted and guyed before laying sod.

C. The sod bed shall be fine graded to remove all ridges or depressions and the surface cleared of all stones and debris.

D. The sod shall be laid perpendicular to the direction of the slope and in a manner which will permit joints to alternate.

E. Sod panels shall be fitted together tightly so that no joint is visible and tamped firmly and evenly by hand.

F. Immediately following sod placement, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered.

G. During delivery, prior to and during the planting of lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun.

H. Top dressing with washed, clean, weed free builder's sand may be required if deemed necessary by the Owner or Landscape Architect to level depressions in the grade or imperfections in the sod.

3.7 MULCHING

A. After completion of all planting operations, beds and tree pits are to be mulched.

B. Tree pits shall have a 3" covering of top-dress mulch and bed areas shall have a minimum of 3" throughout.

3.8 WATERING

A. Watering of areas planted shall be done on the same day planting is done.

B. All planted areas shall be watered as often as necessary as the work progresses, if weather conditions require same.

C. Watering shall be done by competent workmen, with minimum disturbance of adjoining areas and following the direct instruction of the licensed Contractor.

D. Contractor shall supply necessary topsoil or soil mix to compensate for any settling that takes place due to watering.

3.9 PRUNING & REPAIR

A. Pruning for shape shall be done by the Contractor only if so instructed by the Landscape Architect.

B. Pruning shall consist of shaping the plant to a pleasing outline in accordance with good nursery practices.

C. Pruning shall be done in such a manner so as not to change the natural habit or shape of the plant.

D. Cut-back pruning of all dead wood and injured branches shall be done immediately after planting.

E. Injured branches or damaged branches shall be cut back to sound live wood in accordance with good nursery practices.

F. Shade trees shall be cut back only on authorization of the Landscape Architect.

G. Pruning shall be done before final watering and application of mulch.

H. All debris and trimmings shall be removed immediately.

3.10 TREE STAKING & GUYING

A. Guys shall be furnished and erected by the Contractor for all trees to prevent wind movement, in accordance with the following instructions:

1. Trees up to one and one-fourth inch (1-1/4") caliper: Three (3) supports spaced triangularly around trunk at a distance of fifteen inches (15").
2. Trees one and one-fourth inch (1-1/4") to two inch (2") caliper: Three (3) supports spaced triangularly around trunk at a distance of twenty inches (20").
3. Trees two inches (2") and over in caliper: Three (3) supports spaced triangularly around trunk in clear areas between perimeter ball and edge of plant pit.

B. Supports (stakes) shall be as specified on the drawings and of sufficient length that on being driven substantially into the ground, tops of stakes will be no less than two-thirds (2/3) the distance from ground to lowest branches or forks.

C. Method of fastening supports to tree shall be by means of aluminum wire or No. 12 gauge galvanized wire looped through sections of rubber hose and fastened to supports in such a manner that hose sections prevent damage to bark of tree or by use of ArborTie brand guy line (or approved equal).

D. When the tree has been steadied erect, guy lines shall be tightened to equalize pressure to prevent any wind movement.

E. Contractor shall see that there is no twisting strain thrown on tree trunks when slack is taken up on wires and that rubber hose sections are installed in a manner that there will be no friction damage to bark.

3.11 PROTECTION

A. The Contractor shall protect all plants and lawns from damage at all times.

B. If plants or lawns are damaged, they shall be replaced or treated by the Contractor at his expense to the satisfaction of the Owner or his representative.

3.12 MAINTENANCE

A. The Contractor shall maintain all trees, shrubs and groundcover under this contract until final acceptance, by watering, cultivating, weeding, spraying and replacing as necessary to keep plants in a healthy, vigorous condition, and shall rake bed areas as may be required to keep them neat.

B. The Contractor shall maintain all grass areas under this contract until acceptance by watering, mowing, spraying, etc.

C. Watering: All lawn areas shall be watered once a day with a minimum of 1/2" of water up until final acceptance. Thereafter, watering shall be turned over to the Owner where the Contractor shall provide him with the proper procedures for continued watering. All trees, shrubs and groundcover shall be watered twice a week until final acceptance by the Contractor, providing 1" of water each time unless a comparable amount of rain has been provided.

D. Weeding: Shall consist of pulling or digging out all plant material other than the desired shrubs and groundcover until final acceptance.

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REGISTERED
LICENSED
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

LP2.2 SHEET

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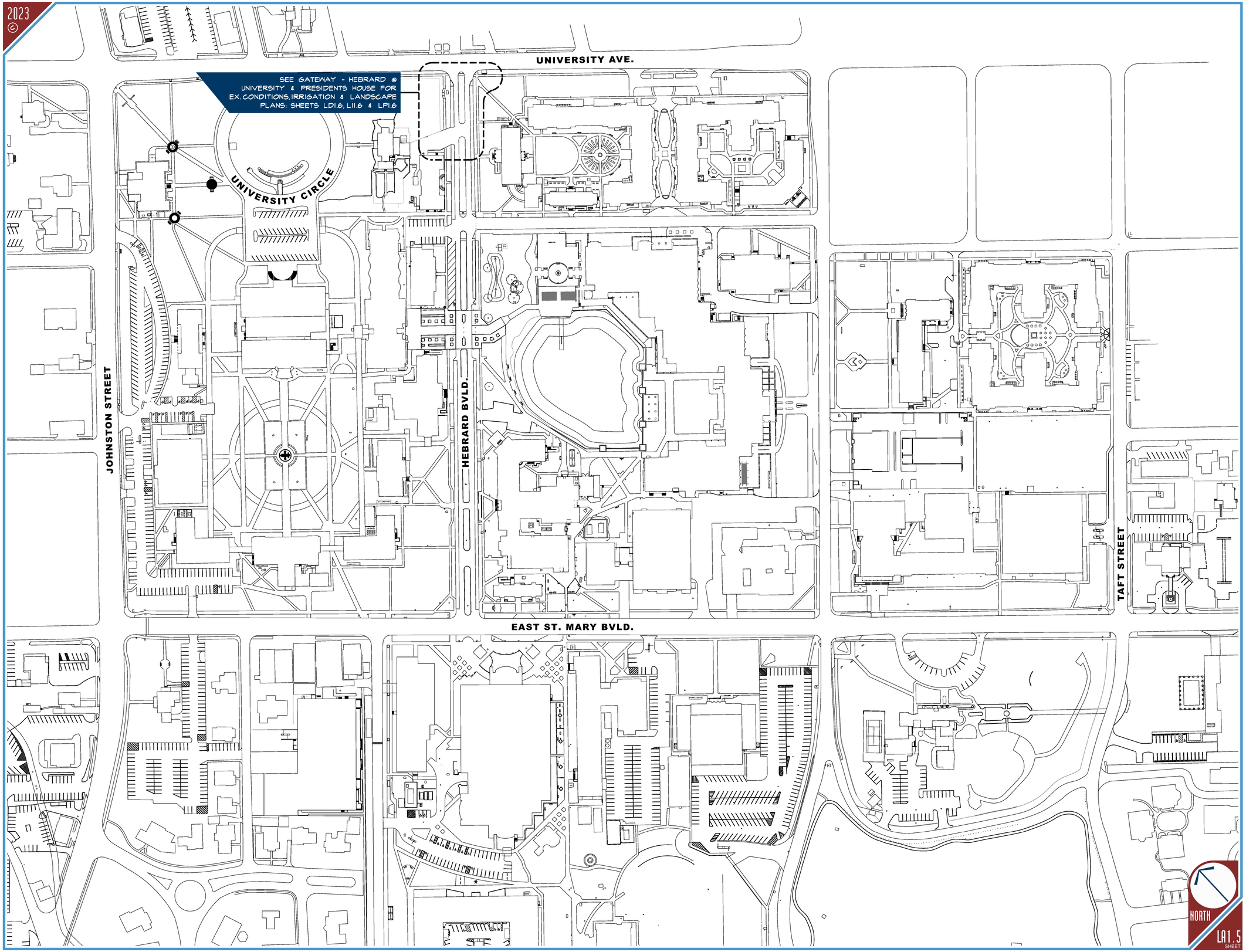

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CAMPUS KEY PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
No. 5-352
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

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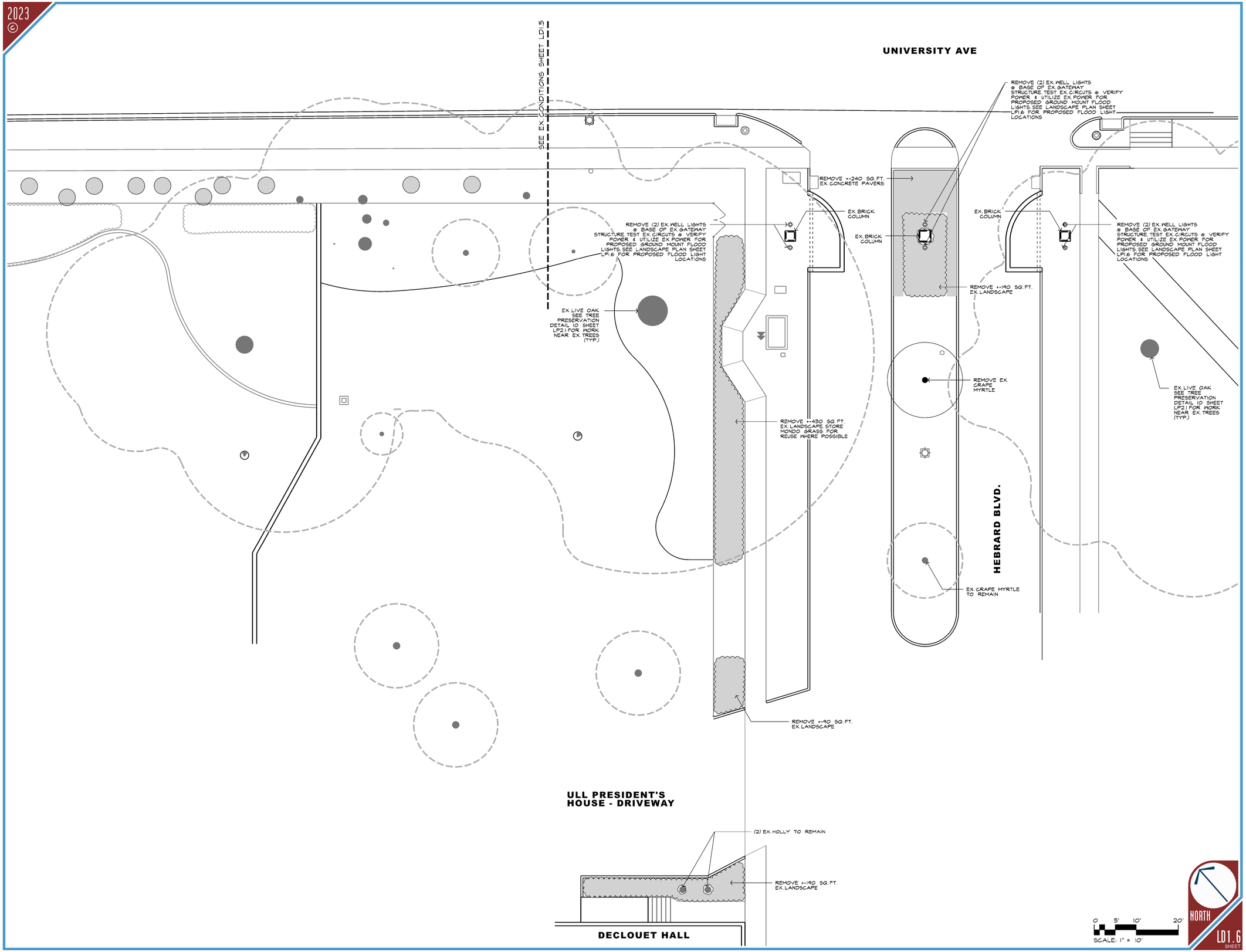

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GATEWAY- UNIVERSITY @ HEBRARD BLVD. DEMO & EX. CONDITIONS PLAN

STATE OF LOUISIANA
DANIEL M. SPALLER JR.
REGISTERED
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

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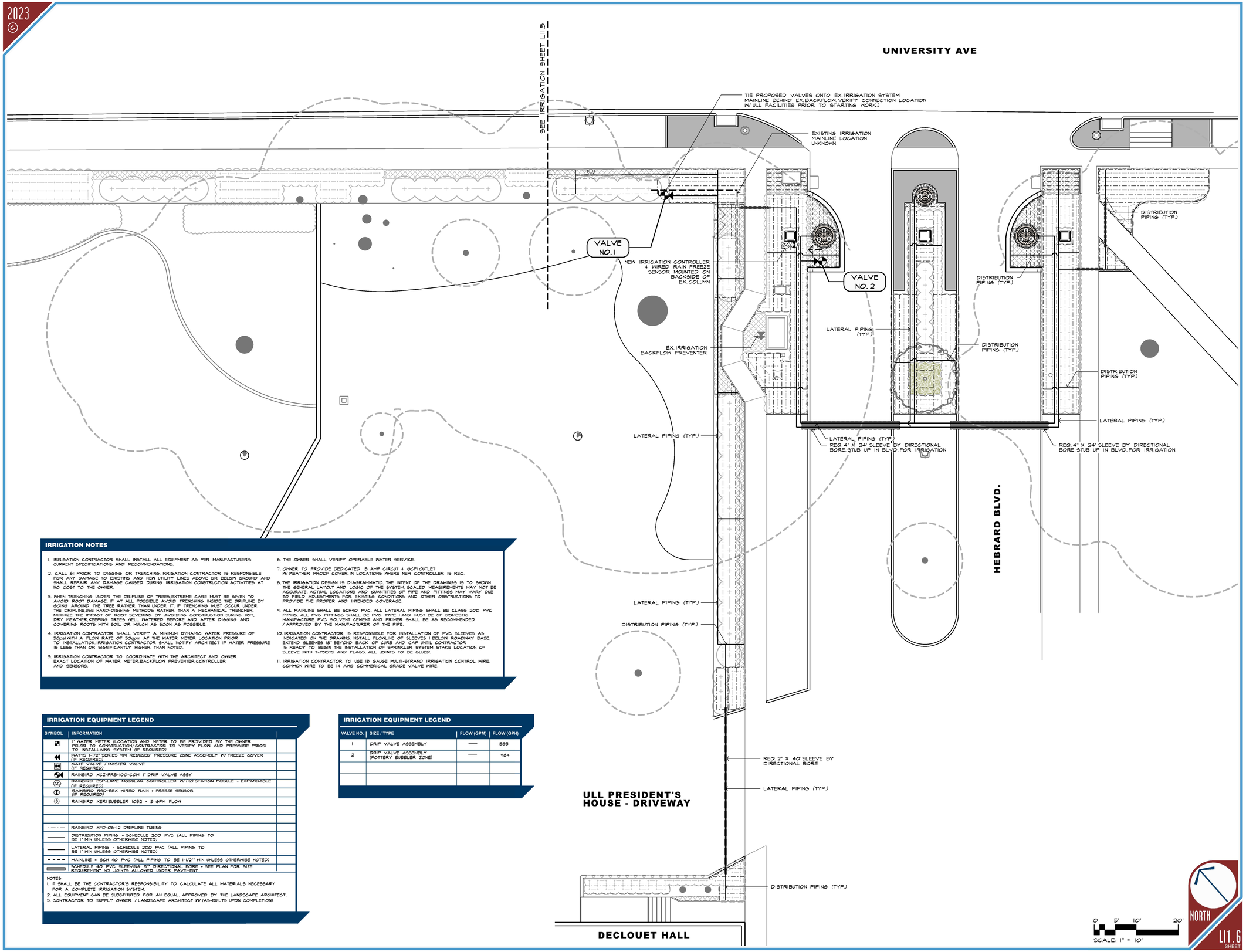

IRRIGATION NOTES

1. IRRIGATION CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S CURRENT SPECIFICATIONS AND RECOMMENDATIONS.
2. CALL 811 PRIOR TO DIGGING OR TRENCHING. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING AND NEW UTILITY LINES ABOVE OR BELOW GROUND AND SHALL REPAIR ANY DAMAGE CAUSED DURING IRRIGATION CONSTRUCTION ACTIVITIES AT NO COST TO THE OWNER.
3. WHEN TRENCHING UNDER THE DRIPLINE OF TREES, EXTREME CARE MUST BE GIVEN TO AVOID ROOT DAMAGE. IF AT ALL POSSIBLE AVOID TRENCHING INSIDE THE DRIPLINE BY GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR UNDER THE DRIPLINE, USE HAND-DIGGING METHODS RATHER THAN A MECHANICAL TRENCHER. MINIMIZE THE IMPACT OF ROOT SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER, KEEPING TREES WELL WATERED BEFORE AND AFTER DIGGING AND COVERING ROOTS WITH SOIL OR MULCH AS SOON AS POSSIBLE.
4. IRRIGATION CONTRACTOR SHALL VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 50PSI WITH A FLOW RATE OF 30GPM AT THE WATER METER LOCATION PRIOR TO INSTALLATION. IRRIGATION CONTRACTOR SHALL NOTIFY ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
5. IRRIGATION CONTRACTOR TO COORDINATE WITH THE ARCHITECT AND OWNER EXACT LOCATION OF WATER METER, BACKFLOW PREVENTER, CONTROLLER AND SENSORS.
6. THE OWNER SHALL VERIFY OPERABLE WATER SERVICE.
7. OWNER TO PROVIDE DEDICATED 15 AMP CIRCUIT & GFCI OUTLET W/ WEATHER PROOF COVER IN LOCATIONS WHERE NEW CONTROLLER IS REQ.
8. THE IRRIGATION DESIGN IS DIAGRAMMATIC. THE INTENT OF THE DRAWINGS IS TO SHOWN THE GENERAL LAYOUT AND LOGIC OF THE SYSTEM. SCALED MEASUREMENTS MAY NOT BE ACCURATE. ACTUAL LOCATIONS AND QUANTITIES OF PIPE AND FITTINGS MAY VARY DUE TO FIELD ADJUSTMENTS FOR EXISTING CONDITIONS AND OTHER OBSTRUCTIONS TO PROVIDE THE PROPER AND INTENDED COVERAGE.
9. ALL MAINLINE SHALL BE SCH40 PVC. ALL LATERAL PIPING SHALL BE CLASS 200 PVC PIPING. ALL PVC FITTINGS SHALL BE PVC TYPE I AND MUST BE OF DOMESTIC MANUFACTURE. PVC SOLVENT CEMENT AND PRIMER SHALL BE AS RECOMMENDED / APPROVED BY THE MANUFACTURER OF THE PIPE.
10. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF PVC SLEEVES AS INDICATED ON THE DRAWING. INSTALL FLOWLINE OF SLEEVES 1' BELOW ROADWAY BASE. EXTEND SLEEVES 18" BEYOND BACK OF CURB AND CAP UNTIL CONTRACTOR IS READY TO BEGIN THE INSTALLATION OF SPRINKLER SYSTEM. STAKE LOCATION OF SLEEVE WITH T-POSTS AND FLAGS. ALL JOINTS TO BE GLUED.
11. IRRIGATION CONTRACTOR TO USE 18 GAUGE MULTI-STRAND IRRIGATION CONTROL WIRE. COMMON WIRE TO BE 14 AWG COMMERICAL GRADE VALVE WIRE.

IRRIGATION EQUIPMENT LEGEND

SYMBOL	INFORMATION
	1" WATER METER (LOCATION AND METER TO BE PROVIDED BY THE OWNER PRIOR TO CONSTRUCTION) CONTRACTOR TO VERIFY FLOW AND PRESSURE PRIOR TO INSTALLAING SYSTEM (IF REQUIRED)
	WATTS 1-1/2" SERIES 919 REDUCED PRESSURE ZONE ASSEMBLY W/ FREEZE COVER (IF REQUIRED)
	GATE VALVE / MASTER VALVE (IF REQUIRED)
	RAINBIRD XCZ-PRB-100-COM 1" DRIP VALVE ASSY
	RAINBIRD ESP-LXME MODULAR CONTROLLER W/ (12) STATION MODULE - EXPANDABLE (IF REQUIRED)
	RAINBIRD RSD-BEX WIRED RAIN + FREEZE SENSOR (IF REQUIRED)
B	RAINBIRD XERI BUBBLER 1032 - 3 GPM FLOW
- — - —	RAINBIRD XFD-06-12 DRIPLINE TUBING
———	DISTRIBUTION PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
———	LATERAL PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
- - - -	MAINLINE - SCH 40 PVC (ALL PIPING TO BE 1-1/2"" MIN UNLESS OTHERWISE NOTED)
	SCHEDULE 40 PVC SLEEVING BY DIRECTIONAL BORE - SEE PLAN FOR SIZE REQUIREMENT. NO JOINTS ALLOWED UNDER PAVEMENT

NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
2. ALL EQUIPMENT CAN BE SUBSTITUTED FOR AN EQUAL, APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR TO SUPPLY OWNER / LANDSCAPE ARCHITECT W/ (AS-BUILTS UPON COMPLETION)

IRRIGATION EQUIPMENT LEGEND

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	1583
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	——	984

GENERAL NOTES

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2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES, STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK, ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE, AS REQUIRED, THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION, THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS, SITE DIMENSIONS, RESTRICTIONS, AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE, TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

GATEWAY- UNIVERSITY @ HEBRARD & PRESIDENTS HOUSE IRRIGATION PLAN

STATE OF LOUISIANA — DANIEL M. SPITLER JR. — REGISTERED — LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION

REVISIONS:

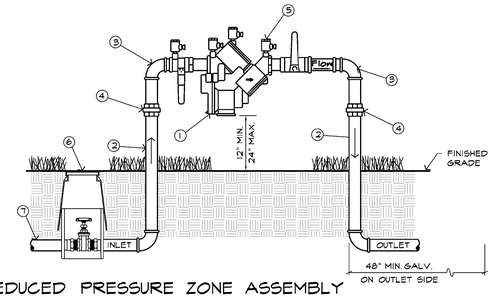
SCALE: 1" = 10'

NORTH

LI1.6 SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

2023 ©



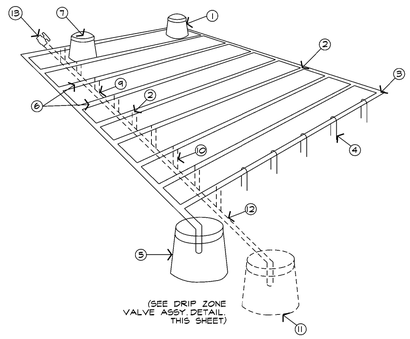
LIST OF MATERIALS

1. APPROVED ANTI-SIPHON PRESSURE VACUUM BREAKER ASSEMBLY,BALL VALVES INCLUDED.
2. GALV. PIPE, ¾" THRU 2".
3. 90° ELL,GALV., ¾" THRU 2 ½".
4. GALV. PIPE UNION.
5. TEST COCKS WITH BRASS PLUGS OR ADAPTORS WITH CAPS INSTALLED.(2 REQUIRED)
6. GATE VALVE IN BOX
7. COPPER NIPPLE AS REQUIRED BY CODE
8. CONTRACTOR TO PROVIDE INSULATED FIBERGLASS ENCLOSURE OR APPROVED EQUAL.

GENERAL NOTES

1. CONTACT THE LOCAL GOVERNING AUTHORITY FOR LATEST LIST OF APPROVED BACK-FLOW PREVENTION ASSEMBLIES.
2. BACKFLOW PREVENTERS MUST BE TESTED BEFORE FINAL APPROVAL IS ISSUED.
3. GALVANIZED FITTINGS SHALL BE CONNECTED USING PIPE DOPE OR TEFLON TAPE.
4. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
5. ALL NIPPLES TO BE COPPER OR BRASS.
6. PIPING UNDER THE CITY RIGHT OF WAY MUST BE PER CITY CODE.
7. CALL LANDSCAPE ARCHITECT FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.

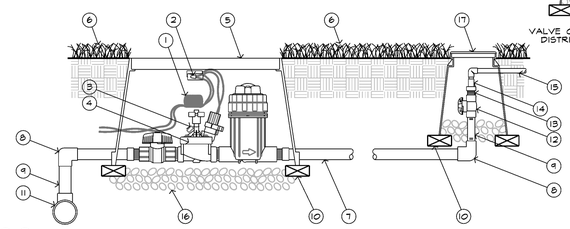
01 REDUCED PRESSURE ZONE ASSEMBLY
NOT TO SCALE



1. FLUSH CAP IN 6" VALVE BOX
2. MDCFTEE COMPRESSION TEE
3. MDCFEL COMPRESSION ELBOW
4. TDS-050 W/BEND TIE DOWN STAKE INSTALL 3'O.C.ON ALL TUBING
5. CONNECTION POINT TO PVC LATERAL LINE IN 10" VALVE BOX
6. SPACING - SEE PLANS
7. AIR/VACUUM RELIEF VALVE IN 6" VALVE BOX
8. PVC DISTRIBUTION PIPE TO BE USED ON LARGE ZONES.(SEE PLAN FOR PIPE SIZES & LOCATION)
9. PVC FITTINGS (TYPICAL)
10. PVC SCH.80 NIPPLE AND ¾" FHT ADAPTER
11. DISTRIBUTION VALVE (AS REQUIRED)
12. DISTRIBUTION PIPE (AS REQUIRED)
13. PVC FLUSH VALVE

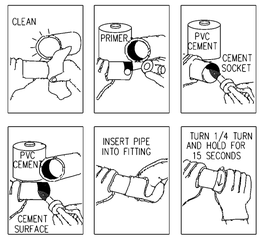
RAINBIRD XFD-06-12 DRIP TUBING
FLOW RATE = 0.6 GPH DRIPPER SPACING = 12"O.C.

02 DRIP TUBING LAYOUT - (DISTRIBUTION PIPE)
NOT TO SCALE



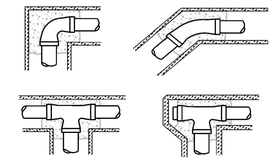
1. 30-INCH LINEAR LENGTH OF WIRE,COILED
2. WATERPROOF CONNECTION SPLICE-1 (1 OF 2)
3. ID TAG W/VALVE NUMBER
4. RAINBIRD XCZ-PRB-100-COM DRIP ZONE VALVE ASSY (INCL. VALVES,FILTER WITH PSI REG.)
5. VALVE BOX WITH COVER
6. FINISH GRADE/TOP OF MULCH
7. PVC CL200 PIPE
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4 PER BOX)
11. PVC MAINLINE PIPE
12. ¾" BALL VALVE
13. ¾" MPT x ¾" ADAPTER
14. ¾" FHT ADAPTER
15. RAINBIRD XFD DRIP LINE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. 10" VALVE BOX (CLEARLY LABELED NON-POTABLE WATER)

03 DRIP ZONE VALVE ASSY. (PRB),CONNECTION POINT & BOX
NOT TO SCALE



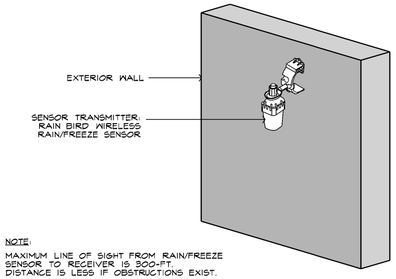
NOTES:
1. NEVER LAY PVC PIPE WHEN THERE IS WATER IN THE TRENCH
2. NEVER LAY PVC PIPE WHEN THE TEMPERATURE IS 32°F OR BELOW

04 PVC ASSEMBLING
NOT TO SCALE



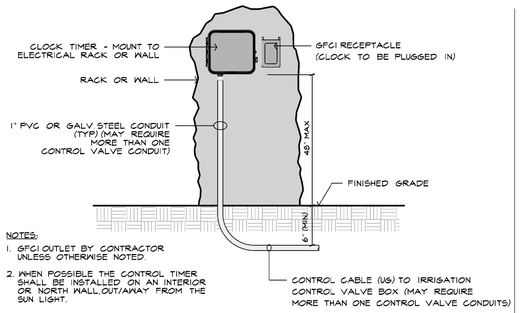
NOTE:
ALL FITTINGS SHALL BE WRAPPED IN POLY PLASTIC BEFORE THRUST BLOCKS ARE INSTALLED.CONCRETE SHALL NOT COVER THE TOP OF ANY FITTING.

05 TYPICAL THRUST BLOCKING
NOT TO SCALE



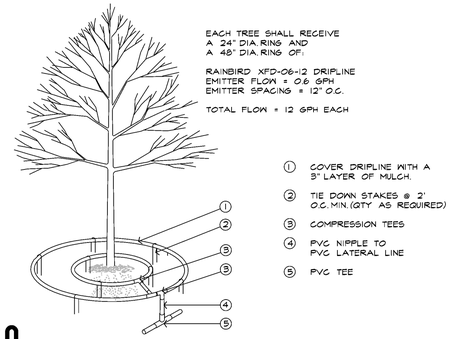
NOTE:
MAXIMUM LINE OF SIGHT FROM RAIN/FREEZE SENSOR TO RECEIVER IS 300-FT. DISTANCE IS LESS IF OBSTRUCTIONS EXIST.

06 RAIN/FREEZE SENSOR WALL/FENCE MOUNT - STANDARD
NOT TO SCALE



NOTES:
1. GFCI OUTLET BY CONTRACTOR UNLESS OTHERWISE NOTED.
2. WHEN POSSIBLE THE CONTROL TIMER SHALL BE INSTALLED ON AN INTERIOR OR NORTH WALL,OUT/AWAY FROM THE SUN LIGHT.

07 CONTROLLER MOUNTING - PLUG IN
NOT TO SCALE



1. COVER DRIPLINE WITH A 3" LAYER OF MULCH.
2. TIE DOWN STAKES @ 2' O.C.MIN.(QTY AS REQUIRED)
3. COMPRESSION TEES
4. PVC NIPPLE TO PVC LATERAL LINE
5. PVC TEE

08 TREE DRIP-RINGS
NOT TO SCALE

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LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPALLER JR.
REGISTERED
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

L12.1
SHEET

2023 ©

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. General provisions of the contract and other applicable parts of the construction documents apply to this Section.

1.2 SUMMARY:

A. Furnish all labor, materials, equipment and instructions necessary for the complete installation of the landscape irrigation system as drawn and specified. The work includes, but is not limited to:

1. Trenching, backfilling, and compaction for irrigation lines.
2. Provisions and installation for a turnkey automatic sprinkler system. Provide backflow preventer, controller, piping, heads, drip lines, valves, quick couplers, valve access boxes, low voltage wiring, applicable connection fees and all other items required for a complete system as shown on the Drawings, called for in the specifications or as may be required for proper operation of the system. The system shall be installed in strict accordance with all applicable codes, ordinances and regulations.
3. Test all systems, make operative and adjust.
4. Submit Record Drawings, Maintenance Manual and satisfactory evidence to show that all work has been installed in accordance with the ordinance and code requirements.
5. Maintain and operate until substantial completion.
6. One-year Guarantee Period.

B. Related work by others:

1. Water Meter as provided by the General Contractor.
2. Sch40 PVC Sleeves as provided by General Contractor.
3. Electrical work and Conduit as provided by General Contractor for the automatic controller & backflow preventer.

C. Provide drip tubing in all shrub and groundcover beds as designated. Provide pop up spray heads in turf areas. Provide the number of heads required to assure 100% coverage. Layout the system so that the shrub and groundcover beds are on separate zones from the turf areas.

D. Provide winterizing for the system using automatic drain valves in the low-points of lateral piping and heat-tape for the backflow preventer.

E. Coordinate exact locations of water meter and backflow preventer with the General Contractor.

F. The Contractor shall coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs.

G. The Contractor shall install the irrigation system in accordance with the schedule requirements provided by the General Contractor.

1.3 QUALITY CONTROL:

A. The sprinkler system shall be designed, to the extent possible, to promote water, soil and energy conservation. The system shall include a rain sensing device and shall be consistent with any water conservation ordinance enacted by the city.

B. Provide Installation by a licensed Irrigation contractor, skilled in work required and completely familiar with manufacturer's recommended method of installation requirements. Contractor must have a minimum of two (2) consecutive years experience in this area of work and having completely installed other jobs of similar size and scope. Evidence of the Contractor's qualifications shall be presented before the award of contract.

C. Approval and selection of Materials and Work: The selection of all materials and the execution of all operations required under the Contract Documents shall be subject to the approval of the General Contractor and Landscape Architect who shall have the right to reject any and all materials and any and all work which, in their opinion, does not meet the requirements of the Contract Documents at any stage of the operations. All rejected materials shall be removed from the site by the Contractor.

D. The successful Contractor shall maintain a competent, skilled and satisfactory work force during and through the completion of the construction period. In no case, shall unskilled labor be allowed to operate equipment, assemble, glue, install, wire, test or adjust components of the system. If in the opinion of the General Contractor or Landscape Architect, the labor furnished by the Contractor is incompetent or inexperienced in the practice assigned, the Contractor shall remove such persons or reassign them to a practice acceptable to the General Contractor and Landscape Architect.

E. Conform to all codes, statutes, laws and regulations governed by the following agencies for the protection of public safety:

ASTM	American Society for Testing Materials
AWWA	American Water Works Association
NEC	National Electric Code
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
UPC	Uniform Plumbing Code

F. The Contractor shall make application, acquire, comply and pay for all licenses and/or permits required by Local, State, or National Governing Agencies as may be required to perform and complete the work as described in the Contract Documents.

1.4 SUBMITTALS:

A. General: Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for possible revisions, and re-submittals, and for placing orders and securing delivery.

B. A design layout based on the equipment of Rainbird Corporation & Hunter Industries has been provided for bidding purposes. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to the layout as required to achieve full coverage of irrigated area at no additional cost to the Owner. It shall be the contractor's responsibility to establish the location of all sprinkler heads in order to ensure proper coverage of all areas.

C. Product Manual: Submit technical specification sheets and or performance data for all proposed system components. Submit the address and telephone number of the subcontractor installing the system and the local representative for the equipment.

1.5 PROJECT CONDITIONS:

A. The Contractor shall warrant that he has fully informed himself of the site conditions under which the work will be performed and is thoroughly familiar with the Contract Documents and all applicable codes and standards. Failure to have done so will not relieve the Contractor of his obligation to furnish all supervision, labor, tools, materials, equipment and supplies necessary to perform the provisions of the work detailed in the Contract Documents.

B. Make necessary adjustments in the layouts as may be required to connect to existing stub-outs, should such not be located exactly as shown, and as may be required to work around existing work at no increase in cost to the Owner.

C. The Contractor's attention is directed to the fact that there are other utilities located within the limits of the work. Before commencing any work required under the Contract, he shall determine the location of all utilities, subsurface drainage, structures and underground construction so that proper precaution may be taken not to disturb or damage during all operations. The Contractor shall be held responsible for making, at his own expense, all repairs to damaged utilities which could have been located or other construction resulting from the work covered by this Contract.

D. Should utilities not shown on plans be found during excavations, promptly notify the General Contractor for instructions as to further action.

1.6 PROTECTION OF WORK AND MATERIALS:

A. Use all means necessary to protect the work before, during and after installation and to protect the materials and installed work of all other trades.

B. The Contractor shall make every effort to safeguard the public during the Irrigation system installation operations. This includes, but is not limited to, erection of barricades around excavation, close supervision of all work and placement of warning flags wherever necessary. The Contractor shall insure that the personnel, equipment and materials involved in operations do not interfere with, or pose a hazard to, vehicular or pedestrian traffic.

C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the General Contractor and Landscape Architect at no additional cost to the Owner.

D. Store materials delivered to site, prior to actual use, in a secure place not to interfere with other trades or construction and protect from vandalism, damage by weather or other elements. All materials are to be stored off of the ground and away from soil or other contaminates.

E. The Contractor is completely responsible for replacement of materials due to acts of God, theft, vandalism and malicious mischief at the job site before, during and after installation. Such regulation shall continue until the date of final acceptance of the work in its entirety by the Owner.

1.7 ACCIDENT REACTION:

A. In the event of an accident causing injury or damage, the Contractor shall promptly report such to the Owner, General Contractor, Landscape Architect and required governmental agencies.

1.8 TRASH & DEBRIS:

A. The Contractor shall not permit trash and debris to accumulate on the grounds in the vicinity of his work. He shall establish and maintain a regular daily routine for removing trash and debris and hauling it away from the premises for no additional payment.

PART 2 - PRODUCTS

2.1 GENERAL:

A. The sprinkler system design shall be based on the equipment of Rainbird Corporation & Hunter Industries or approved equal.

B. Materials shall be newly manufactured and without flaws or defects, and of quality and performance as specified. Excess materials at completion are property of the Contractor, to be removed from the site.

C. The Contractor shall be responsible for computing and supplying the required quantities necessary to make the irrigation system complete and operational in every way. Quantities shown on the drawings are for convenience only.

2.2 PIPE AND FITTINGS:

A. Mainline piping above ground shall be Copper tube, Type K, drawn temper; copper tube fittings; soldered joints.

B. Mainline piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D1785, Sch40 for solvent weld and threaded connections.

C. Lateral piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D2241, Class 200 for solvent weld connections; Sch40 for threaded connections. The minimum pipe size shall be 3/4" in diameter.

D. Polyvinyl chloride (PVC) fittings; meeting ASTM D2466, Sch40 for solvent weld connections; Sch40 for threaded connections. All fittings must be of domestic manufacture and shall be identified as to pressure rating or schedule, with a working pressure no lower than that of the pipe.

E. Handling of Pipe and PVC Fittings: Exercise care in handling, loading, unloading and storing PVC pipe and fittings. Store under cover and transport in a vehicle with a bed long enough to allow no undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded until said section of pipe is cut out and rejoined with a coupling.

F. Visual Inspection: Provide pipe homogenous throughout, free from visible cracks, holes, blisters, wrinkles or foreign materials

G. PVC solvent cement shall comply with ASTM D2564, regular-bodied for pipe 2" and smaller, and medium for pipe 2 1/2" and larger. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints.

H. Use Teflon tape or an appropriate sealant for all threaded connections.

2.3 CONTROL WIRES AND CONNECTORS:

A. Single Conductor Wire for direct burial applications, meeting UL Standard 493, UF-14/1 for "Control" wiring and UF-14/1 for "Common" wiring. Color code the common neutral wiring from all other wires.

B. Wire Connectors shall be either 3M DBY / DBR or King "One Step" Connectors or approved equal.

2.4 AUTOMATIC CONTROLLER AND SENSORS:

A. The automatic controller shall be of a hybrid type that combines electromechanical and microprocessor-based circuitry capable of fully automatic and manual operation. The controller will be housed in a weather-proof, lockable, cabinet suitable for wall mounting.

B. The rain sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if approximately .10" of rainfall has accumulated due to precipitation at a rate equal to or greater than .25" per hour prior to or during an irrigation cycle.

C. The freeze sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if the ambient air temperature falls below 37 degrees Fahrenheit prior to or during an irrigation cycle.

2.5 VALVES:

A. The Rainbird remote control valves shall be a normally closed, 24VAC solenoid actuated, globe type valve. They shall have manual flow control stems for accurate regulation and/or shutoff of outlet flow.

B. The automatic drain valves shall be a pressure activated type, capable of opening when system pressure drops below 2.5psi, and closing when system pressure reaches 5.5psi.

C. Bronze gate valves for use as cut-off, isolation or manual drain valves on lines up to 3" in diameter shall be as manufactured by Nibco, Inc., Elkhart, IN or approved equal.

2.7 VALVE BOXES:

A. Provide valve boxes for all remote control valves and manual gate valves. The manufacturer shall be Armor, Plymouth Products Division, Sheboygan, WI or approved equal.

B. When used with a single valve use a #181104 - 10" round box with a twist lock cover. When used with multiple valves use #190106 - 20" x 14" rectangular box with snap lock cover.

2.8 SPRINKLER HEADS:

A. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.

B. Professional Series Spray Sprinkler: The sprinkler shall be capable of covering area shown at flow rates as designed.

1. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.
2. Provide pop-up spray heads in small turf areas or in clusters of trees where rotary heads are not feasible. The sprinkler shall have a pressure regulating device to prevent high-pressure fogging to the spray pattern and a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
3. Provide pop-up spray heads in all shrub and groundcover beds. The sprinkler shall include a pressure regulating device to prevent high pressure fogging to the nozzle stream. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
4. Provide pop-up rotary sprinklers in all large turf areas. The full or part circle sprinkler shall be a single stream, gear driven rotor with a rotating nozzle turret that is independent of the riser stem. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Matched precipitation shall be obtained by installing nozzles as shown on plan.
5. Provide check valve feature, as required, to prevent low head drainage from sprinklers at lower elevations.

2.9 DRIP IRRIGATION PRODUCTS:

A. Landscape Dripline (Inline Emitter Tubing): The Dripline tubing shall be brown in color and conform to an outside diameter (O.D.) of 0.630 inches and an inside diameter (I.D.) of 0.540 inches and wall thickness of 0.045 inches. The Dripline tubing shall have factory installed, pressure-compensating, inline emitters installed every 12 inches. The flow rate from each installed inline emitter shall be a consistent 0.6 gallons per hour when inlet pressure is between 8.5 and 60 psi.

B. Drip Control Zone Kit: The control zone kit shall have a 1" automatic irrigation control valve with a pressure rating not to be less than 150 psi. The valve body and bonnet shall be constructed of high-impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of a durable Buna-N rubber material reinforced with nylon.

The control zone kit shall have a 1" inline Quick Check Basket Filter body constructed of heavy-duty, glass-filled, UV resistant polypropylene capable of withstanding pressures of not less than 150 psi. The design shall be a basket style body with jar-top cap. The cap shall incorporate an indicator that goes from green to red during operation when the filters element needs cleaning. The screen shall be serviceable for cleaning purposes by unscrewing the cap from the body and removing the filters element.

The control zone kit shall have a 1" inline pressure regulator. The pressure regulator shall be constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 psi. The pressure regulating device is a normally open device that allows full flow with little pressure loss unless the inlet pressure is greater than the preset level. As the inlet pressure increases above the preset level it compresses a spring and begins to reduce the flow and downstream pressure. The inline pressure regulators shall have a preset outlet pressure of approximately 40 psi.

C. Landscape Dripline Compression Fittings: The Compression Fitting System shall consist of 3 fittings (tee, coupling and elbow) plus connection adapters and removable flush caps. The Compression Fittings shall accept all polyethylene tubing with an outside diameter (O.D.) from .630 to .710 inches and shall provide a leak-free compression fit. They also shall provide connections to threaded components when used with the adapters. The removable flush caps shall be used to close off a line and for manual draining. Air/vacuum relief valves shall be capable of venting air or preventing vacuum. The operating pressure range for the Compression Fitting System shall be 0 to 60 psi.

PART 3 - EXECUTION:

3.1 GENERAL:

A. Verify that the work of this section is installed in strict accordance with all applicable codes, regulations the design and the approved submittals. Contractor shall install all equipment as per manufacturer's current specifications and recommendations.

B. VERIFY THAT WATER PRESSURE IS ADEQUATE FOR EFFICIENT OPERATION OF THE SPRINKLER SYSTEM AS DESIGNED AND INSTALLED. Coordinate exact location of Point-of-Connection with the General Contractor.

C. Coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs, and parking, paving and site electrical plans. Verify existing and proposed locations of all site utilities (i.e. gas, water, electric, telephone, fiber optics) prior to any trenching and laying of pipe.

D. When sprinkler system work is to be installed close to or will interfere with the work of other trades, the Contractor shall assist in working out space conditions to permit all work to be installed satisfactorily at no additional cost to the owner. If a Contractor installs his work before coordination with other trades, he shall make necessary changes in his work to correct the condition without additional compensation.

E. Flag the location of all sprinklers & valves in accordance with the approved design and submittals. In the event of a discrepancy, immediately notify the Landscape Architect and General Contractor. Do not proceed with installation in areas of discrepancies until all such discrepancies have been fully resolved.

F. The irrigation design is shown in schematic form only. All piping to be installed directly behind curb where possible.

G. The Contractor is responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at any time, at no additional cost to the Owner.

3.2 WATER METER & BACKFLOW PREVENTER:

A. The Project Owner shall provide Water Meter as shown on the drawings All materials, operations, installed conditions and personnel shall be in strict accordance with all applicable codes, ordinances and regulations.

B. Immediately after Contract award, conduct tests at the designated Point-of-Connection and note as such on the written results provided to the General Contractor and Landscape Architect for the following:

1. Static Water Pressure
2. Dynamic Water Pressure
3. Gallons per minute

C. Install a temporary meter on a fire hydrant if necessary for water access due to site work, phasing schedule and/or landscape installation. Verify location and obtain approval from the General Contractor prior to installing temporary meter.

D. The Contractor shall comply with the requirements and codes of the local governing authority regarding backflow prevention. In addition, the Contractor shall provide the necessary materials, insulation/ winterization capabilities and acceptable concealment. General contractor is responsible for providing a GFI outlet with 115VAC; 1Phase power to the Backflow Preventer location.

3.3 SLEEVING:

A. The General Contractor shall provide Sch40 PVC sleeving, buried at a minimum of 18" and maximum of 24" depth.

B. Upon completion of site filling and compaction operations, and prior to the construction of foundations, roadways, walks or other pavements or obstructions, the General Contractor shall install sleeves in sufficient sizes to accommodate future irrigation piping and/or control wiring. Ends of sleeves shall extend 18 inches past the edges of all paving or construction. The ends of the sleeves shall be clearly marked for future use by the Irrigation Contractor.

3.4 TRENCHING AND BACKFILLING:

A. Carefully install system in areas of existing vegetation designated to remain to provide minimal disturbance feasible. When trenching under the drip-line of existing trees, extreme care must be given to avoid root damage. If at all possible avoid trenching inside the drip-line by going around the tree rather than under it. If trenching must occur under the drip-line, use either tunnelling or hand-digging methods rather than a mechanical trencher. Minimize the impact of root severing by avoiding construction during hot, dry weather, keeping trees well watered before and after digging and covering roots with soil or mulch as soon as possible.

B. Perform all excavation required for the installation of the work included under this Section. Including shoring and bracing of earth banks to prevent cave in. Restore all surfaces and existing underground installations damaged or cut as a result of the excavations, to their original condition and in a manner approved by the Owner and the General Contractor.

C. Excavate trenches to a depth of minimum pipe coverage plus six inches. Remove all lumber, rubbish and large rocks from the trenches. Provide a uniform bearing for the entire length of each pipe line to prevent uneven settlement. Make the width of the trench a minimum of 1 1/2 times the diameter of the piping but not less than 4 inches.

D. Upon completion of pipe installation and system testing, backfill the trenches with clean soil. Backfill material shall be free from rocks or any heavy unsuitable substances which could damage the pipe or create unusual settling problems. Backfilling shall be done in six inch layers and tamped down after each layer is put back as required to avoid settling in landscape areas and to 98% standard proctor in paved areas.

E. If settling occurs within the warranted period, the Contractor shall be responsible for bringing the trenches up to finish grade and repairing plant damage without additional compensation.

3.5 PIPE INSTALLATION:

A. Never Install PVC pipe when there is water in the trench. Never Install PVC pipe when the temperature is 32 degrees Fahrenheit or below.

B. Install the mainline at a bury depth of 18 Inches and the lateral lines at a bury depth of 12 inches below finished grade. Maintain a 4 inch clearance between pipes that cross at an intersection and a 2 inch clearance between pipes that are buried in the same trench.

C. Remove all foreign matter or dirt from the inside of the pipe before joining. Cap or plug all lines after installation and prior to testing to minimize infiltration of foreign matter or dirt.

D. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Install main lines and lateral lines in common trenches wherever possible.

3.6 PIPE AND FITTING CONNECTIONS:

A. Meet ASTM D2855 Standard Practice for making solvent-cemented joints with PVC pipe and fittings. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.

