

VISIBILITY TRIANGLE INFO:

VISIBILITY TRIANGLES ARE BASED ON CITY OF MESA PUBLIC STREET ACCESS GUIDELINES DATED FEB. 15, 2005.

STREET SPEED: 45 MPH
 STREET CROSS SECTION 4LU
 FIGURE 2.3 (50MPH DESIGN SPEED) SD=625'

ADDITIONAL NOTES:

THIS LANDSCAPE IS TO BE MAINTAINED ON A WEEKLY BASIS USING A NATURAL MAINTENANCE PROGRAM AND SHALL BE MAINTAINED IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICE OF THE LANDSCAPE INDUSTRY.
 ALL TREES AND SHRUBS LOCATED IN THE LINE OF SIGHT WILL BE MAINTAINED FOR A CLEAR AREA BETWEEN 3' TO 7'. THE LINE OF SITE IS OUT OF THE SCOPE OF WORK ON THIS PROJECT.

ALL LANDSCAPE AREAS WILL BE MAINTAINED BY THIS OWNER OR LESSEE IN ACCORDANCE WITH THESE APPROVED PLANS

REQUIRED LANDSCAPE AREAS SHALL BE FREE FROM ENCROACHMENT BY ANY USE, STRUCTURE, VEHICLE OR FEATURE NOT PART OF THE LANDSCAPE DESIGN.

CITY OF MESA LANDSCAPE NOTES

1. ALL LANDSCAPE AREAS TO RECEIVE 2" LAYER DECOMPOSED GRANITE
2. ALL LANDSCAPE AREA TO BE WATERED BY UNDERGROUND AUTOMATIC IRRIGATION SYSTEM.
3. THE HEIGHTS AND CALIPERS SHALL COMPLY WITH 'ARIZONIA NURSERY ASSOCIATION SPECIFICATIONS' FOR THAT SIZE AND TYPE OF TREE.
4. REQUIRED TREES SHALL BE PROVIDED IN EQUAL NUMBERS OF 15 GALLON SIZE AND 24" BOX SIZE OR LARGER.
5. REQUIRED SHRUBS SHALL HAVE A MATURE GROWTH HEIGHT OF 18" AT LEAST 50% OF REQUIRE SHRUBS SHALL BE 5 GALLON SIZE.
6. PLANT MATERIAL SHALL BE CALCULATED BASED ON A LINEAR MODULE OF 25 FEET. TREES AND SHRUBS MAY BE CLUSTERED.

ARTERIAL STREET:

(2) TREES AND (6) SHRUBS PER 25' OF STREET FRONTAGE

MAJOR, MIDSECTION COLLECTOR STREET:

(2) TREES AND (6) SHRUBS PER 25' OF STREET FRONTAGE

COLLECTOR/INDUSTRIAL/COMMERICAL STREET:

(1) TREES AND (4) SHRUBS PER 25' OF STREET FRONTAGE

PUBLIC OR PRIVATE LOCAL STREET:

(1) TREES AND (4) SHRUBS PER 25' OF STREET FRONTAGE

7. PLANT MATERIAL SIZES REQUIRED:

TREES: (TOTAL REQUIRED TREES):

- 25% SHALL BE 36" BOX OR LARGER
- 50% SHALL BE 24" BOX OR LARGER
- NO TREES LESS THAN 15 GALLON

SHRUBS: (TOTAL REQUIRED SHRUBS):

- 50% SHALL BE 5 GALLON OR LARGER.
- NO SHRUBS LESS THAN 1 GALLON

8. 1 TREES AND 3 SHRUBS FOR EVERY 15' PARKING ISLAND. PARKING SHALL BE INSTALLED @ EACH END OF ROW OF STALLS AND IN BETWEEN FOR MAXIMUM OF EIGHT CONTIGUOUS PARKING SPACES

9. FOUNDATION LANDSCAPING: LANDSCAPING TO A MINIMUM HEIGHT OF 18" IS REQUIRED IMMEDIATELY ADJACENT TO, OR PROVIDED IN PLANTER AREAS ADJACENT TO BUILDING, WHICH HAVE FRONTAGE ON A PUBLIC STREET. PLANTING AREAS MUST BE A MIN. OF 5' WIDE AND A MIN. OF 50% PLANT COVERAGE.

10. THE BACKFLOW PREVENTION ASSEMBLY SHALL BE TESTED AND APPROVED BY A CERTIFIED TECHNICIAN DESIGNATED IN THE CURRENT CITY OF MESA LIST THE APPROVED INSPECTORS PRIOR TO THE REQUEST FOR FINAL INSPECTION".