B. Make solvent welds with a non-synthetic bristle brush In the following sequence: Apply an even coat of solvent to the outside of the pipe. Then apply solvent to the inside of the fittings and then re-apply a light coat of solvent to the outside of the pipe, making sure that coated area on the pipe is equal to the depth of the fitting socket. Insert pipe quickly into the fitting and turn the pipe approximately 1/4 turn to distribute the solvent and remove air bubbles. Check all tees and ells for correct position, then hold joint for approximately 15 seconds so that pipe does not push out from the fitting. Allow at least 15 minutes drying time for each weld joint before moving.

C. Allow all joints to set and cure for a minimum of 12 hours prior to pressurization of system.

3.7 WIRE INSTALLATION:

A. Verify that the work of this section is installed in strict accordance with the latest edition of the National Electric Code and local electrical codes.

B. Install neutral and control wires, 12 inches below finish grade, in the same trenches as the main and lateral lines. The wires shall be installed in a neat and orderly fashion and bundled together and taped every 10 feet. Snake wires in trench to allow for expansion and contraction and provide slack loops at every splice, change of direction, at the valves, where the wire enters the conduit for the automatic controller and at least every 100 feet in runs more than 100 feet in length. The slack loops shall be created by wrapping 3 feet of wire around a 1/2 inch diameter pipe to form a coil.

C. Connect each solenoid to the controller with a "control wire" which is typically red in color. Connect a "common neutral wire" to all solenoids which is typically white in color.

D. Solder or join all wire connections by positive mechanical connectors. Splices must be properly insulated and waterproofed. Control wire splices will be allowed only in runs more than 500 feet and only in valve boxes.

3.8 CONTROLLER AND SENSOR INSTALLATION:

A. Coordinate with the General Contractor the exact location where the automatic controller will be located. Connect all wiring and grounding In accordance with manufacturer's instructions. Provide separate, secured to the wall, conduits for both power supply and control wiring.

B. General contractor Is responsible for providing a J-box with 115VAC; 1Phase power to the Controller location. Irrigation Contractor shall hard wire controller to j-box.

C. Install the rain and freeze sensors in an open area where the device is exposed to rain water but not sprinkler water. Mount away from overhanging objects that may Interfere with rainfall. Connect wiring In accordance with manufacturer's instructions.

3.9 VALVE INSTALLATION:

A. The remote control valves shall be Installed In accordance with manufacturer's instructions. Valves shall be installed in Armor valve boxes or approved equal. Boxes shall be Installed to a height that will not cause them to Interfere with maintenance machinery and which is sufficient to prevent soil or mulch from washing Into the box. Provide a 6 Inch layer of washed gravel In the bottom of the valve box. Valves shall be set a minimum of two feet behind curbs. Valves shall not be set in curves which are vulnerable to damage by truck trailers over running curbs.

B. The quick coupling valves shall be installed on PVC threaded swing joints on the Irrigation mainline. Space quick coupling valves as shown on the plans. Provide a 1"x1"x3" piece of angle iron next to the quick coupling valve and anchor with two (2) stainless steel hose clamps.

C. The automatic drain valves shall be installed in the low points of the lateral lines. Dig a minimum two (2) cubic foot hole where the drain valve is to be located. Install the drain valve in a PVC tee pointing downward at a 45 degree angle. Surround the drain valve with a minimum one (1) cubic foot of gravel. Place an 18"x18" piece of weed cloth or burlap on top of the gravel. Finish to grade with top soil.

D. Install in the low points of the mainline, manual gate valves as needed for draining. Install 24" off of the mainline in 10" valve boxes.

3.10 FLUSHING AND PRESSURE TESTING:

A. Prior to backfilling and installation of sprinkler heads, open all control valves and use full line pressure to completely flush lines of foreign matter and dirt. INITIAL FLUSHING OF LINES SHALL NEVER BE THROUGH SPRINKLER HEADS OR DRIP TUBING.

B. With zone valves closed, pressure test mainlines by supplying and maintaining full static pressure continuously for one full hour. Observe for evidence of leakage by monitoring flow meter and by visual inspection of the exposed lines. Repair all leaks and retest until no water flow is observed.

3.11 SPRINKLER HEAD INSTALLATION:

A. After landscape finish grading is accomplished, Install heads to finished grade in lawn and shrub areas and backfill with clean topsoil so head is stabilized and no lateral motion is exhibited during operation. Heads shall be set so the tips of the heads are 1/2" above the top of the mulch in planting beds. Heads In the turf areas shall be set flush with the finished grade and not a hazard to pedestrians and/or maintenance machinery. Set sprinkler heads to plumb within 1/16" and a minimum of 4 inches and a maximum of 6 inches from walls, walks and curbs.

B. Sprinkler heads to be spaced so as not to throw water on the buildings, walks or driveways. Heads shall be adjusted as required so that foliage of plants will not obstruct the spray and that the system has 100% coverage.

C. Provide connection to the PVC lateral lines, for spray heads, with barbed fittings and swing pipe. Do not use more than 18 inches of swing pipe for each sprinkler head.

3.12 DRIP SYSTEM INSTALLATION:

A. Drip Control Zone Kit: Install Drip Control Zone Kit level and below grade with a minimum of 4 inches clearance to the top and sides of the inside of a rectangular valve box. Place a minimum of 6 inches of gravel in the bottom of the valve box.

B. Landscape Dripline (Inline Emitter Tubing): Landscape bed areas shall be supplied with rigid PVC lateral piping. Landscape Dripline connection points shall be made in 6 inch valve boxes using compression adapter tees or ells as required. For under mulch Installation, place tubing rows at 18 inch lateral spacing as Indicated on the plans and hold In place with galvanized tie-down stakes spaced evenly every 2 to 3 feet, and with two stakes on each change of direction. Install tubing in a serpentine manner and bending is allowed provided the radius is sufficient enough that kinking does not occur. Backfill with mulch as noted In the landscaping specifications.

C. Landscape Dripline Compression Fittings: Landscape Dripline Compression Fittings shall be used at connection points to the PVC lateral piping, where tubing layout requires a tee and at bends or changes of direction to prevent kinking of the Landscape Dripline.

Removable flush caps shall be Installed at the low point of each dripline section. Depending on the site conditions and tubing layout, more than one flush cap may be required. Provide a 6 inch valve box for each flush cap.

Air/vacuum relief valves shall be installed at the highest elevation within each dripline section. Depending on the site conditions and tubing layout, more than one air/vacuum relief valve may be required. Provide a 6 inch valve box for each air/vacuum relief valve.

3.13 FLUSHING, OPERATION, TESTING AND BALANCING:

A. Flushing: All air and foreign objects and debris shall be flushed from the system.

1. Dripline and Emitter Lateral Flushing Procedures.
   a. Flush the system every two weeks for the first six (6) weeks and check the water that is flushed out for cleanliness. Establish a regular system flushing schedule for the future based on results from the initial six-week flushing schedule.
   b. Flush the system completely after any repairs are made and monitor system operation closely under regular system flushing schedule.
   c. Check the pressure at the supply and flush headers on a regular basis and compare with the pressure readings taken after installation.

B. General Testing: Upon completion of the irrigation system, and after pressure/leak testing and head installation, the entire system shall be tested for proper operation. All components checked for proper operation by the Contractor under supervision of the General Contractor. The system shall be tested in strict accordance with all applicable codes, ordinances and regulations.

C. Dripline and Emitter Lateral Leakage Testing Procedures:

1. Subject installed drip tubing and emitter lateral piping to water pressure equal to specified operating pressure for ten (10) minutes. Test with control zone components and drip flush valve components installed.
2. Partially backfill buried pipe and tubing to prevent movement under pressure. Expose couplings, fittings, and valve components.
3. Visually Inspect valve assemblies and fittings for leakage and replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until test segment is free from leaks. Cement or caulking to seal leaks is prohibited.

D. Dripline and Emitter Lateral Operational Testing Procedures:

1. Activate each dripline and emitter lateral control zone valve in sequence from controller. Provide either one additional person with radio or use handheld remote to activate remote control valves from controller. Manually activating remote control valve using manual bleed mechanism at remote control valve is not an acceptable method of activation.
2. Replace or adjust defective valve, fitting, dripline segment, emitter lateral segment, or appurtenance to correct operational and coverage uniformity deficiencies.
3. Repeat test(s) until each dripline or emitter lateral test segment passes testing procedures. Repeat tests, replace components, and correct deficiencies at no additional cost.
4. Any portions requiring repair shall be replaced or repaired and test repeated. No testing shall be done until the last solvent welded joint has had 12 hours to set and cure.

C. Balancing and Adjustment: The Contractor shall balance and adjust the various components of the system so that the overall operation is most efficient. This work shall include adjustment to all sprinkler heads and individual station adjustments on the controller. Observe that all zones function properly and in the correct sequence.

3.14 MAINTENANCE AND COMPLETION OF THE WORK:

A. The Contractor shall complete the irrigation system as drawn and specified, according to Schedule herein, and operate and maintain same until time of substantial completion of the project.

B. Any changes made in the layout and/or arrangement of the proposed Irrigation system, or any other differences between the proposed system and actual Installed conditions shall be recorded by the Contractor In the form of an "As-Built" drawing. The Contractor shall provide the Owner and the Landscape Architect with a copy of this drawing before work under this contract will be considered acceptable. All adjustments in the layout and/or arrangement of the Irrigation system are subject to the approval of the Landscape Architect.

C. The Contractor shall orient the Owner's personnel to the operation and adjustments of the controller according to local seasonal requirements. The Contractor shall also familiarize the Owner with sprinkler and valve adjustments. The Owner is, In general, to be totally familiarized with the overall operation, adjustment, maintenance and intent of the Irrigation system, Including the measures that should be taken to provide winterization for the system. Such instructions should be in written form. The contractor shall also provide a color coded laminated plan, in the controller door, showing the locations of all zones.

3.15 INSPECTION AND SUBSTANTIAL COMPLETION:

A. When Contractor is satisfied that the entire system is operating properly, that it is balanced and adjusted so that all work and clean-up is completed, he shall submit a written request for Initial Inspection to the General Contractor and Landscape Architect at least one week prior to anticipated date of Inspection and testing.

B. Submit reproducible as-built Record Drawings and Maintenance Manual to General Contractor with request for inspection.

C. Upon completion of repairs and replacements found necessary at time of Inspection, the Landscape Architect will confirm the date of substantial completion.

E. The date of substantial completion will determine:
   1. The final date of maintenance as part of this Section.
   2. The beginning date of the One-Year Guarantee Period.

3.16 GUARANTEE:

A. Guarantee all work, products, equipment and materials for one (1) year period beginning upon substantial completion.

B. Guarantee applies to all losses with the exception of those due to Acts of God, vandalism, occupancy of the project or Owner neglect, as determined by the Landscape Architect and/or Owner.

3.17 FINAL INSPECTION:

A. At end of Guarantee Period and upon request for final inspection, jointly review all guaranteed work for Final Acceptance with the Owner and General Contractor.

B. Submit written request for final inspection to the General Contractor and Owner at least two weeks prior to anticipated date of Inspection.

3.18 FINAL ACCEPTANCE:

A. Upon completion by the Contractor of all required repairs and replacements found at time of final Inspection, the Owner and General Contractor will confirm the date of Final Acceptance of the work.

B. Confirmation of Final Acceptance by the Owner and the General Contractor will constitute completion of the work of this Section.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR · REG. NO. 5-330 · LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

L12.2 SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
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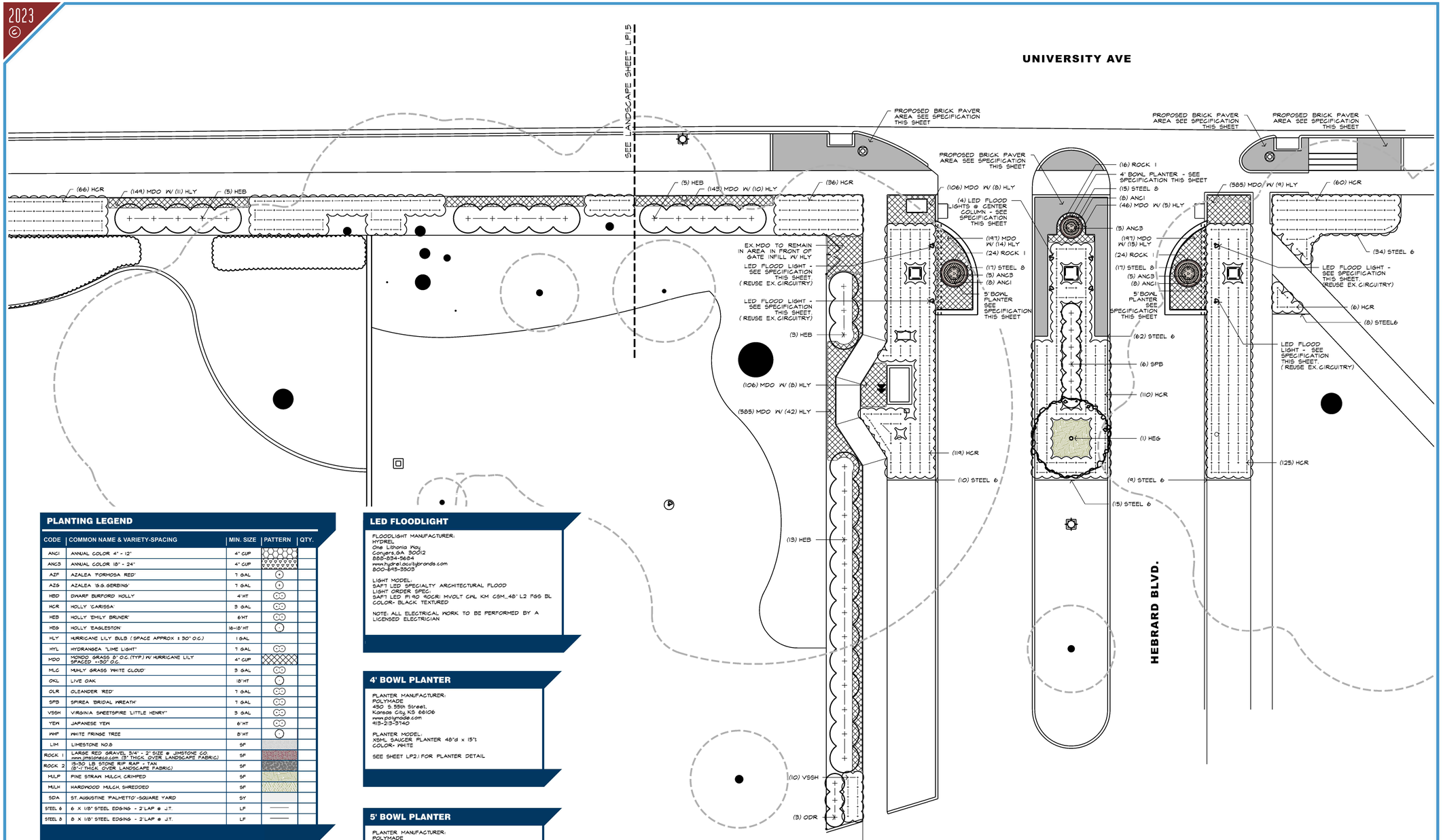


PLANTING LEGEND

CODE	COMMON NAME & VARIETY-SPACING	MIN. SIZE	PATTERN	QTY.
ANC1	ANNUAL COLOR 4" - 12"	4" CUP		
ANC3	ANNUAL COLOR 18" - 24"	4" CUP		
AZF	AZALEA 'FORMOSA RED'	7 GAL		
AZG	AZALEA 'G.G. GERDING'	7 GAL		
HBD	DWARF BURFORD HOLLY	4'HT		
HCR	HOLLY 'CARISSA'	3 GAL		
HEB	HOLLY 'EMILY BRUNER'	6'HT		
HES	HOLLY 'EAGLESTON'	16-18'HT		
HLY	HURRICANE LILY BULB (SPACE APPROX. ± 30" O.C.)	1 GAL		
HYL	HYDRANGEA 'LIME LIGHT'	7 GAL		
MDO	MONDO GRASS 8" O.C. (TYP.) W/ HURRICANE LILY SPACED +-30" O.C.	4" CUP		
MLG	MUHLY GRASS 'WHITE CLOUD'	3 GAL		
OKL	LIVE OAK	18'HT		
OLR	OLEANDER 'RED'	7 GAL		
SPB	SPIREA 'BRIDAL WREATH'	7 GAL		
VSSH	VIRGINIA SWEETSPIRE 'LITTLE HENRY'	3 GAL		
YEW	JAPANESE YEW	6'HT		
WHF	WHITE FRINGE TREE	8'HT		
LIM	LIMESTONE NO.8	SF		
ROCK 1	LARGE RED GRAVEL 3/4" - 2" SIZE @ JIMSTONE CO. www.jimstoneco.com (3" THICK OVER LANDSCAPE FABRIC)	SF		
ROCK 2	15-30 LB STONE RIP RAP - TAN (8"-1' THICK OVER LANDSCAPE FABRIC)	SF		
MULP	PINE STRAW MULCH, CRIMPED	SF		
MULH	HARDWOOD MULCH, SHREDDED	SF		
SOA	ST. AUGUSTINE 'PALMETTO'-SQUARE YARD	SY		
STEEL 6	6 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		
STEEL 8	8 X 1/8" STEEL EDGING - 2' LAP @ J.T.	LF		

PLANTING NOTES

1. PLANT MATERIAL TO BE FULLY GROWN AND MATCHING.
2. BEDS TO BE SLOPED TO DRAIN - MOUNDED W/ 20% SLOPE FROM CENTER TO EDGE
3. DEBRIS TO BE REMOVED FROM BEDS.
4. BEDS TO BE TILLED TO A DEPTH OF 12" FOR ANNUALS & GROUND COVER AND 16" FOR SHRUBS.
5. ALL TREES TO HAVE CLEAR TRUNK OF FIVE FEET MINIMUM.
6. UNLESS OTHERWISE NOTED ALL TREES TO BE STRAIGHT,MATCHING,SINGLE TRUNK.
7. BID SHOULD NOTE CONTAINER OR B&B MATERIAL.
8. UNLESS OTHERWISE NOTED ALL BEDS & NEW TREES ARE TO BE IRRIGATED W/ DRIP IRRIGATION.
9. ALL DRAIN LINES TO FALL ≤ 1% SLOPE OR GREATER.
10. AS-BUILT DRAWINGS OF THE IRRIGATION & DRAINAGE SYSTEM TO BE SUBMITTED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
11. SLOPE ALL BEDS TO DRAIN AWAY FROM THE BUILDING IN THE EVENT THAT THE DRAINAGE SYSTEM BECOMES CLOGGED.
12. SOIL SAMPLES HAVE BEEN TAKEN FOR THIS PROJECT. THE PLANT PALETTE HAS DESIGNED TO WORK WITH THE PARENT OR NATIVE SOIL ON SITE. SUBSTITUTIONS OF PLANT MATERIAL ARE NOT PERMITTED W/ OUT APPROVAL OF THE LANDSCAPE ARCHITECT.
13. UNITS OF ANNUAL COLOR SHOWN ON PLAN ARE IN SQUARE FEET. USE CHART BELOW TO DETERMINE QUANTITY OF PLANTS. QUANTITY MAY BE AFFECTED BY SELECTED VARIETIES.

ANC1 = 3.0 PLANTS PER SQUARE FOOT
ANC2 = 2.5 PLANTS PER SQUARE FOOT
ANC3 = 2.25 PLANTS PER SQUARE FOOT

LED FLOODLIGHT

FLOODLIGHT MANUFACTURER:
HYDREL
One Lithonia Way
Conyers,GA 30012
888-534-5684
www.hydrel.acuitybrands.com
800-845-3503

LIGHT MODEL:
SAF1 LED SPECIALTY ARCHITECTURAL FLOOD
LIGHT ORDER SPEC:
SAF1 LED P1 90 40CRI MVOLT GNL KM GSM_48" L2 FGS BL
COLOR- BLACK TEXTURED

NOTE: ALL ELECTRICAL WORK TO BE PERFORMED BY A LICENSED ELECTRICIAN

4' BOWL PLANTER

PLANTER MANUFACTURER:
POLYMADE
450 S.55th Street,
Kansas City, KS 66106
www.polymade.com
913-213-5740

PLANTER MODEL:
XSML SAUCER PLANTER 48"d x 15"t
COLOR- WHITE

SEE SHEET LP2.1 FOR PLANTER DETAIL

5' BOWL PLANTER

PLANTER MANUFACTURER:
POLYMADE
450 S.55th Street,
Kansas City, KS 66106
www.polymade.com
913-213-5740

PLANTER MODEL:
SAUCER BOWL PLANTER 60"d x 16-1/2"t
COLOR- WHITE

SEE SHEET LP2.1 FOR PLANTER DETAIL

PAVER BRICK

BRICK MANUFACTURER:
PINE HALL BRICK
www.pinehallbrick.com

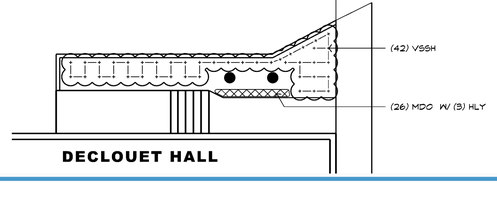
PATHWAY RED PAVER BRICK - 2-1/4" X 4" X 8"

BRICK PATTERNS:
BRICK BORDER - SOLDIER COURSE
BRICK FIELD PAVING - RUNNING BOND

SEE SHEET LP2.1 FOR BRICK PAVER DETAIL

*** NOTE: THE PLANTING LEGEND COVERS MULTIPLE PROJECTS. NOT ALL MATERIALS SHOWN IN LEGEND ARE UTILIZED ON THIS PARTICULAR PROJECT. CONTRACTOR TO VERIFY MATERIALS & QUANTITIES NECESSARY FOR PROJECT DURING BIDDING PROCESS PRIOR TO CONSTRUCTION. ***

ULL PRESIDENTS HOUSE - DRIVEWAY



SCALE: 1" = 10'

NORTH

LP1.6 SHEET

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE.THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS,AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

GATEWAY- UNIVERSITY @ HEBRARD BLVD. LANDSCAPE PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-362
LICENSED LANDSCAPE ARCHITECT

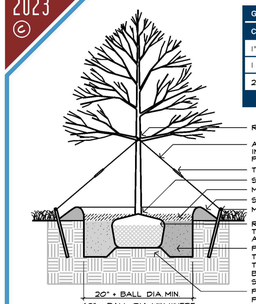
NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944

2023 ©

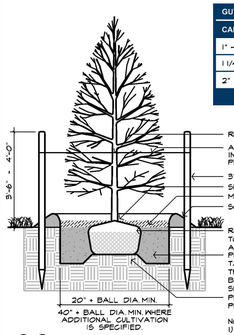
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

01 TREE PLANTING - STANDARD
NOT TO SCALE

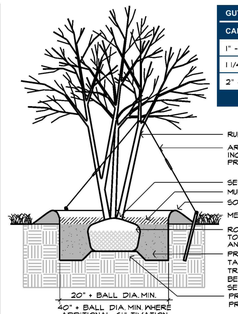
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

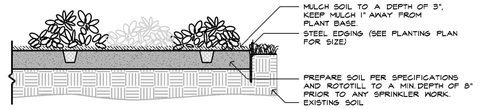
02 TREE PLANTING - FULL TO GROUND
NOT TO SCALE

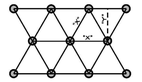
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

03 TREE PLANTING - MULTI-TRUNKED
NOT TO SCALE





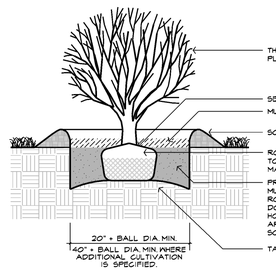
ALL GROUND COVERS TO BE PLANTED ON CENTER IN A TRIANGULAR PATTERN. (SEE PLANTING & PLANTING SPACING LEGEND)
X = O.C. DIMENSION AS NOTED IN LEGEND
Y = ROW SPACING DIMENSION

PLANT SPACING LEGEND

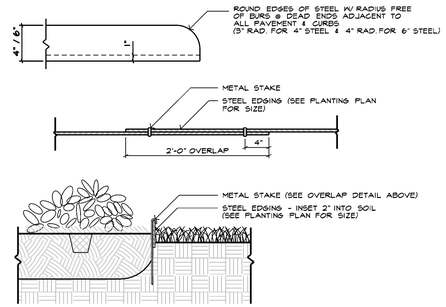
SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.	SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.
6" O.C.	5.2"	4.61	6' O.C.	5.2'	0.032
8" O.C.	6.93"	2.6	8' O.C.	6.93'	0.018
10" O.C.	8.66"	1.66	10' O.C.	8.66'	0.016
12" O.C.	10.4"	1.15	12' O.C.	10.4'	0.008
15" O.C.	13.0"	0.739	15' O.C.	13.0'	0.0059
18" O.C.	15.6"	0.512	20' O.C.	17.3'	0.00288
24" O.C.	20.8"	0.29	25' O.C.	21.65'	0.00185
30" O.C.	26.0"	0.186	30' O.C.	26.0'	0.00128
36" O.C.	30.0"	0.128	40' O.C.	34.6'	0.000722
4'O.C.	3.46'	0.0125			
5'O.C.	4.33'	0.0461			

NOTES:
1. SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES,SIZE,AND SPACING DIMENSION.
2. SMALL ROOTS (1/4" OR LESS) THAT GROW AROUND,UP,OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING.ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING.(SEE ROOT BALL SHAVING CONTAINER DETAIL).
3. SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

04 PLANT SPACING
NOT TO SCALE

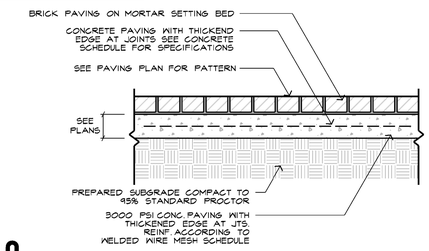


05 SHRUB PLANTING
NOT TO SCALE

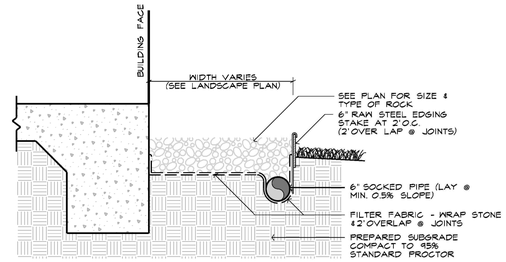


06 STEEL EDGING
NOT TO SCALE

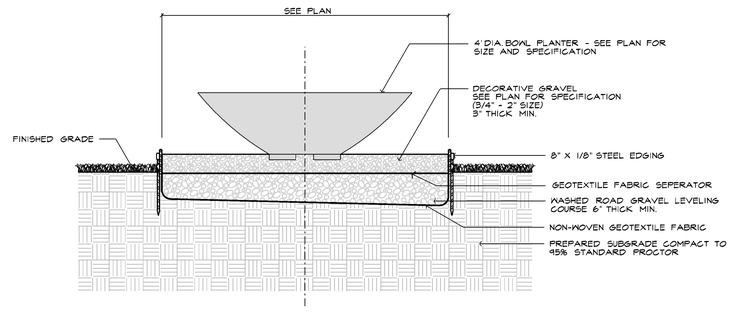
CONCRETE SCHEDULE	
4" PAVING	6X6 * 10/10
6" PAVING	6X6 * 6/6
8" PAVING	6X6 * 4/4



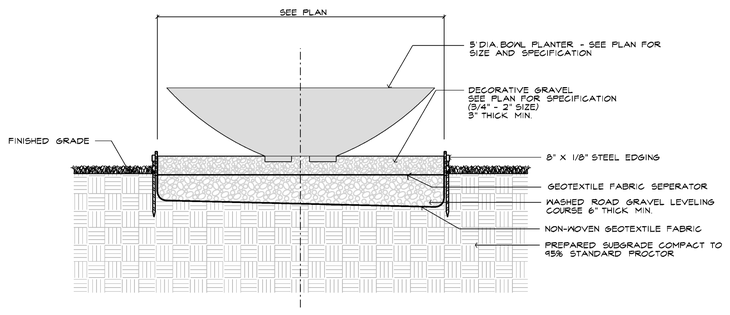
09 BRICK PAVING ON CONCRETE BASE
NOT TO SCALE



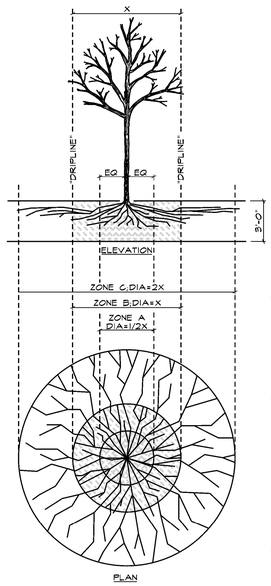
11 FOUNDATION STRIP
NOT TO SCALE



07 RAISED ROCK AREA W/ 4' BOWL PLANTER
NOT TO SCALE



08 RAISED ROCK AREA W/ 5' BOWL PLANTER
NOT TO SCALE



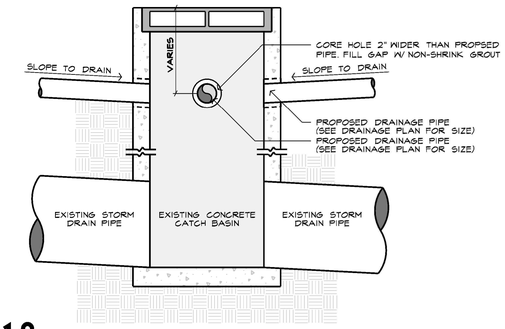
TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
1) NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
2) SEVERANCE OF ROOTS LARGER THAN 2"DIA REQUIRES LANDSCAPE ARCHITECT'S APPROVAL.
3) BORING OR TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER.

ZONE B (DRIPLINE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES REQUIRED.
2) TRENCHING ALLOWED AS FOLLOWS:
- EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED.
- LIMIT TRENCH WIDTH.DO NOT DISTURB ZONE A.MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
- BORING & TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

ZONE C (FEEDER ROOT ZONE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES MAY BE REQUIRED
2) TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
- MINIMIZE TRENCH WIDTH.
- MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION.

10 TREE PRESERVATION DETAIL
NOT TO SCALE



12 CATCH BASIN TIE-IN
NOT TO SCALE

GENERAL NOTES

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR. · REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work in this Section is based on these specifications and the landscape drawings. The scope of work is based on furnishing all labor, materials, tools, transportation, equipment and supervision by the Contractor as required to complete the specified work.

B. In addition to the requirements of these specifications, manufacturer's instructions and recommendations for proper preparation and application of all materials shall be complied with in all respects.

C. Related Work: PLANTING IRRIGATION

1.2 QUALITY ASSURANCE

A. Contractor shall be fully qualified, licensed, capable and experienced in the installation of the described landscape. Evidence of the Contractor's qualifications shall be presented prior to the award of the Contract.

B. The following industry standards shall govern landscape materials and installation. The most stringent requirement shall rule when conflicts between the standards occur and as determined by the Landscape Architect.

1. American Standard for Nursery Stock (Most Current Edition)
2. Horticultural Standards, American Association of Nurserymen.
3. Recommended Standard Specifications for Planting Trees, Shrubs and vines and Fine Grading and Seeding Lawns, second printing - December 1968.
4. American Joint Committee on Horticultural Nomenclature: Latest Edition.

1.3 SUBMITTALS

A. Digital photographs representing each variety shall be submitted for approval by the Landscape Architect prior to ordering any plant material. (The submittal of photographs does not in any way relieve the Contractor of his responsibility to comply with the specifications and applicable standards.)

B. The selection of all materials and the execution of all operations required under the drawings and these specifications are subject to the approval of the Landscape Architect or Owner.

C. The Landscape Architect or Owner shall have the right to reject all material and all work which, in his opinion, does not meet the requirements of the drawings and/or specifications at any stage of the operation. All rejected material shall be removed by the Contractor, as directed, at the Contractor's expense.

1.4 PROTECTION OF EXISTING WORK

A. Location of underground infrastructure such as existing water, telephone, cable, electrical, gas, sewer and drainage lines, and other utilities, shall be ascertained or verified by the Contractor prior to initiating work. The Contractor shall protect the same by means acceptable to the Owner before commencing construction and maintain such protection until the job is accepted by the Owner.

B. Protective measures shall be taken to secure walls, walks, driveways, parking lots, light poles, grass and structures from damage or discoloration. The Contractor shall furnish and install necessary pads, tarpaulins, burlap, building paper, or clean straw to protect existing work.

1.5 EXTRAS, OMITTED OR CHANGES IN WORK

A. While no new unforeseen items are anticipated, they shall be classified as extra work when they cannot be covered by any of the specifications. The Contractor shall submit detailed prices for any extras to the Landscape Architect, and shall perform extras only upon prior written acceptance from the Owner. All such extra work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents. In the absence of such written order, the Contractor shall not be entitled to payment for such extra work.

B. The Landscape Architect shall have the authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time, and not inconsistent with the contract documents. Such changes may be effected by field order or by other written order. Such changes shall be binding on the Contractor.

C. The Owner, without invalidating the contract, may order changes in the work consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents.

1.6 MEASUREMENTS, LAYOUT & LEVELS

A. The Contractor shall layout all lines and levels necessary for the location and erection of the landscape construction and for all excavation, filling and grading work and set necessary markers and stakes, and be responsible for their correctness.

B. The Contractor shall take his own measurements of the site verifying same with the drawings, and shall be responsible for proper fit of his portion of the completed work.

C. The spacing of plants shall conform to the spacing designated on landscape plans and specifications, but variations are permissible when unforeseen site conditions such as underground pipes, etc., make uniform spacing impractical, in which case the Contractor shall abide by instructions, furnished by the Landscape Architect or Owner. Departure from specified spacing will be allowed when site conditions do not permit the specified number of plants in a grouping in which case the minimum spacing shall govern the number of plants to be placed in the group and the excess plants shall be located as directed by the Landscape Architect or Owner.

D. Where proposed grades are not indicated, the Contractor shall in all cases provide the necessary pitch on semi-level areas to drain them to a point designated by the Landscape Architect or Owner.

E. The Landscape Architect reserves the right to relocate shrubs and trees from positions on the plans prior to their planting.

1.7 SUBSTITUTION OF MATERIALS

A. The Contractor, before submitting his bid, shall locate all necessary materials as called for in the plans and specifications, and shall be assured of their availability for use on this job.

B. The contract bids shall be based upon providing the specified materials, processes, products, etc., identified in the specifications and/or indicated on the drawings.

C. Substitutions will not be permitted unless upon admission of proof that specified plants are not obtainable and with the authorization of the Landscape Architect. Written requests with nearest available size, variety of plant and price adjustments are to be submitted to the Landscape Architect.

1.8 PLANT & MATERIAL LIST

A. The Contractor shall furnish the plant material as specified and described in this section.

B. Quantities shall be determined by referring to the Drawings.

C. Names, species, and varieties of all material furnished by the Contractor shall be in accordance with the Drawings and Specifications.

D. The Contractor shall furnish, on request of the Owner, satisfactory proof as to the names and species, variety, and size and shall be made only on written authorization of the Owner.

1.9 MEASUREMENT

A. The quantities for payment will be the design quantities specified in the plans and adjustments thereto.

B. Design quantities will be adjusted if the Landscape Architect makes changes to adjust to field conditions, if plan errors are proven or if design changes are necessary.

C. Design quantities are based on the horizontal dimensions shown on the plans.

PART 2 - PRODUCTS

2.1 TOPSOIL: The Contractor shall use salvaged onsite topsoil to the extent possible and topsoil from offsite borrow to supplement that salvaged. The topsoil shall be a fertile, friable, natural topsoil of a loamy character. It shall contain a normal amount of decomposed organic matter and shall be free of stones, lumps, clay, toxic materials, plants or their roots, stacks and other extraneous matter. The topsoil shall be within a pH range of 5.0 to 6.5. Topsoil testing shall be at the Owner's expense and by a third party entity.

2.2 SOIL CONDITIONER MIX: Finely chopped pine bark mulch to be incorporated into the soil, shall be free from weeds, moss, sticks and other debris but shall contain a generous amount of sand (average 20% by volume) and shall be well decomposed.

2.3 PEAT MOSS: Peat moss shall be a horticultural grade, sphagnum peat moss containing partially decomposed fibrous or cellular stems and leaves of any of the many species of sphagnum mosses from fresh water sources conforming to the following requirements:

A. Peat moss shall be a homogeneous material free of decomposed colloidal residue lumps, roots, stones, and other foreign matter; and of such consistency that peat can pass a 1/2 in. mesh and can be readily incorporated with the topsoil.

B. The pH shall not be less than 3.5 nor greater than 5.5 at 25 degrees C.

C. Organic matter content shall not be less than 90% by weight, on an oven-dry basis.

D. Ash content shall not be more than 10% by weight, on an oven-dry basis.

E. Moisture absorption capacity shall not be less than 800%, by weight, on an oven-dry basis.

2.4 TOP DRESS MULCH: Top dress mulch shall be clean and free from weeds, moss, sticks, soil and any other objectionable material.

A. The pH shall not be less than 3.5 nor greater than 5.3 at 25 degrees C.

B. The Contractor shall submit a one cubic foot sample of the mulch for approval by the Landscape Architect.

2.5 FERTILIZER: Osmocote 14-14-14, or approved equal, shall be used in bed areas and for trees. The fertilizer shall be stored in a cool, dry place in unopened bags until it is ready to be incorporated into the backfill mixture. Agriform tree tablets can be used in lieu of the Osmocote for tree plantings only, and must be applied at the manufacturer's recommended rate.

2.6 SOD: Class "A" premium grade sod consistent with the variety(s) called out in the plans.

A. Sod shall be machine cut at a uniform soil thickness at a height appropriate to the specified species.

B. Pad Size: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 0.5 inch (15 mm) on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.

C. Strength of Turf Sod Sections: Standard size sections of sod shall be strong enough that it can be picked up and handled without damage.

D. Moisture Content: Sod shall not be harvested or transplanted when its moisture content (excessively dry or wet) may adversely affect its survival.

E. Mowing Height: Before harvesting, the sod shall be mowed uniformly at a height of 1 to 2.5 inches (25 to 60 mm) on cool season grasses (i.e., bluegrass, bent grass, rye and fescue), and 0.75 to 1.50 inches (20 to 40 mm) on warm season grasses (i.e., zoysia grass, Bermuda grass, St. Augustine grass, etc.)

F. Time Limitations: Sod shall be harvested, delivered and installed/transplanted within a period of 24 hours, unless a suitable preservation method is approved prior to delivery. Sod not transplanted within this period shall be inspected and approved by the inspecting officer or his representative prior to its installation.

G. Thatch: Sod shall be relatively free of thatch, up to 0.5-inch (15mm) allowable (uncompressed).

H. Diseases, Nematodes and Insects: Sod shall be reasonably free of diseases, nematodes and soil-borne insects. Specific nursery and/or plant materials laws may require that all sod entering inter-state commerce be inspected and approved for sale. The inspections and approval must be made by the appropriate government representative of the agriculture department or office of entomologist.

I. Weeds: Nursery grown turf grass sod shall be free of objectionable grassy and broad leaf weeds. Turf grass sod shall be considered free of such weeds if less than 5 such plants are found per 100 square feet (10 sq m) of area. Sod will not be acceptable if it contains any of the following weeds: common Bermuda, johnson grass, poison ivy, nutsedge, thistle, bindweed, bent grass or wild garlic.

2.7 PLANTS: TREES, SHRUBS & GROUND COVER

A. Caliper measurement of trees shall be taken at six inches above natural ground up to and including four inch caliper material. If the caliper six inches above natural ground exceeds four inches, the caliper will be measured twelve inches above natural grade.

B. Shrubs shall be well shaped, full branched plants with heights measured to point in the main perimeter of branches or foliage rather than to single shoots or leaders. Plants with single stems shall have sufficient, well spaced side branches to give them weight equal to one grown with numerous canes. Canes shall be considered as primary stems starting from the ground or from a point not higher than one-fourth (1/4) the height of the plant.

C. Sizes of balls shall be at least six inches (6") greater in diameter than the minimum sizes established for individual plant types as recommended by "Horticultural Standards" latest edition of American Association of Nurserymen, Inc. Depth shall be sufficient to encompass the fibroid and feeding root system necessary for the full recovery of the plant and in no case shall be less than recommended ratios to diameter as recommended by "Horticultural Standards", latest edition of the American Association of Nurserymen, Inc. All balls shall be firm, intact, slightly tapered, well burlapped and securely fastened with twine or nails or both. Any tree which is determined to be loose in the ball or with a broken ball at the time of planting will be rejected.

D. Any plants having any of the following unnatural or objectionable features will be rejected: excessive abrasions of the bark; dried out root system; excessive dead or dried up wood; excessive sun scald injuries; undeveloped and weak top or roots or both; crooked or one-sided development of tops; no straight leaders on trees naturally and normally having them; broken or removed leaders; untrue types or sizes; root-bound container grown plants; excessively damaged or loose balls of soil; plants actually dead, diseased or insect infested and plants not otherwise complying with the plant specification herein.

E. The rejected material shall be removed from the site and replaced as quickly as possible with new plant material of the same kind, meeting the requirements, at the expense of the Contractor.

PART 3 - EXECUTION

3.1 PLANT DELIVERY, UNLOADING & STORAGE

A. All plants shall be delivered to the job in good condition and unloaded with care so that balls and tops are not damaged. Balled & burlapped plants shall not be handled or lifted by their tops or trunks.

B. The Contractor shall be responsible for the protection of plants from damage through weather conditions, improper storage, vandalism, theft, and injury, and shall unload plants in a location approved by the Owner, requiring the minimum amount of moving to locations where they are to be planted.

C. Whenever and wherever possible, delivery shall be made within a reasonable time of completion of planting pits or beds and if unforeseen conditions prevent immediate planting, the Contractor shall heel in plants, watering same if necessary and protect from drying winds and sun in accordance with good nursery practices.

D. If in the opinion of the Owner, plants have been damaged through prolonged intervals between delivery and storage, they shall not be used in planting, and shall be replaced by new plants conforming to original specifications.

3.2 TREE & SHRUB PIT PLANTING

A. Pits shall not be prepared and left open for prolonged periods prior to planting. Pits shall be protected until used so that sides do not crumble and so pits do not become saturated with water. All damaged pits shall be restored to original condition and shall be drained of surface water before usage.

B. Depth of pits shall not be more than two inches (2") greater than depth of the ball to be received. Diameter of pits shall be such that there is no less than ten inches (10") of space all around the balls or root spread of bare-root plants, except in the case of trees in which case the space shall be increased to twenty inches (20"). Bottom of pit shall be thoroughly loosened to a depth of eight inches (8") before plant is placed in pit. Tops of plants shall not be cut loose until plant is set to correct depth in pit.

C. Excavated earth shall be piled sufficiently far back from the edge of the pit to prevent earth sliding back into pit when plants are placed. Surplus excavated earth shall be disposed of immediately after planting is completed to prevent mixing of same with topsoil.

D. Mixture used in backfilling pits shall consist of 75% topsoil, 10% peat moss, 10% pine bark mulch and 5% sand mixed by volume with a slow release fertilizer at the manufacturer's recommended rate. Mixing shall not be done in the pits. Refer to Article 16, MATERIALS, of this specification.

E. After plant has been set and pit has been backfilled to two-thirds (2/3) of its depth, mixture shall be tamped thoroughly and settled with water. When settling has been accomplished, pit shall be brought to level of adjacent ground with same mixture. Slope finished grade slightly toward center of plant.

F. A six inch saucer shall be constructed for all trees planted outside of prepared landscape beds.

3.3 BED ALIGNMENT

A. The Contractor is responsible for planting all material at the correct grades, locations and alignment.

B. The location of plant material and the outline of beds and other areas indicated on the plans shall be followed as closely as possible.

C. Any questions regarding bed alignment shall be brought to the attention of the Landscape Architect immediately.

3.4 BED PREPARATION & PLANTING

A. Conventional Bed Preparation: This technique shall be used unless otherwise noted.

1. Before the start of conventional bed preparation, all areas to be prepared shall be stripped of any grass, weeds, etc., to a minimum depth of (1) inch.
2. All beds shall be rototilled to a depth of ten (10) inches to completely blend the topsoil with one and a half (1.5) cubic yards of soil conditioner mix (see 'PRODUCTS' section) per one hundred (100) square feet of bed prior to rototilling.
3. All bed areas shall then be treated with a granular weed pre-emergent (Eptam or approved equal) at a rate and the method specified by the manufacturer.
4. All beds shall be fertilized with Osmocote 14-14-14, or an approved equal at the manufacturer's recommended rate of one (1) pound per fifty (50) square feet or per any project-specific recommendation.
5. Before planting, the bed area shall be raked and leveled to a fine grade, allowing for proper surface drainage.

3.5 PLANTING

A. After completion of fine grading, the plants shall be placed at the positions indicated on the plans. All plants shall be set so that when settled, they will bear the same relation to finish grade as they did before transplanting. No filling will be permitted around trunks or stems.

3.6 SODDING

A. The soil shall be thoroughly tilled to a depth of four (4) inches.

B. The trees specified on the plans shall already have been planted and guyed before laying sod.

C. The sod bed shall be fine graded to remove all ridges or depressions and the surface cleared of all stones and debris.

D. The sod shall be laid perpendicular to the direction of the slope and in a manner which will permit joints to alternate.

E. Sod panels shall be fitted together tightly so that no joint is visible and tamped firmly and evenly by hand.

F. Immediately following sod placement, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered.

G. During delivery, prior to and during the planting of lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun.

H. Top dressing with washed, clean, weed free builder's sand may be required if deemed necessary by the Owner or Landscape Architect to level depressions in the grade or imperfections in the sod.

3.7 MULCHING

A. After completion of all planting operations, beds and tree pits are to be mulched.

B. Tree pits shall have a 3" covering of top-dress mulch and bed areas shall have a minimum of 3" throughout.

3.8 WATERING

A. Watering of areas planted shall be done on the same day planting is done.

B. All planted areas shall be watered as often as necessary as the work progresses, if weather conditions require same.

C. Watering shall be done by competent workmen, with minimum disturbance of adjoining areas and following the direct instruction of the licensed Contractor.

D. Contractor shall supply necessary topsoil or soil mix to compensate for any settling that takes place due to watering.

3.9 PRUNING & REPAIR

A. Pruning for shape shall be done by the Contractor only if so instructed by the Landscape Architect.

B. Pruning shall consist of shaping the plant to a pleasing outline in accordance with good nursery practices.

C. Pruning shall be done in such a manner so as not to change the natural habit or shape of the plant.

D. Cut-back pruning of all dead wood and injured branches shall be done immediately after planting.

E. Injured branches or damaged branches shall be cut back to sound live wood in accordance with good nursery practices.

F. Shade trees shall be cut back only on authorization of the Landscape Architect.

G. Pruning shall be done before final watering and application of mulch.

H. All debris and trimmings shall be removed immediately.

3.10 TREE STAKING & GUYING

A. Guys shall be furnished and erected by the Contractor for all trees to prevent wind movement, in accordance with the following instructions:

1. Trees up to one and one-fourth inch (1-1/4") caliper: Three (3) supports spaced triangularly around trunk at a distance of fifteen inches (15").
2. Trees one and one-fourth inch (1-1/4") to two inch (2") caliper: Three (3) supports spaced triangularly around trunk at a distance of twenty inches (20").
3. Trees two inches (2") and over in caliper: Three (3) supports spaced triangularly around trunk in clear areas between perimeter ball and edge of plant pit.

B. Supports (stakes) shall be as specified on the drawings and of sufficient length that on being driven substantially into the ground, tops of stakes will be no less than two-thirds (2/3) the distance from ground to lowest branches or forks.

C. Method of fastening supports to tree shall be by means of aluminum wire or No. 12 gauge galvanized wire looped through sections of rubber hose and fastened to supports in such a manner that hose sections prevent damage to bark of tree or by use of ArborTie brand guy line (or approved equal).

D. When the tree has been steadied erect, guy lines shall be tightened to equalize pressure to prevent any wind movement.

E. Contractor shall see that there is no twisting strain thrown on tree trunks when slack is taken up on wires and that rubber hose sections are installed in a manner that there will be no friction damage to bark.

3.11 PROTECTION

A. The Contractor shall protect all plants and lawns from damage at all times.

B. If plants or lawns are damaged, they shall be replaced or treated by the Contractor at his expense to the satisfaction of the Owner or his representative.

3.12 MAINTENANCE

A. The Contractor shall maintain all trees, shrubs and groundcover under this contract until final acceptance, by watering, cultivating, weeding, spraying and replacing as necessary to keep plants in a healthy, vigorous condition, and shall rake bed areas as may be required to keep them neat.

B. The Contractor shall maintain all grass areas under this contract until acceptance by watering, mowing, spraying, etc.

C. Watering: All lawn areas shall be watered once a day with a minimum of 1/2" of water up until final acceptance. Thereafter, watering shall be turned over to the Owner where the Contractor shall provide him with the proper procedures for continued watering. All trees, shrubs and groundcover shall be watered twice a week until final acceptance by the Contractor, providing 1" of water each time unless a comparable amount of rain has been provided.

D. Weeding: Shall consist of pulling or digging out all plant material other than the desired shrubs and groundcover until final acceptance.

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19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE, TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REGISTERED
LICENSED
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

LP2.2 SHEET

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UNIVERSITY AVE.

UNIVERSITY CIRCLE

JOHNSTON STREET

HEBRARD BVLD.

TAFT STREET

EAST ST. MARY BVLD.

SEE GATEWAY - TAFT @ EAST ST. MARY BLVD. FOR EX. CONDITIONS, IRRIGATION & LANDSCAPE PLANS: SHEETS LD1.7, LI1.7 & LP1.7

NORTH

LA1.6
SHEET

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LAFAYETTE, LA 70504
PROJECT - 22113.00

CAMPUS KEY PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

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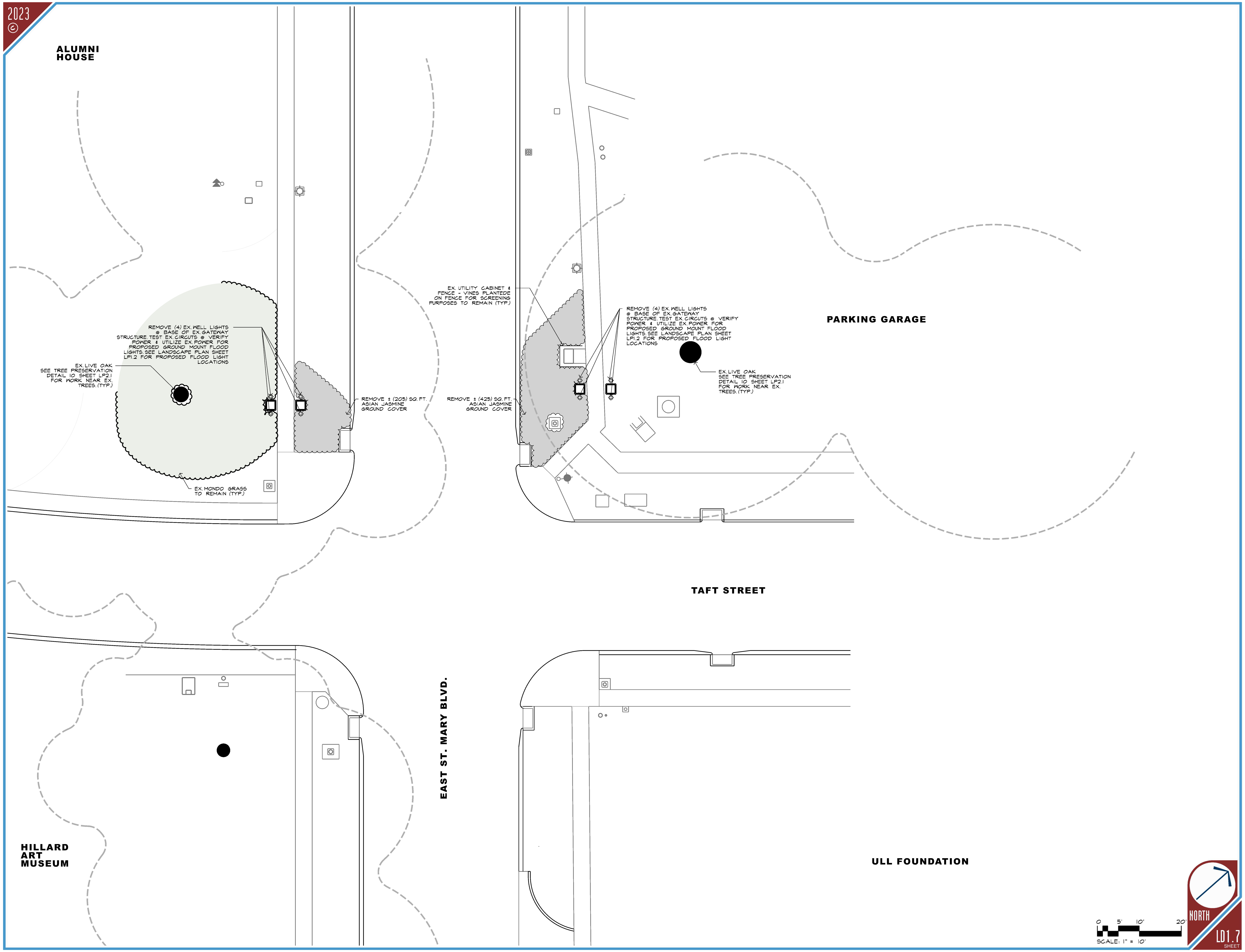
FAX 337.993.3944



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SHEET

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PROJECT • 22113.00

TAFT @ EAST ST. MARY BLVD.
DEMO & EX. CONDITIONS PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPILLER JR.
REG. NO. S-362
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
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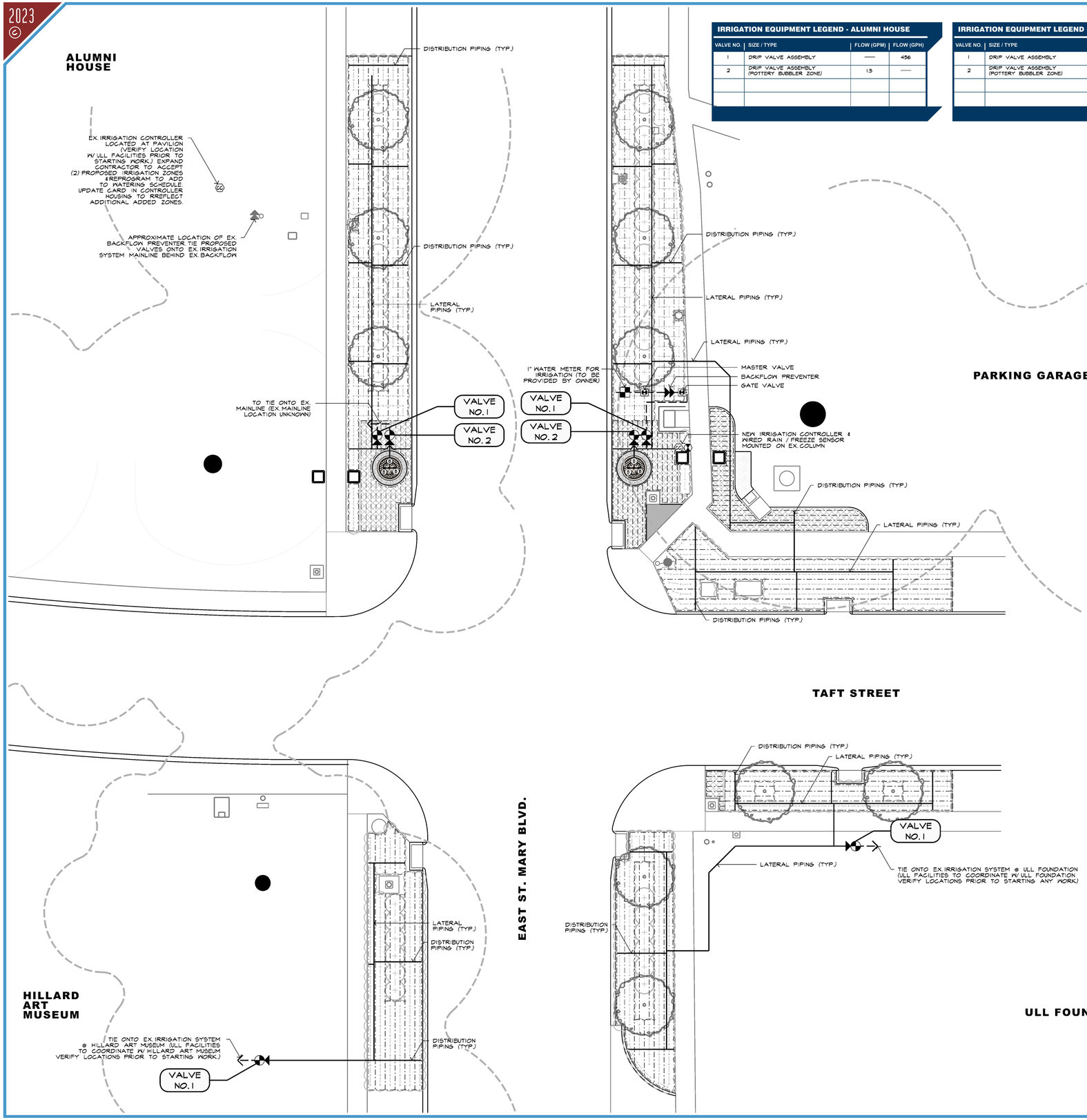

IRRIGATION EQUIPMENT LEGEND - ALUMNI HOUSE

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	456
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	1.5	——

IRRIGATION EQUIPMENT LEGEND - PARKING GARAGE

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	935
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	1.5	——

IRRIGATION EQUIPMENT LEGEND - ULL FOUNDATION

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	378

IRRIGATION EQUIPMENT LEGEND - HILLARD MUSEUM

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	221

IRRIGATION EQUIPMENT LEGEND

SYMBOL	INFORMATION
	1" WATER METER (LOCATION AND METER TO BE PROVIDED BY THE OWNER PRIOR TO CONSTRUCTION/ CONTRACTOR TO VERIFY FLOW AND PRESSURE PRIOR TO INSTALLING SYSTEM
	WATTS 1-1/2" SERIES 919 REDUCED PRESSURE ZONE ASSEMBLY W/ FREEZE COVER
	GATE VALVE / MASTER VALVE
	RAINBIRD XCZ-PRB-100-COM 1" DRIP VALVE ASSY
	RAINBIRD ESP-LXME MODULAR CONTROLLER W/ (12) STATION MODULE - EXPANDABLE
	RAINBIRD RSD-BEX WIRED RAIN + FREEZE SENSOR
	RAINBIRD XERI BUBBLER 1032 - .5 GPM FLOW
	RAINBIRD XFD-06-12 DRIPLINE TUBING
	DISTRIBUTION PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 3/4" MIN UNLESS OTHERWISE NOTED)
	LATERAL PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	MAINLINE - SCH 40 PVC (ALL PIPING TO BE 1-1/2" MIN UNLESS OTHERWISE NOTED)
	SCHEDULE 40 PVC SLEEVING BY DIRECTIONAL BORE - SEE PLAN FOR SIZE REQUIREMENT. NO JOINTS ALLOWED UNDER PAVEMENT

NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
2. ALL EQUIPMENT CAN BE SUBSTITUTED FOR AN EQUAL, APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR TO SUPPLY OWNER / LANDSCAPE ARCHITECT W/ (AS-BUILTS UPON COMPLETION)

IRRIGATION NOTES

1. IRRIGATION CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S CURRENT SPECIFICATIONS AND RECOMMENDATIONS.
2. CALL 811 PRIOR TO DIGGING OR TRENCHING. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING AND NEW UTILITY LINES ABOVE OR BELOW GROUND AND SHALL REPAIR ANY DAMAGE CAUSED DURING IRRIGATION CONSTRUCTION ACTIVITIES AT NO COST TO THE OWNER.
3. WHEN TRENCHING UNDER THE DRIPLINE OF TREES, EXTREME CARE MUST BE GIVEN TO AVOID ROOT DAMAGE. IF AT ALL POSSIBLE AVOID TRENCHING INSIDE THE DRIPLINE BY GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR UNDER THE DRIPLINE, USE HAND-DIGGING METHODS RATHER THAN A MECHANICAL TRENCHER. MINIMIZE THE IMPACT OF ROOT SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER, KEEPING TREES WELL WATERED BEFORE AND AFTER DIGGING AND COVERING ROOTS WITH SOIL OR MULCH AS SOON AS POSSIBLE.
4. IRRIGATION CONTRACTOR SHALL VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 50psi WITH A FLOW RATE OF 30gpm AT THE WATER METER LOCATION PRIOR TO INSTALLATION. IRRIGATION CONTRACTOR SHALL NOTIFY ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
5. IRRIGATION CONTRACTOR TO COORDINATE WITH THE ARCHITECT AND OWNER EXACT LOCATION OF WATER METER, BACKFLOW PREVENTER, CONTROLLER AND SENSORS.
6. THE OWNER SHALL PROVIDE WATER METER AS SHOWN ON DRAWING
7. OWNER TO PROVIDE DEDICATED 15 AMP CIRCUIT & GCFI OUTLET W/ WEATHER PROOF COVER IN LOCATIONS WHERE NEW CONTROLLER IS REQ.
8. THE IRRIGATION DESIGN IS DIAGRAMMATIC. THE INTENT OF THE DRAWINGS IS TO SHOW THE GENERAL LAYOUT AND LOGIC OF THE SYSTEM. SCALED MEASUREMENTS MAY NOT BE ACCURATE. ACTUAL LOCATIONS AND QUANTITIES OF PIPE AND FITTINGS MAY VARY DUE TO FIELD ADJUSTMENTS FOR EXISTING CONDITIONS AND OTHER OBSTRUCTIONS TO PROVIDE THE PROPER AND INTENDED COVERAGE.
9. ALL MAINLINE SHALL BE SCH40 PVC. ALL LATERAL PIPING SHALL BE CLASS 200 PVC PIPING. ALL PVC FITTINGS SHALL BE PVC TYPE I AND MUST BE OF DOMESTIC MANUFACTURE. PVC SOLVENT CEMENT AND PRIMER SHALL BE AS RECOMMENDED / APPROVED BY THE MANUFACTURER OF THE PIPE.
10. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF PVC SLEEVES AS INDICATED ON THE DRAWING. INSTALL FLOWLINE OF SLEEVES 1' BELOW ROADWAY BASE. EXTEND SLEEVES 10' BEYOND BACK OF CURB AND CAP UNTIL CONTRACTOR IS READY TO BEGIN THE INSTALLATION OF SPRINKLER SYSTEM. STAKE LOCATION OF SLEEVE WITH T-POSTS AND FLAGS. ALL JOINTS TO BE GLUED.
11. IRRIGATION CONTRACTOR TO USE 18 GAUGE MULTI-STRAND IRRIGATION CONTROL WIRE. COMMON WIRE TO BE 14 AWG COMMERICAL GRADE VALVE WIRE.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES, STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK, ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE, AS REQUIRED, THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION, THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS, SITE DIMENSIONS, RESTRICTIONS, AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE, TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

TAFT @ EAST ST. MARY BLVD. IRRIGATION PLAN

BID
05/18/23

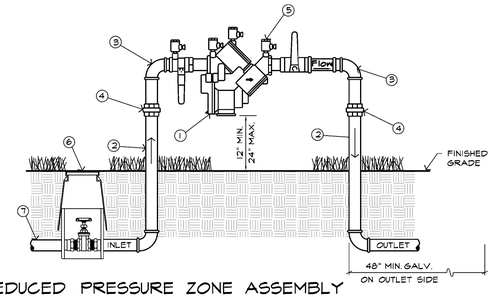
STATE OF LOUISIANA — DANIEL M. SPELLER JR. — REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939 FAX 337.993.3944

LI1.7 SHEET

2023 ©



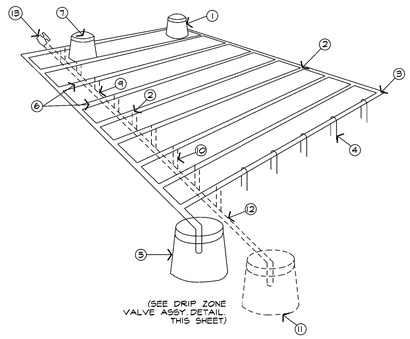
LIST OF MATERIALS

1. APPROVED ANTI-SIPHON PRESSURE VACUUM BREAKER ASSEMBLY,BALL VALVES INCLUDED.
2. GALV. PIPE, ¾" THRU 2".
3. 90° ELL,GALV., ¾" THRU 2 ½".
4. GALV. PIPE UNION.
5. TEST COCKS WITH BRASS PLUGS OR ADAPTORS WITH CAPS INSTALLED.(2 REQUIRED)
6. GATE VALVE IN BOX
7. COPPER NIPPLE AS REQUIRED BY CODE
8. CONTRACTOR TO PROVIDE INSULATED FIBERGLASS ENCLOSURE OR APPROVED EQUAL.

GENERAL NOTES

1. CONTACT THE LOCAL GOVERNING AUTHORITY FOR LATEST LIST OF APPROVED BACK-FLOW PREVENTION ASSEMBLIES.
2. BACKFLOW PREVENTERS MUST BE TESTED BEFORE FINAL APPROVAL IS ISSUED.
3. GALVANIZED FITTINGS SHALL BE CONNECTED USING PIPE DOPE OR TEFLON TAPE.
4. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
5. ALL NIPPLES TO BE COPPER OR BRASS.
6. PIPING UNDER THE CITY RIGHT OF WAY MUST BE PER CITY CODE.
7. CALL LANDSCAPE ARCHITECT FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.

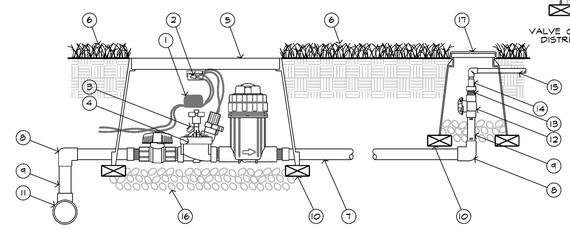
01 REDUCED PRESSURE ZONE ASSEMBLY
NOT TO SCALE



1. FLUSH CAP IN 6" VALVE BOX
2. MDCFTEE COMPRESSION TEE
3. MDCFEL COMPRESSION ELBOW
4. TDS-050 W/BEND TIE DOWN STAKE INSTALL 3'O.C.ON ALL TUBING
5. CONNECTION POINT TO PVC LATERAL LINE IN 10" VALVE BOX
6. SPACING - SEE PLANS
7. AIR/VACUUM RELIEF VALVE IN 6" VALVE BOX
8. PVC DISTRIBUTION PIPE TO BE USED ON LARGE ZONES.(SEE PLAN FOR PIPE SIZES & LOCATION)
9. PVC FITTINGS (TYPICAL)
10. PVC SCH.80 NIPPLE AND ¾" FHT ADAPTER
11. DISTRIBUTION VALVE (AS REQUIRED)
12. DISTRIBUTION PIPE (AS REQUIRED)
13. PVC FLUSH VALVE

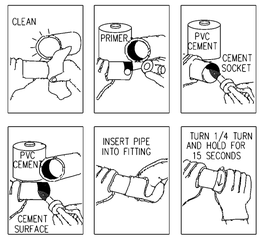
RAINBIRD XFD-06-12 DRIP TUBING
FLOW RATE = 0.6 GPH DRIPPER SPACING = 12"O.C.

02 DRIP TUBING LAYOUT - (DISTRIBUTION PIPE)
NOT TO SCALE



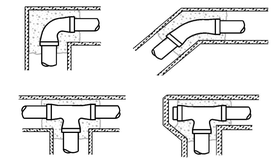
1. 30-INCH LINEAR LENGTH OF WIRE,COILED
2. WATERPROOF CONNECTION SPLICE-1 (1 OF 2)
3. ID TAG W/VALVE NUMBER
4. RAINBIRD XCZ-PRB-100-COM DRIP ZONE VALVE ASSY (INCL. VALVES,FILTER WITH PSI REG.)
5. VALVE BOX WITH COVER
6. FINISH GRADE/TOP OF MULCH
7. PVC CL200 PIPE
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4 PER BOX)
11. PVC MAINLINE PIPE
12. ¾" BALL VALVE
13. ¾" MPT x ¾" ADAPTER
14. ¾" FHT ADAPTER
15. RAINBIRD XFD DRIP LINE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. 10" VALVE BOX (CLEARLY LABELED NON-POTABLE WATER)

03 DRIP ZONE VALVE ASSY. (PRB),CONNECTION POINT & BOX
NOT TO SCALE



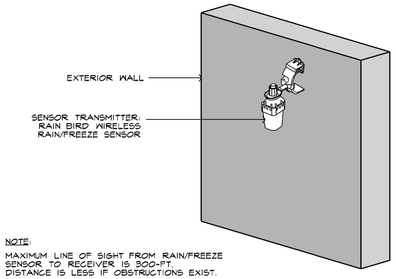
NOTES:
1. NEVER LAY PVC PIPE WHEN THERE IS WATER IN THE TRENCH
2. NEVER LAY PVC PIPE WHEN THE TEMPERATURE IS 32°F OR BELOW

04 PVC ASSEMBLING
NOT TO SCALE



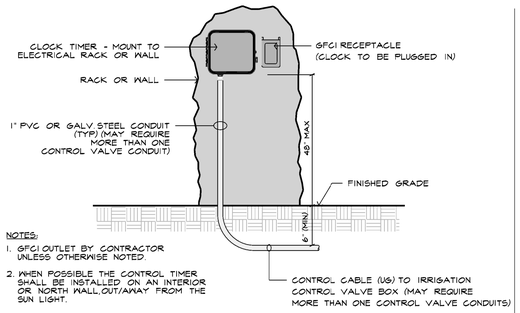
NOTE:
ALL FITTINGS SHALL BE WRAPPED IN POLY PLASTIC BEFORE THRUST BLOCKS ARE INSTALLED.CONCRETE SHALL NOT COVER THE TOP OF ANY FITTING.

05 TYPICAL THRUST BLOCKING
NOT TO SCALE



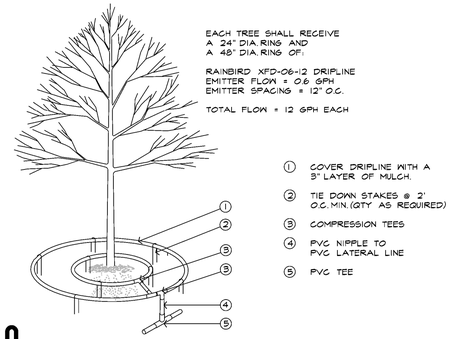
NOTE:
MAXIMUM LINE OF SIGHT FROM RAIN/FREEZE SENSOR TO RECEIVER IS 300-FT. DISTANCE IS LESS IF OBSTRUCTIONS EXIST.

06 RAIN/FREEZE SENSOR WALL/FENCE MOUNT - STANDARD
NOT TO SCALE



NOTES:
1. GFCI OUTLET BY CONTRACTOR UNLESS OTHERWISE NOTED.
2. WHEN POSSIBLE THE CONTROL TIMER SHALL BE INSTALLED ON AN INTERIOR OR NORTH WALL,OUT/AWAY FROM THE SUN LIGHT.

07 CONTROLLER MOUNTING - PLUG IN
NOT TO SCALE



1. COVER DRIPLINE WITH A 3" LAYER OF MULCH.
2. TIE DOWN STAKES @ 2' O.C.MIN.(QTY AS REQUIRED)
3. COMPRESSION TEES
4. PVC NIPPLE TO PVC LATERAL LINE
5. PVC TEE

08 TREE DRIP-RINGS
NOT TO SCALE

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPALLER JR.
REGISTERED
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

L12.1
SHEET

2023 ©

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. General provisions of the contract and other applicable parts of the construction documents apply to this Section.

1.2 SUMMARY:

A. Furnish all labor, materials, equipment and instructions necessary for the complete installation of the landscape irrigation system as drawn and specified. The work includes, but is not limited to:

1. Trenching, backfilling, and compaction for irrigation lines.
2. Provisions and installation for a turnkey automatic sprinkler system. Provide backflow preventer, controller, piping, heads, drip lines, valves, quick couplers, valve access boxes, low voltage wiring, applicable connection fees and all other items required for a complete system as shown on the Drawings, called for in the specifications or as may be required for proper operation of the system. The system shall be installed in strict accordance with all applicable codes, ordinances and regulations.
3. Test all systems, make operative and adjust.
4. Submit Record Drawings, Maintenance Manual and satisfactory evidence to show that all work has been installed in accordance with the ordinance and code requirements.
5. Maintain and operate until substantial completion.
6. One-year Guarantee Period.

B. Related work by others:

1. Water Meter as provided by the General Contractor.
2. Sch40 PVC Sleeves as provided by General Contractor.
3. Electrical work and Conduit as provided by General Contractor for the automatic controller & backflow preventer.

C. Provide drip tubing in all shrub and groundcover beds as designated. Provide pop up spray heads in turf areas. Provide the number of heads required to assure 100% coverage. Layout the system so that the shrub and groundcover beds are on separate zones from the turf areas.

D. Provide winterizing for the system using automatic drain valves in the low-points of lateral piping and heat-tape for the backflow preventer.

E. Coordinate exact locations of water meter and backflow preventer with the General Contractor.

F. The Contractor shall coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs.

G. The Contractor shall install the irrigation system in accordance with the schedule requirements provided by the General Contractor.

1.3 QUALITY CONTROL:

A. The sprinkler system shall be designed, to the extent possible, to promote water, soil and energy conservation. The system shall include a rain sensing device and shall be consistent with any water conservation ordinance enacted by the city.

B. Provide Installation by a licensed Irrigation contractor, skilled in work required and completely familiar with manufacturer's recommended method of installation requirements. Contractor must have a minimum of two (2) consecutive years experience in this area of work and having completely installed other jobs of similar size and scope. Evidence of the Contractor's qualifications shall be presented before the award of contract.

C. Approval and selection of Materials and Work: The selection of all materials and the execution of all operations required under the Contract Documents shall be subject to the approval of the General Contractor and Landscape Architect who shall have the right to reject any and all materials and any and all work which, in their opinion, does not meet the requirements of the Contract Documents at any stage of the operations. All rejected materials shall be removed from the site by the Contractor.

D. The successful Contractor shall maintain a competent, skilled and satisfactory work force during and through the completion of the construction period. In no case, shall unskilled labor be allowed to operate equipment, assemble, glue, install, wire, test or adjust components of the system. If in the opinion of the General Contractor or Landscape Architect, the labor furnished by the Contractor is incompetent or inexperienced in the practice assigned, the Contractor shall remove such persons or reassign them to a practice acceptable to the General Contractor and Landscape Architect.

E. Conform to all codes, statutes, laws and regulations governed by the following agencies for the protection of public safety:

ASTM	American Society for Testing Materials
AWWA	American Water Works Association
NEC	National Electric Code
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
UPC	Uniform Plumbing Code

F. The Contractor shall make application, acquire, comply and pay for all licenses and/or permits required by Local, State, or National Governing Agencies as may be required to perform and complete the work as described in the Contract Documents.

1.4 SUBMITTALS:

A. General: Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for possible revisions, and re-submittals, and for placing orders and securing delivery.

B. A design layout based on the equipment of Rainbird Corporation & Hunter Industries has been provided for bidding purposes. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to the layout as required to achieve full coverage of irrigated area at no additional cost to the Owner. It shall be the contractor's responsibility to establish the location of all sprinkler heads in order to ensure proper coverage of all areas.

C. Product Manual: Submit technical specification sheets and or performance data for all proposed system components. Submit the address and telephone number of the subcontractor installing the system and the local representative for the equipment.

1.5 PROJECT CONDITIONS:

A. The Contractor shall warrant that he has fully informed himself of the site conditions under which the work will be performed and is thoroughly familiar with the Contract Documents and all applicable codes and standards. Failure to have done so will not relieve the Contractor of his obligation to furnish all supervision, labor, tools, materials, equipment and supplies necessary to perform the provisions of the work detailed in the Contract Documents.

B. Make necessary adjustments in the layouts as may be required to connect to existing stub-outs, should such not be located exactly as shown, and as may be required to work around existing work at no increase in cost to the Owner.

C. The Contractor's attention is directed to the fact that there are other utilities located within the limits of the work. Before commencing any work required under the Contract, he shall determine the location of all utilities, subsurface drainage, structures and underground construction so that proper precaution may be taken not to disturb or damage during all operations. The Contractor shall be held responsible for making, at his own expense, all repairs to damaged utilities which could have been located or other construction resulting from the work covered by this Contract.

D. Should utilities not shown on plans be found during excavations, promptly notify the General Contractor for instructions as to further action.

1.6 PROTECTION OF WORK AND MATERIALS:

A. Use all means necessary to protect the work before, during and after installation and to protect the materials and installed work of all other trades.

B. The Contractor shall make every effort to safeguard the public during the Irrigation system installation operations. This includes, but is not limited to, erection of barricades around excavation, close supervision of all work and placement of warning flags wherever necessary. The Contractor shall insure that the personnel, equipment and materials involved in operations do not interfere with, or pose a hazard to, vehicular or pedestrian traffic.

C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the General Contractor and Landscape Architect at no additional cost to the Owner.

D. Store materials delivered to site, prior to actual use, in a secure place not to interfere with other trades or construction and protect from vandalism, damage by weather or other elements. All materials are to be stored off of the ground and away from soil or other contaminates.

E. The Contractor is completely responsible for replacement of materials due to acts of God, theft, vandalism and malicious mischief at the job site before, during and after installation. Such regulation shall continue until the date of final acceptance of the work in its entirety by the Owner.

1.7 ACCIDENT REACTION:

A. In the event of an accident causing injury or damage, the Contractor shall promptly report such to the Owner, General Contractor, Landscape Architect and required governmental agencies.

1.8 TRASH & DEBRIS:

A. The Contractor shall not permit trash and debris to accumulate on the grounds in the vicinity of his work. He shall establish and maintain a regular daily routine for removing trash and debris and hauling it away from the premises for no additional payment.

PART 2 - PRODUCTS

2.1 GENERAL:

A. The sprinkler system design shall be based on the equipment of Rainbird Corporation & Hunter Industries or approved equal.

B. Materials shall be newly manufactured and without flaws or defects, and of quality and performance as specified. Excess materials at completion are property of the Contractor, to be removed from the site.

C. The Contractor shall be responsible for computing and supplying the required quantities necessary to make the irrigation system complete and operational in every way. Quantities shown on the drawings are for convenience only.

2.2 PIPE AND FITTINGS:

A. Mainline piping above ground shall be Copper tube, Type K, drawn temper; copper tube fittings; soldered joints.

B. Mainline piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D1785, Sch40 for solvent weld and threaded connections.

C. Lateral piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D2241, Class 200 for solvent weld connections; Sch40 for threaded connections. The minimum pipe size shall be 3/4" in diameter.

D. Polyvinyl chloride (PVC) fittings; meeting ASTM D2466, Sch40 for solvent weld connections; Sch40 for threaded connections. All fittings must be of domestic manufacture and shall be identified as to pressure rating or schedule, with a working pressure no lower than that of the pipe.

E. Handling of Pipe and PVC Fittings: Exercise care in handling, loading, unloading and storing PVC pipe and fittings. Store under cover and transport in a vehicle with a bed long enough to allow no undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded until said section of pipe is cut out and rejoined with a coupling.

F. Visual Inspection: Provide pipe homogenous throughout, free from visible cracks, holes, blisters, wrinkles or foreign materials

G. PVC solvent cement shall comply with ASTM D2564, regular-bodied for pipe 2" and smaller, and medium for pipe 2 1/2" and larger. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints.

H. Use Teflon tape or an appropriate sealant for all threaded connections.

2.3 CONTROL WIRES AND CONNECTORS:

A. Single Conductor Wire for direct burial applications, meeting UL Standard 493, UF-14/1 for "Control" wiring and UF-14/1 for "Common" wiring. Color code the common neutral wiring from all other wires.

B. Wire Connectors shall be either 3M DBY / DBR or King "One Step" Connectors or approved equal.

2.4 AUTOMATIC CONTROLLER AND SENSORS:

A. The automatic controller shall be of a hybrid type that combines electromechanical and microprocessor-based circuitry capable of fully automatic and manual operation. The controller will be housed in a weather-proof, lockable, cabinet suitable for wall mounting.

B. The rain sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if approximately .10" of rainfall has accumulated due to precipitation at a rate equal to or greater than .25" per hour prior to or during an irrigation cycle.

C. The freeze sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if the ambient air temperature falls below 37 degrees Fahrenheit prior to or during an irrigation cycle.

2.5 VALVES:

A. The Rainbird remote control valves shall be a normally closed, 24VAC solenoid actuated, globe type valve. They shall have manual flow control stems for accurate regulation and/or shutoff of outlet flow.

B. The automatic drain valves shall be a pressure activated type, capable of opening when system pressure drops below 2.5psi, and closing when system pressure reaches 5.5psi.

C. Bronze gate valves for use as cut-off, isolation or manual drain valves on lines up to 3" in diameter shall be as manufactured by Nibco, Inc., Elkhart, IN or approved equal.

2.7 VALVE BOXES:

A. Provide valve boxes for all remote control valves and manual gate valves. The manufacturer shall be Armor, Plymouth Products Division, Sheboygan, WI or approved equal.

B. When used with a single valve use a #181104 - 10" round box with a twist lock cover. When used with multiple valves use #190106 - 20" x 14" rectangular box with snap lock cover.

2.8 SPRINKLER HEADS:

A. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.

B. Professional Series Spray Sprinkler: The sprinkler shall be capable of covering area shown at flow rates as designed.

1. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.
2. Provide pop-up spray heads in small turf areas or in clusters of trees where rotary heads are not feasible. The sprinkler shall have a pressure regulating device to prevent high-pressure fogging to the spray pattern and a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
3. Provide pop-up spray heads in all shrub and groundcover beds. The sprinkler shall include a pressure regulating device to prevent high pressure fogging to the nozzle stream. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
4. Provide pop-up rotary sprinklers in all large turf areas. The full or part circle sprinkler shall be a single stream, gear driven rotor with a rotating nozzle turret that is independent of the riser stem. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Matched precipitation shall be obtained by installing nozzles as shown on plan.
5. Provide check valve feature, as required, to prevent low head drainage from sprinklers at lower elevations.

2.9 DRIP IRRIGATION PRODUCTS:

A. Landscape Dripline (Inline Emitter Tubing): The Dripline tubing shall be brown in color and conform to an outside diameter (O.D.) of 0.630 inches and an inside diameter (I.D.) of 0.540 inches and wall thickness of 0.045 inches. The Dripline tubing shall have factory installed, pressure-compensating, inline emitters installed every 12 inches. The flow rate from each installed inline emitter shall be a consistent 0.6 gallons per hour when inlet pressure is between 8.5 and 60 psi.

B. Drip Control Zone Kit: The control zone kit shall have a 1" automatic irrigation control valve with a pressure rating not to be less than 150 psi. The valve body and bonnet shall be constructed of high-impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of a durable Buna-N rubber material reinforced with nylon.

The control zone kit shall have a 1" inline Quick Check Basket Filter body constructed of heavy-duty, glass-filled, UV resistant polypropylene capable of withstanding pressures of not less than 150 psi. The design shall be a basket style body with jar-top cap. The cap shall incorporate an indicator that goes from green to red during operation when the filters element needs cleaning. The screen shall be serviceable for cleaning purposes by unscrewing the cap from the body and removing the filters element.

The control zone kit shall have a 1" inline pressure regulator. The pressure regulator shall be constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 psi. The pressure regulating device is a normally open device that allows full flow with little pressure loss unless the inlet pressure is greater than the preset level. As the inlet pressure increases above the preset level it compresses a spring and begins to reduce the flow and downstream pressure. The inline pressure regulators shall have a preset outlet pressure of approximately 40 psi.

C. Landscape Dripline Compression Fittings: The Compression Fitting System shall consist of 3 fittings (tee, coupling and elbow) plus connection adapters and removable flush caps. The Compression Fittings shall accept all polyethylene tubing with an outside diameter (O.D.) from .630 to .710 inches and shall provide a leak-free compression fit. They also shall provide connections to threaded components when used with the adapters. The removable flush caps shall be used to close off a line and for manual draining. Air/vacuum relief valves shall be capable of venting air or preventing vacuum. The operating pressure range for the Compression Fitting System shall be 0 to 60 psi.

PART 3 - EXECUTION:

3.1 GENERAL:

A. Verify that the work of this section is installed in strict accordance with all applicable codes, regulations the design and the approved submittals. Contractor shall install all equipment as per manufacturer's current specifications and recommendations.

B. VERIFY THAT WATER PRESSURE IS ADEQUATE FOR EFFICIENT OPERATION OF THE SPRINKLER SYSTEM AS DESIGNED AND INSTALLED. Coordinate exact location of Point-of-Connection with the General Contractor.

C. Coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs, and parking, paving and site electrical plans. Verify existing and proposed locations of all site utilities (i.e. gas, water, electric, telephone, fiber optics) prior to any trenching and laying of pipe.

D. When sprinkler system work is to be installed close to or will interfere with the work of other trades, the Contractor shall assist in working out space conditions to permit all work to be installed satisfactorily at no additional cost to the owner. If a Contractor installs his work before coordination with other trades, he shall make necessary changes in his work to correct the condition without additional compensation.

E. Flag the location of all sprinklers & valves in accordance with the approved design and submittals. In the event of a discrepancy, immediately notify the Landscape Architect and General Contractor. Do not proceed with installation in areas of discrepancies until all such discrepancies have been fully resolved.

F. The irrigation design is shown in schematic form only. All piping to be installed directly behind curb where possible.

G. The Contractor is responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at any time, at no additional cost to the Owner.

3.2 WATER METER & BACKFLOW PREVENTER:

A. The Project Owner shall provide Water Meter as shown on the drawings All materials, operations, installed conditions and personnel shall be in strict accordance with all applicable codes, ordinances and regulations.

B. Immediately after Contract award, conduct tests at the designated Point-of-Connection and note as such on the written results provided to the General Contractor and Landscape Architect for the following:

1. Static Water Pressure
2. Dynamic Water Pressure
3. Gallons per minute

C. Install a temporary meter on a fire hydrant if necessary for water access due to site work, phasing schedule and/or landscape installation. Verify location and obtain approval from the General Contractor prior to installing temporary meter.

D. The Contractor shall comply with the requirements and codes of the local governing authority regarding backflow prevention. In addition, the Contractor shall provide the necessary materials, insulation/ winterization capabilities and acceptable concealment. General contractor is responsible for providing a GFI outlet with 115VAC; 1Phase power to the Backflow Preventer location.

3.3 SLEEVING:

A. The General Contractor shall provide Sch40 PVC sleeving, buried at a minimum of 18" and maximum of 24" depth.

B. Upon completion of site filling and compaction operations, and prior to the construction of foundations, roadways, walks or other pavements or obstructions, the General Contractor shall install sleeves in sufficient sizes to accommodate future irrigation piping and/or control wiring. Ends of sleeves shall extend 18 inches past the edges of all paving or construction. The ends of the sleeves shall be clearly marked for future use by the Irrigation Contractor.

3.4 TRENCHING AND BACKFILLING:

A. Carefully install system in areas of existing vegetation designated to remain to provide minimal disturbance feasible. When trenching under the drip-line of existing trees, extreme care must be given to avoid root damage. If at all possible avoid trenching inside the drip-line by going around the tree rather than under it. If trenching must occur under the drip-line, use either tunnelling or hand-digging methods rather than a mechanical trencher. Minimize the impact of root severing by avoiding construction during hot, dry weather, keeping trees well watered before and after digging and covering roots with soil or mulch as soon as possible.

B. Perform all excavation required for the installation of the work included under this Section. Including shoring and bracing of earth banks to prevent cave in. Restore all surfaces and existing underground installations damaged or cut as a result of the excavations, to their original condition and in a manner approved by the Owner and the General Contractor.

C. Excavate trenches to a depth of minimum pipe coverage plus six inches. Remove all lumber, rubbish and large rocks from the trenches. Provide a uniform bearing for the entire length of each pipe line to prevent uneven settlement. Make the width of the trench a minimum of 1 1/2 times the diameter of the piping but not less than 4 inches.

D. Upon completion of pipe installation and system testing, backfill the trenches with clean soil. Backfill material shall be free from rocks or any heavy unsuitable substances which could damage the pipe or create unusual settling problems. Backfilling shall be done in six inch layers and tamped down after each layer is put back as required to avoid settling in landscape areas and to 98% standard proctor in paved areas.

E. If settling occurs within the warranted period, the Contractor shall be responsible for bringing the trenches up to finish grade and repairing plant damage without additional compensation.

3.5 PIPE INSTALLATION:

A. Never Install PVC pipe when there is water in the trench. Never Install PVC pipe when the temperature is 32 degrees Fahrenheit or below.

B. Install the mainline at a bury depth of 18 Inches and the lateral lines at a bury depth of 12 inches below finished grade. Maintain a 4 inch clearance between pipes that cross at an intersection and a 2 inch clearance between pipes that are buried in the same trench.

C. Remove all foreign matter or dirt from the inside of the pipe before joining. Cap or plug all lines after installation and prior to testing to minimize infiltration of foreign matter or dirt.

D. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Install main lines and lateral lines in common trenches wherever possible.

3.6 PIPE AND FITTING CONNECTIONS:

A. Meet ASTM D2855 Standard Practice for making solvent-cemented joints with PVC pipe and fittings. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.

B. Make solvent welds with a non-synthetic bristle brush In the following sequence: Apply an even coat of solvent to the outside of the pipe. Then apply solvent to the inside of the fittings and then re-apply a light coat of solvent to the outside of the pipe, making sure that coated area on the pipe is equal to the depth of the fitting socket. Insert pipe quickly into the fitting and turn the pipe approximately 1/4 turn to distribute the solvent and remove air bubbles. Check all tees and ells for correct position, then hold joint for approximately 15 seconds so that pipe does not push out from the fitting. Allow at least 15 minutes drying time for each weld joint before moving.

C. Allow all joints to set and cure for a minimum of 12 hours prior to pressurization of system.

3.7 WIRE INSTALLATION:

A. Verify that the work of this section is installed in strict accordance with the latest edition of the National Electric Code and local electrical codes.

B. Install neutral and control wires, 12 inches below finish grade, in the same trenches as the main and lateral lines. The wires shall be installed in a neat and orderly fashion and bundled together and taped every 10 feet. Snake wires in trench to allow for expansion and contraction and provide slack loops at every splice, change of direction, at the valves, where the wire enters the conduit for the automatic controller and at least every 100 feet in runs more than 100 feet in length. The slack loops shall be created by wrapping 3 feet of wire around a 1/2 inch diameter pipe to form a coil.

C. Connect each solenoid to the controller with a "control wire" which is typically red in color. Connect a "common neutral wire" to all solenoids which is typically white in color.

D. Solder or join all wire connections by positive mechanical connectors. Splices must be properly insulated and waterproofed. Control wire splices will be allowed only in runs more than 500 feet and only in valve boxes.

3.8 CONTROLLER AND SENSOR INSTALLATION:

A. Coordinate with the General Contractor the exact location where the automatic controller will be located. Connect all wiring and grounding In accordance with manufacturer's instructions. Provide separate, secured to the wall, conduits for both power supply and control wiring.

B. General contractor Is responsible for providing a J-box with 115VAC; 1Phase power to the Controller location. Irrigation Contractor shall hard wire controller to j-box.

C. Install the rain and freeze sensors in an open area where the device is exposed to rain water but not sprinkler water. Mount away from overhanging objects that may Interfere with rainfall. Connect wiring In accordance with manufacturer's instructions.

3.9 VALVE INSTALLATION:

A. The remote control valves shall be Installed In accordance with manufacturer's instructions. Valves shall be installed in Armor valve boxes or approved equal. Boxes shall be Installed to a height that will not cause them to Interfere with maintenance machinery and which is sufficient to prevent soil or mulch from washing Into the box. Provide a 6 Inch layer of washed gravel In the bottom of the valve box. Valves shall be set a minimum of two feet behind curbs. Valves shall not be set in curves which are vulnerable to damage by truck trailers over running curbs.

B. The quick coupling valves shall be installed on PVC threaded swing joints on the Irrigation mainline. Space quick coupling valves as shown on the plans. Provide a 1"x1"x3" piece of angle iron next to the quick coupling valve and anchor with two (2) stainless steel hose clamps.

C. The automatic drain valves shall be installed in the low points of the lateral lines. Dig a minimum two (2) cubic foot hole where the drain valve is to be located. Install the drain valve in a PVC tee pointing downward at a 45 degree angle. Surround the drain valve with a minimum one (1) cubic foot of gravel. Place an 18"x18" piece of weed cloth or burlap on top of the gravel. Finish to grade with top soil.

D. Install in the low points of the mainline, manual gate valves as needed for draining. Install 24" off of the mainline in 10" valve boxes.

3.10 FLUSHING AND PRESSURE TESTING:

A. Prior to backfilling and installation of sprinkler heads, open all control valves and use full line pressure to completely flush lines of foreign matter and dirt. INITIAL FLUSHING OF LINES SHALL NEVER BE THROUGH SPRINKLER HEADS OR DRIP TUBING.

B. With zone valves closed, pressure test mainlines by supplying and maintaining full static pressure continuously for one full hour. Observe for evidence of leakage by monitoring flow meter and by visual inspection of the exposed lines. Repair all leaks and retest until no water flow is observed.

3.11 SPRINKLER HEAD INSTALLATION:

A. After landscape finish grading is accomplished, Install heads to finished grade in lawn and shrub areas and backfill with clean topsoil so head is stabilized and no lateral motion is exhibited during operation. Heads shall be set so the tips of the heads are 1/2" above the top of the mulch in planting beds. Heads In the turf areas shall be set flush with the finished grade and not a hazard to pedestrians and/or maintenance machinery. Set sprinkler heads to plumb within 1/16" and a minimum of 4 inches and a maximum of 6 inches from walls, walks and curbs.

B. Sprinkler heads to be spaced so as not to throw water on the buildings, walks or driveways. Heads shall be adjusted as required so that foliage of plants will not obstruct the spray and that the system has 100% coverage.

C. Provide connection to the PVC lateral lines, for spray heads, with barbed fittings and swing pipe. Do not use more than 18 inches of swing pipe for each sprinkler head.

3.12 DRIP SYSTEM INSTALLATION:

A. Drip Control Zone Kit: Install Drip Control Zone Kit level and below grade with a minimum of 4 inches clearance to the top and sides of the inside of a rectangular valve box. Place a minimum of 6 inches of gravel in the bottom of the valve box.

B. Landscape Dripline (Inline Emitter Tubing): Landscape bed areas shall be supplied with rigid PVC lateral piping. Landscape Dripline connection points shall be made in 6 inch valve boxes using compression adapter tees or ells as required. For under mulch Installation, place tubing rows at 18 inch lateral spacing as Indicated on the plans and hold In place with galvanized tie-down stakes spaced evenly every 2 to 3 feet, and with two stakes on each change of direction. Install tubing in a serpentine manner and bending is allowed provided the radius is sufficient enough that kinking does not occur. Backfill with mulch as noted In the landscaping specifications.