11. THE REQUIRED BACKFLOW PREVENTION ASSEMBLY SHALL BE MANUFACTURER AND MODEL NUMBER DESIGNATED IN THE CURRENT CITY OF MESA LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES".

12. ALL WORK WILL BE DONE UNDER SEPARATE PERMIT FOR SIGNS".

13. ALL LANDSCAPING INSTALLED WITH THIS PROJECT TO BE MAINTAINED BY OWNERS ASSOC. OR OWNERS ASSOCIATION OF COMMERCIAL SUBDIVISION OR MANAGEMENT COMPANY IF COMMERCIAL RENTALS

14. THAT ALL TREES AND SHRUBS LOCATED IN LINE-OF-SIGHT WILL BE MAINTAINED TO A CLEAR AREA BETWEEN OF 3' TO 7'

15. RIP-RAP MUST BE ON NATURAL MATERIALS MATCHING D.G. COLORS CONCRETE OR GUNITE MUST BE COLORED TO MATCH D.G. COLOR

16. TREES SHALL BE PLANTED @ LEAST 20' AWAY FROM ANY STREET LIGHT POLE OR LOCATION. SHRUBS SHALL BE PLANTED @ LEAST 7' FEET AWAY FROM ANY STREET LIGHT POLE OR LCC.

17. 10% OF TOTAL TREES IN PARKING SHALL BE 36" BOX OR LARGER.

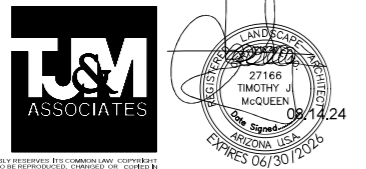
LANDSCAPE LEGEND

- QUERCUS VIRGINIANA
LIVE OAK
36" BOX (8)
 - CAESALPINIA CACALACO
CASCALOTE
36" BOX (7)
 - TECOMA 'ORANGE JUBILEE
'ORANGE JUBILEE
5 GALLON (19)
 - EREMOPHILA MACULATA
VALENTINE EMU BUSH
5 GALLON (45)
 - HESPERALOE PARVIFLORA
RED YUCCA
5 GALLON (49)
 - HESPERALOE PARVIFLORA
YELLOW YUCCA
5 GALLON (45)
 - LANTANA MONTEVIDENSIS
'GOLD MOUND'
1 GALLON (90)
 - LANTANA MONTEVIDENSIS
TRAILING PURPLE
1 GALLON (63)
 - PODRANEA RICASOLINA
PINK TRUMPET VINE
5 GALLON (6)
 - BOUGAINVILLEA 'BARBARA KARST'
BOUGAINVILLEA
5 GALLON (8)
- 1/2" MINUS MADISON GOLD
DECOMPOSED GRANITE
2" DEPTH IN ALL LANDSCAPE AREAS

LANDSCAPE CALCULATION TABLE:

MESA DRIVE	SOUTH PROPERTY LINE	PARKING LOT	LANDSCAPE COVERAGE
PROPERTY LINE = 100' (1 TREE, 6 SHRUBS PER 25 L.F.T.)	PROPERTY LINE = 121' (3 TREES, 20 SHRUBS PER 100 L.F.T.)	PARKING STALLS = 19 8 TREES REQUIRED (24" BOX) 7 TREES PROVIDED (36" BOX) ** 21 SHRUBS REQUIRED 21 SHRUBS PROVIDED	LANDSCAPE AREA: 10,783 SQ.FT. LANDSCAPE COVERAGE REQUIRED: 5,392 SQ.FT. (50%) LANDSCAPE COVERAGE PROVIDED: 5,444 SQ.FT. (50%)
4 TREES REQUIRED (36" BOX) 0 TREES PROVIDED 24 SHRUBS REQUIRED (5 GALLON) 30 SHRUBS PROVIDED * * ADDITIONAL SHRUBS USED TO PROVIDE 50% LIVING VEGETATION	4 TREES REQUIRED (24" BOX) 1 TREES PROVIDED 24 SHRUBS REQUIRED (5 GALLON) 24 SHRUBS PROVIDED	**36" BOX USED TO COUNT TOWARDS FOUNDATION TREE REQUIREMENTS REQUIRED TREE AT DUMPSTER REMOVED PER PRIOR SANITATION COMMENTS	
NORTH PROPERTY LINE PROPERTY LINE = 100' (3 TREES, 20 SHRUBS PER 100 L.F.T.)	WEST PROPERTY LINE PROPERTY LINE = 100' (3 TREES, 20 SHRUBS PER 100 L.F.T.)		
4 TREES REQUIRED (24" BOX) 4 TREES PROVIDED (36" BOX) 24 SHRUBS REQUIRED (5 GALLON) 16 SHRUBS PROVIDED (5 GALLON)	4 TREES REQUIRED (24" BOX) 0 TREES PROVIDED 20 SHRUBS REQUIRED (5 GALLON) 12 SHRUBS PROVIDED (5 GALLON)		

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 SWC E. Southern Avenue and S. Mesa Drive
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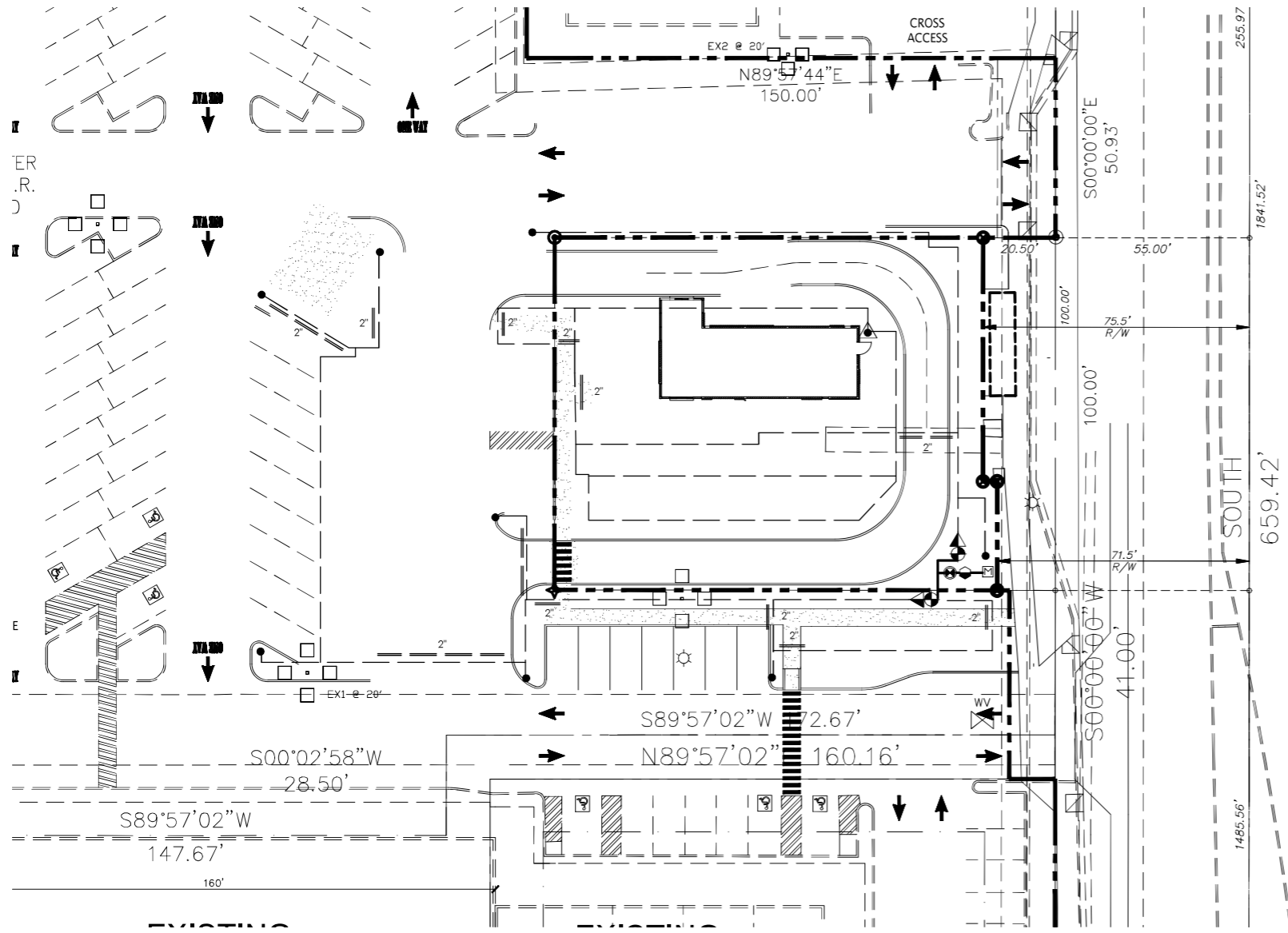
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Red Mountain Group FINAL ZON23-00935