C. Landscape Dripline Compression Fittings: Landscape Dripline Compression Fittings shall be used at connection points to the PVC lateral piping, where tubing layout requires a tee and at bends or changes of direction to prevent kinking of the Landscape Dripline.

Removable flush caps shall be Installed at the low point of each dripline section. Depending on the site conditions and tubing layout, more than one flush cap may be required. Provide a 6 inch valve box for each flush cap.

Air/vacuum relief valves shall be installed at the highest elevation within each dripline section. Depending on the site conditions and tubing layout, more than one air/vacuum relief valve may be required. Provide a 6 inch valve box for each air/vacuum relief valve.

3.13 FLUSHING, OPERATION, TESTING AND BALANCING:

A. Flushing: All air and foreign objects and debris shall be flushed from the system.

1. Dripline and Emitter Lateral Flushing Procedures.
   a. Flush the system every two weeks for the first six (6) weeks and check the water that is flushed out for cleanliness. Establish a regular system flushing schedule for the future based on results from the initial six-week flushing schedule.
   b. Flush the system completely after any repairs are made and monitor system operation closely under regular system flushing schedule.
   c. Check the pressure at the supply and flush headers on a regular basis and compare with the pressure readings taken after installation.

B. General Testing: Upon completion of the irrigation system, and after pressure/leak testing and head installation, the entire system shall be tested for proper operation. All components checked for proper operation by the Contractor under supervision of the General Contractor. The system shall be tested in strict accordance with all applicable codes, ordinances and regulations.

C. Dripline and Emitter Lateral Leakage Testing Procedures:

1. Subject installed drip tubing and emitter lateral piping to water pressure equal to specified operating pressure for ten (10) minutes. Test with control zone components and drip flush valve components installed.
2. Partially backfill buried pipe and tubing to prevent movement under pressure. Expose couplings, fittings, and valve components.
3. Visually Inspect valve assemblies and fittings for leakage and replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until test segment is free from leaks. Cement or caulking to seal leaks is prohibited.

D. Dripline and Emitter Lateral Operational Testing Procedures:

1. Activate each dripline and emitter lateral control zone valve in sequence from controller. Provide either one additional person with radio or use handheld remote to activate remote control valves from controller. Manually activating remote control valve using manual bleed mechanism at remote control valve is not an acceptable method of activation.
2. Replace or adjust defective valve, fitting, dripline segment, emitter lateral segment, or appurtenance to correct operational and coverage uniformity deficiencies.
3. Repeat test(s) until each dripline or emitter lateral test segment passes testing procedures. Repeat tests, replace components, and correct deficiencies at no additional cost.
4. Any portions requiring repair shall be replaced or repaired and test repeated. No testing shall be done until the last solvent welded joint has had 12 hours to set and cure.

C. Balancing and Adjustment: The Contractor shall balance and adjust the various components of the system so that the overall operation is most efficient. This work shall include adjustment to all sprinkler heads and individual station adjustments on the controller. Observe that all zones function properly and in the correct sequence.

3.14 MAINTENANCE AND COMPLETION OF THE WORK:

A. The Contractor shall complete the irrigation system as drawn and specified, according to Schedule herein, and operate and maintain same until time of substantial completion of the project.

B. Any changes made in the layout and/or arrangement of the proposed Irrigation system, or any other differences between the proposed system and actual Installed conditions shall be recorded by the Contractor In the form of an "As-Built" drawing. The Contractor shall provide the Owner and the Landscape Architect with a copy of this drawing before work under this contract will be considered acceptable. All adjustments in the layout and/or arrangement of the Irrigation system are subject to the approval of the Landscape Architect.

C. The Contractor shall orient the Owner's personnel to the operation and adjustments of the controller according to local seasonal requirements. The Contractor shall also familiarize the Owner with sprinkler and valve adjustments. The Owner is, In general, to be totally familiarized with the overall operation, adjustment, maintenance and intent of the Irrigation system, Including the measures that should be taken to provide winterization for the system. Such instructions should be in written form. The contractor shall also provide a color coded laminated plan, in the controller door, showing the locations of all zones.

3.15 INSPECTION AND SUBSTANTIAL COMPLETION:

A. When Contractor is satisfied that the entire system is operating properly, that it is balanced and adjusted so that all work and clean-up is completed, he shall submit a written request for Initial Inspection to the General Contractor and Landscape Architect at least one week prior to anticipated date of Inspection and testing.

B. Submit reproducible as-built Record Drawings and Maintenance Manual to General Contractor with request for inspection.

C. Upon completion of repairs and replacements found necessary at time of Inspection, the Landscape Architect will confirm the date of substantial completion.

E. The date of substantial completion will determine:
   1. The final date of maintenance as part of this Section.
   2. The beginning date of the One-Year Guarantee Period.

3.16 GUARANTEE:

A. Guarantee all work, products, equipment and materials for one (1) year period beginning upon substantial completion.

B. Guarantee applies to all losses with the exception of those due to Acts of God, vandalism, occupancy of the project or Owner neglect, as determined by the Landscape Architect and/or Owner.

3.17 FINAL INSPECTION:

A. At end of Guarantee Period and upon request for final inspection, jointly review all guaranteed work for Final Acceptance with the Owner and General Contractor.

B. Submit written request for final inspection to the General Contractor and Owner at least two weeks prior to anticipated date of Inspection.

3.18 FINAL ACCEPTANCE:

A. Upon completion by the Contractor of all required repairs and replacements found at time of final Inspection, the Owner and General Contractor will confirm the date of Final Acceptance of the work.

B. Confirmation of Final Acceptance by the Owner and the General Contractor will constitute completion of the work of this Section.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR · REG. NO. 5-330 · LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

L12.2 SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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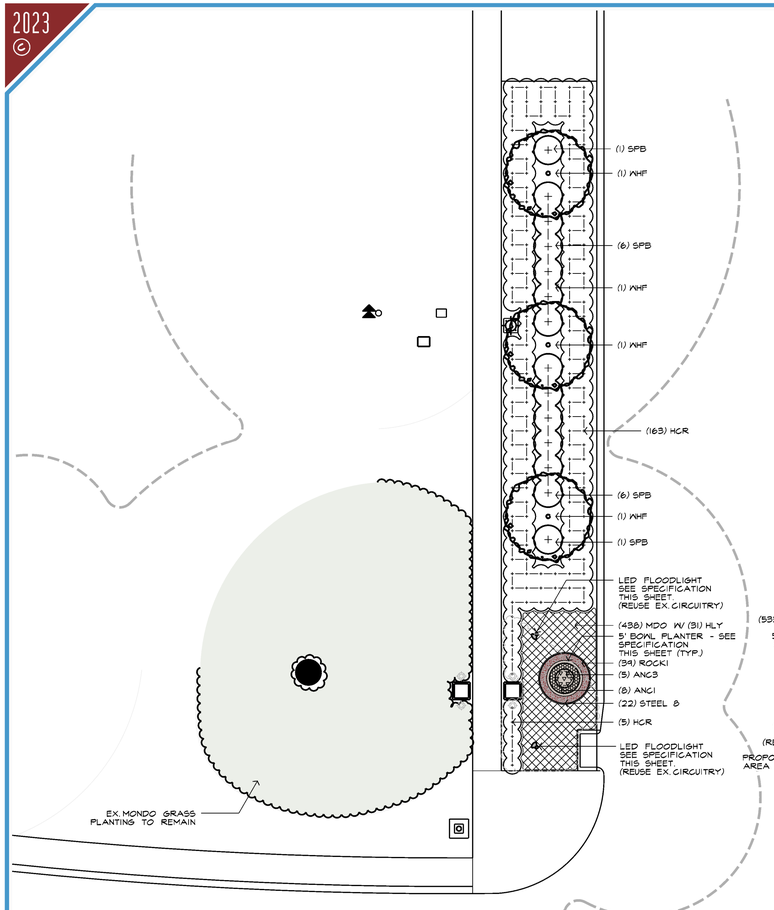
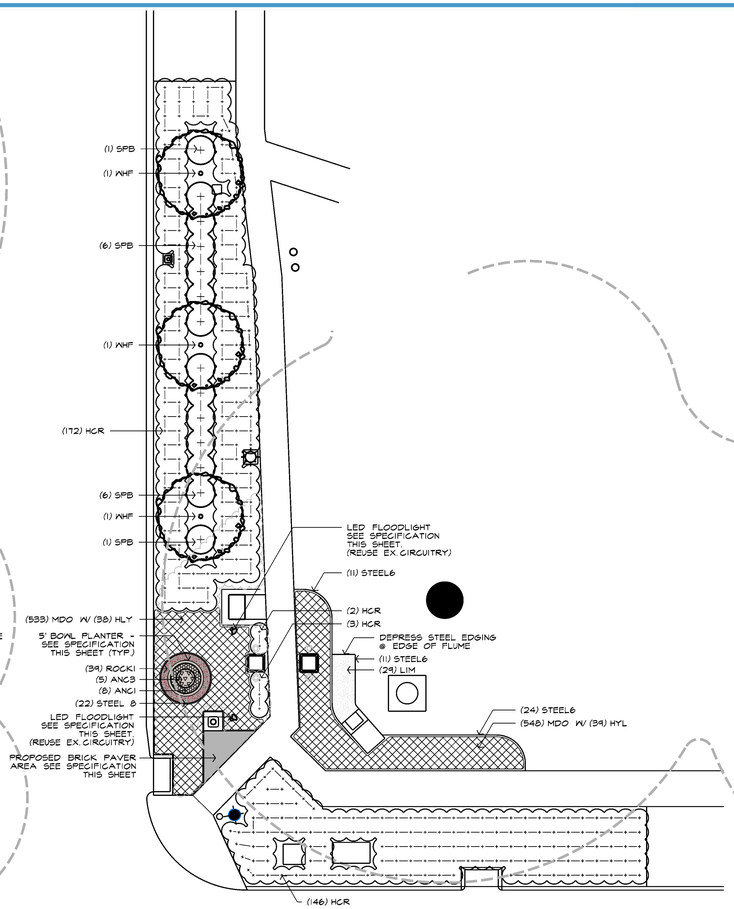
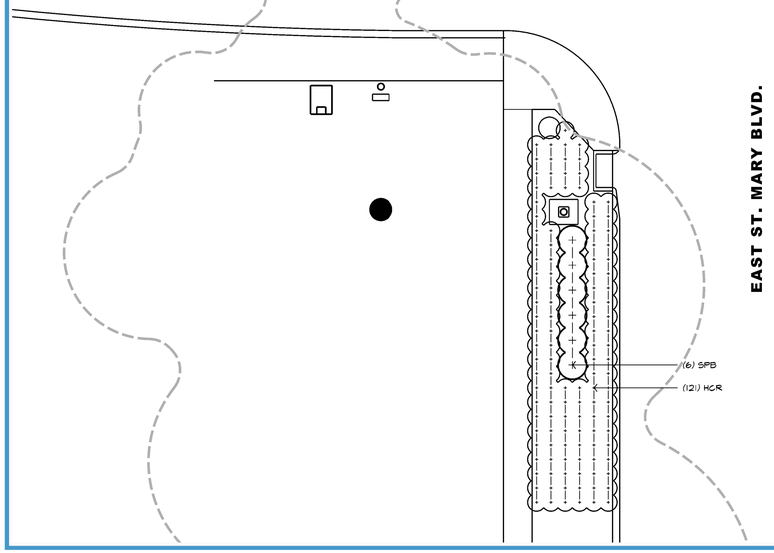
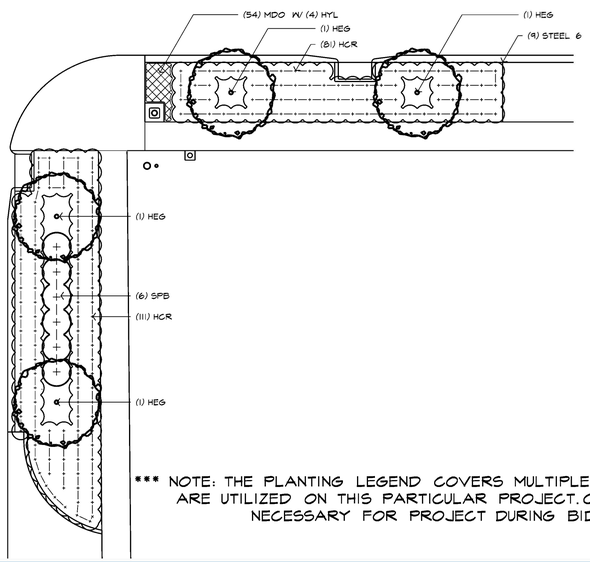






EAST ST. MARY BLVD.

TAFT STREET



PLANTING LEGEND

CODE	COMMON NAME & VARIETY-SPACING	MIN. SIZE	PATTERN	QTY.
ANC1	ANNUAL COLOR 4" - 12"	4" CUP		
ANC3	ANNUAL COLOR 18" - 24"	4" CUP		
AZF	AZALEA 'FORMOSA RED'	7 GAL		
AZG	AZALEA 'G.G. GERBING'	7 GAL		
HBD	DWARF BURFORD HOLLY	4'HT		
HCR	HOLLY 'CARISSA'	3 GAL		
HEB	HOLLY 'EMILY BRUNER'	6'HT		
HES	HOLLY 'EAGLESTON'	16-18'HT		
HLY	HURRICANE LILY BULB (SPACE APPROX ± 30" O.C.)	1 GAL		
HYL	HYDRANGEA "LIME LIGHT"	7 GAL		
MDO	MONDO GRASS 8" O.C. (TYP.) W/ HURRICANE LILY SPACED +-30" O.C.	4" CUP		
MLG	MUHLY GRASS 'WHITE CLOUD'	3 GAL		
OKL	LIVE OAK	18' HT		
OLR	OLEANDER 'RED'	7 GAL		
SPB	SPIREA 'BRIDAL WREATH'	7 GAL		
VSSH	VIRGINIA SWEETSPIRE 'LITTLE HENRY'	3 GAL		
YEW	JAPANESE YEW	6'HT		
WHF	WHITE FRINGE TREE	8'HT		
LIM	LIMESTONE NO.8	SF		
ROCK 1	LARGE RED GRAVEL 3/4" - 2" SIZE @ JIMSTONE CO. www.jimstoneco.com (3" THICK OVER LANDSCAPE FABRIC)	SF		
ROCK 2	15-30 LB STONE RIP RAP - TAN (8"-1' THICK OVER LANDSCAPE FABRIC)	SF		
MULF	PINE STRAW MULCH, CRIMPED	SF		
MULH	HARDWOOD MULCH, SHREDDED	SF		
SOD	ST. AUGUSTINE 'PALMETTO' -SQUARE YARD	SY		
STEEL 6	6" X 1/8" STEEL EDGING - 2'LAP @ J.T.	LF		
STEEL 8	8" X 1/8" STEEL EDGING - 2'LAP @ J.T.	LF		

PLANTING NOTES

1. PLANT MATERIAL TO BE FULLY GROWN AND MATCHING.
2. BEDS TO BE SLOPED TO DRAIN - MOUNDED W/ 20% SLOPE FROM CENTER TO EDGE
3. DEBRIS TO BE REMOVED FROM BEDS.
4. BEDS TO BE FILLED TO A DEPTH OF 12" FOR ANNUALS & GROUND COVER AND 18" FOR SHRUBS.
5. ALL TREES TO HAVE CLEAR TRUNK OF FIVE FEET MINIMUM.
6. UNLESS OTHERWISE NOTED ALL TREES TO BE STRAIGHT,MATCHING,SINGLE TRUNK.
7. BID SHOULD NOTE CONTAINER OR B&B MATERIAL.
8. UNLESS OTHERWISE NOTED ALL BEDS & NEW TREES ARE TO BE IRRIGATED W/ DRIP IRRIGATION.
9. ALL DRAIN LINES TO FALL 1 1% SLOPE OR GREATER.
10. AS-BUILT DRAWING OF THE IRRIGATION & DRAINAGE SYSTEM TO BE SUBMITTED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
11. SLOPE ALL BEDS TO DRAIN AWAY FROM THE BUILDING IN THE EVENT THAT THE DRAINAGE SYSTEM BECOMES CLOGGED.
12. SOIL SAMPLES HAVE BEEN TAKEN FOR THIS PROJECT. THE PLANT PALETTE WAS DESIGNED TO WORK WITH THE PARENT OR NATIVE SOIL ON SITE. SUBSTITUTIONS OF PLANT MATERIAL ARE NOT PERMITTED W/ OUT APPROVAL OF THE LANDSCAPE ARCHITECT.
13. UNITS OF ANNUAL COLOR SHOWN ON PLAN ARE IN SQUARE FEET. USE CHART BELOW TO DETERMINE QUANTITY OF PLANTS. QUANTITY MAY BE AFFECTED BY SELECTED VARIETIES.

ANC1 = 3.0 PLANTS PER SQUARE FOOT
ANC2 = 2.5 PLANTS PER SQUARE FOOT
ANC3 = 2.25 PLANTS PER SQUARE FOOT

LED FLOODLIGHT

FLOODLIGHT MANUFACTURER:
HYDREL
One Lithonia Way
Conyers,GA 30012
800-534-5604
www.hydrel.acuitybrands.com
800-848-3503

LIGHT MODEL:
SAFT LED SPECIALTY ARCHITECTURAL FLOOD
LIGHT ORDER SPEC:
SAFT LED P140 40CRI MVOLT CML KM GSM_48" L2 FGS BL
COLOR- BLACK TEXTURED

NOTE: ALL ELECTRICAL WORK TO BE PERFORMED BY A LICENSED ELECTRICIAN

5' BOWL PLANTER

PLANTER MANUFACTURER:
POLYMADE
450 S. 55th Street,
Kansas City KS 66106
www.polymade.com
913-213-3740

PLANTER MODEL:
SAUCER BOWL PLANTER 60"d x 16-1/2"t
COLOR- WHITE

SEE SHEET LP2.1 FOR PLANTER DETAIL

PAVER BRICK

BRICK MANUFACTURER:
PINE HALL BRICK
www.pinehallbrick.com

PATHWAY RED PAVER BRICK - 2-1/4" X 4" X 8"

BRICK PATTERNS:
BRICK BORDER - SOLDIER COURSE
BRICK FIELD PAVING - RUNNING BOND
SEE SHEET LP2.1 FOR BRICK PAVER DETAIL

*** NOTE: THE PLANTING LEGEND COVERS MULTIPLE PROJECTS. NOT ALL MATERIALS SHOWN IN LEGEND *** ARE UTILIZED ON THIS PARTICULAR PROJECT. CONTRACTOR TO VERIFY MATERIALS & QUANTITIES NECESSARY FOR PROJECT DURING BIDDING PROCESS PRIOR TO CONSTRUCTION.

SCALE: 1" = 10'

NORTH

LP1.7 SHEET

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE.THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS,AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

GATEWAY - TAFT @ EAST ST. MARY BLVD. LANDSCAPE PLAN

BID
05/18/23

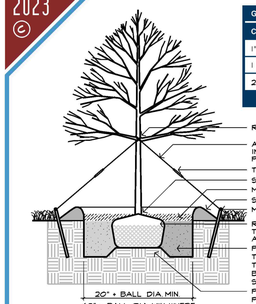
STATE OF LOUISIANA · DANIEL M. SPALLER JR. · REG. NO. 5-382 · LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

2023 ©

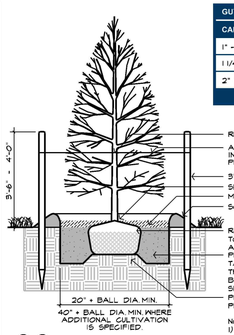
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

01 TREE PLANTING - STANDARD
NOT TO SCALE

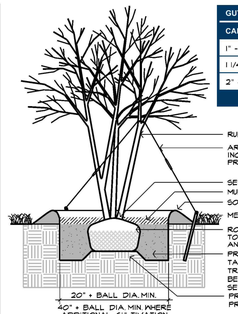
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

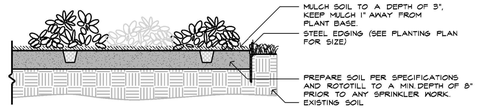
02 TREE PLANTING - FULL TO GROUND
NOT TO SCALE

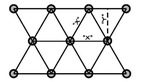
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

03 TREE PLANTING - MULTI-TRUNKED
NOT TO SCALE





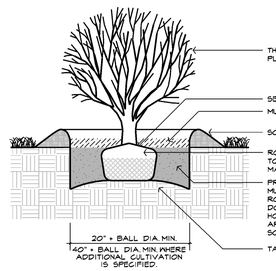
ALL GROUND COVERS TO BE PLANTED ON CENTER IN A TRIANGULAR PATTERN. (SEE PLANTING & PLANTING SPACING LEGEND)
X = O.C. DIMENSION AS NOTED IN LEGEND
Y = ROW SPACING DIMENSION

PLANT SPACING LEGEND

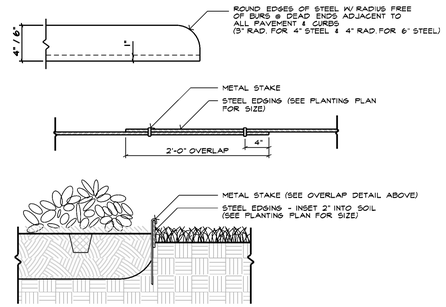
SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.	SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.
6" O.C.	5.2"	4.61	6' O.C.	5.2'	0.032
8" O.C.	6.93"	2.6	8' O.C.	6.93'	0.018
10" O.C.	8.66"	1.66	10' O.C.	8.66'	0.016
12" O.C.	10.4"	1.15	12' O.C.	10.4'	0.008
15" O.C.	13.0"	0.739	15' O.C.	13.0'	0.0059
18" O.C.	15.6"	0.512	20' O.C.	17.3'	0.00288
24" O.C.	20.8"	0.29	25' O.C.	21.65'	0.00185
30" O.C.	26.0"	0.186	30' O.C.	26.0'	0.00128
36" O.C.	30.0"	0.128	40' O.C.	34.6'	0.000722
4'O.C.	3.46'	0.0125			
5'O.C.	4.33'	0.0461			

NOTES:
1. SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES,SIZE,AND SPACING DIMENSION.
2. SMALL ROOTS (1/4" OR LESS) THAT GROW AROUND,UP,OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING.ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING.(SEE ROOT BALL SHAVING CONTAINER DETAIL).
3. SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

04 PLANT SPACING
NOT TO SCALE

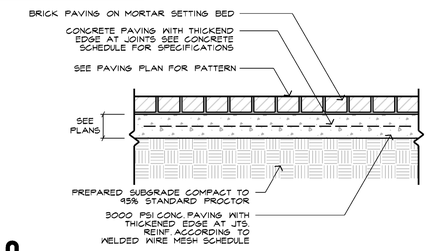


05 SHRUB PLANTING
NOT TO SCALE

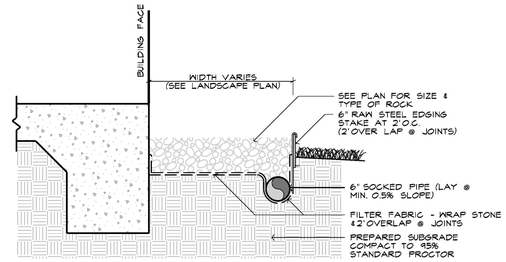


06 STEEL EDGING
NOT TO SCALE

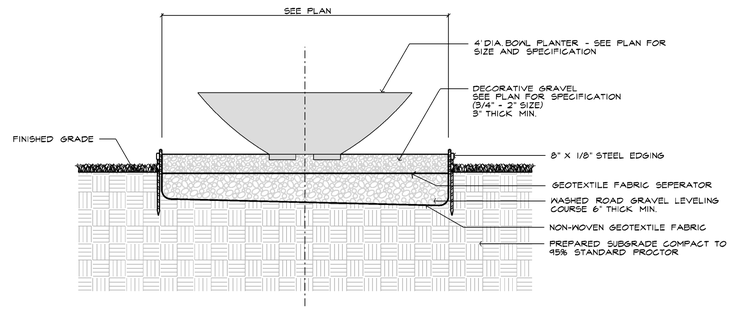
CONCRETE SCHEDULE	
4" PAVING	6X6 * 10/10
6" PAVING	6X6 * 6/6
8" PAVING	6X6 * 4/4



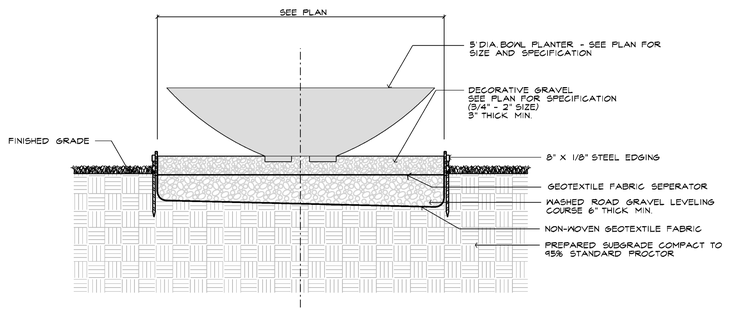
09 BRICK PAVING ON CONCRETE BASE
NOT TO SCALE



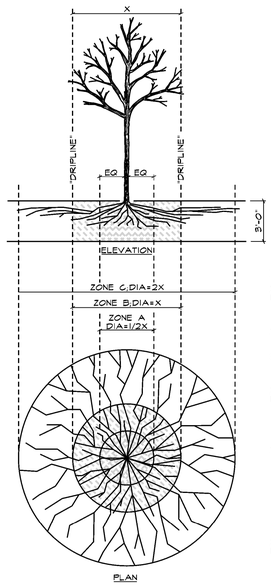
11 FOUNDATION STRIP
NOT TO SCALE



07 RAISED ROCK AREA W/ 4' BOWL PLANTER
NOT TO SCALE



08 RAISED ROCK AREA W/ 5' BOWL PLANTER
NOT TO SCALE



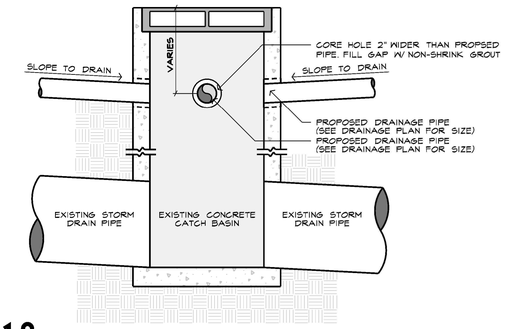
TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
1) NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
2) SEVERANCE OF ROOTS LARGER THAN 2"DIA REQUIRES LANDSCAPE ARCHITECT'S APPROVAL.
3) BORING OR TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER.

ZONE B (DRIPLINE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES REQUIRED.
2) TRENCHING ALLOWED AS FOLLOWS:
- EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED.
- LIMIT TRENCH WIDTH.DO NOT DISTURB ZONE A.MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
- BORING & TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

ZONE C (FEEDER ROOT ZONE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES MAY BE REQUIRED
2) TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
- MINIMIZE TRENCH WIDTH.
- MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION.

10 TREE PRESERVATION DETAIL
NOT TO SCALE



12 CATCH BASIN TIE-IN
NOT TO SCALE

GENERAL NOTES

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR. · REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work in this Section is based on these specifications and the landscape drawings. The scope of work is based on furnishing all labor, materials, tools, transportation, equipment and supervision by the Contractor as required to complete the specified work.

B. In addition to the requirements of these specifications, manufacturer's instructions and recommendations for proper preparation and application of all materials shall be complied with in all respects.

C. Related Work: PLANTING IRRIGATION

1.2 QUALITY ASSURANCE

A. Contractor shall be fully qualified, licensed, capable and experienced in the installation of the described landscape. Evidence of the Contractor's qualifications shall be presented prior to the award of the Contract.

B. The following industry standards shall govern landscape materials and installation. The most stringent requirement shall rule when conflicts between the standards occur and as determined by the Landscape Architect.

1. American Standard for Nursery Stock (Most Current Edition)
2. Horticultural Standards, American Association of Nurserymen.
3. Recommended Standard Specifications for Planting Trees, Shrubs and vines and Fine Grading and Seeding Lawns, second printing - December 1968.
4. American Joint Committee on Horticultural Nomenclature: Latest Edition.

1.3 SUBMITTALS

A. Digital photographs representing each variety shall be submitted for approval by the Landscape Architect prior to ordering any plant material. (The submittal of photographs does not in any way relieve the Contractor of his responsibility to comply with the specifications and applicable standards.)

B. The selection of all materials and the execution of all operations required under the drawings and these specifications are subject to the approval of the Landscape Architect or Owner.

C. The Landscape Architect or Owner shall have the right to reject all material and all work which, in his opinion, does not meet the requirements of the drawings and/or specifications at any stage of the operation. All rejected material shall be removed by the Contractor, as directed, at the Contractor's expense.

1.4 PROTECTION OF EXISTING WORK

A. Location of underground infrastructure such as existing water, telephone, cable, electrical, gas, sewer and drainage lines, and other utilities, shall be ascertained or verified by the Contractor prior to initiating work. The Contractor shall protect the same by means acceptable to the Owner before commencing construction and maintain such protection until the job is accepted by the Owner.

B. Protective measures shall be taken to secure walls, walks, driveways, parking lots, light poles, grass and structures from damage or discoloration. The Contractor shall furnish and install necessary pads, tarpaulins, burlap, building paper, or clean straw to protect existing work.

1.5 EXTRAS, OMITTED OR CHANGES IN WORK

A. While no new unforeseen items are anticipated, they shall be classified as extra work when they cannot be covered by any of the specifications. The Contractor shall submit detailed prices for any extras to the Landscape Architect, and shall perform extras only upon prior written acceptance from the Owner. All such extra work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents. In the absence of such written order, the Contractor shall not be entitled to payment for such extra work.

B. The Landscape Architect shall have the authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time, and not inconsistent with the contract documents. Such changes may be effected by field order or by other written order. Such changes shall be binding on the Contractor.

C. The Owner, without invalidating the contract, may order changes in the work consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents.

1.6 MEASUREMENTS, LAYOUT & LEVELS

A. The Contractor shall layout all lines and levels necessary for the location and erection of the landscape construction and for all excavation, filling and grading work and set necessary markers and stakes, and be responsible for their correctness.

B. The Contractor shall take his own measurements of the site verifying same with the drawings, and shall be responsible for proper fit of his portion of the completed work.

C. The spacing of plants shall conform to the spacing designated on landscape plans and specifications, but variations are permissible when unforeseen site conditions such as underground pipes, etc., make uniform spacing impractical, in which case the Contractor shall abide by instructions, furnished by the Landscape Architect or Owner. Departure from specified spacing will be allowed when site conditions do not permit the specified number of plants in a grouping in which case the minimum spacing shall govern the number of plants to be placed in the group and the excess plants shall be located as directed by the Landscape Architect or Owner.

D. Where proposed grades are not indicated, the Contractor shall in all cases provide the necessary pitch on semi-level areas to drain them to a point designated by the Landscape Architect or Owner.

E. The Landscape Architect reserves the right to relocate shrubs and trees from positions on the plans prior to their planting.

1.7 SUBSTITUTION OF MATERIALS

A. The Contractor, before submitting his bid, shall locate all necessary materials as called for in the plans and specifications, and shall be assured of their availability for use on this job.

B. The contract bids shall be based upon providing the specified materials, processes, products, etc., identified in the specifications and/or indicated on the drawings.

C. Substitutions will not be permitted unless upon admission of proof that specified plants are not obtainable and with the authorization of the Landscape Architect. Written requests with nearest available size, variety of plant and price adjustments are to be submitted to the Landscape Architect.

1.8 PLANT & MATERIAL LIST

A. The Contractor shall furnish the plant material as specified and described in this section.

B. Quantities shall be determined by referring to the Drawings.

C. Names, species, and varieties of all material furnished by the Contractor shall be in accordance with the Drawings and Specifications.

D. The Contractor shall furnish, on request of the Owner, satisfactory proof as to the names and species, variety, and size and shall be made only on written authorization of the Owner.

1.9 MEASUREMENT

A. The quantities for payment will be the design quantities specified in the plans and adjustments thereto.

B. Design quantities will be adjusted if the Landscape Architect makes changes to adjust to field conditions, if plan errors are proven or if design changes are necessary.

C. Design quantities are based on the horizontal dimensions shown on the plans.

PART 2 - PRODUCTS

2.1 TOPSOIL: The Contractor shall use salvaged onsite topsoil to the extent possible and topsoil from offsite borrow to supplement that salvaged. The topsoil shall be a fertile, friable, natural topsoil of a loamy character. It shall contain a normal amount of decomposed organic matter and shall be free of stones, lumps, clay, toxic materials, plants or their roots, stacks and other extraneous matter. The topsoil shall be within a pH range of 5.0 to 6.5. Topsoil testing shall be at the Owner's expense and by a third party entity.

2.2 SOIL CONDITIONER MIX: Finely chopped pine bark mulch to be incorporated into the soil, shall be free from weeds, moss, sticks and other debris but shall contain a generous amount of sand (average 20% by volume) and shall be well decomposed.

2.3 PEAT MOSS: Peat moss shall be a horticultural grade, sphagnum peat moss containing partially decomposed fibrous or cellular stems and leaves of any of the many species of sphagnum mosses from fresh water sources conforming to the following requirements:

A. Peat moss shall be a homogeneous material free of decomposed colloidal residue lumps, roots, stones, and other foreign matter; and of such consistency that peat can pass a 1/2 in. mesh and can be readily incorporated with the topsoil.

B. The pH shall not be less than 3.5 nor greater than 5.5 at 25 degrees C.

C. Organic matter content shall not be less than 90% by weight, on an oven-dry basis.

D. Ash content shall not be more than 10% by weight, on an oven-dry basis.

E. Moisture absorption capacity shall not be less than 800%, by weight, on an oven-dry basis.

2.4 TOP DRESS MULCH: Top dress mulch shall be clean and free from weeds, moss, sticks, soil and any other objectionable material.

A. The pH shall not be less than 3.5 nor greater than 5.3 at 25 degrees C.

B. The Contractor shall submit a one cubic foot sample of the mulch for approval by the Landscape Architect.

2.5 FERTILIZER: Osmocote 14-14-14, or approved equal, shall be used in bed areas and for trees. The fertilizer shall be stored in a cool, dry place in unopened bags until it is ready to be incorporated into the backfill mixture. Agriform tree tablets can be used in lieu of the Osmocote for tree plantings only, and must be applied at the manufacturer's recommended rate.

2.6 SOD: Class "A" premium grade sod consistent with the variety(s) called out in the plans.

A. Sod shall be machine cut at a uniform soil thickness at a height appropriate to the specified species.

B. Pad Size: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 0.5 inch (15 mm) on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.

C. Strength of Turf Sod Sections: Standard size sections of sod shall be strong enough that it can be picked up and handled without damage.

D. Moisture Content: Sod shall not be harvested or transplanted when its moisture content (excessively dry or wet) may adversely affect its survival.

E. Mowing Height: Before harvesting, the sod shall be mowed uniformly at a height of 1 to 2.5 inches (25 to 60 mm) on cool season grasses (i.e., bluegrass, bent grass, rye and fescue), and 0.75 to 1.50 inches (20 to 40 mm) on warm season grasses (i.e., zoysia grass, Bermuda grass, St. Augustine grass, etc.)

F. Time Limitations: Sod shall be harvested, delivered and installed/transplanted within a period of 24 hours, unless a suitable preservation method is approved prior to delivery. Sod not transplanted within this period shall be inspected and approved by the inspecting officer or his representative prior to its installation.

G. Thatch: Sod shall be relatively free of thatch, up to 0.5-inch (15mm) allowable (uncompressed).

H. Diseases, Nematodes and Insects: Sod shall be reasonably free of diseases, nematodes and soil-borne insects. Specific nursery and/or plant materials laws may require that all sod entering inter-state commerce be inspected and approved for sale. The inspections and approval must be made by the appropriate government representative of the agriculture department or office of entomologist.

I. Weeds: Nursery grown turf grass sod shall be free of objectionable grassy and broad leaf weeds. Turf grass sod shall be considered free of such weeds if less than 5 such plants are found per 100 square feet (10 sq m) of area. Sod will not be acceptable if it contains any of the following weeds: common Bermuda, johnson grass, poison ivy, nutsedge, thistle, bindweed, bent grass or wild garlic.

2.7 PLANTS: TREES, SHRUBS & GROUND COVER

A. Caliper measurement of trees shall be taken at six inches above natural ground up to and including four inch caliper material. If the caliper six inches above natural ground exceeds four inches, the caliper will be measured twelve inches above natural grade.

B. Shrubs shall be well shaped, full branched plants with heights measured to point in the main perimeter of branches or foliage rather than to single shoots or leaders. Plants with single stems shall have sufficient, well spaced side branches to give them weight equal to one grown with numerous canes. Canes shall be considered as primary stems starting from the ground or from a point not higher than one-fourth (1/4) the height of the plant.

C. Sizes of balls shall be at least six inches (6") greater in diameter than the minimum sizes established for individual plant types as recommended by "Horticultural Standards" latest edition of American Association of Nurserymen, Inc. Depth shall be sufficient to encompass the fibroid and feeding root system necessary for the full recovery of the plant and in no case shall be less than recommended ratios to diameter as recommended by "Horticultural Standards", latest edition of the American Association of Nurserymen, Inc. All balls shall be firm, intact, slightly tapered, well burlapped and securely fastened with twine or nails or both. Any tree which is determined to be loose in the ball or with a broken ball at the time of planting will be rejected.

D. Any plants having any of the following unnatural or objectionable features will be rejected: excessive abrasions of the bark; dried out root system; excessive dead or dried up wood; excessive sun scald injuries; undeveloped and weak top or roots or both; crooked or one-sided development of tops; no straight leaders on trees naturally and normally having them; broken or removed leaders; untrue types or sizes; root-bound container grown plants; excessively damaged or loose balls of soil; plants actually dead, diseased or insect infested and plants not otherwise complying with the plant specification herein.

E. The rejected material shall be removed from the site and replaced as quickly as possible with new plant material of the same kind, meeting the requirements, at the expense of the Contractor.

PART 3 - EXECUTION

3.1 PLANT DELIVERY, UNLOADING & STORAGE

A. All plants shall be delivered to the job in good condition and unloaded with care so that balls and tops are not damaged. Balled & burlapped plants shall not be handled or lifted by their tops or trunks.

B. The Contractor shall be responsible for the protection of plants from damage through weather conditions, improper storage, vandalism, theft, and injury, and shall unload plants in a location approved by the Owner, requiring the minimum amount of moving to locations where they are to be planted.

C. Whenever and wherever possible, delivery shall be made within a reasonable time of completion of planting pits or beds and if unforeseen conditions prevent immediate planting, the Contractor shall heel in plants, watering same if necessary and protect from drying winds and sun in accordance with good nursery practices.

D. If in the opinion of the Owner, plants have been damaged through prolonged intervals between delivery and storage, they shall not be used in planting, and shall be replaced by new plants conforming to original specifications.

3.2 TREE & SHRUB PIT PLANTING

A. Pits shall not be prepared and left open for prolonged periods prior to planting. Pits shall be protected until used so that sides do not crumble and so pits do not become saturated with water. All damaged pits shall be restored to original condition and shall be drained of surface water before usage.

B. Depth of pits shall not be more than two inches (2") greater than depth of the ball to be received. Diameter of pits shall be such that there is no less than ten inches (10") of space all around the balls or root spread of bare-root plants, except in the case of trees in which case the space shall be increased to twenty inches (20"). Bottom of pit shall be thoroughly loosened to a depth of eight inches (8") before plant is placed in pit. Tops of plants shall not be cut loose until plant is set to correct depth in pit.

C. Excavated earth shall be piled sufficiently far back from the edge of the pit to prevent earth sliding back into pit when plants are placed. Surplus excavated earth shall be disposed of immediately after planting is completed to prevent mixing of same with topsoil.

D. Mixture used in backfilling pits shall consist of 75% topsoil, 10% peat moss, 10% pine bark mulch and 5% sand mixed by volume with a slow release fertilizer at the manufacturer's recommended rate. Mixing shall not be done in the pits. Refer to Article 16, MATERIALS, of this specification.

E. After plant has been set and pit has been backfilled to two-thirds (2/3) of its depth, mixture shall be tamped thoroughly and settled with water. When settling has been accomplished, pit shall be brought to level of adjacent ground with same mixture. Slope finished grade slightly toward center of plant.

F. A six inch saucer shall be constructed for all trees planted outside of prepared landscape beds.

3.3 BED ALIGNMENT

A. The Contractor is responsible for planting all material at the correct grades, locations and alignment.

B. The location of plant material and the outline of beds and other areas indicated on the plans shall be followed as closely as possible.

C. Any questions regarding bed alignment shall be brought to the attention of the Landscape Architect immediately.

3.4 BED PREPARATION & PLANTING

A. Conventional Bed Preparation: This technique shall be used unless otherwise noted.

1. Before the start of conventional bed preparation, all areas to be prepared shall be stripped of any grass, weeds, etc., to a minimum depth of (1) inch.
2. All beds shall be rototilled to a depth of ten (10) inches to completely blend the topsoil with one and a half (1.5) cubic yards of soil conditioner mix (see 'PRODUCTS' section) per one hundred (100) square feet of bed prior to rototilling.
3. All bed areas shall then be treated with a granular weed pre-emergent (Eptam or approved equal) at a rate and the method specified by the manufacturer.
4. All beds shall be fertilized with Osmocote 14-14-14, or an approved equal at the manufacturer's recommended rate of one (1) pound per fifty (50) square feet or per any project-specific recommendation.
5. Before planting, the bed area shall be raked and leveled to a fine grade, allowing for proper surface drainage.

3.5 PLANTING

A. After completion of fine grading, the plants shall be placed at the positions indicated on the plans. All plants shall be set so that when settled, they will bear the same relation to finish grade as they did before transplanting. No filling will be permitted around trunks or stems.

3.6 SODDING

A. The soil shall be thoroughly tilled to a depth of four (4) inches.

B. The trees specified on the plans shall already have been planted and guyed before laying sod.

C. The sod bed shall be fine graded to remove all ridges or depressions and the surface cleared of all stones and debris.

D. The sod shall be laid perpendicular to the direction of the slope and in a manner which will permit joints to alternate.

E. Sod panels shall be fitted together tightly so that no joint is visible and tamped firmly and evenly by hand.

F. Immediately following sod placement, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered.

G. During delivery, prior to and during the planting of lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun.

H. Top dressing with washed, clean, weed free builder's sand may be required if deemed necessary by the Owner or Landscape Architect to level depressions in the grade or imperfections in the sod.

3.7 MULCHING

A. After completion of all planting operations, beds and tree pits are to be mulched.

B. Tree pits shall have a 3" covering of top-dress mulch and bed areas shall have a minimum of 3" throughout.

3.8 WATERING

A. Watering of areas planted shall be done on the same day planting is done.

B. All planted areas shall be watered as often as necessary as the work progresses, if weather conditions require same.

C. Watering shall be done by competent workmen, with minimum disturbance of adjoining areas and following the direct instruction of the licensed Contractor.

D. Contractor shall supply necessary topsoil or soil mix to compensate for any settling that takes place due to watering.

3.9 PRUNING & REPAIR

A. Pruning for shape shall be done by the Contractor only if so instructed by the Landscape Architect.

B. Pruning shall consist of shaping the plant to a pleasing outline in accordance with good nursery practices.

C. Pruning shall be done in such a manner so as not to change the natural habit or shape of the plant.

D. Cut-back pruning of all dead wood and injured branches shall be done immediately after planting.

E. Injured branches or damaged branches shall be cut back to sound live wood in accordance with good nursery practices.

F. Shade trees shall be cut back only on authorization of the Landscape Architect.

G. Pruning shall be done before final watering and application of mulch.

H. All debris and trimmings shall be removed immediately.

3.10 TREE STAKING & GUYING

A. Guys shall be furnished and erected by the Contractor for all trees to prevent wind movement, in accordance with the following instructions:

1. Trees up to one and one-fourth inch (1-1/4") caliper: Three (3) supports spaced triangularly around trunk at a distance of fifteen inches (15").
2. Trees one and one-fourth inch (1-1/4") to two inch (2") caliper: Three (3) supports spaced triangularly around trunk at a distance of twenty inches (20").
3. Trees two inches (2") and over in caliper: Three (3) supports spaced triangularly around trunk in clear areas between perimeter ball and edge of plant pit.

B. Supports (stakes) shall be as specified on the drawings and of sufficient length that on being driven substantially into the ground, tops of stakes will be no less than two-thirds (2/3) the distance from ground to lowest branches or forks.

C. Method of fastening supports to tree shall be by means of aluminum wire or No. 12 gauge galvanized wire looped through sections of rubber hose and fastened to supports in such a manner that hose sections prevent damage to bark of tree or by use of ArborTie brand guy line (or approved equal).

D. When the tree has been steadied erect, guy lines shall be tightened to equalize pressure to prevent any wind movement.

E. Contractor shall see that there is no twisting strain thrown on tree trunks when slack is taken up on wires and that rubber hose sections are installed in a manner that there will be no friction damage to bark.

3.11 PROTECTION

A. The Contractor shall protect all plants and lawns from damage at all times.

B. If plants or lawns are damaged, they shall be replaced or treated by the Contractor at his expense to the satisfaction of the Owner or his representative.

3.12 MAINTENANCE

A. The Contractor shall maintain all trees, shrubs and groundcover under this contract until final acceptance, by watering, cultivating, weeding, spraying and replacing as necessary to keep plants in a healthy, vigorous condition, and shall rake bed areas as may be required to keep them neat.

B. The Contractor shall maintain all grass areas under this contract until acceptance by watering, mowing, spraying, etc.

C. Watering: All lawn areas shall be watered once a day with a minimum of 1/2" of water up until final acceptance. Thereafter, watering shall be turned over to the Owner where the Contractor shall provide him with the proper procedures for continued watering. All trees, shrubs and groundcover shall be watered twice a week until final acceptance by the Contractor, providing 1" of water each time unless a comparable amount of rain has been provided.

D. Weeding: Shall consist of pulling or digging out all plant material other than the desired shrubs and groundcover until final acceptance.