Project number: 22038

Date: 08.14.24

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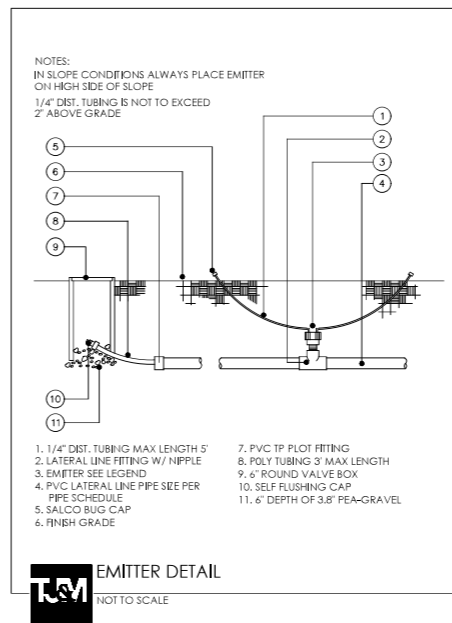
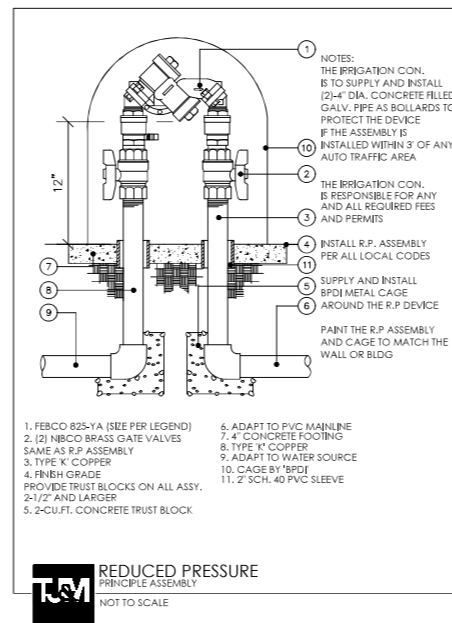
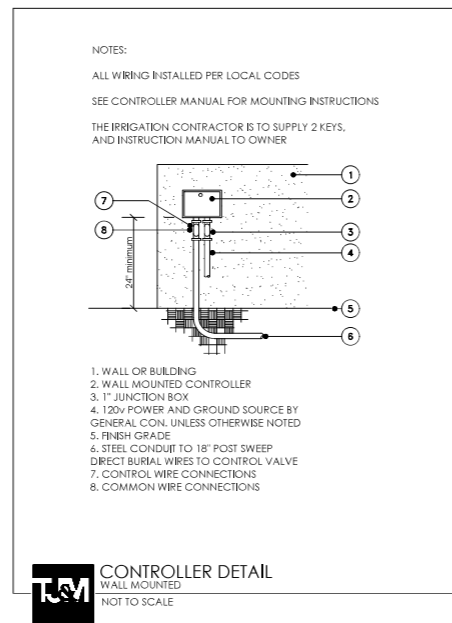
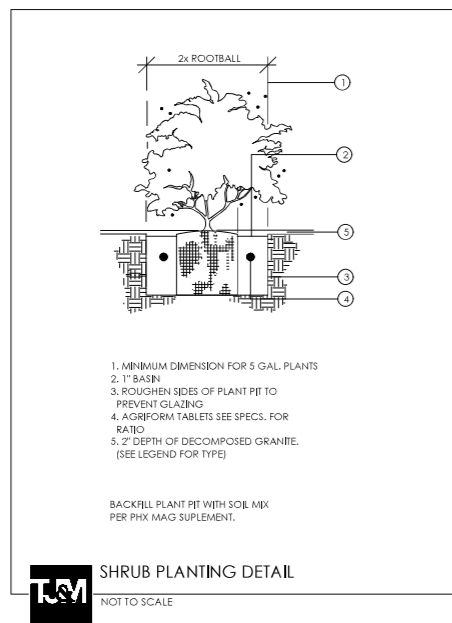
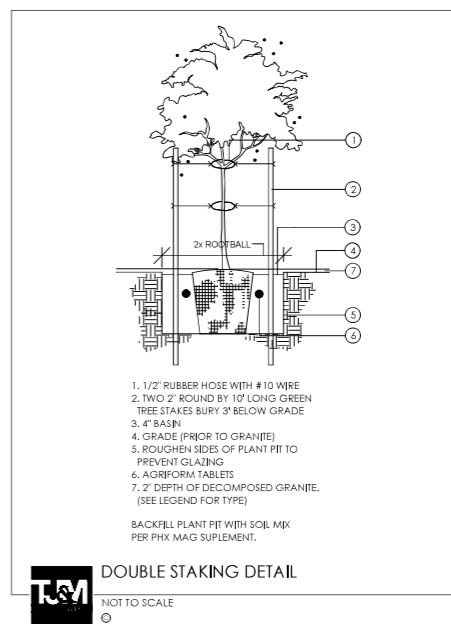
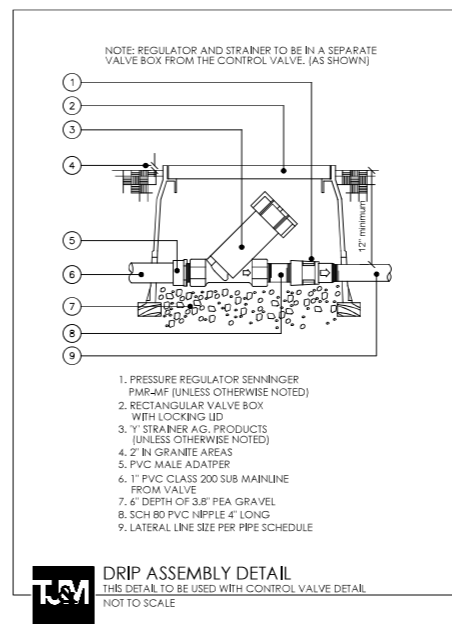
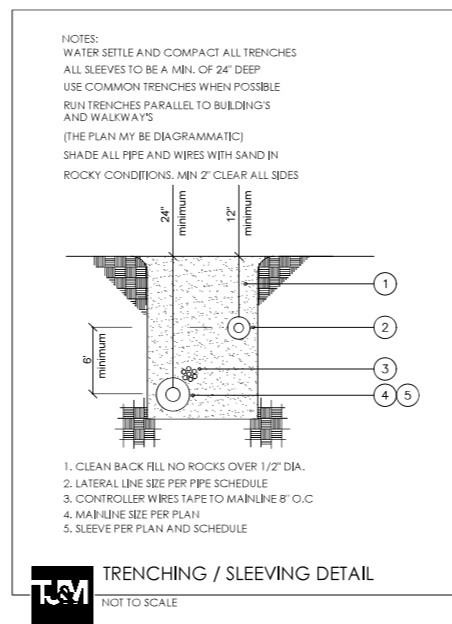
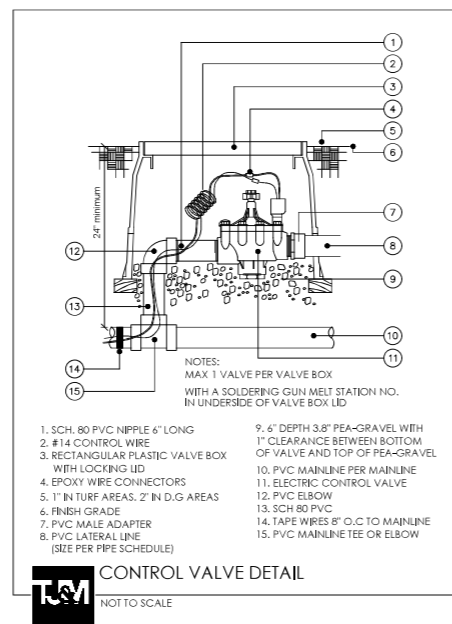
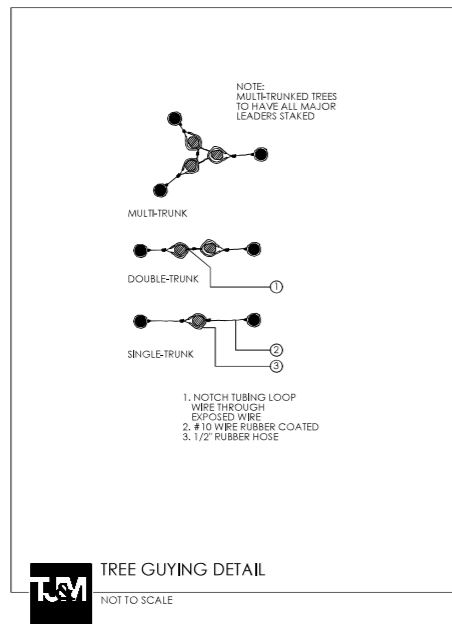