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REGISTERED
LICENSED
LANDSCAPE ARCHITECT

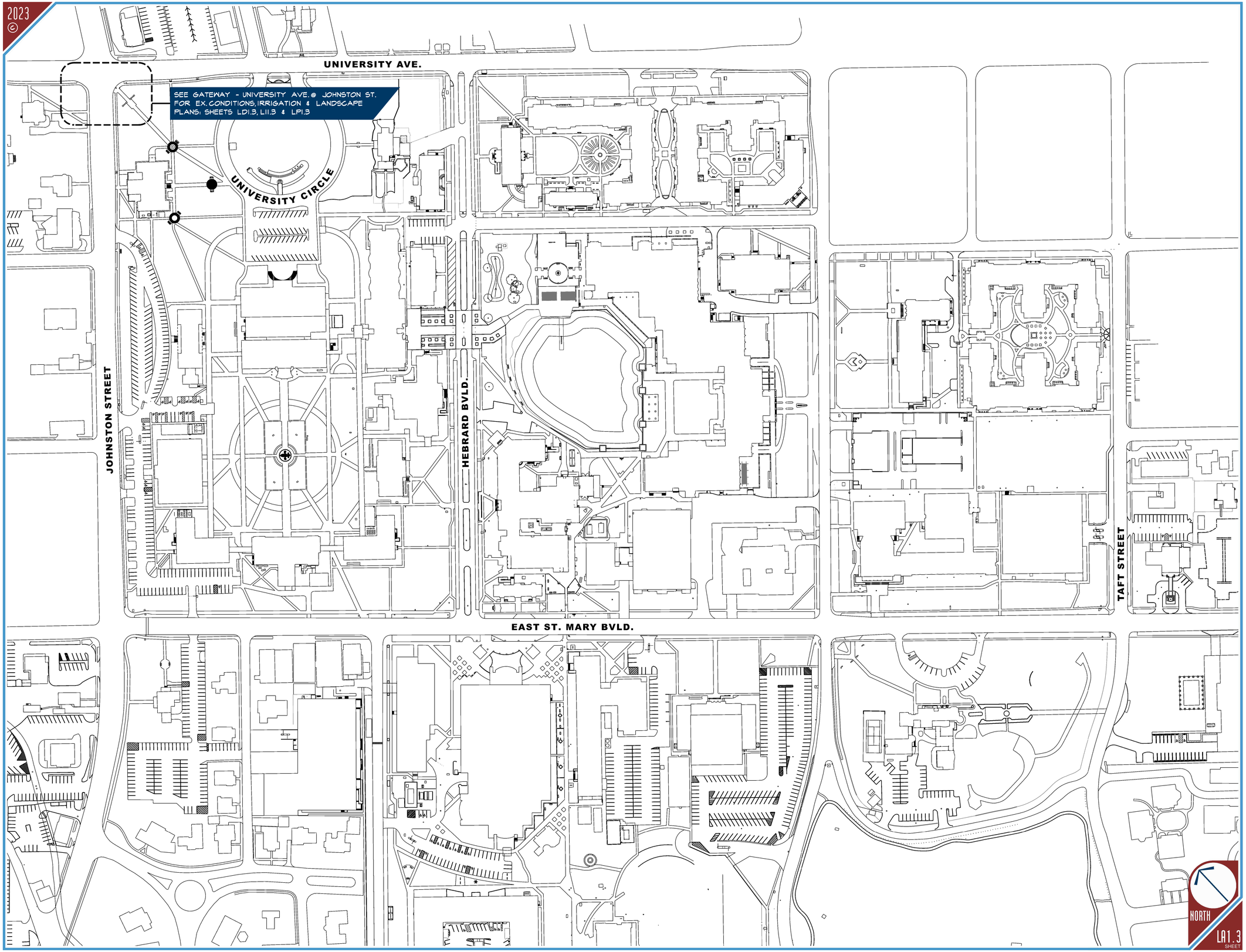
NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

LP2.2 SHEET

2023 ©



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PROJECT - 22113.00

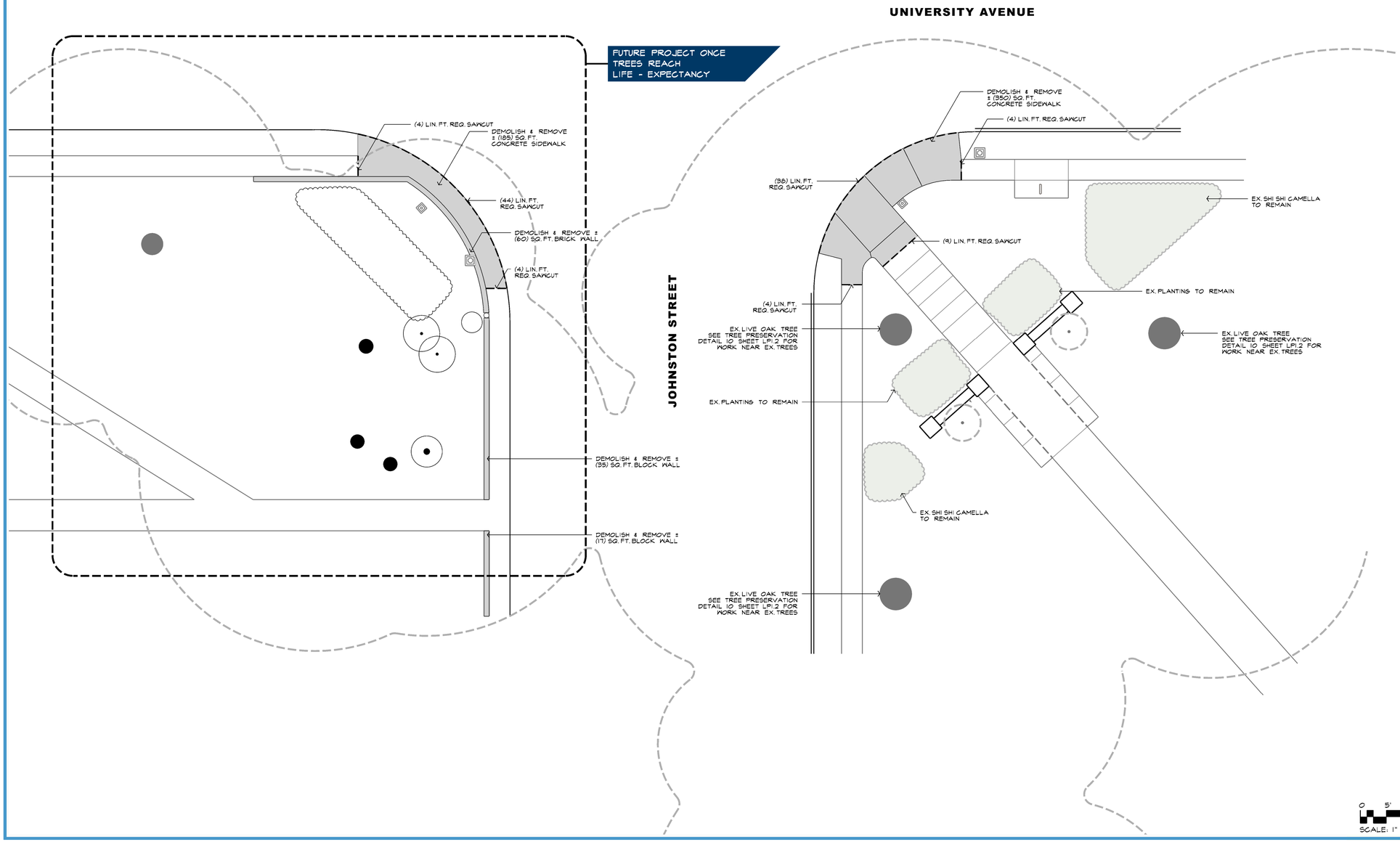
CAMPUS KEY PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944



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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT •

GATEWAY - UNIVERSITY AVE. @ JOHNSTON ST. DEMO & EX. CONDITIONS PLAN

STATE OF LOUISIANA
DANIEL M. SPILLER JR.
REG. NO. 5-362
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

SCALE: 1" = 10'
0 5' 10' 20
NORTH
LD1.3
SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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IRRIGATION NOTES

1. IRRIGATION CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S CURRENT SPECIFICATIONS AND RECOMMENDATIONS.
2. CALL 811 PRIOR TO DIGGING OR TRENCHING.IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING AND NEW UTILITY LINES ABOVE OR BELOW GROUND AND SHALL REPAIR ANY DAMAGE CAUSED DURING IRRIGATION CONSTRUCTION ACTIVITIES AT NO COST TO THE OWNER.
3. WHEN TRENCHING UNDER THE DRIPLINE OF TREES,EXTREME CARE MUST BE GIVEN TO AVOID ROOT DAMAGE. IF AT ALL POSSIBLE AVOID TRENCHING INSIDE THE DRIPLINE BY GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR UNDER THE DRIPLINE,USE HAND-DIGGING METHODS RATHER THAN A MECHANICAL TRENCHER. MINIMIZE THE IMPACT OF ROOT SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER.KEEPING TREES WELL WATERED BEFORE AND AFTER DIGGING AND COVERING ROOTS WITH SOIL OR MULCH AS SOON AS POSSIBLE.
4. IRRIGATION CONTRACTOR SHALL VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 50psi WITH A FLOW RATE OF 50gpm AT THE WATER METER LOCATION PRIOR TO INSTALLATION.IRRIGATION CONTRACTOR SHALL NOTIFY ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
5. IRRIGATION CONTRACTOR TO COORDINATE WITH THE ARCHITECT AND OWNER EXACT LOCATION OF WATER METER,BACKFLOW PREVENTER,CONTROLLER AND SENSORS.
6. THE OWNER SHALL VERIFY OPERABLE WATER SERVICE.
7. OWNER TO PROVIDE DEDICATED 15 AMP CIRCUIT & GCFI OUTLET W/ WEATHER PROOF COVER.IN LOCATIONS WHERE NEW CONTROLLER IS REQ.
8. THE IRRIGATION DESIGN IS DIAGRAMMATIC. THE INTENT OF THE DRAWINGS IS TO SHOW THE GENERAL LAYOUT AND LOGIC OF THE SYSTEM. SCALED MEASUREMENTS MAY NOT BE ACCURATE. ACTUAL LOCATIONS AND QUANTITIES OF PIPE AND FITTINGS MAY VARY DUE TO FIELD ADJUSTMENTS FOR EXISTING CONDITIONS AND OTHER OBSTRUCTIONS TO PROVIDE THE PROPER AND INTENDED COVERAGE.
9. ALL MAINLINE SHALL BE SCH40 PVC. ALL LATERAL PIPING SHALL BE CLASS 200 PVC PIPING. ALL PVC FITTINGS SHALL BE PVC TYPE I AND MUST BE OF DOMESTIC MANUFACTURE. PVC SOLVENT CEMENT AND PRIMER SHALL BE AS RECOMMENDED / APPROVED BY THE MANUFACTURER OF THE PIPE.
10. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF PVC SLEEVES AS INDICATED ON THE DRAWING. INSTALL FLOWLINE OF SLEEVES 18"BELOW ROADWAY BASE. EXTEND SLEEVES 18" BEYOND BACK OF CURB AND CAP UNTIL CONTRACTOR IS READY TO BEGIN THE INSTALLATION OF SPRINKLER SYSTEM. STAKE LOCATION OF SLEEVE WITH T-POSTS AND FLAGS. ALL JOINTS TO BE GLUED.
11. IRRIGATION CONTRACTOR TO USE 18 GAUGE MULTI-STRAND IRRIGATION CONTROL WIRE. COMMON WIRE TO BE 14 AWG COMMERICAL GRADE VALVE WIRE.

IRRIGATION EQUIPMENT LEGEND

SYMBOL	INFORMATION
	1" WATER METER (LOCATION AND METER TO BE PROVIDED BY THE OWNER PRIOR TO CONSTRUCTION) CONTRACTOR TO VERIFY FLOW AND PRESSURE PRIOR TO INSTALLAING SYSTEM (IF REQUIRED)
	WATTS 1-1/2" SERIES 9A REDUCED PRESSURE ZONE ASSEMBLY W/ FREEZE COVER (IF REQUIRED)
	GATE VALVE / MASTER VALVE (IF REQUIRED)
	RAINBIRD XCZ-PRB-100-COM 1" DRIP VALVE ASSY
	RAINBIRD ESP-LXME MODULAR CONTROLLER W/ (12) STATION MODULE - EXPANDABLE (IF REQUIRED)
	RAINBIRD RSD-BEX WIRED RAIN + FREEZE SENSOR (IF REQUIRED)
B	RAINBIRD XERI BUBBLER 1032 - 3 GPM FLOW
- — - —	RAINBIRD XFD-06-12 DRIPLINE TUBING
———	DISTRIBUTION PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
———	LATERAL PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
- - - -	MAINLINE - SCH 40 PVC (ALL PIPING TO BE 1-1/2"" MIN UNLESS OTHERWISE NOTED)
	SCHEDULE 40 PVC SLEEVING BY DIRECTIONAL BORE - SEE PLAN FOR SIZE REQUIREMENT. NO JOINTS ALLOWED UNDER PAVEMENT.

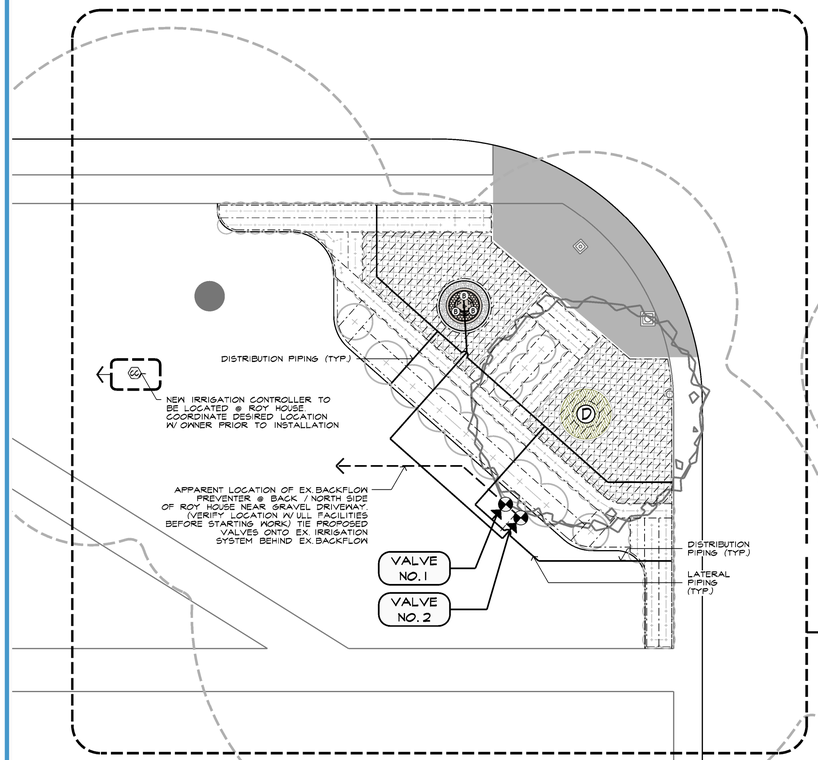
NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
2. ALL EQUIPMENT CAN BE SUBSTITUTED FOR AN EQUAL APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR TO SUPPLY OWNER / LANDSCAPE ARCHITECT W/ (AS-BUILTS UPON COMPLETION)

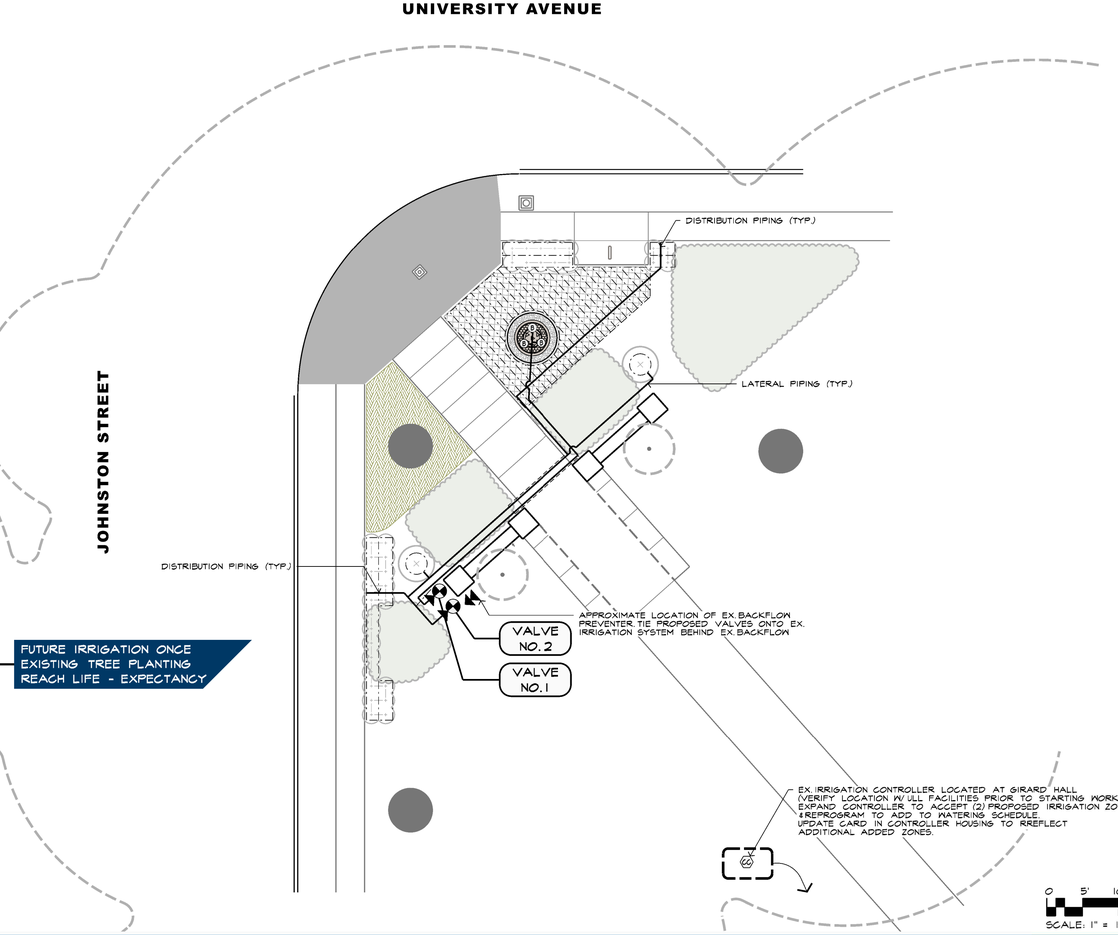
IRRIGATION EQUIPMENT LEGEND

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	517
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	1.5	——

IRRIGATION EQUIPMENT LEGEND ROY HOUSE - FUTURE

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	735
2	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	1.5	——





LI1.3
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GENERAL NOTES

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2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS,AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT - 22113.00

GATEWAY - UNIVERSITY AVE. @ JOHNSTON ST. IRRIGATION PLAN

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3539
FAX 337.993.3944

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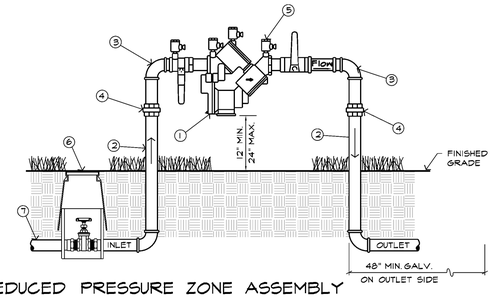


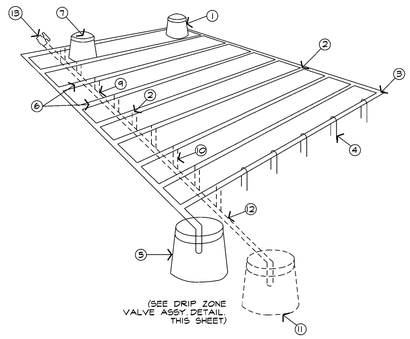
LIST OF MATERIALS

1. APPROVED ANTI-SIPHON PRESSURE VACUUM BREAKER ASSEMBLY,BALL VALVES INCLUDED.
2. GALV. PIPE, ¾" THRU 2".
3. 90° ELL,GALV., ¾" THRU 2 ½".
4. GALV. PIPE UNION.
5. TEST COCKS WITH BRASS PLUGS OR ADAPTORS WITH CAPS INSTALLED.(2 REQUIRED)
6. GATE VALVE IN BOX
7. COPPER NIPPLE AS REQUIRED BY CODE
8. CONTRACTOR TO PROVIDE INSULATED FIBERGLASS ENCLOSURE OR APPROVED EQUAL.

GENERAL NOTES

1. CONTACT THE LOCAL GOVERNING AUTHORITY FOR LATEST LIST OF APPROVED BACK-FLOW PREVENTION ASSEMBLIES.
2. BACKFLOW PREVENTERS MUST BE TESTED BEFORE FINAL APPROVAL IS ISSUED.
3. GALVANIZED FITTINGS SHALL BE CONNECTED USING PIPE DOPE OR TEFLON TAPE.
4. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
5. ALL NIPPLES TO BE COPPER OR BRASS.
6. PIPING UNDER THE CITY RIGHT OF WAY MUST BE PER CITY CODE.
7. CALL LANDSCAPE ARCHITECT FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.

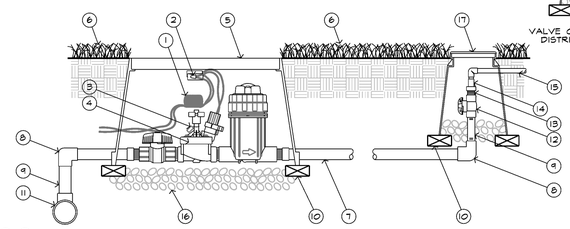
01 REDUCED PRESSURE ZONE ASSEMBLY
NOT TO SCALE



1. FLUSH CAP IN 6" VALVE BOX
2. MDCFTEE COMPRESSION TEE
3. MDCFEL COMPRESSION ELBOW
4. TDS-050 W/BEND TIE DOWN STAKE INSTALL 3'O.C.ON ALL TUBING
5. CONNECTION POINT TO PVC LATERAL LINE IN 10" VALVE BOX
6. SPACING - SEE PLANS
7. AIR/VACUUM RELIEF VALVE IN 6" VALVE BOX
8. PVC DISTRIBUTION PIPE TO BE USED ON LARGE ZONES.(SEE PLAN FOR PIPE SIZES & LOCATION)
9. PVC FITTINGS (TYPICAL)
10. PVC SCH.80 NIPPLE AND ¾" FHT ADAPTER
11. DISTRIBUTION VALVE (AS REQUIRED)
12. DISTRIBUTION PIPE (AS REQUIRED)
13. PVC FLUSH VALVE

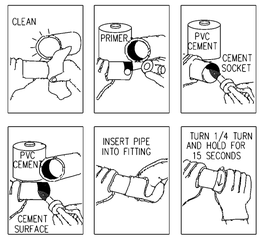
RAINBIRD XFD-06-12 DRIP TUBING
FLOW RATE = 0.6 GPH DRIPPER SPACING = 12"O.C.

02 DRIP TUBING LAYOUT - (DISTRIBUTION PIPE)
NOT TO SCALE



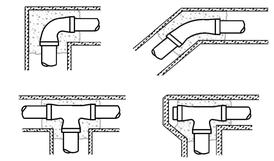
1. 30-INCH LINEAR LENGTH OF WIRE,COILED
2. WATERPROOF CONNECTION SPLICE-1 (1 OF 2)
3. ID TAG W/VALVE NUMBER
4. RAINBIRD XCZ-PRB-100-COM DRIP ZONE VALVE ASSY (INCL. VALVES,FILTER WITH PSI REG.)
5. VALVE BOX WITH COVER
6. FINISH GRADE/TOP OF MULCH
7. PVC CL200 PIPE
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4 PER BOX)
11. PVC MAINLINE PIPE
12. ¾" BALL VALVE
13. ¾" MPT x ¾" ADAPTER
14. ¾" FHT ADAPTER
15. RAINBIRD XFD DRIP LINE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. 10" VALVE BOX (CLEARLY LABELED NON-POTABLE WATER)

03 DRIP ZONE VALVE ASSY. (PRB),CONNECTION POINT & BOX
NOT TO SCALE



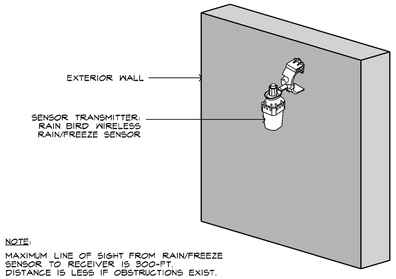
NOTES:
1. NEVER LAY PVC PIPE WHEN THERE IS WATER IN THE TRENCH
2. NEVER LAY PVC PIPE WHEN THE TEMPERATURE IS 32°F OR BELOW

04 PVC ASSEMBLING
NOT TO SCALE



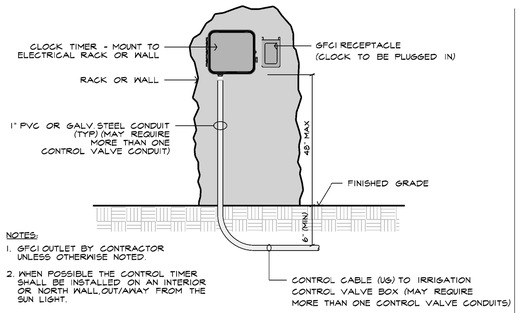
NOTE:
ALL FITTINGS SHALL BE WRAPPED IN POLY PLASTIC BEFORE THRUST BLOCKS ARE INSTALLED.CONCRETE SHALL NOT COVER THE TOP OF ANY FITTING.

05 TYPICAL THRUST BLOCKING
NOT TO SCALE



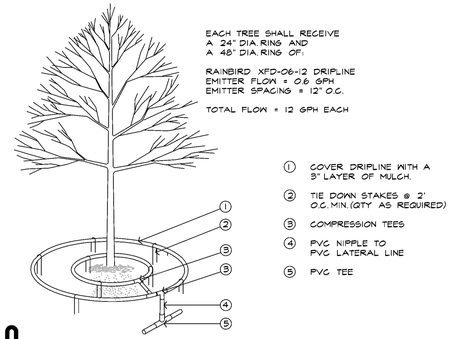
NOTE:
MAXIMUM LINE OF SIGHT FROM RAIN/FREEZE SENSOR TO RECEIVER IS 300-FT. DISTANCE IS LESS IF OBSTRUCTIONS EXIST.

06 RAIN/FREEZE SENSOR WALL/FENCE MOUNT - STANDARD
NOT TO SCALE



NOTES:
1. GFCI OUTLET BY CONTRACTOR UNLESS OTHERWISE NOTED.
2. WHEN POSSIBLE THE CONTROL TIMER SHALL BE INSTALLED ON AN INTERIOR OR NORTH WALL,OUT/AWAY FROM THE SUN LIGHT.

07 CONTROLLER MOUNTING - PLUG IN
NOT TO SCALE



1. COVER DRIPLINE WITH A 3" LAYER OF MULCH.
2. TIE DOWN STAKES @ 2' O.C.MIN.(QTY AS REQUIRED)
3. COMPRESSION TEES
4. PVC NIPPLE TO PVC LATERAL LINE
5. PVC TEE

08 TREE DRIP-RINGS
NOT TO SCALE

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPALLER JR.
REGISTERED
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. General provisions of the contract and other applicable parts of the construction documents apply to this Section.

1.2 SUMMARY:

A. Furnish all labor, materials, equipment and instructions necessary for the complete installation of the landscape irrigation system as drawn and specified. The work includes, but is not limited to:

1. Trenching, backfilling, and compaction for irrigation lines.
2. Provisions and installation for a turnkey automatic sprinkler system. Provide backflow preventer, controller, piping, heads, drip lines, valves, quick couplers, valve access boxes, low voltage wiring, applicable connection fees and all other items required for a complete system as shown on the Drawings, called for in the specifications or as may be required for proper operation of the system. The system shall be installed in strict accordance with all applicable codes, ordinances and regulations.
3. Test all systems, make operative and adjust.
4. Submit Record Drawings, Maintenance Manual and satisfactory evidence to show that all work has been installed in accordance with the ordinance and code requirements.
5. Maintain and operate until substantial completion.
6. One-year Guarantee Period.

B. Related work by others:

1. Water Meter as provided by the General Contractor.
2. Sch40 PVC Sleeves as provided by General Contractor.
3. Electrical work and Conduit as provided by General Contractor for the automatic controller & backflow preventer.

C. Provide drip tubing in all shrub and groundcover beds as designated. Provide pop up spray heads in turf areas. Provide the number of heads required to assure 100% coverage. Layout the system so that the shrub and groundcover beds are on separate zones from the turf areas.

D. Provide winterizing for the system using automatic drain valves in the low-points of lateral piping and heat-tape for the backflow preventer.

E. Coordinate exact locations of water meter and backflow preventer with the General Contractor.

F. The Contractor shall coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs.

G. The Contractor shall install the irrigation system in accordance with the schedule requirements provided by the General Contractor.

1.3 QUALITY CONTROL:

A. The sprinkler system shall be designed, to the extent possible, to promote water, soil and energy conservation. The system shall include a rain sensing device and shall be consistent with any water conservation ordinance enacted by the city.

B. Provide Installation by a licensed Irrigation contractor, skilled in work required and completely familiar with manufacturer's recommended method of installation requirements. Contractor must have a minimum of two (2) consecutive years experience in this area of work and having completely installed other jobs of similar size and scope. Evidence of the Contractor's qualifications shall be presented before the award of contract.

C. Approval and selection of Materials and Work: The selection of all materials and the execution of all operations required under the Contract Documents shall be subject to the approval of the General Contractor and Landscape Architect who shall have the right to reject any and all materials and any and all work which, in their opinion, does not meet the requirements of the Contract Documents at any stage of the operations. All rejected materials shall be removed from the site by the Contractor.

D. The successful Contractor shall maintain a competent, skilled and satisfactory work force during and through the completion of the construction period. In no case, shall unskilled labor be allowed to operate equipment, assemble, glue, install, wire, test or adjust components of the system. If in the opinion of the General Contractor or Landscape Architect, the labor furnished by the Contractor is incompetent or inexperienced in the practice assigned, the Contractor shall remove such persons or reassign them to a practice acceptable to the General Contractor and Landscape Architect.

E. Conform to all codes, statutes, laws and regulations governed by the following agencies for the protection of public safety:

ASTM	American Society for Testing Materials
AWWA	American Water Works Association
NEC	National Electric Code
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
UPC	Uniform Plumbing Code

F. The Contractor shall make application, acquire, comply and pay for all licenses and/or permits required by Local, State, or National Governing Agencies as may be required to perform and complete the work as described in the Contract Documents.

1.4 SUBMITTALS:

A. General: Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for possible revisions, and re-submittals, and for placing orders and securing delivery.

B. A design layout based on the equipment of Rainbird Corporation & Hunter Industries has been provided for bidding purposes. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to the layout as required to achieve full coverage of irrigated area at no additional cost to the Owner. It shall be the contractor's responsibility to establish the location of all sprinkler heads in order to ensure proper coverage of all areas.

C. Product Manual: Submit technical specification sheets and or performance data for all proposed system components. Submit the address and telephone number of the subcontractor installing the system and the local representative for the equipment.

1.5 PROJECT CONDITIONS:

A. The Contractor shall warrant that he has fully informed himself of the site conditions under which the work will be performed and is thoroughly familiar with the Contract Documents and all applicable codes and standards. Failure to have done so will not relieve the Contractor of his obligation to furnish all supervision, labor, tools, materials, equipment and supplies necessary to perform the provisions of the work detailed in the Contract Documents.

B. Make necessary adjustments in the layouts as may be required to connect to existing stub-outs, should such not be located exactly as shown, and as may be required to work around existing work at no increase in cost to the Owner.

C. The Contractor's attention is directed to the fact that there are other utilities located within the limits of the work. Before commencing any work required under the Contract, he shall determine the location of all utilities, subsurface drainage, structures and underground construction so that proper precaution may be taken not to disturb or damage during all operations. The Contractor shall be held responsible for making, at his own expense, all repairs to damaged utilities which could have been located or other construction resulting from the work covered by this Contract.

D. Should utilities not shown on plans be found during excavations, promptly notify the General Contractor for instructions as to further action.

1.6 PROTECTION OF WORK AND MATERIALS:

A. Use all means necessary to protect the work before, during and after installation and to protect the materials and installed work of all other trades.

B. The Contractor shall make every effort to safeguard the public during the Irrigation system installation operations. This includes, but is not limited to, erection of barricades around excavation, close supervision of all work and placement of warning flags wherever necessary. The Contractor shall insure that the personnel, equipment and materials involved in operations do not interfere with, or pose a hazard to, vehicular or pedestrian traffic.

C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the General Contractor and Landscape Architect at no additional cost to the Owner.

D. Store materials delivered to site, prior to actual use, in a secure place not to interfere with other trades or construction and protect from vandalism, damage by weather or other elements. All materials are to be stored off of the ground and away from soil or other contaminates.

E. The Contractor is completely responsible for replacement of materials due to acts of God, theft, vandalism and malicious mischief at the job site before, during and after installation. Such regulation shall continue until the date of final acceptance of the work in its entirety by the Owner.

1.7 ACCIDENT REACTION:

A. In the event of an accident causing injury or damage, the Contractor shall promptly report such to the Owner, General Contractor, Landscape Architect and required governmental agencies.

1.8 TRASH & DEBRIS:

A. The Contractor shall not permit trash and debris to accumulate on the grounds in the vicinity of his work. He shall establish and maintain a regular daily routine for removing trash and debris and hauling it away from the premises for no additional payment.

PART 2 - PRODUCTS

2.1 GENERAL:

A. The sprinkler system design shall be based on the equipment of Rainbird Corporation & Hunter Industries or approved equal.

B. Materials shall be newly manufactured and without flaws or defects, and of quality and performance as specified. Excess materials at completion are property of the Contractor, to be removed from the site.

C. The Contractor shall be responsible for computing and supplying the required quantities necessary to make the irrigation system complete and operational in every way. Quantities shown on the drawings are for convenience only.

2.2 PIPE AND FITTINGS:

A. Mainline piping above ground shall be Copper tube, Type K, drawn temper; copper tube fittings; soldered joints.

B. Mainline piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D1785, Sch40 for solvent weld and threaded connections.

C. Lateral piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D2241, Class 200 for solvent weld connections; Sch40 for threaded connections. The minimum pipe size shall be 3/4" in diameter.

D. Polyvinyl chloride (PVC) fittings; meeting ASTM D2466, Sch40 for solvent weld connections; Sch40 for threaded connections. All fittings must be of domestic manufacture and shall be identified as to pressure rating or schedule, with a working pressure no lower than that of the pipe.

E. Handling of Pipe and PVC Fittings: Exercise care in handling, loading, unloading and storing PVC pipe and fittings. Store under cover and transport in a vehicle with a bed long enough to allow no undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded until said section of pipe is cut out and rejoined with a coupling.

F. Visual Inspection: Provide pipe homogenous throughout, free from visible cracks, holes, blisters, wrinkles or foreign materials

G. PVC solvent cement shall comply with ASTM D2564, regular-bodied for pipe 2" and smaller, and medium for pipe 2 1/2" and larger. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints.

H. Use Teflon tape or an appropriate sealant for all threaded connections.

2.3 CONTROL WIRES AND CONNECTORS:

A. Single Conductor Wire for direct burial applications, meeting UL Standard 493, UF-14/1 for "Control" wiring and UF-14/1 for "Common" wiring. Color code the common neutral wiring from all other wires.

B. Wire Connectors shall be either 3M DBY / DBR or King "One Step" Connectors or approved equal.

2.4 AUTOMATIC CONTROLLER AND SENSORS:

A. The automatic controller shall be of a hybrid type that combines electromechanical and microprocessor-based circuitry capable of fully automatic and manual operation. The controller will be housed in a weather-proof, lockable, cabinet suitable for wall mounting.

B. The rain sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if approximately .10" of rainfall has accumulated due to precipitation at a rate equal to or greater than .25" per hour prior to or during an irrigation cycle.

C. The freeze sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if the ambient air temperature falls below 37 degrees Fahrenheit prior to or during an irrigation cycle.

2.5 VALVES:

A. The Rainbird remote control valves shall be a normally closed, 24VAC solenoid actuated, globe type valve. They shall have manual flow control stems for accurate regulation and/or shutoff of outlet flow.

B. The automatic drain valves shall be a pressure activated type, capable of opening when system pressure drops below 2.5psi, and closing when system pressure reaches 5.5psi.

C. Bronze gate valves for use as cut-off, isolation or manual drain valves on lines up to 3" in diameter shall be as manufactured by Nibco, Inc., Elkhart, IN or approved equal.

2.7 VALVE BOXES:

A. Provide valve boxes for all remote control valves and manual gate valves. The manufacturer shall be Armor, Plymouth Products Division, Sheboygan, WI or approved equal.

B. When used with a single valve use a #181104 - 10" round box with a twist lock cover. When used with multiple valves use #190106 - 20" x 14" rectangular box with snap lock cover.

2.8 SPRINKLER HEADS:

A. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.

B. Professional Series Spray Sprinkler: The sprinkler shall be capable of covering area shown at flow rates as designed.

1. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.
2. Provide pop-up spray heads in small turf areas or in clusters of trees where rotary heads are not feasible. The sprinkler shall have a pressure regulating device to prevent high-pressure fogging to the spray pattern and a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
3. Provide pop-up spray heads in all shrub and groundcover beds. The sprinkler shall include a pressure regulating device to prevent high pressure fogging to the nozzle stream. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
4. Provide pop-up rotary sprinklers in all large turf areas. The full or part circle sprinkler shall be a single stream, gear driven rotor with a rotating nozzle turret that is independent of the riser stem. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Matched precipitation shall be obtained by installing nozzles as shown on plan.
5. Provide check valve feature, as required, to prevent low head drainage from sprinklers at lower elevations.

2.9 DRIP IRRIGATION PRODUCTS:

A. Landscape Dripline (Inline Emitter Tubing): The Dripline tubing shall be brown in color and conform to an outside diameter (O.D.) of 0.630 inches and an inside diameter (I.D.) of 0.540 inches and wall thickness of 0.045 inches. The Dripline tubing shall have factory installed, pressure-compensating, inline emitters installed every 12 inches. The flow rate from each installed inline emitter shall be a consistent 0.6 gallons per hour when inlet pressure is between 8.5 and 60 psi.

B. Drip Control Zone Kit: The control zone kit shall have a 1" automatic irrigation control valve with a pressure rating not to be less than 150 psi. The valve body and bonnet shall be constructed of high-impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of a durable Buna-N rubber material reinforced with nylon.

The control zone kit shall have a 1" inline Quick Check Basket Filter body constructed of heavy-duty, glass-filled, UV resistant polypropylene capable of withstanding pressures of not less than 150 psi. The design shall be a basket style body with jar-top cap. The cap shall incorporate an indicator that goes from green to red during operation when the filters element needs cleaning. The screen shall be serviceable for cleaning purposes by unscrewing the cap from the body and removing the filters element.

The control zone kit shall have a 1" inline pressure regulator. The pressure regulator shall be constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 psi. The pressure regulating device is a normally open device that allows full flow with little pressure loss unless the inlet pressure is greater than the preset level. As the inlet pressure increases above the preset level it compresses a spring and begins to reduce the flow and downstream pressure. The inline pressure regulators shall have a preset outlet pressure of approximately 40 psi.

C. Landscape Dripline Compression Fittings: The Compression Fitting System shall consist of 3 fittings (tee, coupling and elbow) plus connection adapters and removable flush caps. The Compression Fittings shall accept all polyethylene tubing with an outside diameter (O.D.) from .630 to .710 inches and shall provide a leak-free compression fit. They also shall provide connections to threaded components when used with the adapters. The removable flush caps shall be used to close off a line and for manual draining. Air/vacuum relief valves shall be capable of venting air or preventing vacuum. The operating pressure range for the Compression Fitting System shall be 0 to 60 psi.

PART 3 - EXECUTION:

3.1 GENERAL:

A. Verify that the work of this section is installed in strict accordance with all applicable codes, regulations the design and the approved submittals. Contractor shall install all equipment as per manufacturer's current specifications and recommendations.

B. VERIFY THAT WATER PRESSURE IS ADEQUATE FOR EFFICIENT OPERATION OF THE SPRINKLER SYSTEM AS DESIGNED AND INSTALLED. Coordinate exact location of Point-of-Connection with the General Contractor.

C. Coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs, and parking, paving and site electrical plans. Verify existing and proposed locations of all site utilities (i.e. gas, water, electric, telephone, fiber optics) prior to any trenching and laying of pipe.

D. When sprinkler system work is to be installed close to or will interfere with the work of other trades, the Contractor shall assist in working out space conditions to permit all work to be installed satisfactorily at no additional cost to the owner. If a Contractor installs his work before coordination with other trades, he shall make necessary changes in his work to correct the condition without additional compensation.

E. Flag the location of all sprinklers & valves in accordance with the approved design and submittals. In the event of a discrepancy, immediately notify the Landscape Architect and General Contractor. Do not proceed with installation in areas of discrepancies until all such discrepancies have been fully resolved.

F. The irrigation design is shown in schematic form only. All piping to be installed directly behind curb where possible.

G. The Contractor is responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at any time, at no additional cost to the Owner.

3.2 WATER METER & BACKFLOW PREVENTER:

A. The Project Owner shall provide Water Meter as shown on the drawings All materials, operations, installed conditions and personnel shall be in strict accordance with all applicable codes, ordinances and regulations.

B. Immediately after Contract award, conduct tests at the designated Point-of-Connection and note as such on the written results provided to the General Contractor and Landscape Architect for the following:

1. Static Water Pressure
2. Dynamic Water Pressure
3. Gallons per minute

C. Install a temporary meter on a fire hydrant if necessary for water access due to site work, phasing schedule and/or landscape installation. Verify location and obtain approval from the General Contractor prior to installing temporary meter.

D. The Contractor shall comply with the requirements and codes of the local governing authority regarding backflow prevention. In addition, the Contractor shall provide the necessary materials, insulation/ winterization capabilities and acceptable concealment. General contractor is responsible for providing a GFI outlet with 115VAC; 1Phase power to the Backflow Preventer location.

3.3 SLEEVING:

A. The General Contractor shall provide Sch40 PVC sleeving, buried at a minimum of 18" and maximum of 24" depth.

B. Upon completion of site filling and compaction operations, and prior to the construction of foundations, roadways, walks or other pavements or obstructions, the General Contractor shall install sleeves in sufficient sizes to accommodate future irrigation piping and/or control wiring. Ends of sleeves shall extend 18 inches past the edges of all paving or construction. The ends of the sleeves shall be clearly marked for future use by the Irrigation Contractor.

3.4 TRENCHING AND BACKFILLING:

A. Carefully install system in areas of existing vegetation designated to remain to provide minimal disturbance feasible. When trenching under the drip-line of existing trees, extreme care must be given to avoid root damage. If at all possible avoid trenching inside the drip-line by going around the tree rather than under it. If trenching must occur under the drip-line, use either tunnelling or hand-digging methods rather than a mechanical trencher. Minimize the impact of root severing by avoiding construction during hot, dry weather, keeping trees well watered before and after digging and covering roots with soil or mulch as soon as possible.

B. Perform all excavation required for the installation of the work included under this Section. Including shoring and bracing of earth banks to prevent cave in. Restore all surfaces and existing underground installations damaged or cut as a result of the excavations, to their original condition and in a manner approved by the Owner and the General Contractor.

C. Excavate trenches to a depth of minimum pipe coverage plus six inches. Remove all lumber, rubbish and large rocks from the trenches. Provide a uniform bearing for the entire length of each pipe line to prevent uneven settlement. Make the width of the trench a minimum of 1 1/2 times the diameter of the piping but not less than 4 inches.

D. Upon completion of pipe installation and system testing, backfill the trenches with clean soil. Backfill material shall be free from rocks or any heavy unsuitable substances which could damage the pipe or create unusual settling problems. Backfilling shall be done in six inch layers and tamped down after each layer is put back as required to avoid settling in landscape areas and to 98% standard proctor in paved areas.

E. If settling occurs within the warranted period, the Contractor shall be responsible for bringing the trenches up to finish grade and repairing plant damage without additional compensation.

3.5 PIPE INSTALLATION:

A. Never Install PVC pipe when there is water in the trench. Never Install PVC pipe when the temperature is 32 degrees Fahrenheit or below.

B. Install the mainline at a bury depth of 18 Inches and the lateral lines at a bury depth of 12 inches below finished grade. Maintain a 4 inch clearance between pipes that cross at an intersection and a 2 inch clearance between pipes that are buried in the same trench.

C. Remove all foreign matter or dirt from the inside of the pipe before joining. Cap or plug all lines after installation and prior to testing to minimize infiltration of foreign matter or dirt.

D. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Install main lines and lateral lines in common trenches wherever possible.

3.6 PIPE AND FITTING CONNECTIONS:

A. Meet ASTM D2855 Standard Practice for making solvent-cemented joints with PVC pipe and fittings. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.

B. Make solvent welds with a non-synthetic bristle brush In the following sequence: Apply an even coat of solvent to the outside of the pipe. Then apply solvent to the inside of the fittings and then re-apply a light coat of solvent to the outside of the pipe, making sure that coated area on the pipe is equal to the depth of the fitting socket. Insert pipe quickly into the fitting and turn the pipe approximately 1/4 turn to distribute the solvent and remove air bubbles. Check all tees and ells for correct position, then hold joint for approximately 15 seconds so that pipe does not push out from the fitting. Allow at least 15 minutes drying time for each weld joint before moving.

C. Allow all joints to set and cure for a minimum of 12 hours prior to pressurization of system.

3.7 WIRE INSTALLATION:

A. Verify that the work of this section is installed in strict accordance with the latest edition of the National Electric Code and local electrical codes.

B. Install neutral and control wires, 12 inches below finish grade, in the same trenches as the main and lateral lines. The wires shall be installed in a neat and orderly fashion and bundled together and taped every 10 feet. Snake wires in trench to allow for expansion and contraction and provide slack loops at every splice, change of direction, at the valves, where the wire enters the conduit for the automatic controller and at least every 100 feet in runs more than 100 feet in length. The slack loops shall be created by wrapping 3 feet of wire around a 1/2 inch diameter pipe to form a coil.

C. Connect each solenoid to the controller with a "control wire" which is typically red in color. Connect a "common neutral wire" to all solenoids which is typically white in color.

D. Solder or join all wire connections by positive mechanical connectors. Splices must be properly insulated and waterproofed. Control wire splices will be allowed only in runs more than 500 feet and only in valve boxes.

3.8 CONTROLLER AND SENSOR INSTALLATION:

A. Coordinate with the General Contractor the exact location where the automatic controller will be located. Connect all wiring and grounding In accordance with manufacturer's instructions. Provide separate, secured to the wall, conduits for both power supply and control wiring.

B. General contractor Is responsible for providing a J-box with 115VAC; 1Phase power to the Controller location. Irrigation Contractor shall hard wire controller to j-box.

C. Install the rain and freeze sensors in an open area where the device is exposed to rain water but not sprinkler water. Mount away from overhanging objects that may Interfere with rainfall. Connect wiring In accordance with manufacturer's instructions.

3.9 VALVE INSTALLATION:

A. The remote control valves shall be Installed In accordance with manufacturer's instructions. Valves shall be installed in Armor valve boxes or approved equal. Boxes shall be Installed to a height that will not cause them to Interfere with maintenance machinery and which is sufficient to prevent soil or mulch from washing Into the box. Provide a 6 Inch layer of washed gravel In the bottom of the valve box. Valves shall be set a minimum of two feet behind curbs. Valves shall not be set in curves which are vulnerable to damage by truck trailers over running curbs.

B. The quick coupling valves shall be installed on PVC threaded swing joints on the Irrigation mainline. Space quick coupling valves as shown on the plans. Provide a 1"x1"x3" piece of angle iron next to the quick coupling valve and anchor with two (2) stainless steel hose clamps.

C. The automatic drain valves shall be installed in the low points of the lateral lines. Dig a minimum two (2) cubic foot hole where the drain valve is to be located. Install the drain valve in a PVC tee pointing downward at a 45 degree angle. Surround the drain valve with a minimum one (1) cubic foot of gravel. Place an 18"x18" piece of weed cloth or burlap on top of the gravel. Finish to grade with top soil.

D. Install in the low points of the mainline, manual gate valves as needed for draining. Install 24" off of the mainline in 10" valve boxes.

3.10 FLUSHING AND PRESSURE TESTING:

A. Prior to backfilling and installation of sprinkler heads, open all control valves and use full line pressure to completely flush lines of foreign matter and dirt. INITIAL FLUSHING OF LINES SHALL NEVER BE THROUGH SPRINKLER HEADS OR DRIP TUBING.