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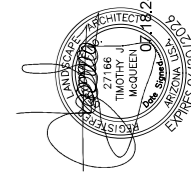
Red Mountain Group

Project number: 22038

Date: October 4, 2023

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<p>UNDERGROUND SPRINKLER SYSTEM</p> <p>Part 1 – General</p> <p>1.01 WORK INCLUDED</p> <p>A. The work included under these specifications shall consist of the furnishing of all labor, materials, permits, tools, and equipment necessary for the complete installation of a sprinkler irrigation system in accordance with the following specifications and accompanying drawings.</p> <p>B. It is the intent of these drawings and specifications to form a guide for a complete installation, and although some items may not be specifically noted, but are reasonably necessary for a complete installation, they shall be furnished under this contract. Sprinklers shall be located and spaced so that adequate overlapping of the spray will provide uniform head to head (100%) coverage. The system shall efficiently and evenly irrigate all areas, and shall be complete in every respect, ready for operation by the Owner.</p> <p>C. It is the responsibility of the Irrigation Contractor to provide 100% coverage to all landscape areas.</p>		<p>2.04 FERTILIZER</p> <p>A. Commercial Fertilizer: A complete fertilizer, conforming to FS O-F-241, Type I, Grade A, part of the elements of which are derived from organic sources containing the following percentages by weight: 10% nitrogen 10% phosphoric acid—10% phosphoric acid 10% potash</p> <p>B. Organic Fertilizer: An organic activated fertilizer containing a minimum of five percent nitrogen, three percent phosphoric acid and other basic elements by weight.</p> <p>C. Deliver fertilizer mixed as specified in standard size bags, showing weights, analysis and name of manufacturer. Store in weatherproof storage place in such manner that it will be kept dry and its effectiveness not impaired.</p> <p>D. The Landscape Architect reserves the right to vary the percentages of the components of the fertilizers subject to the results of the soil fertility tests.</p>
<p>1.02 CONTRACTOR'S QUALIFICATIONS</p> <p>A. Installers shall be licensed irrigation contractors with experience in the installation of automatic underground lawn sprinkling systems. All work shall be performed in a professional workmanlike manner by mechanics skilled in the trade.</p> <p>B. The Contractor shall be responsible for any damage to any covered by these specifications, under his care and custody, until final acceptance of his work.</p> <p>C. The Contractor shall obtain all permits from, pay required fees to, and arrange any necessary inspections by any government agency having jurisdiction over the work.</p>	<p>2.05 WATER</p> <p>A. Connection shall be made to the sprinkler outside the building as shown on the drawings.</p> <p>B. Water meter to be supplied by others. Unless otherwise noted.</p>	
<p>1.03 VERIFICATION OF DRAWINGS AND SPECIFICATIONS</p> <p>A. It shall be the Contractor's responsibility to carefully examine the drawings and specifications, and to visit the site in order to check existing conditions prior to bidding. Any conflict or errors shall be immediately brought to the attention of the Landscape Architect for interpretation or instructions. Otherwise, any changes necessary to meet existing conditions, shall be made at the Contractor's expense.</p> <p>B. It is the Irrigation Contractor's responsibility to verify water pressure, water source, and size in the field prior to construction. Should a discrepancy exist between design pressure and the field pressure the Landscape Architect shall be notified immediately.</p>	<p>2.06 PLANT MATERIAL</p> <p>A. All old abrasions and cuts shall be completely calloused over. All shrubs shall be measured when their branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch or root tip to tip.</p> <p>B. Shrubs shall be matched specimens from single block source.</p> <p>C. Evergreen trees not fully branched from top to bottom will be rejected, and those with terminal leaders exceeding twelve (12) inches in length will also be rejected. During the spring planting seasons, any evergreen plant delivered with new growth in an advanced stage of candling out will be rejected.</p> <p>D. Plants shall not be pruned before delivery. Trees which have damaged or crooked leaders, or multiple leaders, unless specified will be rejected. Trees with bark abrasions, sunscald, disfiguring knots, or fresh cuts of limb over 1 1/4 inches which have not completely calloused will be rejected. Plants shall be freshly dug or container grown. Heeled in plants or plants from cold storage will not be accepted.</p> <p>E. Plants shall be true to species and variety, and shall conform to measurements specified on the Drawings. Plants larger than specified may be used if approved by the Landscape Architect. Use of such plants shall not increase contract price. If larger plants are approved, the ball of earth shall be increased proportionally with the size of the plant.</p> <p>F. Substitutions of plant materials will not be permitted unless authorized in writing by the Landscape Architect. Proof must be submitted that use of nearest equivalent size of variety with corresponding adjustment of Contract Price. Such proof shall be substantiated and submitted in writing.</p> <p>G. It shall be the responsibility of the Contractor to determine required quantities of plants, as no compensation will be made for error in plant quantities. If plant counts occur on plant legend, it is for the convenience of the contractor only. Verify plant counts with plan. In case of discrepancy, plan shall govern.</p> <p>H. Each plant shall be properly identified with legible waterproof tags securely fastened. Tags shall remain on the plants until after final acceptance and then be promptly removed by the Contractor.</p>	