B. With zone valves closed, pressure test mainlines by supplying and maintaining full static pressure continuously for one full hour. Observe for evidence of leakage by monitoring flow meter and by visual inspection of the exposed lines. Repair all leaks and retest until no water flow is observed.

3.11 SPRINKLER HEAD INSTALLATION:

A. After landscape finish grading is accomplished, Install heads to finished grade in lawn and shrub areas and backfill with clean topsoil so head is stabilized and no lateral motion is exhibited during operation. Heads shall be set so the tips of the heads are 1/2" above the top of the mulch in planting beds. Heads In the turf areas shall be set flush with the finished grade and not a hazard to pedestrians and/or maintenance machinery. Set sprinkler heads to plumb within 1/16" and a minimum of 4 inches and a maximum of 6 inches from walls, walks and curbs.

B. Sprinkler heads to be spaced so as not to throw water on the buildings, walks or driveways. Heads shall be adjusted as required so that foliage of plants will not obstruct the spray and that the system has 100% coverage.

C. Provide connection to the PVC lateral lines, for spray heads, with barbed fittings and swing pipe. Do not use more than 18 inches of swing pipe for each sprinkler head.

3.12 DRIP SYSTEM INSTALLATION:

A. Drip Control Zone Kit: Install Drip Control Zone Kit level and below grade with a minimum of 4 inches clearance to the top and sides of the inside of a rectangular valve box. Place a minimum of 6 inches of gravel in the bottom of the valve box.

B. Landscape Dripline (Inline Emitter Tubing): Landscape bed areas shall be supplied with rigid PVC lateral piping. Landscape Dripline connection points shall be made in 6 inch valve boxes using compression adapter tees or ells as required. For under mulch Installation, place tubing rows at 18 inch lateral spacing as Indicated on the plans and hold In place with galvanized tie-down stakes spaced evenly every 2 to 3 feet, and with two stakes on each change of direction. Install tubing in a serpentine manner and bending is allowed provided the radius is sufficient enough that kinking does not occur. Backfill with mulch as noted In the landscaping specifications.

C. Landscape Dripline Compression Fittings: Landscape Dripline Compression Fittings shall be used at connection points to the PVC lateral piping, where tubing layout requires a tee and at bends or changes of direction to prevent kinking of the Landscape Dripline.

Removable flush caps shall be Installed at the low point of each dripline section. Depending on the site conditions and tubing layout, more than one flush cap may be required. Provide a 6 inch valve box for each flush cap.

Air/vacuum relief valves shall be installed at the highest elevation within each dripline section. Depending on the site conditions and tubing layout, more than one air/vacuum relief valve may be required. Provide a 6 inch valve box for each air/vacuum relief valve.

3.13 FLUSHING, OPERATION, TESTING AND BALANCING:

A. Flushing: All air and foreign objects and debris shall be flushed from the system.

1. Dripline and Emitter Lateral Flushing Procedures.
   a. Flush the system every two weeks for the first six (6) weeks and check the water that is flushed out for cleanliness. Establish a regular system flushing schedule for the future based on results from the initial six-week flushing schedule.
   b. Flush the system completely after any repairs are made and monitor system operation closely under regular system flushing schedule.
   c. Check the pressure at the supply and flush headers on a regular basis and compare with the pressure readings taken after installation.

B. General Testing: Upon completion of the irrigation system, and after pressure/leak testing and head installation, the entire system shall be tested for proper operation. All components checked for proper operation by the Contractor under supervision of the General Contractor. The system shall be tested in strict accordance with all applicable codes, ordinances and regulations.

C. Dripline and Emitter Lateral Leakage Testing Procedures:

1. Subject installed drip tubing and emitter lateral piping to water pressure equal to specified operating pressure for ten (10) minutes. Test with control zone components and drip flush valve components installed.
2. Partially backfill buried pipe and tubing to prevent movement under pressure. Expose couplings, fittings, and valve components.
3. Visually Inspect valve assemblies and fittings for leakage and replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until test segment is free from leaks. Cement or caulking to seal leaks is prohibited.

D. Dripline and Emitter Lateral Operational Testing Procedures:

1. Activate each dripline and emitter lateral control zone valve in sequence from controller. Provide either one additional person with radio or use handheld remote to activate remote control valves from controller. Manually activating remote control valve using manual bleed mechanism at remote control valve is not an acceptable method of activation.
2. Replace or adjust defective valve, fitting, dripline segment, emitter lateral segment, or appurtenance to correct operational and coverage uniformity deficiencies.
3. Repeat test(s) until each dripline or emitter lateral test segment passes testing procedures. Repeat tests, replace components, and correct deficiencies at no additional cost.
4. Any portions requiring repair shall be replaced or repaired and test repeated. No testing shall be done until the last solvent welded joint has had 12 hours to set and cure.

C. Balancing and Adjustment: The Contractor shall balance and adjust the various components of the system so that the overall operation is most efficient. This work shall include adjustment to all sprinkler heads and individual station adjustments on the controller. Observe that all zones function properly and in the correct sequence.

3.14 MAINTENANCE AND COMPLETION OF THE WORK:

A. The Contractor shall complete the irrigation system as drawn and specified, according to Schedule herein, and operate and maintain same until time of substantial completion of the project.

B. Any changes made in the layout and/or arrangement of the proposed Irrigation system, or any other differences between the proposed system and actual Installed conditions shall be recorded by the Contractor In the form of an "As-Built" drawing. The Contractor shall provide the Owner and the Landscape Architect with a copy of this drawing before work under this contract will be considered acceptable. All adjustments in the layout and/or arrangement of the Irrigation system are subject to the approval of the Landscape Architect.

C. The Contractor shall orient the Owner's personnel to the operation and adjustments of the controller according to local seasonal requirements. The Contractor shall also familiarize the Owner with sprinkler and valve adjustments. The Owner is, In general, to be totally familiarized with the overall operation, adjustment, maintenance and intent of the Irrigation system, Including the measures that should be taken to provide winterization for the system. Such instructions should be in written form. The contractor shall also provide a color coded laminated plan, in the controller door, showing the locations of all zones.

3.15 INSPECTION AND SUBSTANTIAL COMPLETION:

A. When Contractor is satisfied that the entire system is operating properly, that it is balanced and adjusted so that all work and clean-up is completed, he shall submit a written request for Initial Inspection to the General Contractor and Landscape Architect at least one week prior to anticipated date of Inspection and testing.

B. Submit reproducible as-built Record Drawings and Maintenance Manual to General Contractor with request for inspection.

C. Upon completion of repairs and replacements found necessary at time of Inspection, the Landscape Architect will confirm the date of substantial completion.

E. The date of substantial completion will determine:
   1. The final date of maintenance as part of this Section.
   2. The beginning date of the One-Year Guarantee Period.

3.16 GUARANTEE:

A. Guarantee all work, products, equipment and materials for one (1) year period beginning upon substantial completion.

B. Guarantee applies to all losses with the exception of those due to Acts of God, vandalism, occupancy of the project or Owner neglect, as determined by the Landscape Architect and/or Owner.

3.17 FINAL INSPECTION:

A. At end of Guarantee Period and upon request for final inspection, jointly review all guaranteed work for Final Acceptance with the Owner and General Contractor.

B. Submit written request for final inspection to the General Contractor and Owner at least two weeks prior to anticipated date of Inspection.

3.18 FINAL ACCEPTANCE:

A. Upon completion by the Contractor of all required repairs and replacements found at time of final Inspection, the Owner and General Contractor will confirm the date of Final Acceptance of the work.

B. Confirmation of Final Acceptance by the Owner and the General Contractor will constitute completion of the work of this Section.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR · REG. NO. 5-330 · LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

L12.2 SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PLANTING LEGEND

CODE	COMMON NAME & VARIETY-SPACING	MIN. SIZE	PATTERN	QTY.
ANC1	ANNUAL COLOR 4" - 12"	4" CUP		
ANC3	ANNUAL COLOR 18" - 24"	4" CUP		
AZF	AZALEA 'FORMOSA RED'	7 GAL	+	
AZG	AZALEA 'G.G. GERBING'	7 GAL	+	
HBD	DWARF BURFORD HOLLY	4'HT	⊙⊙	
HCR	HOLLY 'CARISSA'	3 GAL	⊙⊙	
HEB	HOLLY 'EMILY BRUNER'	6'HT	⊙⊙	
HEG	HOLLY 'EAGLESTON'	16-18' HT	⊙	
HLY	HURRICANE LILY BULB (SPACE APPROX ± 30" O.C.)	1 GAL		
HYL	HYDRANGEA 'LIME LIGHT'	7 GAL	⊙⊙	
MDO	MONDO GRASS 8" O.C.(TYP.) W/ HURRICANE LILY SPACED ~30" O.C.	4" CUP		
MLG	MUHLY GRASS 'WHITE CLOUD'	3 GAL	⊙⊙	
OKL	LIVE OAK	18' HT	⊙	
OLR	OLEANDER 'RED'	7 GAL	⊙⊙	
SPB	SPIREA 'BRIDAL WREATH'	7 GAL	⊙⊙	
VSSH	VIRGINIA SWEETSPIRE 'LITTLE HENRY'	3 GAL	⊙⊙	
YEW	JAPANESE YEW	6' HT	⊙⊙	
WHF	WHITE FRINGE TREE	8' HT	⊙	
LIM	LIMESTONE NO.8	SF		
ROCK 1	LARGE RED GRAVEL 3/4" - 2" SIZE @ JIMSTONE CO. www.jimstoneco.com (3" THICK OVER LANDSCAPE FABRIC)	SF		
ROCK 2	15-30 LB STONE R/P RAP - TAN (8"-" THICK OVER LANDSCAPE FABRIC)	SF		
MLP	PINE STRAW MULCH, CRIMPED	SF		
MLH	HARDWOOD MULCH, SHREDDED	SF		
SOA	ST. AUGUSTINE 'PALMETTO'-SQUARE YARD	SY		
STEEL 6	6 X 1/8" STEEL EDGING - 2'LAP @ J.T.	LF	——	
STEEL 8	8 X 1/8" STEEL EDGING - 2'LAP @ J.T.	LF	——	

PLANTING NOTES

1. PLANT MATERIAL TO BE FULLY GROWN AND MATCHING.
2. BEDS TO BE SLOPED TO DRAIN - MOUNDED W/ 20% SLOPE FROM CENTER TO EDGE
3. DEBRIS TO BE REMOVED FROM BEDS.
4. BEDS TO BE TILLED TO A DEPTH OF 12" FOR ANNUALS & GROUND COVER AND 16" FOR SHRUBS.
5. ALL TREES TO HAVE CLEAR TRUNK OF FIVE FEET MINIMUM.
6. UNLESS OTHERWISE NOTED ALL TREES TO BE STRAIGHT,MATCHING,SINGLE TRUNK.
7. BID SHOULD NOTE CONTAINER OR B&B MATERIAL.
8. UNLESS OTHERWISE NOTED ALL BEDS & NEW TREES ARE TO BE IRRIGATED W/ DRIP IRRIGATION.
9. ALL DRAIN LINES TO FALL ± 1% SLOPE OR GREATER.
10. AS-BUILT DRAWINGS OF THE IRRIGATION & DRAINAGE SYSTEM TO BE SUBMITTED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
11. SLOPE ALL BEDS TO DRAIN AWAY FROM THE BUILDING IN THE EVENT THAT THE DRAINAGE SYSTEM BECOMES CLOGGED.
12. SOIL SAMPLES HAVE BEEN TAKEN FOR THIS PROJECT. THE PLANT PALETTE WAS DESIGNED TO WORK WITH THE PARENT OR NATIVE SOIL ON SITE. SUBSTITUTIONS OF PLANT MATERIAL ARE NOT PERMITTED W/OUT APPROVAL OF THE LANDSCAPE ARCHITECT.
13. UNITS OF ANNUAL COLOR SHOWN ON PLAN ARE IN SQUARE FEET. USE CHART BELOW TO DETERMINE QUANTITY OF PLANTS. QUANTITY MAY BE AFFECTED BY SELECTED VARIETIES.

ANC1 = 3.0 PLANTS PER SQUARE FOOT
ANC2 = 2.5 PLANTS PER SQUARE FOOT
ANC3 = 2.25 PLANTS PER SQUARE FOOT

5' BOWL PLANTER

PLANTER MANUFACTURER:
POLYMADE
450 S. 55th Street,
Kansas City, KS 66106
www.polymade.com
913-213-3740

PLANTER MODEL:
SAUCER BOWL PLANTER 60"d x 16-1/2"t
COLOR= WHITE

SEE SHEET LP1.2 FOR PLANTER DETAIL

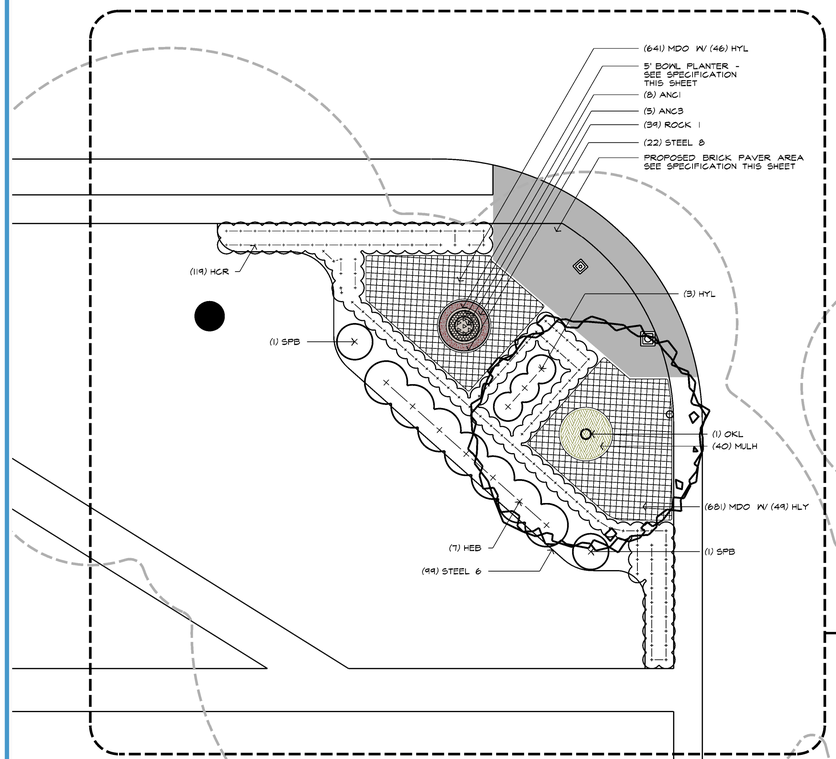
PAVER BRICK

BRICK MANUFACTURER:
PINE HALL BRICK
www.pinehallbrick.com

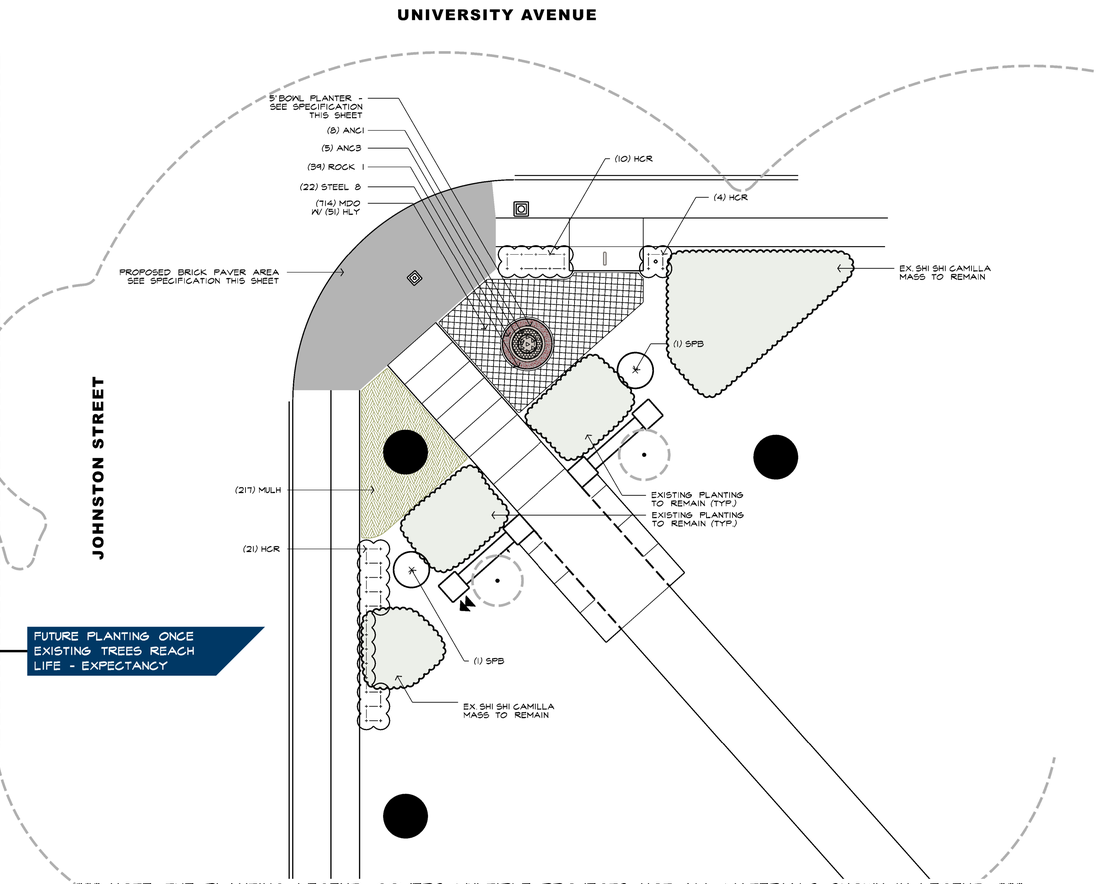
PATHWAY RED PAVER BRICK - 2-1/4" X 4" X 8"

PATTERNS:
BRICK BORDER - SOLDIER COURSE
BRICK FIELD PAVING - RUNNING BOND

SEE SHEET LP2.1 FOR BRICK PAVER DETAIL



FUTURE PLANTING ONCE EXISTING TREES REACH LIFE - EXPECTANCY



*** NOTE: THE PLANTING LEGEND COVERS MULTIPLE PROJECTS. NOT ALL MATERIALS SHOWN IN LEGEND ARE UTILIZED ON THIS PARTICULAR PROJECT. CONTRACTOR TO VERIFY MATERIALS & QUANTITIES NECESSARY FOR PROJECT DURING BIDDING PROCESS PRIOR TO CONSTRUCTION. ***

0 5' 10' 20'
SCALE: 1" = 10'

NORTH

LP1.3 SHEET

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK, ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS,AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

GATEWAY - UNIVERSITY AVE. @ JOHNSTON ST. LANDSCAPE PLAN

STATE OF LOUISIANA
DANIEL W. SPILLER JR.
REG. NO. 5-382
LICENSED LANDSCAPE ARCHITECT

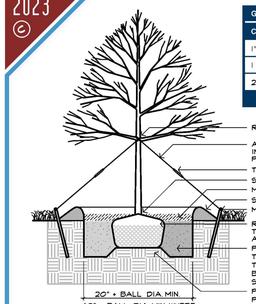
BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

2023 ©

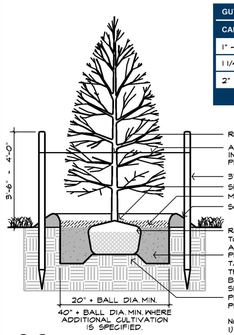
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

01 TREE PLANTING - STANDARD
NOT TO SCALE

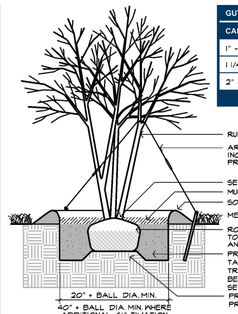
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

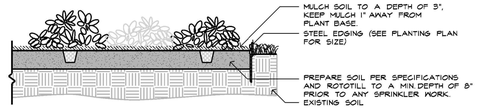
02 TREE PLANTING - FULL TO GROUND
NOT TO SCALE

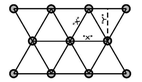
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

03 TREE PLANTING - MULTI-TRUNKED
NOT TO SCALE





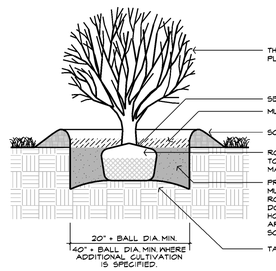
ALL GROUND COVERS TO BE PLANTED ON CENTER IN A TRIANGULAR PATTERN. (SEE PLANTING & PLANTING SPACING LEGEND)
X = O.C. DIMENSION AS NOTED IN LEGEND
Y = ROW SPACING DIMENSION

PLANT SPACING LEGEND

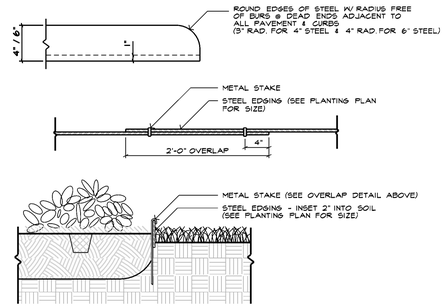
SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.	SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.
6" O.C.	5.2"	4.61	6' O.C.	5.2'	0.032
8" O.C.	6.93"	2.6	8' O.C.	6.93'	0.018
10" O.C.	8.66"	1.66	10' O.C.	8.66'	0.016
12" O.C.	10.4"	1.15	12' O.C.	10.4'	0.008
15" O.C.	13.0"	0.739	15' O.C.	13.0'	0.0059
18" O.C.	15.6"	0.512	20' O.C.	17.3'	0.00288
24" O.C.	20.8"	0.29	25' O.C.	21.65'	0.00185
30" O.C.	26.0"	0.186	30' O.C.	26.0'	0.00128
36" O.C.	30.0"	0.128	40' O.C.	34.6'	0.000722
4'O.C.	3.46'	0.0125			
5'O.C.	4.33'	0.0461			

NOTES:
1. SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES,SIZE,AND SPACING DIMENSION.
2. SMALL ROOTS (1/4" OR LESS) THAT GROW AROUND,UP,OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING.ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING.(SEE ROOT BALL SHAVING CONTAINER DETAIL).
3. SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

04 PLANT SPACING
NOT TO SCALE

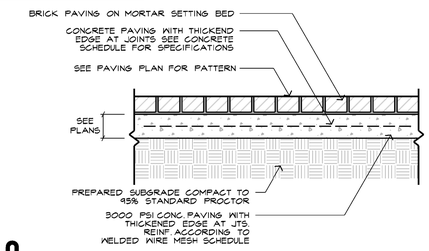


05 SHRUB PLANTING
NOT TO SCALE

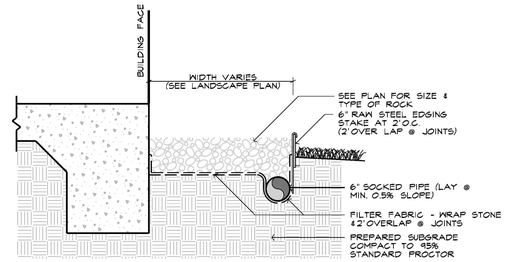


06 STEEL EDGING
NOT TO SCALE

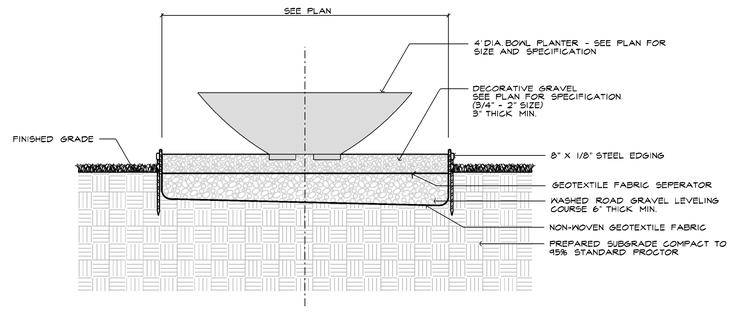
CONCRETE SCHEDULE	
4" PAVING	6X6 * 10/10
6" PAVING	6X6 * 6/6
8" PAVING	6X6 * 4/4



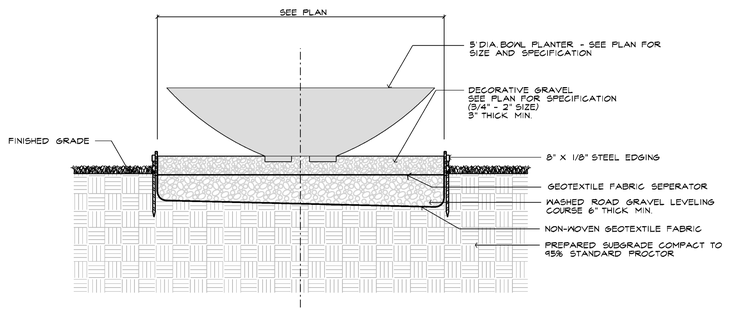
09 BRICK PAVING ON CONCRETE BASE
NOT TO SCALE



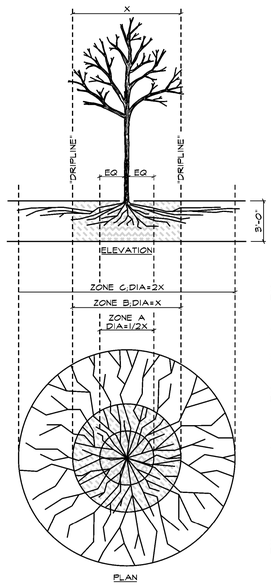
11 FOUNDATION STRIP
NOT TO SCALE



07 RAISED ROCK AREA W/ 4' BOWL PLANTER
NOT TO SCALE



08 RAISED ROCK AREA W/ 5' BOWL PLANTER
NOT TO SCALE



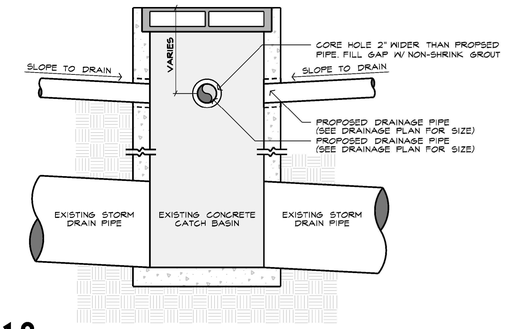
TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
1) NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
2) SEVERANCE OF ROOTS LARGER THAN 2"DIA REQUIRES LANDSCAPE ARCHITECT'S APPROVAL.
3) BORING OR TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER.

ZONE B (DRIPLINE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES REQUIRED.
2) TRENCHING ALLOWED AS FOLLOWS:
- EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED.
- LIMIT TRENCH WIDTH.DO NOT DISTURB ZONE A.MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
- BORING & TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

ZONE C (FEEDER ROOT ZONE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES MAY BE REQUIRED
2) TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
- MINIMIZE TRENCH WIDTH.
- MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION.

10 TREE PRESERVATION DETAIL
NOT TO SCALE



12 CATCH BASIN TIE-IN
NOT TO SCALE

GENERAL NOTES

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UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR. · REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work in this Section is based on these specifications and the landscape drawings. The scope of work is based on furnishing all labor, materials, tools, transportation, equipment and supervision by the Contractor as required to complete the specified work.

B. In addition to the requirements of these specifications, manufacturer's instructions and recommendations for proper preparation and application of all materials shall be complied with in all respects.

C. Related Work: PLANTING IRRIGATION

1.2 QUALITY ASSURANCE

A. Contractor shall be fully qualified, licensed, capable and experienced in the installation of the described landscape. Evidence of the Contractor's qualifications shall be presented prior to the award of the Contract.

B. The following industry standards shall govern landscape materials and installation. The most stringent requirement shall rule when conflicts between the standards occur and as determined by the Landscape Architect.

1. American Standard for Nursery Stock (Most Current Edition)
2. Horticultural Standards, American Association of Nurserymen.
3. Recommended Standard Specifications for Planting Trees, Shrubs and vines and Fine Grading and Seeding Lawns, second printing - December 1968.
4. American Joint Committee on Horticultural Nomenclature: Latest Edition.

1.3 SUBMITTALS

A. Digital photographs representing each variety shall be submitted for approval by the Landscape Architect prior to ordering any plant material. (The submittal of photographs does not in any way relieve the Contractor of his responsibility to comply with the specifications and applicable standards.)

B. The selection of all materials and the execution of all operations required under the drawings and these specifications are subject to the approval of the Landscape Architect or Owner.

C. The Landscape Architect or Owner shall have the right to reject all material and all work which, in his opinion, does not meet the requirements of the drawings and/or specifications at any stage of the operation. All rejected material shall be removed by the Contractor, as directed, at the Contractor's expense.

1.4 PROTECTION OF EXISTING WORK

A. Location of underground infrastructure such as existing water, telephone, cable, electrical, gas, sewer and drainage lines, and other utilities, shall be ascertained or verified by the Contractor prior to initiating work. The Contractor shall protect the same by means acceptable to the Owner before commencing construction and maintain such protection until the job is accepted by the Owner.

B. Protective measures shall be taken to secure walls, walks, driveways, parking lots, light poles, grass and structures from damage or discoloration. The Contractor shall furnish and install necessary pads, tarpaulins, burlap, building paper, or clean straw to protect existing work.

1.5 EXTRAS, OMITTED OR CHANGES IN WORK

A. While no new unforeseen items are anticipated, they shall be classified as extra work when they cannot be covered by any of the specifications. The Contractor shall submit detailed prices for any extras to the Landscape Architect, and shall perform extras only upon prior written acceptance from the Owner. All such extra work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents. In the absence of such written order, the Contractor shall not be entitled to payment for such extra work.

B. The Landscape Architect shall have the authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time, and not inconsistent with the contract documents. Such changes may be effected by field order or by other written order. Such changes shall be binding on the Contractor.

C. The Owner, without invalidating the contract, may order changes in the work consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents.

1.6 MEASUREMENTS, LAYOUT & LEVELS

A. The Contractor shall layout all lines and levels necessary for the location and erection of the landscape construction and for all excavation, filling and grading work and set necessary markers and stakes, and be responsible for their correctness.

B. The Contractor shall take his own measurements of the site verifying same with the drawings, and shall be responsible for proper fit of his portion of the completed work.

C. The spacing of plants shall conform to the spacing designated on landscape plans and specifications, but variations are permissible when unforeseen site conditions such as underground pipes, etc., make uniform spacing impractical, in which case the Contractor shall abide by instructions, furnished by the Landscape Architect or Owner. Departure from specified spacing will be allowed when site conditions do not permit the specified number of plants in a grouping in which case the minimum spacing shall govern the number of plants to be placed in the group and the excess plants shall be located as directed by the Landscape Architect or Owner.

D. Where proposed grades are not indicated, the Contractor shall in all cases provide the necessary pitch on semi-level areas to drain them to a point designated by the Landscape Architect or Owner.

E. The Landscape Architect reserves the right to relocate shrubs and trees from positions on the plans prior to their planting.

1.7 SUBSTITUTION OF MATERIALS

A. The Contractor, before submitting his bid, shall locate all necessary materials as called for in the plans and specifications, and shall be assured of their availability for use on this job.

B. The contract bids shall be based upon providing the specified materials, processes, products, etc., identified in the specifications and/or indicated on the drawings.

C. Substitutions will not be permitted unless upon admission of proof that specified plants are not obtainable and with the authorization of the Landscape Architect. Written requests with nearest available size, variety of plant and price adjustments are to be submitted to the Landscape Architect.

1.8 PLANT & MATERIAL LIST

A. The Contractor shall furnish the plant material as specified and described in this section.

B. Quantities shall be determined by referring to the Drawings.

C. Names, species, and varieties of all material furnished by the Contractor shall be in accordance with the Drawings and Specifications.

D. The Contractor shall furnish, on request of the Owner, satisfactory proof as to the names and species, variety, and size and shall be made only on written authorization of the Owner.

1.9 MEASUREMENT

A. The quantities for payment will be the design quantities specified in the plans and adjustments thereto.

B. Design quantities will be adjusted if the Landscape Architect makes changes to adjust to field conditions, if plan errors are proven or if design changes are necessary.

C. Design quantities are based on the horizontal dimensions shown on the plans.

PART 2 - PRODUCTS

2.1 TOPSOIL: The Contractor shall use salvaged onsite topsoil to the extent possible and topsoil from offsite borrow to supplement that salvaged. The topsoil shall be a fertile, friable, natural topsoil of a loamy character. It shall contain a normal amount of decomposed organic matter and shall be free of stones, lumps, clay, toxic materials, plants or their roots, stacks and other extraneous matter. The topsoil shall be within a pH range of 5.0 to 6.5. Topsoil testing shall be at the Owner's expense and by a third party entity.

2.2 SOIL CONDITIONER MIX: Finely chopped pine bark mulch to be incorporated into the soil, shall be free from weeds, moss, sticks and other debris but shall contain a generous amount of sand (average 20% by volume) and shall be well decomposed.

2.3 PEAT MOSS: Peat moss shall be a horticultural grade, sphagnum peat moss containing partially decomposed fibrous or cellular stems and leaves of any of the many species of sphagnum mosses from fresh water sources conforming to the following requirements:

A. Peat moss shall be a homogeneous material free of decomposed colloidal residue lumps, roots, stones, and other foreign matter; and of such consistency that peat can pass a 1/2 in. mesh and can be readily incorporated with the topsoil.

B. The pH shall not be less than 3.5 nor greater than 5.5 at 25 degrees C.

C. Organic matter content shall not be less than 90% by weight, on an oven-dry basis.

D. Ash content shall not be more than 10% by weight, on an oven-dry basis.

E. Moisture absorption capacity shall not be less than 800%, by weight, on an oven-dry basis.

2.4 TOP DRESS MULCH: Top dress mulch shall be clean and free from weeds, moss, sticks, soil and any other objectionable material.

A. The pH shall not be less than 3.5 nor greater than 5.3 at 25 degrees C.

B. The Contractor shall submit a one cubic foot sample of the mulch for approval by the Landscape Architect.

2.5 FERTILIZER: Osmocote 14-14-14, or approved equal, shall be used in bed areas and for trees. The fertilizer shall be stored in a cool, dry place in unopened bags until it is ready to be incorporated into the backfill mixture. Agriform tree tablets can be used in lieu of the Osmocote for tree plantings only, and must be applied at the manufacturer's recommended rate.

2.6 SOD: Class "A" premium grade sod consistent with the variety(s) called out in the plans.

A. Sod shall be machine cut at a uniform soil thickness at a height appropriate to the specified species.

B. Pad Size: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 0.5 inch (15 mm) on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.

C. Strength of Turf Sod Sections: Standard size sections of sod shall be strong enough that it can be picked up and handled without damage.

D. Moisture Content: Sod shall not be harvested or transplanted when its moisture content (excessively dry or wet) may adversely affect its survival.

E. Mowing Height: Before harvesting, the sod shall be mowed uniformly at a height of 1 to 2.5 inches (25 to 60 mm) on cool season grasses (i.e., bluegrass, bent grass, rye and fescue), and 0.75 to 1.50 inches (20 to 40 mm) on warm season grasses (i.e., zoysia grass, Bermuda grass, St. Augustine grass, etc.)

F. Time Limitations: Sod shall be harvested, delivered and installed/transplanted within a period of 24 hours, unless a suitable preservation method is approved prior to delivery. Sod not transplanted within this period shall be inspected and approved by the inspecting officer or his representative prior to its installation.

G. Thatch: Sod shall be relatively free of thatch, up to 0.5-inch (15mm) allowable (uncompressed).

H. Diseases, Nematodes and Insects: Sod shall be reasonably free of diseases, nematodes and soil-borne insects. Specific nursery and/or plant materials laws may require that all sod entering inter-state commerce be inspected and approved for sale. The inspections and approval must be made by the appropriate government representative of the agriculture department or office of entomologist.

I. Weeds: Nursery grown turf grass sod shall be free of objectionable grassy and broad leaf weeds. Turf grass sod shall be considered free of such weeds if less than 5 such plants are found per 100 square feet (10 sq m) of area. Sod will not be acceptable if it contains any of the following weeds: common Bermuda, johnson grass, poison ivy, nutsedge, thistle, bindweed, bent grass or wild garlic.

2.7 PLANTS: TREES, SHRUBS & GROUND COVER

A. Caliper measurement of trees shall be taken at six inches above natural ground up to and including four inch caliper material. If the caliper six inches above natural ground exceeds four inches, the caliper will be measured twelve inches above natural grade.

B. Shrubs shall be well shaped, full branched plants with heights measured to point in the main perimeter of branches or foliage rather than to single shoots or leaders. Plants with single stems shall have sufficient, well spaced side branches to give them weight equal to one grown with numerous canes. Canes shall be considered as primary stems starting from the ground or from a point not higher than one-fourth (1/4) the height of the plant.

C. Sizes of balls shall be at least six inches (6") greater in diameter than the minimum sizes established for individual plant types as recommended by "Horticultural Standards" latest edition of American Association of Nurserymen, Inc. Depth shall be sufficient to encompass the fibroid and feeding root system necessary for the full recovery of the plant and in no case shall be less than recommended ratios to diameter as recommended by "Horticultural Standards", latest edition of the American Association of Nurserymen, Inc. All balls shall be firm, intact, slightly tapered, well burlapped and securely fastened with twine or nails or both. Any tree which is determined to be loose in the ball or with a broken ball at the time of planting will be rejected.

D. Any plants having any of the following unnatural or objectionable features will be rejected: excessive abrasions of the bark; dried out root system; excessive dead or dried up wood; excessive sun scald injuries; undeveloped and weak top or roots or both; crooked or one-sided development of tops; no straight leaders on trees naturally and normally having them; broken or removed leaders; untrue types or sizes; root-bound container grown plants; excessively damaged or loose balls of soil; plants actually dead, diseased or insect infested and plants not otherwise complying with the plant specification herein.

E. The rejected material shall be removed from the site and replaced as quickly as possible with new plant material of the same kind, meeting the requirements, at the expense of the Contractor.

PART 3 - EXECUTION

3.1 PLANT DELIVERY, UNLOADING & STORAGE

A. All plants shall be delivered to the job in good condition and unloaded with care so that balls and tops are not damaged. Balled & burlapped plants shall not be handled or lifted by their tops or trunks.

B. The Contractor shall be responsible for the protection of plants from damage through weather conditions, improper storage, vandalism, theft, and injury, and shall unload plants in a location approved by the Owner, requiring the minimum amount of moving to locations where they are to be planted.

C. Whenever and wherever possible, delivery shall be made within a reasonable time of completion of planting pits or beds and if unforeseen conditions prevent immediate planting, the Contractor shall heel in plants, watering same if necessary and protect from drying winds and sun in accordance with good nursery practices.

D. If in the opinion of the Owner, plants have been damaged through prolonged intervals between delivery and storage, they shall not be used in planting, and shall be replaced by new plants conforming to original specifications.

3.2 TREE & SHRUB PIT PLANTING

A. Pits shall not be prepared and left open for prolonged periods prior to planting. Pits shall be protected until used so that sides do not crumble and so pits do not become saturated with water. All damaged pits shall be restored to original condition and shall be drained of surface water before usage.

B. Depth of pits shall not be more than two inches (2") greater than depth of the ball to be received. Diameter of pits shall be such that there is no less than ten inches (10") of space all around the balls or root spread of bare-root plants, except in the case of trees in which case the space shall be increased to twenty inches (20"). Bottom of pit shall be thoroughly loosened to a depth of eight inches (8") before plant is placed in pit. Tops of plants shall not be cut loose until plant is set to correct depth in pit.

C. Excavated earth shall be piled sufficiently far back from the edge of the pit to prevent earth sliding back into pit when plants are placed. Surplus excavated earth shall be disposed of immediately after planting is completed to prevent mixing of same with topsoil.

D. Mixture used in backfilling pits shall consist of 75% topsoil, 10% peat moss, 10% pine bark mulch and 5% sand mixed by volume with a slow release fertilizer at the manufacturer's recommended rate. Mixing shall not be done in the pits. Refer to Article 16, MATERIALS, of this specification.

E. After plant has been set and pit has been backfilled to two-thirds (2/3) of its depth, mixture shall be tamped thoroughly and settled with water. When settling has been accomplished, pit shall be brought to level of adjacent ground with same mixture. Slope finished grade slightly toward center of plant.

F. A six inch saucer shall be constructed for all trees planted outside of prepared landscape beds.

3.3 BED ALIGNMENT

A. The Contractor is responsible for planting all material at the correct grades, locations and alignment.

B. The location of plant material and the outline of beds and other areas indicated on the plans shall be followed as closely as possible.

C. Any questions regarding bed alignment shall be brought to the attention of the Landscape Architect immediately.

3.4 BED PREPARATION & PLANTING

A. Conventional Bed Preparation: This technique shall be used unless otherwise noted.

1. Before the start of conventional bed preparation, all areas to be prepared shall be stripped of any grass, weeds, etc., to a minimum depth of (1) inch.
2. All beds shall be rototilled to a depth of ten (10) inches to completely blend the topsoil with one and a half (1.5) cubic yards of soil conditioner mix (see 'PRODUCTS' section) per one hundred (100) square feet of bed prior to rototilling.
3. All bed areas shall then be treated with a granular weed pre-emergent (Eptam or approved equal) at a rate and the method specified by the manufacturer.
4. All beds shall be fertilized with Osmocote 14-14-14, or an approved equal at the manufacturer's recommended rate of one (1) pound per fifty (50) square feet or per any project-specific recommendation.
5. Before planting, the bed area shall be raked and leveled to a fine grade, allowing for proper surface drainage.

3.5 PLANTING

A. After completion of fine grading, the plants shall be placed at the positions indicated on the plans. All plants shall be set so that when settled, they will bear the same relation to finish grade as they did before transplanting. No filling will be permitted around trunks or stems.

3.6 SODDING

A. The soil shall be thoroughly tilled to a depth of four (4) inches.

B. The trees specified on the plans shall already have been planted and guyed before laying sod.

C. The sod bed shall be fine graded to remove all ridges or depressions and the surface cleared of all stones and debris.

D. The sod shall be laid perpendicular to the direction of the slope and in a manner which will permit joints to alternate.

E. Sod panels shall be fitted together tightly so that no joint is visible and tamped firmly and evenly by hand.

F. Immediately following sod placement, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered.

G. During delivery, prior to and during the planting of lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun.

H. Top dressing with washed, clean, weed free builder's sand may be required if deemed necessary by the Owner or Landscape Architect to level depressions in the grade or imperfections in the sod.

3.7 MULCHING

A. After completion of all planting operations, beds and tree pits are to be mulched.

B. Tree pits shall have a 3" covering of top-dress mulch and bed areas shall have a minimum of 3" throughout.

3.8 WATERING

A. Watering of areas planted shall be done on the same day planting is done.

B. All planted areas shall be watered as often as necessary as the work progresses, if weather conditions require same.

C. Watering shall be done by competent workmen, with minimum disturbance of adjoining areas and following the direct instruction of the licensed Contractor.

D. Contractor shall supply necessary topsoil or soil mix to compensate for any settling that takes place due to watering.

3.9 PRUNING & REPAIR

A. Pruning for shape shall be done by the Contractor only if so instructed by the Landscape Architect.

B. Pruning shall consist of shaping the plant to a pleasing outline in accordance with good nursery practices.

C. Pruning shall be done in such a manner so as not to change the natural habit or shape of the plant.

D. Cut-back pruning of all dead wood and injured branches shall be done immediately after planting.

E. Injured branches or damaged branches shall be cut back to sound live wood in accordance with good nursery practices.

F. Shade trees shall be cut back only on authorization of the Landscape Architect.

G. Pruning shall be done before final watering and application of mulch.

H. All debris and trimmings shall be removed immediately.

3.10 TREE STAKING & GUYING

A. Guys shall be furnished and erected by the Contractor for all trees to prevent wind movement, in accordance with the following instructions:

1. Trees up to one and one-fourth inch (1-1/4") caliper: Three (3) supports spaced triangularly around trunk at a distance of fifteen inches (15").
2. Trees one and one-fourth inch (1-1/4") to two inch (2") caliper: Three (3) supports spaced triangularly around trunk at a distance of twenty inches (20").
3. Trees two inches (2") and over in caliper: Three (3) supports spaced triangularly around trunk in clear areas between perimeter ball and edge of plant pit.

B. Supports (stakes) shall be as specified on the drawings and of sufficient length that on being driven substantially into the ground, tops of stakes will be no less than two-thirds (2/3) the distance from ground to lowest branches or forks.

C. Method of fastening supports to tree shall be by means of aluminum wire or No. 12 gauge galvanized wire looped through sections of rubber hose and fastened to supports in such a manner that hose sections prevent damage to bark of tree or by use of ArborTie brand guy line (or approved equal).

D. When the tree has been steadied erect, guy lines shall be tightened to equalize pressure to prevent any wind movement.

E. Contractor shall see that there is no twisting strain thrown on tree trunks when slack is taken up on wires and that rubber hose sections are installed in a manner that there will be no friction damage to bark.

3.11 PROTECTION

A. The Contractor shall protect all plants and lawns from damage at all times.

B. If plants or lawns are damaged, they shall be replaced or treated by the Contractor at his expense to the satisfaction of the Owner or his representative.

3.12 MAINTENANCE

A. The Contractor shall maintain all trees, shrubs and groundcover under this contract until final acceptance, by watering, cultivating, weeding, spraying and replacing as necessary to keep plants in a healthy, vigorous condition, and shall rake bed areas as may be required to keep them neat.

B. The Contractor shall maintain all grass areas under this contract until acceptance by watering, mowing, spraying, etc.

C. Watering: All lawn areas shall be watered once a day with a minimum of 1/2" of water up until final acceptance. Thereafter, watering shall be turned over to the Owner where the Contractor shall provide him with the proper procedures for continued watering. All trees, shrubs and groundcover shall be watered twice a week until final acceptance by the Contractor, providing 1" of water each time unless a comparable amount of rain has been provided.

D. Weeding: Shall consist of pulling or digging out all plant material other than the desired shrubs and groundcover until final acceptance.