<p>1.04 WORKING CONDITIONS</p> <p>A. The Contractor shall confine his operations to the areas allotted to him by the Owner, for his work for material and equipment storage.</p> <p>B. The Contractor shall continuously maintain a competent superintendent, satisfactory to the Owner, on the work during progress, with authority to act for the Contractor in all matters pertaining to the work.</p> <p>C. The Contractor shall not assign nor sublet any portion of this work without written approval by the Owner.</p> <p>D. The Contractor shall be responsible for staking out the system from the drawings, using the property lines and building dimensions as a guide.</p> <p>E. The Contractor shall coordinate his work with that of the other trades, so as to avoid any conflict, and carry the installations to a rapid completion without any unnecessary delays.</p>	<p>2.07 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>2.01 PIPING</p> <p>A. All pressure main piping, on the supply side of the zone valves, shall be class 200 PVC with integrally formed bell-tite joint couplers. All fittings shall be solvent welded, schedule 40 PVC.</p> <p>B. All lateral piping, on the discharge side of the zone valves, two inches (2") and under, shall be class 200 PVC. Fittings shall be schedule 40 PVC material, 1/2" pvc to be class 315.</p> <p>C. All plastic to metal shall be made with PVC schedule 40 male adapters or PVC schedule 80 nipples. Joint compound for such connections shall be Permatex Type II teflon tape or a prior approved equivalent.</p> <p>D. Where pipes are installed under roads, drives, parking areas or walks, schedule 40 PVC sleeves shall be provided for the lines. In planting areas, where cultivation might damage shallow plastic piping, protective sleeves must be provided, unless copper tubing is installed. Risers in flower beds and shrubbery shall be schedule 80 PVC.</p>	<p>2.08 DRAWINGS OF RECORD</p> <p>A. The Contractor shall provide and keep up to date a complete "as-built" record set of mylar sepia which shall be corrected to show any changes from the original drawings. These record drawings shall show location of all control lines, valves, valve boxes, main line flush caps, controllers, and any substitutions as well as any deviation in piping or location of buried valves, etc. with accurate dimensions indicated.</p> <p>B. After completion of the sprinkler installation, the Contractor shall deliver to the Owner three prints of the correct and completed "as-built" set of drawings, along with three bound instruction folders covering the equipment installed. Contractor shall present the above information as a condition precedent to the completion payment.</p>	
<p>2.02 SPRINKLER HEADS</p> <p>A. Emitter heads shall be on PVC laterals, or prior approved equivalent.</p>	<p>2.09 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>2.03 AUTOMATIC CONTROLLER</p> <p>A. Unit features shall include mechanical time control design, adjustable time setting up to 60 minutes per station, 24-hour clock, 14-day calendar, and automatic rapid advance. Unit shall be UL listed and shall operate on 120 volt, 1 phase, 60 Hz power. General Contractor to bring power to controller. Irrigation Contractor to hardwire to controller, see detail.</p>	<p>2.10 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>2.04 QUICKCOUPLING VALVES</p> <p>A. Furnish and install where shown on the drawings quick-coupler with swivel and hose bib, 3/4" size or prior approved equivalent. They shall be mounted on one inch (1") copper swing joint risers, and the tops shall be set flush with the top of the planters. Furnish and deliver to the Owner double-lug coupler key complete with one inch (1") hose swivel for connecting to the above valves. Also furnish two (2) locktop cover key.</p>	<p>2.11 QUARANTINE</p> <p>A. Within ten (10) days after the Contractor's notification that the sprinkler installation is complete, the Landscape Architect will inspect the system and, if necessary, submit a "punch list" to the Contractor. Acceptance by the Landscape Architect of these corrections will signify final acceptance by the Owner.</p> <p>B. The entire sprinkler system shall be guaranteed for a period of one year from this final acceptance date. The Contractor shall promptly replace, without cost to the Owner, any defective materials of faulty workmanship which may develop within this guarantee period, including restoration of any property damaged during repairs. He shall also be responsible for damages resulting from leaks which may occur in the piping system installed by him, and he shall repair, at his expense, all damage so caused, in a manner satisfactory to the Owner. However, the Contractor shall not be held liable for damages occasioned by strikes, fire, weather, violence or theft, acts of God, acts of other contractors, or any other caused beyond the control of the Contractor.</p> <p>C. It will be the Owner's responsibility to maintain the system in working order during the guarantee period, performing necessary minor maintenance, keeping grass from obstructing the sprinkler heads, protecting against vandalism and preventing damage during the landscape maintenance operation.</p> <p>D. The Contractor shall service the system at the Owner's request during the guarantee period, and shall be paid for work performed which is not covered by the guarantee, in accordance with a predetermined schedule of fees.</p>	