GENERAL NOTES

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LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REGISTERED
LICENSED
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

LP2.2 SHEET

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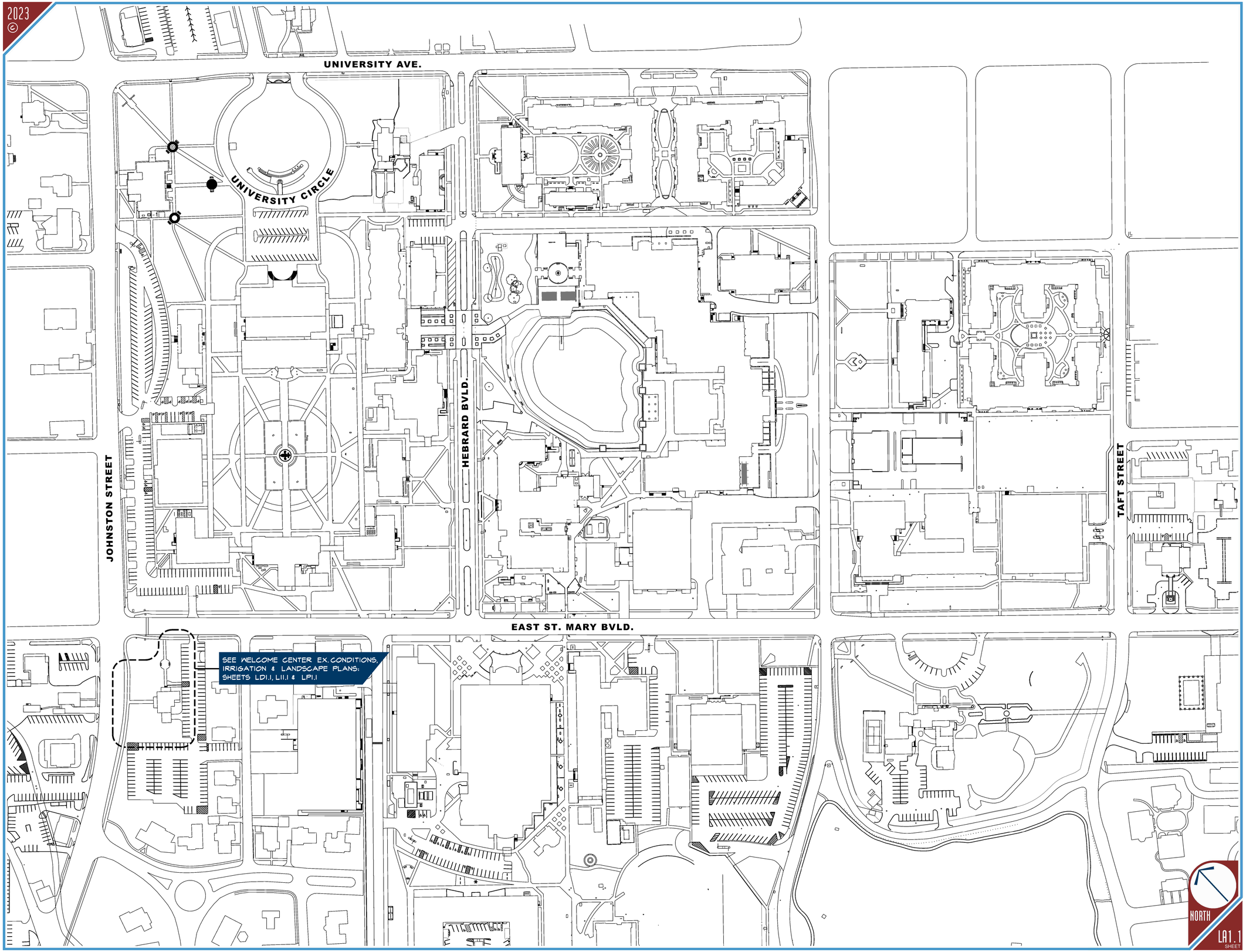

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SHEET

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PROJECT - 22113.00

CAMPUS KEY PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
REG. NO. 5-352
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
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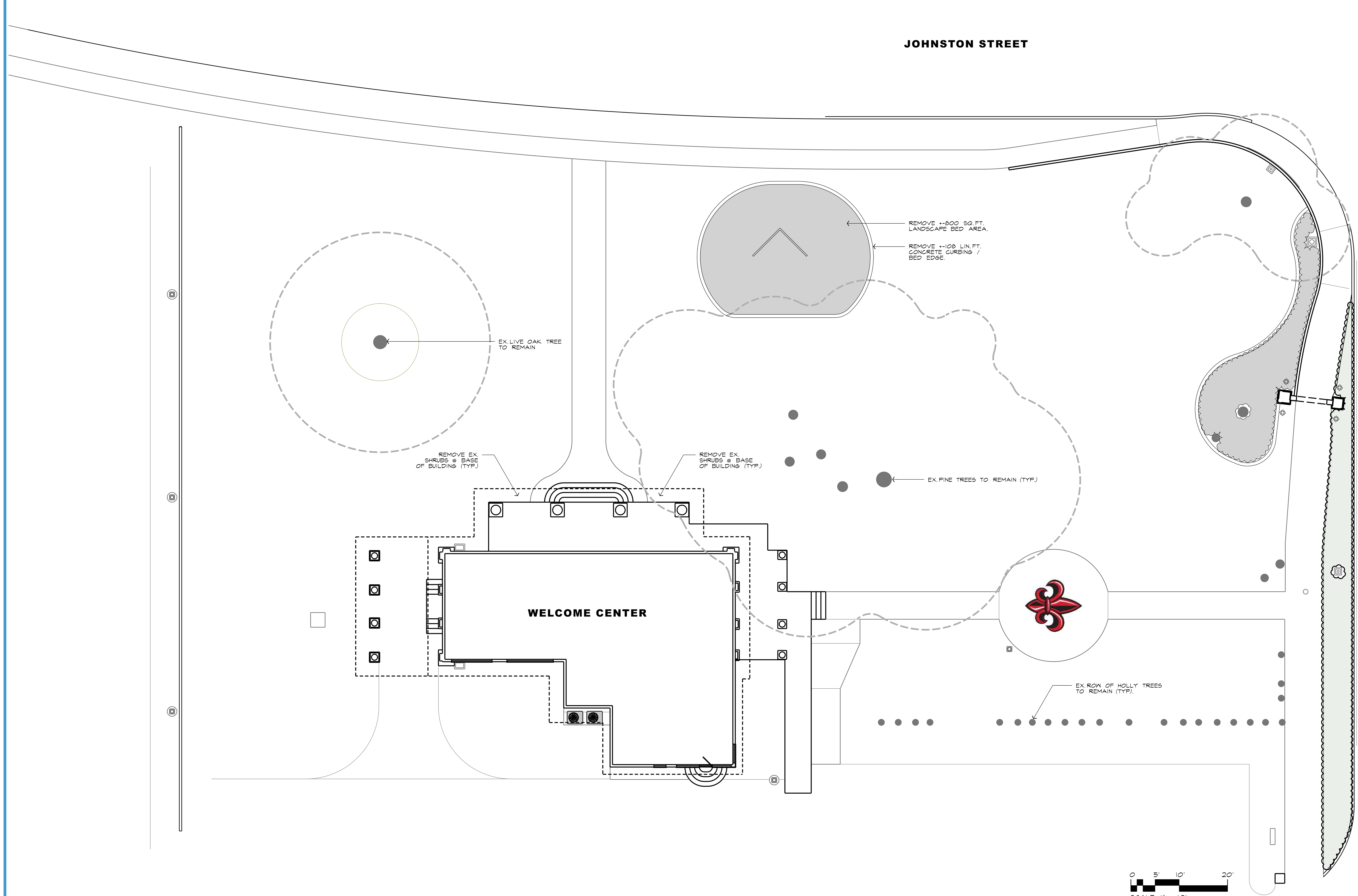

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LAFAYETTE, LA 70504
PROJECT • 22113.00

WELCOME CENTER - EX. CONDITIONS & DEMO PLAN

BID
05/18/23

STATE OF LOUISIANA
DANIEL A. SPILLER JR.
REG. NO. S-362
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

NORTH

LD1.1
SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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IRRIGATION NOTES

1. IRRIGATION CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S CURRENT SPECIFICATIONS AND RECOMMENDATIONS.
2. CALL 811 PRIOR TO DIGGING OR TRENCHING IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING AND NEW UTILITY LINES ABOVE OR BELOW GROUND AND SHALL REPAIR ANY DAMAGE CAUSED DURING IRRIGATION CONSTRUCTION ACTIVITIES AT NO COST TO THE OWNER.
3. WHEN TRENCHING UNDER THE DRIPLINE OF TREES,EXTREME CARE MUST BE GIVEN TO AVOID ROOT DAMAGE. IF AT ALL POSSIBLE AVOID TRENCHING INSIDE THE DRIPLINE BY GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR UNDER THE DRIPLINE,USE HAND-DIGGING METHODS RATHER THAN A MECHANICAL TRENCHER. MINIMIZE THE IMPACT OF ROOT SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER,KEEPING TREES WELL MATERED BEFORE AND AFTER DIGGING AND COVERING ROOTS WITH SOIL OR MULCH AS SOON AS POSSIBLE.
4. IRRIGATION CONTRACTOR SHALL VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 50psi WITH A FLOW RATE OF 50gpm AT THE WATER METER LOCATION PRIOR TO INSTALLATION.IRRIGATION CONTRACTOR SHALL NOTIFY ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
5. IRRIGATION CONTRACTOR TO COORDINATE WITH THE ARCHITECT AND OWNER EXACT LOCATION OF WATER METER,BACKFLOW PREVENTER,CONTROLLER AND SENSORS.
6. THE OWNER SHALL VERIFY OPERABLE WATER SERVICE.
7. OWNER TO PROVIDE DEDICATED 15 AMP CIRCUIT & GCFI OUTLET W/ WEATHER PROOF COVER IN LOCATIONS WHERE NEW CONTROLLER IS REQ.
8. THE IRRIGATION DESIGN IS DIAGRAMMATIC. THE INTENT OF THE DRAWINGS IS TO SHOW THE GENERAL LAYOUT AND LOGIC OF THE SYSTEM. SCALED MEASUREMENTS MAY NOT BE ACCURATE. ACTUAL LOCATIONS AND QUANTITIES OF PIPE AND FITTINGS MAY VARY DUE TO FIELD ADJUSTMENTS FOR EXISTING CONDITIONS AND OTHER OBSTRUCTIONS TO PROVIDE THE PROPER AND INTENDED COVERAGE.
9. ALL MAINLINE SHALL BE SCH40 PVC. ALL LATERAL PIPING SHALL BE CLASS 200 PVC PIPING. ALL PVC FITTINGS SHALL BE PVC TYPE I AND MUST BE OF DOMESTIC MANUFACTURE. PVC SOLVENT CEMENT AND PRIMER SHALL BE AS RECOMMENDED / APPROVED BY THE MANUFACTURER OF THE PIPE.
10. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF PVC SLEEVES AS INDICATED ON THE DRAWING. INSTALL FLOWLINE OF SLEEVES 1'BELOW ROADWAY BASE. EXTEND SLEEVES 18" BEYOND BACK OF CURB AND CAP UNTIL CONTRACTOR IS READY TO BEGIN THE INSTALLATION OF SPRINKLER SYSTEM. STAKE LOCATION OF SLEEVE WITH T-POSTS AND FLAGS. ALL JOINTS TO BE GLUED.
11. IRRIGATION CONTRACTOR TO USE 18 GAUGE MULTI-STRAND IRRIGATION CONTROL WIRE. COMMON WIRE TO BE 14 AWG COMMERICAL GRADE VALVE WIRE

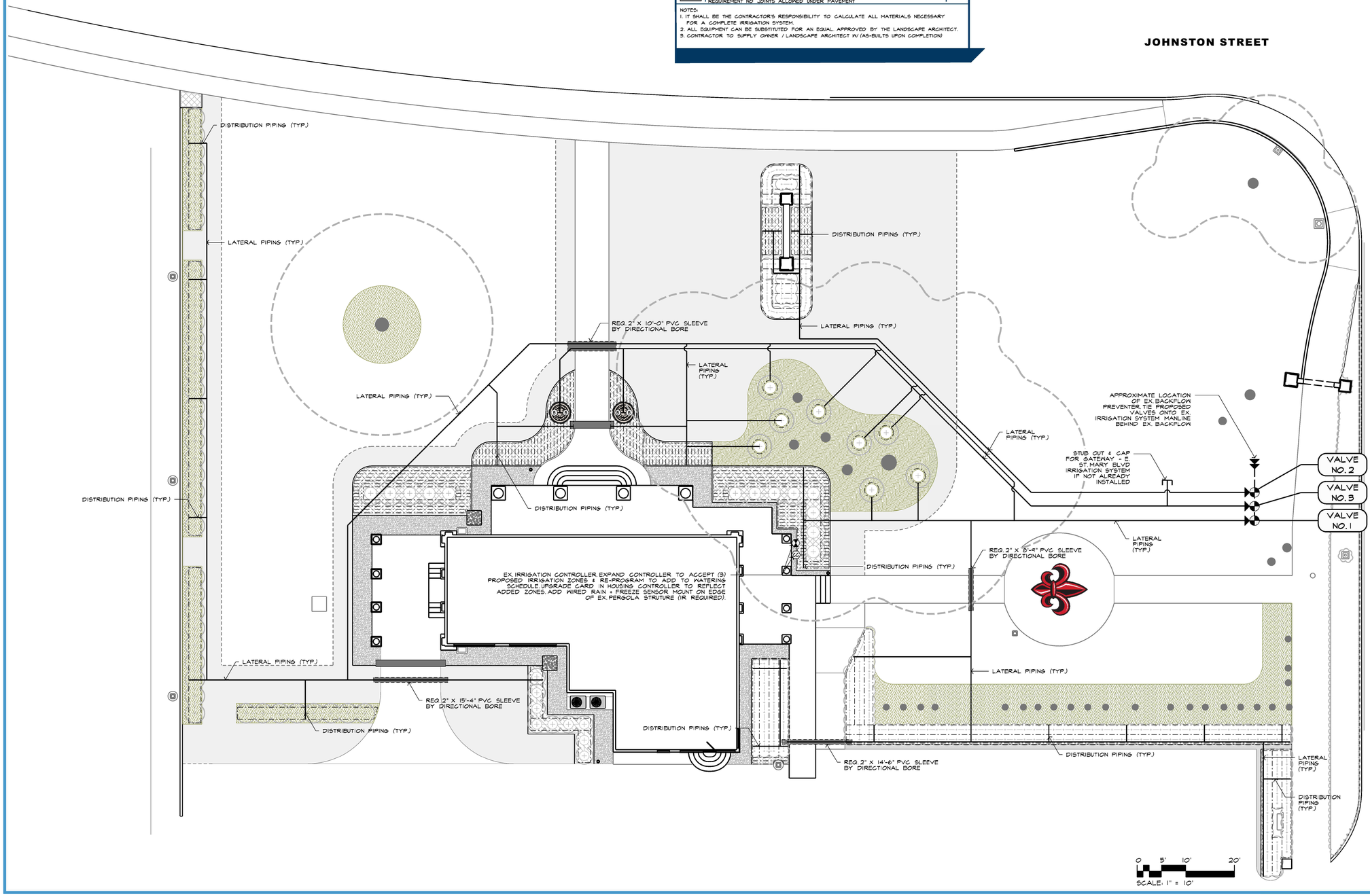
IRRIGATION EQUIPMENT LEGEND

SYMBOL	INFORMATION
	1" WATER METER (LOCATION AND METER TO BE PROVIDED BY THE OWNER PRIOR TO CONSTRUCTION) CONTRACTOR TO VERIFY FLOW AND PRESSURE PRIOR TO INSTALLAING SYSTEM (IF REQUIRED)
	WATTS 1-1/2" SERIES 911 REDUCED PRESSURE ZONE ASSEMBLY W/ FREEZE COVER (IF REQUIRED)
	GATE VALVE / MASTER VALVE (IF REQUIRED)
	RAINBIRD XCZ-PRB-100-COM 1" DRIP VALVE ASSY
	RAINBIRD ESP-LXME MODULAR CONTROLLER W/ (12) STATION MODULE - EXPANDABLE (IF REQUIRED)
	RAINBIRD RSD-BEX WIRED RAIN + FREEZE SENSOR (IF REQUIRED)
	RAINBIRD XERI BUBBLER 1032 - .5 GPM FLOW
	RAINBIRD XFD-06-12 DRIPLINE TUBING
	DISTRIBUTION PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	LATERAL PIPING - SCHEDULE 200 PVC (ALL PIPING TO BE 1" MIN UNLESS OTHERWISE NOTED)
	MAINLINE = SCH 40 PVC (ALL PIPING TO BE 1-1/2" MIN UNLESS OTHERWISE NOTED)
	SCHEDULE 40 PVC SLEEVING BY DIRECTIONAL BORE - SEE PLAN FOR SIZE REQUIREMENT. NO JOINTS ALLOWED UNDER PAVEMENT

NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE IRRIGATION SYSTEM.
2. ALL EQUIPMENT CAN BE SUBSTITUTED FOR AN EQUAL APPROVED BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR TO SUPPLY OWNER / LANDSCAPE ARCHITECT W/ (AS-BUILTS UPON COMPLETION)

IRRIGATION EQUIPMENT LEGEND

VALVE NO.	SIZE / TYPE	FLOW (GPM)	FLOW (GPH)
1	DRIP VALVE ASSEMBLY	——	1483
2	DRIP VALVE ASSEMBLY	——	197
3	DRIP VALVE ASSEMBLY (POTTERY BUBBLER ZONE)	5	——



LI1.1 SHEET

GENERAL NOTES

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2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
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10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS,AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

WELCOME CENTER IRRIGATION PLAN

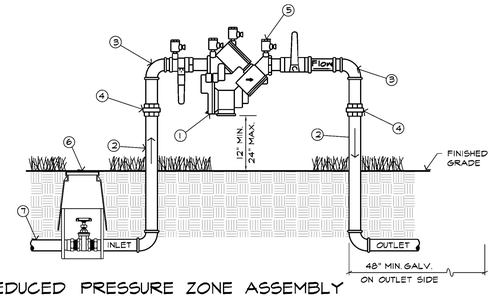
STATE OF LOUISIANA — DANIEL M. SPITLER JR. — REG. NO. S-302 — LICENSED LANDSCAPE ARCHITECT

BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939 FAX 337.993.3944

2023 ©



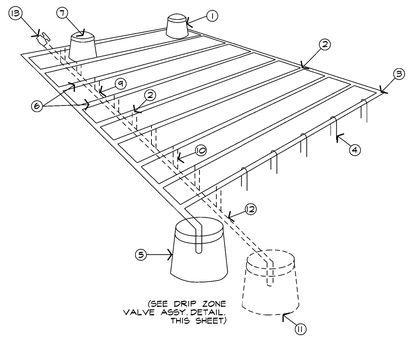
LIST OF MATERIALS

1. APPROVED ANTI-SIPHON PRESSURE VACUUM BREAKER ASSEMBLY,BALL VALVES INCLUDED.
2. GALV. PIPE, ¾" THRU 2".
3. 90° ELL,GALV., ¾" THRU 2 ½".
4. GALV. PIPE UNION.
5. TEST COCKS WITH BRASS PLUGS OR ADAPTORS WITH CAPS INSTALLED.(2 REQUIRED)
6. GATE VALVE IN BOX
7. COPPER NIPPLE AS REQUIRED BY CODE
8. CONTRACTOR TO PROVIDE INSULATED FIBERGLASS ENCLOSURE OR APPROVED EQUAL.

GENERAL NOTES

1. CONTACT THE LOCAL GOVERNING AUTHORITY FOR LATEST LIST OF APPROVED BACK-FLOW PREVENTION ASSEMBLIES.
2. BACKFLOW PREVENTERS MUST BE TESTED BEFORE FINAL APPROVAL IS ISSUED.
3. GALVANIZED FITTINGS SHALL BE CONNECTED USING PIPE DOPE OR TEFLON TAPE.
4. FINISHED GRADE UNDERNEATH THE BACKFLOW PREVENTER SHALL BE AT 95% COMPACTION.
5. ALL NIPPLES TO BE COPPER OR BRASS.
6. PIPING UNDER THE CITY RIGHT OF WAY MUST BE PER CITY CODE.
7. CALL LANDSCAPE ARCHITECT FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.

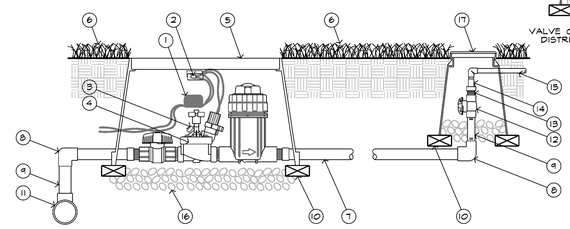
01 REDUCED PRESSURE ZONE ASSEMBLY
NOT TO SCALE



1. FLUSH CAP IN 6" VALVE BOX
2. MDCFTEE COMPRESSION TEE
3. MDCFEL COMPRESSION ELBOW
4. TDS-050 W/BEND TIE DOWN STAKE INSTALL 3'O.C.ON ALL TUBING
5. CONNECTION POINT TO PVC LATERAL LINE IN 10" VALVE BOX
6. SPACING - SEE PLANS
7. AIR/VACUUM RELIEF VALVE IN 6" VALVE BOX
8. PVC DISTRIBUTION PIPE TO BE USED ON LARGE ZONES.(SEE PLAN FOR PIPE SIZES & LOCATION)
9. PVC FITTINGS (TYPICAL)
10. PVC SCH.80 NIPPLE AND ¾" FHT ADAPTER
11. DISTRIBUTION VALVE (AS REQUIRED)
12. DISTRIBUTION PIPE (AS REQUIRED)
13. PVC FLUSH VALVE

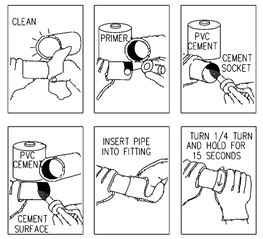
RAINBIRD XFD-06-12 DRIP TUBING
FLOW RATE = 0.6 GPH DRIPPER SPACING = 12"O.C.

02 DRIP TUBING LAYOUT - (DISTRIBUTION PIPE)
NOT TO SCALE



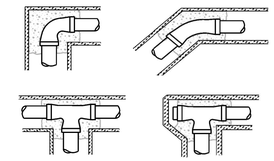
1. 30-INCH LINEAR LENGTH OF WIRE,COILED
2. WATERPROOF CONNECTION SPLICE-1 (1 OF 2)
3. ID TAG W/VALVE NUMBER
4. RAINBIRD XCZ-PRB-100-COM DRIP ZONE VALVE ASSY (INCL. VALVES,FILTER WITH PSI REG.)
5. VALVE BOX WITH COVER
6. FINISH GRADE/TOP OF MULCH
7. PVC CL200 PIPE
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4 PER BOX)
11. PVC MAINLINE PIPE
12. ¾" BALL VALVE
13. ¾" MPT x ¾" ADAPTER
14. ¾" FHT ADAPTER
15. RAINBIRD XFD DRIP LINE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. 10" VALVE BOX (CLEARLY LABELED NON-POTABLE WATER)

03 DRIP ZONE VALVE ASSY. (PRB),CONNECTION POINT & BOX
NOT TO SCALE



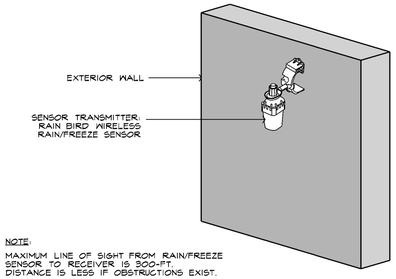
NOTES:
1. NEVER LAY PVC PIPE WHEN THERE IS WATER IN THE TRENCH
2. NEVER LAY PVC PIPE WHEN THE TEMPERATURE IS 32°F OR BELOW

04 PVC ASSEMBLING
NOT TO SCALE



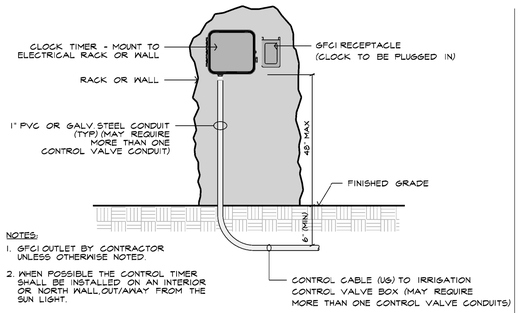
NOTE:
ALL FITTINGS SHALL BE WRAPPED IN POLY PLASTIC BEFORE THRUST BLOCKS ARE INSTALLED.CONCRETE SHALL NOT COVER THE TOP OF ANY FITTING.

05 TYPICAL THRUST BLOCKING
NOT TO SCALE



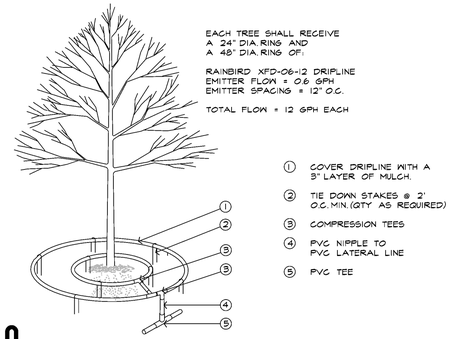
NOTE:
MAXIMUM LINE OF SIGHT FROM RAIN/FREEZE SENSOR TO RECEIVER IS 300-FT. DISTANCE IS LESS IF OBSTRUCTIONS EXIST.

06 RAIN/FREEZE SENSOR WALL/FENCE MOUNT - STANDARD
NOT TO SCALE



NOTES:
1. GFCI OUTLET BY CONTRACTOR UNLESS OTHERWISE NOTED.
2. WHEN POSSIBLE THE CONTROL TIMER SHALL BE INSTALLED ON AN INTERIOR OR NORTH WALL,OUT/AWAY FROM THE SUN LIGHT.

07 CONTROLLER MOUNTING - PLUG IN
NOT TO SCALE



1. COVER DRIPLINE WITH A 3" LAYER OF MULCH.
2. TIE DOWN STAKES @ 2' O.C.MIN.(QTY AS REQUIRED)
3. COMPRESSION TEES
4. PVC NIPPLE TO PVC LATERAL LINE
5. PVC TEE

08 TREE DRIP-RINGS
NOT TO SCALE

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LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA
DANIEL M. SPALLER JR.
REGISTERED
LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

L12.1
SHEET

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. General provisions of the contract and other applicable parts of the construction documents apply to this Section.

1.2 SUMMARY:

A. Furnish all labor, materials, equipment and instructions necessary for the complete installation of the landscape irrigation system as drawn and specified. The work includes, but is not limited to:

1. Trenching, backfilling, and compaction for irrigation lines.
2. Provisions and installation for a turnkey automatic sprinkler system. Provide backflow preventer, controller, piping, heads, drip lines, valves, quick couplers, valve access boxes, low voltage wiring, applicable connection fees and all other items required for a complete system as shown on the Drawings, called for in the specifications or as may be required for proper operation of the system. The system shall be installed in strict accordance with all applicable codes, ordinances and regulations.
3. Test all systems, make operative and adjust.
4. Submit Record Drawings, Maintenance Manual and satisfactory evidence to show that all work has been installed in accordance with the ordinance and code requirements.
5. Maintain and operate until substantial completion.
6. One-year Guarantee Period.

B. Related work by others:

1. Water Meter as provided by the General Contractor.
2. Sch40 PVC Sleeves as provided by General Contractor.
3. Electrical work and Conduit as provided by General Contractor for the automatic controller & backflow preventer.

C. Provide drip tubing in all shrub and groundcover beds as designated. Provide pop up spray heads in turf areas. Provide the number of heads required to assure 100% coverage. Layout the system so that the shrub and groundcover beds are on separate zones from the turf areas.

D. Provide winterizing for the system using automatic drain valves in the low-points of lateral piping and heat-tape for the backflow preventer.

E. Coordinate exact locations of water meter and backflow preventer with the General Contractor.

F. The Contractor shall coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs.

G. The Contractor shall install the irrigation system in accordance with the schedule requirements provided by the General Contractor.

1.3 QUALITY CONTROL:

A. The sprinkler system shall be designed, to the extent possible, to promote water, soil and energy conservation. The system shall include a rain sensing device and shall be consistent with any water conservation ordinance enacted by the city.

B. Provide Installation by a licensed Irrigation contractor, skilled in work required and completely familiar with manufacturer's recommended method of installation requirements. Contractor must have a minimum of two (2) consecutive years experience in this area of work and having completely installed other jobs of similar size and scope. Evidence of the Contractor's qualifications shall be presented before the award of contract.

C. Approval and selection of Materials and Work: The selection of all materials and the execution of all operations required under the Contract Documents shall be subject to the approval of the General Contractor and Landscape Architect who shall have the right to reject any and all materials and any and all work which, in their opinion, does not meet the requirements of the Contract Documents at any stage of the operations. All rejected materials shall be removed from the site by the Contractor.

D. The successful Contractor shall maintain a competent, skilled and satisfactory work force during and through the completion of the construction period. In no case, shall unskilled labor be allowed to operate equipment, assemble, glue, install, wire, test or adjust components of the system. If in the opinion of the General Contractor or Landscape Architect, the labor furnished by the Contractor is incompetent or inexperienced in the practice assigned, the Contractor shall remove such persons or reassign them to a practice acceptable to the General Contractor and Landscape Architect.

E. Conform to all codes, statutes, laws and regulations governed by the following agencies for the protection of public safety:

ASTM	American Society for Testing Materials
AWWA	American Water Works Association
NEC	National Electric Code
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
UPC	Uniform Plumbing Code

F. The Contractor shall make application, acquire, comply and pay for all licenses and/or permits required by Local, State, or National Governing Agencies as may be required to perform and complete the work as described in the Contract Documents.

1.4 SUBMITTALS:

A. General: Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for possible revisions, and re-submittals, and for placing orders and securing delivery.

B. A design layout based on the equipment of Rainbird Corporation & Hunter Industries has been provided for bidding purposes. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to the layout as required to achieve full coverage of irrigated area at no additional cost to the Owner. It shall be the contractor's responsibility to establish the location of all sprinkler heads in order to ensure proper coverage of all areas.

C. Product Manual: Submit technical specification sheets and or performance data for all proposed system components. Submit the address and telephone number of the subcontractor installing the system and the local representative for the equipment.

1.5 PROJECT CONDITIONS:

A. The Contractor shall warrant that he has fully informed himself of the site conditions under which the work will be performed and is thoroughly familiar with the Contract Documents and all applicable codes and standards. Failure to have done so will not relieve the Contractor of his obligation to furnish all supervision, labor, tools, materials, equipment and supplies necessary to perform the provisions of the work detailed in the Contract Documents.

B. Make necessary adjustments in the layouts as may be required to connect to existing stub-outs, should such not be located exactly as shown, and as may be required to work around existing work at no increase in cost to the Owner.

C. The Contractor's attention is directed to the fact that there are other utilities located within the limits of the work. Before commencing any work required under the Contract, he shall determine the location of all utilities, subsurface drainage, structures and underground construction so that proper precaution may be taken not to disturb or damage during all operations. The Contractor shall be held responsible for making, at his own expense, all repairs to damaged utilities which could have been located or other construction resulting from the work covered by this Contract.

D. Should utilities not shown on plans be found during excavations, promptly notify the General Contractor for instructions as to further action.

1.6 PROTECTION OF WORK AND MATERIALS:

A. Use all means necessary to protect the work before, during and after installation and to protect the materials and installed work of all other trades.

B. The Contractor shall make every effort to safeguard the public during the Irrigation system installation operations. This includes, but is not limited to, erection of barricades around excavation, close supervision of all work and placement of warning flags wherever necessary. The Contractor shall insure that the personnel, equipment and materials involved in operations do not interfere with, or pose a hazard to, vehicular or pedestrian traffic.

C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the General Contractor and Landscape Architect at no additional cost to the Owner.

D. Store materials delivered to site, prior to actual use, in a secure place not to interfere with other trades or construction and protect from vandalism, damage by weather or other elements. All materials are to be stored off of the ground and away from soil or other contaminates.

E. The Contractor is completely responsible for replacement of materials due to acts of God, theft, vandalism and malicious mischief at the job site before, during and after installation. Such regulation shall continue until the date of final acceptance of the work in its entirety by the Owner.

1.7 ACCIDENT REACTION:

A. In the event of an accident causing injury or damage, the Contractor shall promptly report such to the Owner, General Contractor, Landscape Architect and required governmental agencies.

1.8 TRASH & DEBRIS:

A. The Contractor shall not permit trash and debris to accumulate on the grounds in the vicinity of his work. He shall establish and maintain a regular daily routine for removing trash and debris and hauling it away from the premises for no additional payment.

PART 2 - PRODUCTS

2.1 GENERAL:

A. The sprinkler system design shall be based on the equipment of Rainbird Corporation & Hunter Industries or approved equal.

B. Materials shall be newly manufactured and without flaws or defects, and of quality and performance as specified. Excess materials at completion are property of the Contractor, to be removed from the site.

C. The Contractor shall be responsible for computing and supplying the required quantities necessary to make the irrigation system complete and operational in every way. Quantities shown on the drawings are for convenience only.

2.2 PIPE AND FITTINGS:

A. Mainline piping above ground shall be Copper tube, Type K, drawn temper; copper tube fittings; soldered joints.

B. Mainline piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D1785, Sch40 for solvent weld and threaded connections.

C. Lateral piping below ground shall be polyvinyl chloride (PVC) pipe; meeting ASTM D2241, Class 200 for solvent weld connections; Sch40 for threaded connections. The minimum pipe size shall be 3/4" in diameter.

D. Polyvinyl chloride (PVC) fittings; meeting ASTM D2466, Sch40 for solvent weld connections; Sch40 for threaded connections. All fittings must be of domestic manufacture and shall be identified as to pressure rating or schedule, with a working pressure no lower than that of the pipe.

E. Handling of Pipe and PVC Fittings: Exercise care in handling, loading, unloading and storing PVC pipe and fittings. Store under cover and transport in a vehicle with a bed long enough to allow no undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded until said section of pipe is cut out and rejoined with a coupling.

F. Visual Inspection: Provide pipe homogenous throughout, free from visible cracks, holes, blisters, wrinkles or foreign materials

G. PVC solvent cement shall comply with ASTM D2564, regular-bodied for pipe 2" and smaller, and medium for pipe 2 1/2" and larger. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints.

H. Use Teflon tape or an appropriate sealant for all threaded connections.

2.3 CONTROL WIRES AND CONNECTORS:

A. Single Conductor Wire for direct burial applications, meeting UL Standard 493, UF-14/1 for "Control" wiring and UF-14/1 for "Common" wiring. Color code the common neutral wiring from all other wires.

B. Wire Connectors shall be either 3M DBY / DBR or King "One Step" Connectors or approved equal.

2.4 AUTOMATIC CONTROLLER AND SENSORS:

A. The automatic controller shall be of a hybrid type that combines electromechanical and microprocessor-based circuitry capable of fully automatic and manual operation. The controller will be housed in a weather-proof, lockable, cabinet suitable for wall mounting.

B. The rain sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if approximately .10" of rainfall has accumulated due to precipitation at a rate equal to or greater than .25" per hour prior to or during an irrigation cycle.

C. The freeze sensor shall be a wall mounted device that shall interrupt the watering cycle from starting if the ambient air temperature falls below 37 degrees Fahrenheit prior to or during an irrigation cycle.

2.5 VALVES:

A. The Rainbird remote control valves shall be a normally closed, 24VAC solenoid actuated, globe type valve. They shall have manual flow control stems for accurate regulation and/or shutoff of outlet flow.

B. The automatic drain valves shall be a pressure activated type, capable of opening when system pressure drops below 2.5psi, and closing when system pressure reaches 5.5psi.

C. Bronze gate valves for use as cut-off, isolation or manual drain valves on lines up to 3" in diameter shall be as manufactured by Nibco, Inc., Elkhart, IN or approved equal.

2.7 VALVE BOXES:

A. Provide valve boxes for all remote control valves and manual gate valves. The manufacturer shall be Armor, Plymouth Products Division, Sheboygan, WI or approved equal.

B. When used with a single valve use a #181104 - 10" round box with a twist lock cover. When used with multiple valves use #190106 - 20" x 14" rectangular box with snap lock cover.

2.8 SPRINKLER HEADS:

A. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.

B. Professional Series Spray Sprinkler: The sprinkler shall be capable of covering area shown at flow rates as designed.

1. All heads shall perform to manufacturer's specifications concerning diameter of throw and flow rates at given pressures.
2. Provide pop-up spray heads in small turf areas or in clusters of trees where rotary heads are not feasible. The sprinkler shall have a pressure regulating device to prevent high-pressure fogging to the spray pattern and a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
3. Provide pop-up spray heads in all shrub and groundcover beds. The sprinkler shall include a pressure regulating device to prevent high pressure fogging to the nozzle stream. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Use matched precipitation rate nozzles that can be mixed with various arcs and radii on the same circuit.
4. Provide pop-up rotary sprinklers in all large turf areas. The full or part circle sprinkler shall be a single stream, gear driven rotor with a rotating nozzle turret that is independent of the riser stem. The sprinkler shall have a pressure activated wiper seal that will clean debris from the pop-up stem as it retracts. Matched precipitation shall be obtained by installing nozzles as shown on plan.
5. Provide check valve feature, as required, to prevent low head drainage from sprinklers at lower elevations.

2.9 DRIP IRRIGATION PRODUCTS:

A. Landscape Dripline (Inline Emitter Tubing): The Dripline tubing shall be brown in color and conform to an outside diameter (O.D.) of 0.630 inches and an inside diameter (I.D.) of 0.540 inches and wall thickness of 0.045 inches. The Dripline tubing shall have factory installed, pressure-compensating, inline emitters installed every 12 inches. The flow rate from each installed inline emitter shall be a consistent 0.6 gallons per hour when inlet pressure is between 8.5 and 60 psi.

B. Drip Control Zone Kit: The control zone kit shall have a 1" automatic irrigation control valve with a pressure rating not to be less than 150 psi. The valve body and bonnet shall be constructed of high-impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of a durable Buna-N rubber material reinforced with nylon.

The control zone kit shall have a 1" inline Quick Check Basket Filter body constructed of heavy-duty, glass-filled, UV resistant polypropylene capable of withstanding pressures of not less than 150 psi. The design shall be a basket style body with jar-top cap. The cap shall incorporate an indicator that goes from green to red during operation when the filters element needs cleaning. The screen shall be serviceable for cleaning purposes by unscrewing the cap from the body and removing the filters element.

The control zone kit shall have a 1" inline pressure regulator. The pressure regulator shall be constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 psi. The pressure regulating device is a normally open device that allows full flow with little pressure loss unless the inlet pressure is greater than the preset level. As the inlet pressure increases above the preset level it compresses a spring and begins to reduce the flow and downstream pressure. The inline pressure regulators shall have a preset outlet pressure of approximately 40 psi.

C. Landscape Dripline Compression Fittings: The Compression Fitting System shall consist of 3 fittings (tee, coupling and elbow) plus connection adapters and removable flush caps. The Compression Fittings shall accept all polyethylene tubing with an outside diameter (O.D.) from .630 to .710 inches and shall provide a leak-free compression fit. They also shall provide connections to threaded components when used with the adapters. The removable flush caps shall be used to close off a line and for manual draining. Air/vacuum relief valves shall be capable of venting air or preventing vacuum. The operating pressure range for the Compression Fitting System shall be 0 to 60 psi.

PART 3 - EXECUTION:

3.1 GENERAL:

A. Verify that the work of this section is installed in strict accordance with all applicable codes, regulations the design and the approved submittals. Contractor shall install all equipment as per manufacturer's current specifications and recommendations.

B. VERIFY THAT WATER PRESSURE IS ADEQUATE FOR EFFICIENT OPERATION OF THE SPRINKLER SYSTEM AS DESIGNED AND INSTALLED. Coordinate exact location of Point-of-Connection with the General Contractor.

C. Coordinate the installation of the sprinkler system with the landscape installation, avoiding the rootballs of trees and shrubs, and parking, paving and site electrical plans. Verify existing and proposed locations of all site utilities (i.e. gas, water, electric, telephone, fiber optics) prior to any trenching and laying of pipe.

D. When sprinkler system work is to be installed close to or will interfere with the work of other trades, the Contractor shall assist in working out space conditions to permit all work to be installed satisfactorily at no additional cost to the owner. If a Contractor installs his work before coordination with other trades, he shall make necessary changes in his work to correct the condition without additional compensation.

E. Flag the location of all sprinklers & valves in accordance with the approved design and submittals. In the event of a discrepancy, immediately notify the Landscape Architect and General Contractor. Do not proceed with installation in areas of discrepancies until all such discrepancies have been fully resolved.

F. The irrigation design is shown in schematic form only. All piping to be installed directly behind curb where possible.

G. The Contractor is responsible for full and complete coverage of all irrigated areas and shall make any necessary minor adjustments at any time, at no additional cost to the Owner.

3.2 WATER METER & BACKFLOW PREVENTER:

A. The Project Owner shall provide Water Meter as shown on the drawings All materials, operations, installed conditions and personnel shall be in strict accordance with all applicable codes, ordinances and regulations.

B. Immediately after Contract award, conduct tests at the designated Point-of-Connection and note as such on the written results provided to the General Contractor and Landscape Architect for the following:

1. Static Water Pressure
2. Dynamic Water Pressure
3. Gallons per minute

C. Install a temporary meter on a fire hydrant if necessary for water access due to site work, phasing schedule and/or landscape installation. Verify location and obtain approval from the General Contractor prior to installing temporary meter.

D. The Contractor shall comply with the requirements and codes of the local governing authority regarding backflow prevention. In addition, the Contractor shall provide the necessary materials, insulation/ winterization capabilities and acceptable concealment. General contractor is responsible for providing a GFI outlet with 115VAC; 1Phase power to the Backflow Preventer location.

3.3 SLEEVING:

A. The General Contractor shall provide Sch40 PVC sleeving, buried at a minimum of 18" and maximum of 24" depth.

B. Upon completion of site filling and compaction operations, and prior to the construction of foundations, roadways, walks or other pavements or obstructions, the General Contractor shall install sleeves in sufficient sizes to accommodate future irrigation piping and/or control wiring. Ends of sleeves shall extend 18 inches past the edges of all paving or construction. The ends of the sleeves shall be clearly marked for future use by the Irrigation Contractor.

3.4 TRENCHING AND BACKFILLING:

A. Carefully install system in areas of existing vegetation designated to remain to provide minimal disturbance feasible. When trenching under the drip-line of existing trees, extreme care must be given to avoid root damage. If at all possible avoid trenching inside the drip-line by going around the tree rather than under it. If trenching must occur under the drip-line, use either tunnelling or hand-digging methods rather than a mechanical trencher. Minimize the impact of root severing by avoiding construction during hot, dry weather, keeping trees well watered before and after digging and covering roots with soil or mulch as soon as possible.

B. Perform all excavation required for the installation of the work included under this Section. Including shoring and bracing of earth banks to prevent cave in. Restore all surfaces and existing underground installations damaged or cut as a result of the excavations, to their original condition and in a manner approved by the Owner and the General Contractor.

C. Excavate trenches to a depth of minimum pipe coverage plus six inches. Remove all lumber, rubbish and large rocks from the trenches. Provide a uniform bearing for the entire length of each pipe line to prevent uneven settlement. Make the width of the trench a minimum of 1 1/2 times the diameter of the piping but not less than 4 inches.

D. Upon completion of pipe installation and system testing, backfill the trenches with clean soil. Backfill material shall be free from rocks or any heavy unsuitable substances which could damage the pipe or create unusual settling problems. Backfilling shall be done in six inch layers and tamped down after each layer is put back as required to avoid settling in landscape areas and to 98% standard proctor in paved areas.

E. If settling occurs within the warranted period, the Contractor shall be responsible for bringing the trenches up to finish grade and repairing plant damage without additional compensation.

3.5 PIPE INSTALLATION:

A. Never Install PVC pipe when there is water in the trench. Never Install PVC pipe when the temperature is 32 degrees Fahrenheit or below.

B. Install the mainline at a bury depth of 18 Inches and the lateral lines at a bury depth of 12 inches below finished grade. Maintain a 4 inch clearance between pipes that cross at an intersection and a 2 inch clearance between pipes that are buried in the same trench.

C. Remove all foreign matter or dirt from the inside of the pipe before joining. Cap or plug all lines after installation and prior to testing to minimize infiltration of foreign matter or dirt.

D. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Install main lines and lateral lines in common trenches wherever possible.

3.6 PIPE AND FITTING CONNECTIONS:

A. Meet ASTM D2855 Standard Practice for making solvent-cemented joints with PVC pipe and fittings. Use only the solvent approved and/or recommended by the pipe manufacturer to make solvent welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.

B. Make solvent welds with a non-synthetic bristle brush In the following sequence: Apply an even coat of solvent to the outside of the pipe. Then apply solvent to the inside of the fittings and then re-apply a light coat of solvent to the outside of the pipe, making sure that coated area on the pipe is equal to the depth of the fitting socket. Insert pipe quickly into the fitting and turn the pipe approximately 1/4 turn to distribute the solvent and remove air bubbles. Check all tees and ells for correct position, then hold joint for approximately 15 seconds so that pipe does not push out from the fitting. Allow at least 15 minutes drying time for each weld joint before moving.

C. Allow all joints to set and cure for a minimum of 12 hours prior to pressurization of system.

3.7 WIRE INSTALLATION:

A. Verify that the work of this section is installed in strict accordance with the latest edition of the National Electric Code and local electrical codes.

B. Install neutral and control wires, 12 inches below finish grade, in the same trenches as the main and lateral lines. The wires shall be installed in a neat and orderly fashion and bundled together and taped every 10 feet. Snake wires in trench to allow for expansion and contraction and provide slack loops at every splice, change of direction, at the valves, where the wire enters the conduit for the automatic controller and at least every 100 feet in runs more than 100 feet in length. The slack loops shall be created by wrapping 3 feet of wire around a 1/2 inch diameter pipe to form a coil.

C. Connect each solenoid to the controller with a "control wire" which is typically red in color. Connect a "common neutral wire" to all solenoids which is typically white in color.

D. Solder or join all wire connections by positive mechanical connectors. Splices must be properly insulated and waterproofed. Control wire splices will be allowed only in runs more than 500 feet and only in valve boxes.

3.8 CONTROLLER AND SENSOR INSTALLATION:

A. Coordinate with the General Contractor the exact location where the automatic controller will be located. Connect all wiring and grounding In accordance with manufacturer's instructions. Provide separate, secured to the wall, conduits for both power supply and control wiring.

B. General contractor Is responsible for providing a J-box with 115VAC; 1Phase power to the Controller location. Irrigation Contractor shall hard wire controller to j-box.

C. Install the rain and freeze sensors in an open area where the device is exposed to rain water but not sprinkler water. Mount away from overhanging objects that may Interfere with rainfall. Connect wiring In accordance with manufacturer's instructions.

3.9 VALVE INSTALLATION:

A. The remote control valves shall be Installed In accordance with manufacturer's instructions. Valves shall be installed in Armor valve boxes or approved equal. Boxes shall be Installed to a height that will not cause them to Interfere with maintenance machinery and which is sufficient to prevent soil or mulch from washing Into the box. Provide a 6 Inch layer of washed gravel In the bottom of the valve box. Valves shall be set a minimum of two feet behind curbs. Valves shall not be set in curves which are vulnerable to damage by truck trailers over running curbs.

B. The quick coupling valves shall be installed on PVC threaded swing joints on the Irrigation mainline. Space quick coupling valves as shown on the plans. Provide a 1"x1"x3" piece of angle iron next to the quick coupling valve and anchor with two (2) stainless steel hose clamps.

C. The automatic drain valves shall be installed in the low points of the lateral lines. Dig a minimum two (2) cubic foot hole where the drain valve is to be located. Install the drain valve in a PVC tee pointing downward at a 45 degree angle. Surround the drain valve with a minimum one (1) cubic foot of gravel. Place an 18"x18" piece of weed cloth or burlap on top of the gravel. Finish to grade with top soil.

D. Install in the low points of the mainline, manual gate valves as needed for draining. Install 24" off of the mainline in 10" valve boxes.

3.10 FLUSHING AND PRESSURE TESTING:

A. Prior to backfilling and installation of sprinkler heads, open all control valves and use full line pressure to completely flush lines of foreign matter and dirt. INITIAL FLUSHING OF LINES SHALL NEVER BE THROUGH SPRINKLER HEADS OR DRIP TUBING.

B. With zone valves closed, pressure test mainlines by supplying and maintaining full static pressure continuously for one full hour. Observe for evidence of leakage by monitoring flow meter and by visual inspection of the exposed lines. Repair all leaks and retest until no water flow is observed.

3.11 SPRINKLER HEAD INSTALLATION:

A. After landscape finish grading is accomplished, Install heads to finished grade in lawn and shrub areas and backfill with clean topsoil so head is stabilized and no lateral motion is exhibited during operation. Heads shall be set so the tips of the heads are 1/2" above the top of the mulch in planting beds. Heads In the turf areas shall be set flush with the finished grade and not a hazard to pedestrians and/or maintenance machinery. Set sprinkler heads to plumb within 1/16" and a minimum of 4 inches and a maximum of 6 inches from walls, walks and curbs.

B. Sprinkler heads to be spaced so as not to throw water on the buildings, walks or driveways. Heads shall be adjusted as required so that foliage of plants will not obstruct the spray and that the system has 100% coverage.

C. Provide connection to the PVC lateral lines, for spray heads, with barbed fittings and swing pipe. Do not use more than 18 inches of swing pipe for each sprinkler head.

3.12 DRIP SYSTEM INSTALLATION:

A. Drip Control Zone Kit: Install Drip Control Zone Kit level and below grade with a minimum of 4 inches clearance to the top and sides of the inside of a rectangular valve box. Place a minimum of 6 inches of gravel in the bottom of the valve box.

B. Landscape Dripline (Inline Emitter Tubing): Landscape bed areas shall be supplied with rigid PVC lateral piping. Landscape Dripline connection points shall be made in 6 inch valve boxes using compression adapter tees or ells as required. For under mulch Installation, place tubing rows at 18 inch lateral spacing as Indicated on the plans and hold In place with galvanized tie-down stakes spaced evenly every 2 to 3 feet, and with two stakes on each change of direction. Install tubing in a serpentine manner and bending is allowed provided the radius is sufficient enough that kinking does not occur. Backfill with mulch as noted In the landscaping specifications.

C. Landscape Dripline Compression Fittings: Landscape Dripline Compression Fittings shall be used at connection points to the PVC lateral piping, where tubing layout requires a tee and at bends or changes of direction to prevent kinking of the Landscape Dripline.

Removable flush caps shall be Installed at the low point of each dripline section. Depending on the site conditions and tubing layout, more than one flush cap may be required. Provide a 6 inch valve box for each flush cap.

Air/vacuum relief valves shall be installed at the highest elevation within each dripline section. Depending on the site conditions and tubing layout, more than one air/vacuum relief valve may be required. Provide a 6 inch valve box for each air/vacuum relief valve.

3.13 FLUSHING, OPERATION, TESTING AND BALANCING:

A. Flushing: All air and foreign objects and debris shall be flushed from the system.

1. Dripline and Emitter Lateral Flushing Procedures.
   a. Flush the system every two weeks for the first six (6) weeks and check the water that is flushed out for cleanliness. Establish a regular system flushing schedule for the future based on results from the initial six-week flushing schedule.
   b. Flush the system completely after any repairs are made and monitor system operation closely under regular system flushing schedule.
   c. Check the pressure at the supply and flush headers on a regular basis and compare with the pressure readings taken after installation.

B. General Testing: Upon completion of the irrigation system, and after pressure/leak testing and head installation, the entire system shall be tested for proper operation. All components checked for proper operation by the Contractor under supervision of the General Contractor. The system shall be tested in strict accordance with all applicable codes, ordinances and regulations.

C. Dripline and Emitter Lateral Leakage Testing Procedures:

1. Subject installed drip tubing and emitter lateral piping to water pressure equal to specified operating pressure for ten (10) minutes. Test with control zone components and drip flush valve components installed.
2. Partially backfill buried pipe and tubing to prevent movement under pressure. Expose couplings, fittings, and valve components.
3. Visually Inspect valve assemblies and fittings for leakage and replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until test segment is free from leaks. Cement or caulking to seal leaks is prohibited.

D. Dripline and Emitter Lateral Operational Testing Procedures:

1. Activate each dripline and emitter lateral control zone valve in sequence from controller. Provide either one additional person with radio or use handheld remote to activate remote control valves from controller. Manually activating remote control valve using manual bleed mechanism at remote control valve is not an acceptable method of activation.
2. Replace or adjust defective valve, fitting, dripline segment, emitter lateral segment, or appurtenance to correct operational and coverage uniformity deficiencies.
3. Repeat test(s) until each dripline or emitter lateral test segment passes testing procedures. Repeat tests, replace components, and correct deficiencies at no additional cost.
4. Any portions requiring repair shall be replaced or repaired and test repeated. No testing shall be done until the last solvent welded joint has had 12 hours to set and cure.

C. Balancing and Adjustment: The Contractor shall balance and adjust the various components of the system so that the overall operation is most efficient. This work shall include adjustment to all sprinkler heads and individual station adjustments on the controller. Observe that all zones function properly and in the correct sequence.

3.14 MAINTENANCE AND COMPLETION OF THE WORK:

A. The Contractor shall complete the irrigation system as drawn and specified, according to Schedule herein, and operate and maintain same until time of substantial completion of the project.

B. Any changes made in the layout and/or arrangement of the proposed Irrigation system, or any other differences between the proposed system and actual Installed conditions shall be recorded by the Contractor In the form of an "As-Built" drawing. The Contractor shall provide the Owner and the Landscape Architect with a copy of this drawing before work under this contract will be considered acceptable. All adjustments in the layout and/or arrangement of the Irrigation system are subject to the approval of the Landscape Architect.

C. The Contractor shall orient the Owner's personnel to the operation and adjustments of the controller according to local seasonal requirements. The Contractor shall also familiarize the Owner with sprinkler and valve adjustments. The Owner is, In general, to be totally familiarized with the overall operation, adjustment, maintenance and intent of the Irrigation system, Including the measures that should be taken to provide winterization for the system. Such instructions should be in written form. The contractor shall also provide a color coded laminated plan, in the controller door, showing the locations of all zones.

3.15 INSPECTION AND SUBSTANTIAL COMPLETION:

A. When Contractor is satisfied that the entire system is operating properly, that it is balanced and adjusted so that all work and clean-up is completed, he shall submit a written request for Initial Inspection to the General Contractor and Landscape Architect at least one week prior to anticipated date of Inspection and testing.

B. Submit reproducible as-built Record Drawings and Maintenance Manual to General Contractor with request for inspection.

C. Upon completion of repairs and replacements found necessary at time of Inspection, the Landscape Architect will confirm the date of substantial completion.

E. The date of substantial completion will determine:
   1. The final date of maintenance as part of this Section.
   2. The beginning date of the One-Year Guarantee Period.

3.16 GUARANTEE:

A. Guarantee all work, products, equipment and materials for one (1) year period beginning upon substantial completion.

B. Guarantee applies to all losses with the exception of those due to Acts of God, vandalism, occupancy of the project or Owner neglect, as determined by the Landscape Architect and/or Owner.

3.17 FINAL INSPECTION:

A. At end of Guarantee Period and upon request for final inspection, jointly review all guaranteed work for Final Acceptance with the Owner and General Contractor.

B. Submit written request for final inspection to the General Contractor and Owner at least two weeks prior to anticipated date of Inspection.

3.18 FINAL ACCEPTANCE:

A. Upon completion by the Contractor of all required repairs and replacements found at time of final Inspection, the Owner and General Contractor will confirm the date of Final Acceptance of the work.

B. Confirmation of Final Acceptance by the Owner and the General Contractor will constitute completion of the work of this Section.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

IRRIGATION SPECIFICATION SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR · REG. NO. 5-330 · LICENSED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

L12.2 SHEET

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

2023 ©

PLANTING LEGEND

CODE	COMMON NAME & VARIETY-SPACING	MIN. SIZE	PATTERN	QTY.
ANCI	ANNUAL COLOR 4" - 12"	4" CUP		
ANC3	ANNUAL COLOR 18" - 24"	4" CUP		
AZF	AZALEA 'FORMOSA RED'	7 GAL		
AZG	AZALEA 'G.G.GERBING'	7 GAL		
HBD	DWARF BURFORD HOLLY	4'HT		
HCR	HOLLY 'CARISSA'	3 GAL		
HEB	HOLLY 'EMILY BRUNER'	6'HT		
HEG	HOLLY 'EAGLESTON'	16-18'HT		
HLY	HURRICANE LILY BULB (SPACE APPROX ± 30" O.C.)	1 GAL		
HYL	HYDRANGEA "LIME LIGHT"	7 GAL		
MDO	MONDO GRASS 8" O.C.(TYP.) W/ HURRICANE LILY SPACED +-30" O.C.	4" CUP		
MLG	MUHLY GRASS 'WHITE CLOUD'	3 GAL		
OKL	LIVE OAK	15'HT		
OLR	OLEANDER 'RED'	7 GAL		
SPB	SPIREA 'BRIDAL WREATH'	7 GAL		
VSSH	VIRGINIA SWEETSPIRE 'LITTLE HENRY"	3 GAL		
YEW	JAPANESE YEW	6'HT		
WHF	WHITE FRINGE TREE	8'HT		
LIM	LIMESTONE NO.8	SF		
ROCK 1	LARGE RED GRAVEL- 3/4" - 2" SIZE @ LIMESTONE CO. www.limestoneco.com (3" THICK OVER LANDSCAPE FABRIC)	SF		
ROCK 2	15-50 LB STONE RIP RAP - TAN (8"-11" THICK OVER LANDSCAPE FABRIC)	SF		
MULP	PINE STRAW MULCH, CRIMPED	SF		
MULH	HARDWOOD MULCH, SHREDDED	SF		
SDA	ST. AUGUSTINE 'PALMETTO'-SQUARE YARD	SY		
STEEL 6	6 X 1/8" STEEL EDGING - 2'LAP @ J.T.	LF		
STEEL 8	8 X 1/8" STEEL EDGING - 2'LAP @ J.T.	LF		

PLANTING NOTES

1. PLANT MATERIAL TO BE FULLY GROWN AND MATCHING.
2. BEDS TO BE SLOPED TO DRAIN - MOUNDED W/ 20% SLOPE FROM CENTER TO EDGE
3. DEBRIS TO BE REMOVED FROM BEDS.
4. BEDS TO BE TILLED TO A DEPTH OF 12" FOR ANNUALS & GROUND COVER AND 16" FOR SHRUBS.
5. ALL TREES TO HAVE CLEAR TRUNK OF FIVE FEET MINIMUM.
6. UNLESS OTHERWISE NOTED ALL TREES TO BE STRAIGHT,MATCHING,SINGLE TRUNK.
7. BID SHOULD NOTE CONTAINER OR B&B MATERIAL
8. UNLESS OTHERWISE NOTED ALL BEDS & NEW TREES ARE TO BE IRRIGATED W/ DRIP IRRIGATION.
9. ALL DRAIN LINES TO FALL @ 1% SLOPE OR GREATER.
10. AS-BUILT DRAWINGS OF THE IRRIGATION & DRAINAGE SYSTEM TO BE SUBMITTED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
11. SLOPE ALL BEDS TO DRAIN AWAY FROM THE BUILDING IN THE EVENT THAT THE DRAINAGE SYSTEM BECOMES CLOGGED
12. SOIL SAMPLES HAVE BEEN TAKEN FOR THIS PROJECT. THE PLANT PALETTE WAS DESIGNED TO WORK WITH THE PARENT OR NATIVE SOIL ON SITE SUBSTITUTIONS OF PLANT MATERIAL ARE NOT PERMITTED W/OUT APPROVAL OF THE LANDSCAPE ARCHITECT.
13. UNITS OF ANNUAL COLOR SHOWN ON PLAN ARE IN SQUARE FEET. USE CHART BELOW TO DETERMINE QUANTITY OF PLANTS. QUANTITY MAY BE AFFECTED BY SELECTED VARIETIES.

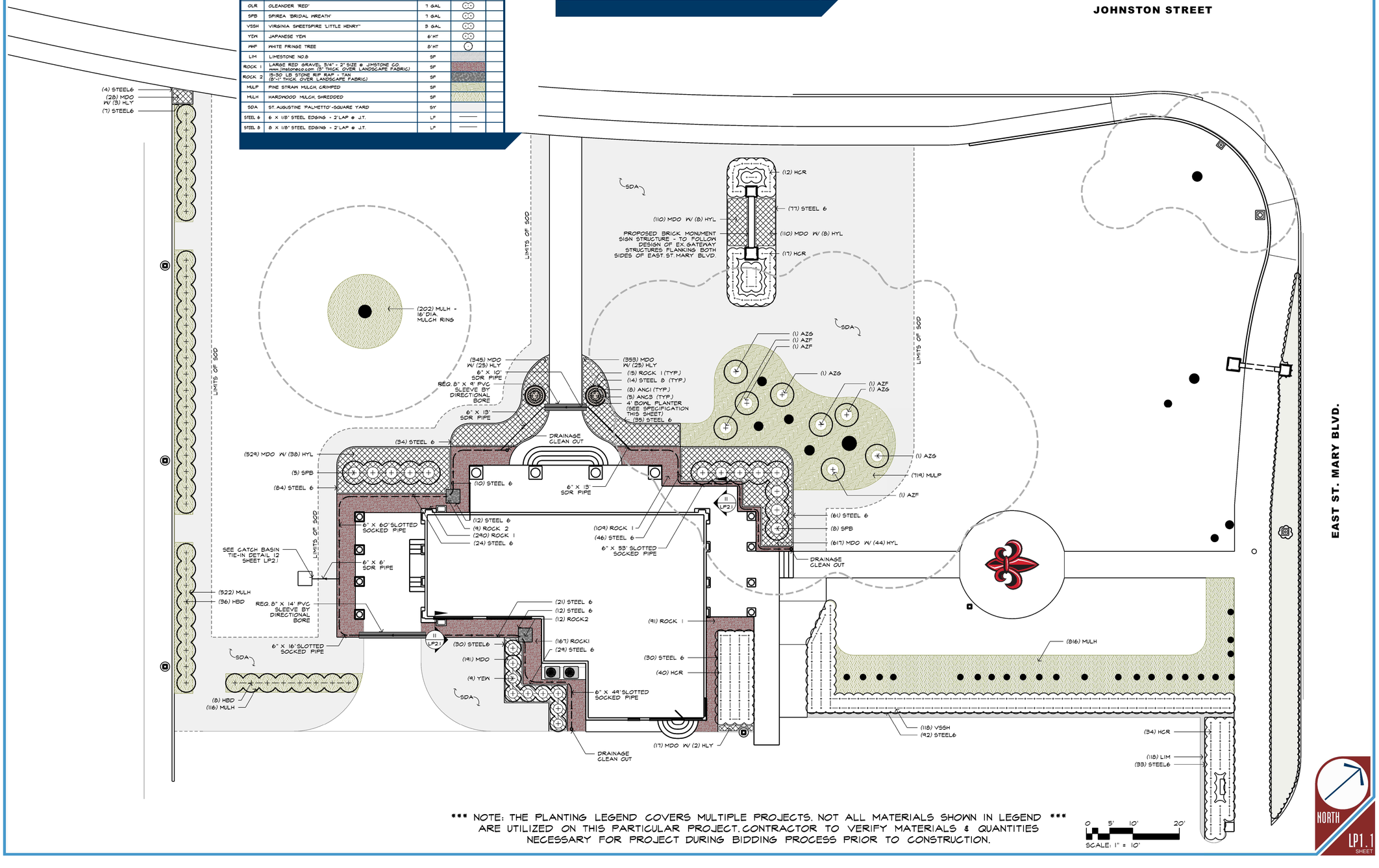
ANCI = 3.0 PLANTS PER SQUARE FOOT
ANC2 = 2.5 PLANTS PER SQUARE FOOT
ANC3 = 2.25 PLANTS PER SQUARE FOOT

4' BOWL PLANTER

PLANTER MANUFACTURER:
POLYMADE
450 S. 55th Street,
Kansas City, KS 66106
www.polymade.com
913-213-3740

PLANTER MODEL
XSHL SAUCER PLANTER 48"d x 15"t
COLOR- WHITE

SEE SHEET LP2.1 FOR PLANTER DETAIL



*** NOTE: THE PLANTING LEGEND COVERS MULTIPLE PROJECTS. NOT ALL MATERIALS SHOWN IN LEGEND ARE UTILIZED ON THIS PARTICULAR PROJECT. CONTRACTOR TO VERIFY MATERIALS & QUANTITIES NECESSARY FOR PROJECT DURING BIDDING PROCESS PRIOR TO CONSTRUCTION. ***

0 5' 10' 20'
SCALE: 1" = 10'

NORTH

LP1.1 SHEET

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE.THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES,STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK,ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE,AS REQUIRED,THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION,THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS,SITE DIMENSIONS,RESTRICTIONS,AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE,TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

811 Know what's below. Call before you dig.

UNIVERSITY OF LOUISIANA LAFAYETTE
104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

WELCOME CENTER
LANDSCAPE PLAN

STATE OF LOUISIANA · DANIEL W. SPALLER JR. · LICENSED LANDSCAPE ARCHITECT · No. 5-382

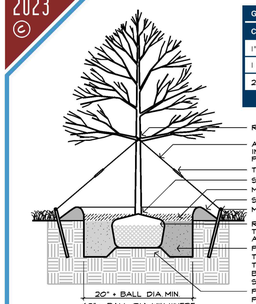
BID
05/18/23

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

2023 ©

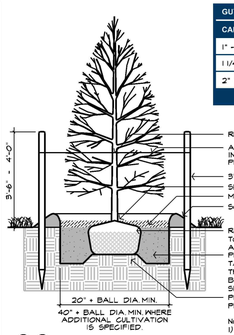
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

01 TREE PLANTING - STANDARD
NOT TO SCALE

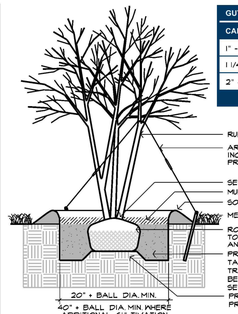
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

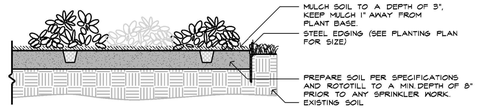
02 TREE PLANTING - FULL TO GROUND
NOT TO SCALE

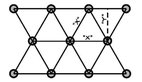
GUY WIRE SCHEDULE		
CALIPER	# STAKES	SPACING
1" - 1 1/4"	3	TRIANGULARLY @ 15"
1 1/4" - 2"	3	TRIANGULARLY @ 20"
2" & OVER	3	TRIANGULARLY IN CLEAR AREAS B/T PERIMATER OF BALL & EDGE OF PIT



NOTES:
1) TRUNK CALIPER SHALL MEET ANSI Z60 CURRENT EDITION FOR ROOT BALL SIZE.

03 TREE PLANTING - MULTI-TRUNKED
NOT TO SCALE





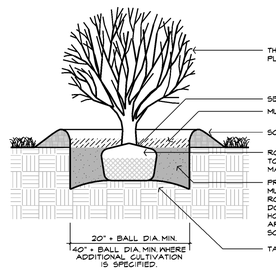
ALL GROUND COVERS TO BE PLANTED ON CENTER IN A TRIANGULAR PATTERN. (SEE PLANTING & PLANTING SPACING LEGEND)
X = O.C. DIMENSION AS NOTED IN LEGEND
Y = ROW SPACING DIMENSION

PLANT SPACING LEGEND

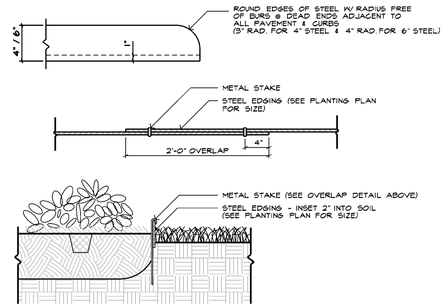
SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.	SPACING "X"	SPACING "Y"	NO. OF PLANTS PER SQ. FT.
6" O.C.	5.2"	4.61	6' O.C.	5.2'	0.032
8" O.C.	6.93"	2.6	8' O.C.	6.93'	0.018
10" O.C.	8.66"	1.66	10' O.C.	8.66'	0.016
12" O.C.	10.4"	1.15	12' O.C.	10.4'	0.008
15" O.C.	13.0"	0.739	15' O.C.	13.0'	0.0059
18" O.C.	15.6"	0.512	20' O.C.	17.3'	0.00288
24" O.C.	20.8"	0.29	25' O.C.	21.65'	0.00185
30" O.C.	26.0"	0.186	30' O.C.	26.0'	0.00128
36" O.C.	30.0"	0.128	40' O.C.	34.6'	0.000722
4'O.C.	3.46'	0.0125			
5'O.C.	4.33'	0.0461			

NOTES:
1. SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES,SIZE,AND SPACING DIMENSION.
2. SMALL ROOTS (1/4" OR LESS) THAT GROW AROUND,UP,OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING.ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING.(SEE ROOT BALL SHAVING CONTAINER DETAIL).
3. SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

04 PLANT SPACING
NOT TO SCALE

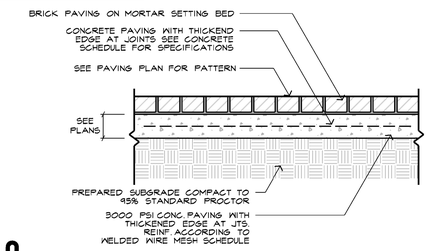


05 SHRUB PLANTING
NOT TO SCALE

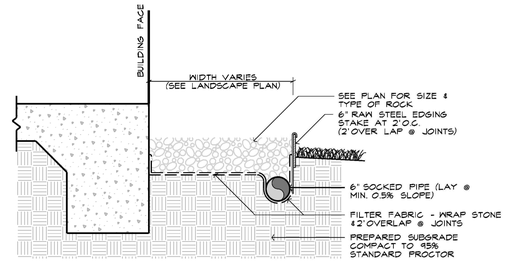


06 STEEL EDGING
NOT TO SCALE

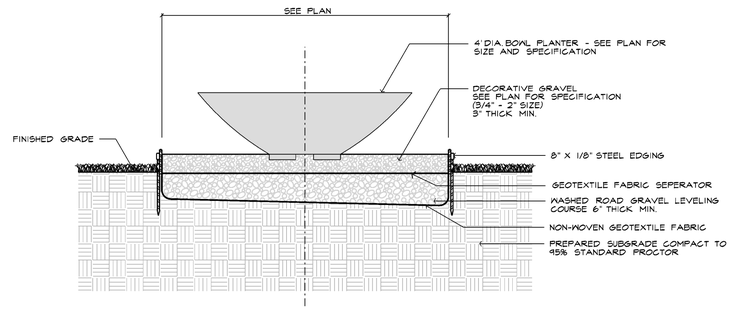
CONCRETE SCHEDULE	
4" PAVING	6X6 * 10/10
6" PAVING	6X6 * 6/6
8" PAVING	6X6 * 4/4



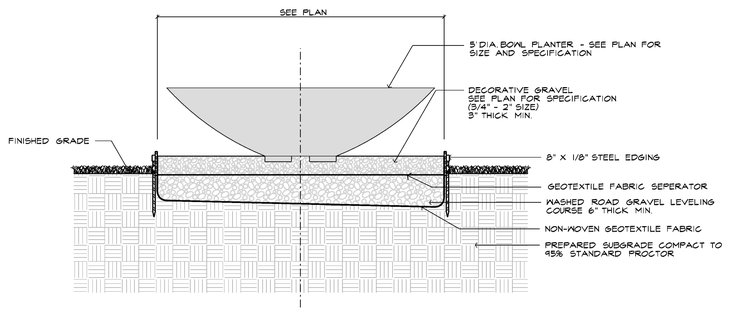
09 BRICK PAVING ON CONCRETE BASE
NOT TO SCALE



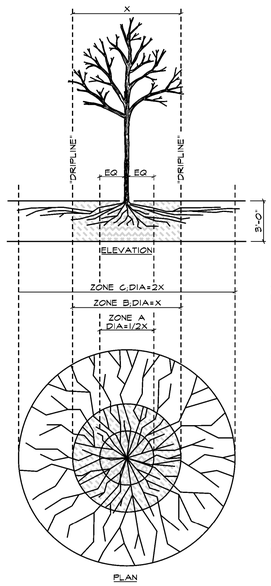
11 FOUNDATION STRIP
NOT TO SCALE



07 RAISED ROCK AREA W/ 4' BOWL PLANTER
NOT TO SCALE



08 RAISED ROCK AREA W/ 5' BOWL PLANTER
NOT TO SCALE



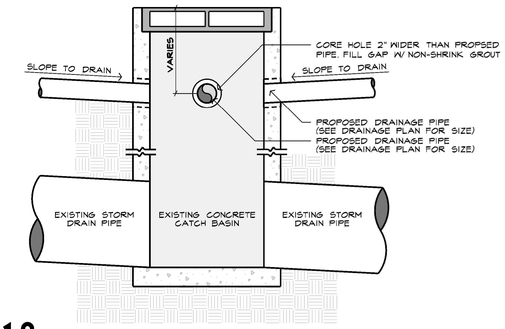
TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
1) NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
2) SEVERANCE OF ROOTS LARGER THAN 2"DIA REQUIRES LANDSCAPE ARCHITECT'S APPROVAL.
3) BORING OR TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER.

ZONE B (DRIPLINE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES REQUIRED.
2) TRENCHING ALLOWED AS FOLLOWS:
- EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED.
- LIMIT TRENCH WIDTH.DO NOT DISTURB ZONE A.MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
- BORING & TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

ZONE C (FEEDER ROOT ZONE)
1) OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.
*SURFACE PROTECTION MEASURES MAY BE REQUIRED
2) TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
- MINIMIZE TRENCH WIDTH.
- MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION.

10 TREE PRESERVATION DETAIL
NOT TO SCALE



12 CATCH BASIN TIE-IN
NOT TO SCALE

GENERAL NOTES

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
PROJECT • 22113.00

LANDSCAPE DETAIL SHEET

BID
05/18/23

STATE OF LOUISIANA · DANIEL M. SPILLER JR. · REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION
REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE. LAFAYETTE, LA 70506
PHONE 337.993.3939
FAX 337.993.3944

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PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work in this Section is based on these specifications and the landscape drawings. The scope of work is based on furnishing all labor, materials, tools, transportation, equipment and supervision by the Contractor as required to complete the specified work.

B. In addition to the requirements of these specifications, manufacturer's instructions and recommendations for proper preparation and application of all materials shall be complied with in all respects.

C. Related Work: PLANTING IRRIGATION

1.2 QUALITY ASSURANCE

A. Contractor shall be fully qualified, licensed, capable and experienced in the installation of the described landscape. Evidence of the Contractor's qualifications shall be presented prior to the award of the Contract.

B. The following industry standards shall govern landscape materials and installation. The most stringent requirement shall rule when conflicts between the standards occur and as determined by the Landscape Architect.

1. American Standard for Nursery Stock (Most Current Edition)
2. Horticultural Standards, American Association of Nurserymen.
3. Recommended Standard Specifications for Planting Trees, Shrubs and vines and Fine Grading and Seeding Lawns, second printing - December 1968.
4. American Joint Committee on Horticultural Nomenclature: Latest Edition.

1.3 SUBMITTALS

A. Digital photographs representing each variety shall be submitted for approval by the Landscape Architect prior to ordering any plant material. (The submittal of photographs does not in any way relieve the Contractor of his responsibility to comply with the specifications and applicable standards.)

B. The selection of all materials and the execution of all operations required under the drawings and these specifications are subject to the approval of the Landscape Architect or Owner.

C. The Landscape Architect or Owner shall have the right to reject all material and all work which, in his opinion, does not meet the requirements of the drawings and/or specifications at any stage of the operation. All rejected material shall be removed by the Contractor, as directed, at the Contractor's expense.

1.4 PROTECTION OF EXISTING WORK

A. Location of underground infrastructure such as existing water, telephone, cable, electrical, gas, sewer and drainage lines, and other utilities, shall be ascertained or verified by the Contractor prior to initiating work. The Contractor shall protect the same by means acceptable to the Owner before commencing construction and maintain such protection until the job is accepted by the Owner.

B. Protective measures shall be taken to secure walls, walks, driveways, parking lots, light poles, grass and structures from damage or discoloration. The Contractor shall furnish and install necessary pads, tarpaulins, burlap, building paper, or clean straw to protect existing work.

1.5 EXTRAS, OMITTED OR CHANGES IN WORK

A. While no new unforeseen items are anticipated, they shall be classified as extra work when they cannot be covered by any of the specifications. The Contractor shall submit detailed prices for any extras to the Landscape Architect, and shall perform extras only upon prior written acceptance from the Owner. All such extra work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents. In the absence of such written order, the Contractor shall not be entitled to payment for such extra work.

B. The Landscape Architect shall have the authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time, and not inconsistent with the contract documents. Such changes may be effected by field order or by other written order. Such changes shall be binding on the Contractor.

C. The Owner, without invalidating the contract, may order changes in the work consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order and shall be executed under the applicable conditions of the contract documents.

1.6 MEASUREMENTS, LAYOUT & LEVELS

A. The Contractor shall layout all lines and levels necessary for the location and erection of the landscape construction and for all excavation, filling and grading work and set necessary markers and stakes, and be responsible for their correctness.

B. The Contractor shall take his own measurements of the site verifying same with the drawings, and shall be responsible for proper fit of his portion of the completed work.

C. The spacing of plants shall conform to the spacing designated on landscape plans and specifications, but variations are permissible when unforeseen site conditions such as underground pipes, etc., make uniform spacing impractical, in which case the Contractor shall abide by instructions, furnished by the Landscape Architect or Owner. Departure from specified spacing will be allowed when site conditions do not permit the specified number of plants in a grouping in which case the minimum spacing shall govern the number of plants to be placed in the group and the excess plants shall be located as directed by the Landscape Architect or Owner.

D. Where proposed grades are not indicated, the Contractor shall in all cases provide the necessary pitch on semi-level areas to drain them to a point designated by the Landscape Architect or Owner.

E. The Landscape Architect reserves the right to relocate shrubs and trees from positions on the plans prior to their planting.

1.7 SUBSTITUTION OF MATERIALS

A. The Contractor, before submitting his bid, shall locate all necessary materials as called for in the plans and specifications, and shall be assured of their availability for use on this job.

B. The contract bids shall be based upon providing the specified materials, processes, products, etc., identified in the specifications and/or indicated on the drawings.

C. Substitutions will not be permitted unless upon admission of proof that specified plants are not obtainable and with the authorization of the Landscape Architect. Written requests with nearest available size, variety of plant and price adjustments are to be submitted to the Landscape Architect.

1.8 PLANT & MATERIAL LIST

A. The Contractor shall furnish the plant material as specified and described in this section.

B. Quantities shall be determined by referring to the Drawings.

C. Names, species, and varieties of all material furnished by the Contractor shall be in accordance with the Drawings and Specifications.

D. The Contractor shall furnish, on request of the Owner, satisfactory proof as to the names and species, variety, and size and shall be made only on written authorization of the Owner.

1.9 MEASUREMENT

A. The quantities for payment will be the design quantities specified in the plans and adjustments thereto.

B. Design quantities will be adjusted if the Landscape Architect makes changes to adjust to field conditions, if plan errors are proven or if design changes are necessary.

C. Design quantities are based on the horizontal dimensions shown on the plans.

PART 2 - PRODUCTS

2.1 TOPSOIL: The Contractor shall use salvaged onsite topsoil to the extent possible and topsoil from offsite borrow to supplement that salvaged. The topsoil shall be a fertile, friable, natural topsoil of a loamy character. It shall contain a normal amount of decomposed organic matter and shall be free of stones, lumps, clay, toxic materials, plants or their roots, stacks and other extraneous matter. The topsoil shall be within a pH range of 5.0 to 6.5. Topsoil testing shall be at the Owner's expense and by a third party entity.

2.2 SOIL CONDITIONER MIX: Finely chopped pine bark mulch to be incorporated into the soil, shall be free from weeds, moss, sticks and other debris but shall contain a generous amount of sand (average 20% by volume) and shall be well decomposed.

2.3 PEAT MOSS: Peat moss shall be a horticultural grade, sphagnum peat moss containing partially decomposed fibrous or cellular stems and leaves of any of the many species of sphagnum mosses from fresh water sources conforming to the following requirements:

A. Peat moss shall be a homogeneous material free of decomposed colloidal residue lumps, roots, stones, and other foreign matter; and of such consistency that peat can pass a 1/2 in. mesh and can be readily incorporated with the topsoil.

B. The pH shall not be less than 3.5 nor greater than 5.5 at 25 degrees C.

C. Organic matter content shall not be less than 90% by weight, on an oven-dry basis.

D. Ash content shall not be more than 10% by weight, on an oven-dry basis.

E. Moisture absorption capacity shall not be less than 800%, by weight, on an oven-dry basis.

2.4 TOP DRESS MULCH: Top dress mulch shall be clean and free from weeds, moss, sticks, soil and any other objectionable material.

A. The pH shall not be less than 3.5 nor greater than 5.3 at 25 degrees C.

B. The Contractor shall submit a one cubic foot sample of the mulch for approval by the Landscape Architect.

2.5 FERTILIZER: Osmocote 14-14-14, or approved equal, shall be used in bed areas and for trees. The fertilizer shall be stored in a cool, dry place in unopened bags until it is ready to be incorporated into the backfill mixture. Agriform tree tablets can be used in lieu of the Osmocote for tree plantings only, and must be applied at the manufacturer's recommended rate.

2.6 SOD: Class "A" premium grade sod consistent with the variety(s) called out in the plans.

A. Sod shall be machine cut at a uniform soil thickness at a height appropriate to the specified species.

B. Pad Size: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 0.5 inch (15 mm) on width and plus or minus five percent on length. Broken pads and torn or uneven ends will not be acceptable.

C. Strength of Turf Sod Sections: Standard size sections of sod shall be strong enough that it can be picked up and handled without damage.

D. Moisture Content: Sod shall not be harvested or transplanted when its moisture content (excessively dry or wet) may adversely affect its survival.

E. Mowing Height: Before harvesting, the sod shall be mowed uniformly at a height of 1 to 2.5 inches (25 to 60 mm) on cool season grasses (i.e., bluegrass, bent grass, rye and fescue), and 0.75 to 1.50 inches (20 to 40 mm) on warm season grasses (i.e., zoysia grass, Bermuda grass, St. Augustine grass, etc.)

F. Time Limitations: Sod shall be harvested, delivered and installed/transplanted within a period of 24 hours, unless a suitable preservation method is approved prior to delivery. Sod not transplanted within this period shall be inspected and approved by the inspecting officer or his representative prior to its installation.

G. Thatch: Sod shall be relatively free of thatch, up to 0.5-inch (15mm) allowable (uncompressed).

H. Diseases, Nematodes and Insects: Sod shall be reasonably free of diseases, nematodes and soil-borne insects. Specific nursery and/or plant materials laws may require that all sod entering inter-state commerce be inspected and approved for sale. The inspections and approval must be made by the appropriate government representative of the agriculture department or office of entomologist.

I. Weeds: Nursery grown turf grass sod shall be free of objectionable grassy and broad leaf weeds. Turf grass sod shall be considered free of such weeds if less than 5 such plants are found per 100 square feet (10 sq m) of area. Sod will not be acceptable if it contains any of the following weeds: common Bermuda, johnson grass, poison ivy, nutsedge, thistle, bindweed, bent grass or wild garlic.

2.7 PLANTS: TREES, SHRUBS & GROUND COVER

A. Caliper measurement of trees shall be taken at six inches above natural ground up to and including four inch caliper material. If the caliper six inches above natural ground exceeds four inches, the caliper will be measured twelve inches above natural grade.

B. Shrubs shall be well shaped, full branched plants with heights measured to point in the main perimeter of branches or foliage rather than to single shoots or leaders. Plants with single stems shall have sufficient, well spaced side branches to give them weight equal to one grown with numerous canes. Canes shall be considered as primary stems starting from the ground or from a point not higher than one-fourth (1/4) the height of the plant.

C. Sizes of balls shall be at least six inches (6") greater in diameter than the minimum sizes established for individual plant types as recommended by "Horticultural Standards" latest edition of American Association of Nurserymen, Inc. Depth shall be sufficient to encompass the fibroid and feeding root system necessary for the full recovery of the plant and in no case shall be less than recommended ratios to diameter as recommended by "Horticultural Standards", latest edition of the American Association of Nurserymen, Inc. All balls shall be firm, intact, slightly tapered, well burlapped and securely fastened with twine or nails or both. Any tree which is determined to be loose in the ball or with a broken ball at the time of planting will be rejected.

D. Any plants having any of the following unnatural or objectionable features will be rejected: excessive abrasions of the bark; dried out root system; excessive dead or dried up wood; excessive sun scald injuries; undeveloped and weak top or roots or both; crooked or one-sided development of tops; no straight leaders on trees naturally and normally having them; broken or removed leaders; untrue types or sizes; root-bound container grown plants; excessively damaged or loose balls of soil; plants actually dead, diseased or insect infested and plants not otherwise complying with the plant specification herein.

E. The rejected material shall be removed from the site and replaced as quickly as possible with new plant material of the same kind, meeting the requirements, at the expense of the Contractor.

PART 3 - EXECUTION

3.1 PLANT DELIVERY, UNLOADING & STORAGE

A. All plants shall be delivered to the job in good condition and unloaded with care so that balls and tops are not damaged. Balled & burlapped plants shall not be handled or lifted by their tops or trunks.

B. The Contractor shall be responsible for the protection of plants from damage through weather conditions, improper storage, vandalism, theft, and injury, and shall unload plants in a location approved by the Owner, requiring the minimum amount of moving to locations where they are to be planted.

C. Whenever and wherever possible, delivery shall be made within a reasonable time of completion of planting pits or beds and if unforeseen conditions prevent immediate planting, the Contractor shall heel in plants, watering same if necessary and protect from drying winds and sun in accordance with good nursery practices.

D. If in the opinion of the Owner, plants have been damaged through prolonged intervals between delivery and storage, they shall not be used in planting, and shall be replaced by new plants conforming to original specifications.

3.2 TREE & SHRUB PIT PLANTING

A. Pits shall not be prepared and left open for prolonged periods prior to planting. Pits shall be protected until used so that sides do not crumble and so pits do not become saturated with water. All damaged pits shall be restored to original condition and shall be drained of surface water before usage.

B. Depth of pits shall not be more than two inches (2") greater than depth of the ball to be received. Diameter of pits shall be such that there is no less than ten inches (10") of space all around the balls or root spread of bare-root plants, except in the case of trees in which case the space shall be increased to twenty inches (20"). Bottom of pit shall be thoroughly loosened to a depth of eight inches (8") before plant is placed in pit. Tops of plants shall not be cut loose until plant is set to correct depth in pit.

C. Excavated earth shall be piled sufficiently far back from the edge of the pit to prevent earth sliding back into pit when plants are placed. Surplus excavated earth shall be disposed of immediately after planting is completed to prevent mixing of same with topsoil.

D. Mixture used in backfilling pits shall consist of 75% topsoil, 10% peat moss, 10% pine bark mulch and 5% sand mixed by volume with a slow release fertilizer at the manufacturer's recommended rate. Mixing shall not be done in the pits. Refer to Article 16, MATERIALS, of this specification.

E. After plant has been set and pit has been backfilled to two-thirds (2/3) of its depth, mixture shall be tamped thoroughly and settled with water. When settling has been accomplished, pit shall be brought to level of adjacent ground with same mixture. Slope finished grade slightly toward center of plant.

F. A six inch saucer shall be constructed for all trees planted outside of prepared landscape beds.

3.3 BED ALIGNMENT

A. The Contractor is responsible for planting all material at the correct grades, locations and alignment.

B. The location of plant material and the outline of beds and other areas indicated on the plans shall be followed as closely as possible.

C. Any questions regarding bed alignment shall be brought to the attention of the Landscape Architect immediately.

3.4 BED PREPARATION & PLANTING

A. Conventional Bed Preparation: This technique shall be used unless otherwise noted.

1. Before the start of conventional bed preparation, all areas to be prepared shall be stripped of any grass, weeds, etc., to a minimum depth of (1) inch.
2. All beds shall be rototilled to a depth of ten (10) inches to completely blend the topsoil with one and a half (1.5) cubic yards of soil conditioner mix (see 'PRODUCTS' section) per one hundred (100) square feet of bed prior to rototilling.
3. All bed areas shall then be treated with a granular weed pre-emergent (Eptam or approved equal) at a rate and the method specified by the manufacturer.
4. All beds shall be fertilized with Osmocote 14-14-14, or an approved equal at the manufacturer's recommended rate of one (1) pound per fifty (50) square feet or per any project-specific recommendation.
5. Before planting, the bed area shall be raked and leveled to a fine grade, allowing for proper surface drainage.

3.5 PLANTING

A. After completion of fine grading, the plants shall be placed at the positions indicated on the plans. All plants shall be set so that when settled, they will bear the same relation to finish grade as they did before transplanting. No filling will be permitted around trunks or stems.

3.6 SODDING

A. The soil shall be thoroughly tilled to a depth of four (4) inches.

B. The trees specified on the plans shall already have been planted and guyed before laying sod.

C. The sod bed shall be fine graded to remove all ridges or depressions and the surface cleared of all stones and debris.

D. The sod shall be laid perpendicular to the direction of the slope and in a manner which will permit joints to alternate.

E. Sod panels shall be fitted together tightly so that no joint is visible and tamped firmly and evenly by hand.

F. Immediately following sod placement, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered.

G. During delivery, prior to and during the planting of lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun.

H. Top dressing with washed, clean, weed free builder's sand may be required if deemed necessary by the Owner or Landscape Architect to level depressions in the grade or imperfections in the sod.

3.7 MULCHING

A. After completion of all planting operations, beds and tree pits are to be mulched.

B. Tree pits shall have a 3" covering of top-dress mulch and bed areas shall have a minimum of 3" throughout.

3.8 WATERING

A. Watering of areas planted shall be done on the same day planting is done.

B. All planted areas shall be watered as often as necessary as the work progresses, if weather conditions require same.

C. Watering shall be done by competent workmen, with minimum disturbance of adjoining areas and following the direct instruction of the licensed Contractor.

D. Contractor shall supply necessary topsoil or soil mix to compensate for any settling that takes place due to watering.

3.9 PRUNING & REPAIR

A. Pruning for shape shall be done by the Contractor only if so instructed by the Landscape Architect.

B. Pruning shall consist of shaping the plant to a pleasing outline in accordance with good nursery practices.

C. Pruning shall be done in such a manner so as not to change the natural habit or shape of the plant.

D. Cut-back pruning of all dead wood and injured branches shall be done immediately after planting.

E. Injured branches or damaged branches shall be cut back to sound live wood in accordance with good nursery practices.

F. Shade trees shall be cut back only on authorization of the Landscape Architect.

G. Pruning shall be done before final watering and application of mulch.

H. All debris and trimmings shall be removed immediately.

3.10 TREE STAKING & GUYING

A. Guys shall be furnished and erected by the Contractor for all trees to prevent wind movement, in accordance with the following instructions:

1. Trees up to one and one-fourth inch (1-1/4") caliper: Three (3) supports spaced triangularly around trunk at a distance of fifteen inches (15").
2. Trees one and one-fourth inch (1-1/4") to two inch (2") caliper: Three (3) supports spaced triangularly around trunk at a distance of twenty inches (20").
3. Trees two inches (2") and over in caliper: Three (3) supports spaced triangularly around trunk in clear areas between perimeter ball and edge of plant pit.

B. Supports (stakes) shall be as specified on the drawings and of sufficient length that on being driven substantially into the ground, tops of stakes will be no less than two-thirds (2/3) the distance from ground to lowest branches or forks.

C. Method of fastening supports to tree shall be by means of aluminum wire or No. 12 gauge galvanized wire looped through sections of rubber hose and fastened to supports in such a manner that hose sections prevent damage to bark of tree or by use of ArborTie brand guy line (or approved equal).

D. When the tree has been steadied erect, guy lines shall be tightened to equalize pressure to prevent any wind movement.

E. Contractor shall see that there is no twisting strain thrown on tree trunks when slack is taken up on wires and that rubber hose sections are installed in a manner that there will be no friction damage to bark.

3.11 PROTECTION

A. The Contractor shall protect all plants and lawns from damage at all times.

B. If plants or lawns are damaged, they shall be replaced or treated by the Contractor at his expense to the satisfaction of the Owner or his representative.

3.12 MAINTENANCE

A. The Contractor shall maintain all trees, shrubs and groundcover under this contract until final acceptance, by watering, cultivating, weeding, spraying and replacing as necessary to keep plants in a healthy, vigorous condition, and shall rake bed areas as may be required to keep them neat.

B. The Contractor shall maintain all grass areas under this contract until acceptance by watering, mowing, spraying, etc.

C. Watering: All lawn areas shall be watered once a day with a minimum of 1/2" of water up until final acceptance. Thereafter, watering shall be turned over to the Owner where the Contractor shall provide him with the proper procedures for continued watering. All trees, shrubs and groundcover shall be watered twice a week until final acceptance by the Contractor, providing 1" of water each time unless a comparable amount of rain has been provided.

D. Weeding: Shall consist of pulling or digging out all plant material other than the desired shrubs and groundcover until final acceptance.

GENERAL NOTES

1. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND AVOID DAMAGE TO THEM. (UTILITIES SHOWN ON THE PLANS SHALL BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. OTHER UTILITIES MAY EXIST.)
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES, STRUCTURES OR PAVING RESULTING FROM CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THE CONTRACT.
4. ALL WORK, ADJUSTMENTS AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE, AS REQUIRED, THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DRAWINGS AND ALSO AS PER INSTRUCTIONS OF THE OWNER.
6. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF ALL PROPOSED IMPROVEMENTS.
7. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED BY THE CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
9. ANY DISCREPANCIES IN THE PLANS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS & PAYING RELATED FEES.
11. THE SITE SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AND DRAIN PROPERLY PRIOR TO FINAL PAYMENT.
12. OWNER WILL NOT AWARD BID FOR CONSTRUCTION NOR AUTHORIZE COMMENCEMENT FOR CONSTRUCTION UNTIL CONTRACTOR HAS VERIFIED IN WRITING HE HAS REVIEWED THE PLANS SUBMITTED BY LANDSCAPE ARCHITECT AND ASSUMES FULL RESPONSIBILITY TO PROPERLY BUILD FROM THE DOCUMENTATION PROVIDED.
13. CONTRACTOR SHALL DETERMINE METHODS OF CONSTRUCTION.
14. IF A DETAIL IS OMITTED FROM CONSTRUCTION DOCUMENTS FOR WHICH THE CONTRACTOR NEEDS FURTHER EXPLANATION, THE CONTRACTOR SHOULD DETERMINE THE SOLUTION WITH LANDSCAPE ARCHITECT BEFORE SIGNING A CONTRACT FOR CONSTRUCTION WITH OWNER.
15. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR EXECUTING ALL DETAILS OF CONSTRUCTION IF NOT ON DOCUMENTS IN ORDER TO FULFILL THE CONTRACT FOR CONSTRUCTION.
16. OWNER AND CONTRACTOR SHALL VERIFY METES AND BOUNDS, SITE DIMENSIONS, RESTRICTIONS, AND PLACEMENT OF STRUCTURES AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT IN WRITING BEFORE EXECUTION OF CONTRACT FOR CONSTRUCTION AND COMMENCEMENT OF WORK.
17. THE CONTRACT FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE BETWEEN CONTRACTOR AND OWNER ONLY. ANY SUBCONTRACT WILL BE SOLELY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.
18. CONTRACTOR TO PROVIDE A SCHEDULE FOR CONSTRUCTION UPON NOTIFICATION BID AWARD.
19. BY LAND - REFERS TO AN ITEM SUPPLIED BY LAND ARCHITECTURE, TO BE PICKED UP AT LAND ARCHITECTURE AND INSTALLED BY CONTRACTOR.

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104 E. UNIVERSITY AVE.
LAFAYETTE, LA 70504
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LANDSCAPE SPECIFICATION SHEET

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05/18/23

STATE OF LOUISIANA
DANIEL M. SPITLER JR.
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LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

REVISIONS:

LAND ARCHITECTURE
100 ST. JULIEN AVE.
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LP2.2 SHEET