<p>2.05 ELECTRICAL CONTROL CABLE</p> <p>A. All electrical control and ground wire shall be irrigation control cable of size as required. All wiring to be used for connecting the automatic remote control valve to the automatic controllers shall be Type "UF", 600 volt, stranded, or solid copper, single conductor wire with PVC insulation and bear UL approval for direct underground burial tender cable.</p> <p>B. All control or "hot" wires shall be on one color and all common or "ground" wire shall be or another color(white).</p> <p>C. Verifications of wire types and installation procedures shall be checked to conform to local codes.</p> <p>D. All electric control cable shall be of size as determined by the equipment manufacturer and shall be installed in the piping trenches where possible, in the manner recommended by the manufacturer, leaving slack in the wire. Exposed joints in the wire may be protected at 200-foot intervals by making 5 or 6 turns of the wire around a piece of 1/2 inch pipe. Where it is necessary to run wire in a separate trench, the wire shall be a minimum cover of twelve (12) inches.</p>	<p>2.12 DIGGING AND HANDLING</p> <p>A. Digging shall be done the same season of planting and shall be done by hand as to not injure plants and to meet size requirements. No plant other than the required samples shall be dug or delivered to the site until the required inspections have been made and the plants or samples approved.</p> <p>B. Dig balled and burlapped (BB) plants with firm, unbroken natural balls of earth, of sufficient diameter and depth to include the fibrous and feeding roots. No synthetic or mudded in balls will be accepted. No plants moved with a ball will be accepted if the ball is cracked or broken before or during planting operations.</p> <p>C. Roots or balls of all plants shall be adequately protected at all times from excessive exposure to wind, sun, rain, hail, etc. Balled and burlapped plants that cannot be planted immediately on delivery shall be set out on ground and well protected with soil, wet moss and other acceptable material. Bare rooted plants shall be planted or heeled-in immediately upon delivery.</p> <p>D. All plant material shall be handled carefully to prevent injury to rootballs, trunks, or branches. Any plant suffering damage sufficient to impair its health and/or natural form will be rejected. No plant shall be bound with wire or rope at any time so as to damage the bark or break branches.</p>	
<p>2.06 ELECTRICAL CONTROL CABLE</p> <p>A. All electrical control and ground wire shall be irrigation control cable of size as required. All wiring to be used for connecting the automatic remote control valve to the automatic controllers shall be Type "UF", 600 volt, stranded, or solid copper, single conductor wire with PVC insulation and bear UL approval for direct underground burial tender cable.</p> <p>B. All control or "hot" wires shall be on one color and all common or "ground" wire shall be or another color(white).</p> <p>C. Verifications of wire types and installation procedures shall be checked to conform to local codes.</p> <p>D. All electric control cable shall be of size as determined by the equipment manufacturer and shall be installed in the piping trenches where possible, in the manner recommended by the manufacturer, leaving slack in the wire. Exposed joints in the wire may be protected at 200-foot intervals by making 5 or 6 turns of the wire around a piece of 1/2 inch pipe. Where it is necessary to run wire in a separate trench, the wire shall be a minimum cover of twelve (12) inches.</p>	<p>2.13 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>3.01 PROTECTION OF UTILITIES, IRRIGATION SYSTEM, ETC.</p> <p>A. The Contractor shall verify the location of all utilities and note location of utilities, irrigation piping and underground obstructions. The contractor shall be responsible for the cost of repairing buried conduit, cables or pipelines damaged during the installation of the irrigation system.</p> <p>B. The Contractor shall clearly mark and maintain markers showing locations of irrigation system wiring and piping installed in order that other contractors may avoid damaging this work.</p> <p>C. The Contractor shall take necessary precautions to protect site conditions and plant materials which are to remain. Should damage be incurred, Contractor shall repair damage to its original condition or furnish and install equal replacement at his expense.</p> <p>D. The Contractor shall coordinate with the Landscape Architect to provide irrigation to existing materials.</p> <p>E. Contact blue stake prior to digging.</p>	<p>2.14 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>3.02 EXCAVATION</p> <p>A. The Contractor shall do all necessary excavation for the proper installation of his work. Machine trenches used on the site shall be of an approved type to cut smooth-bottom trenches on uniform slopes. Trenches shall be no wider than necessary to lay the pipe, except where necessary to make joints. Over excavating shall be backfilled and carefully tamped to provide a smooth and firm bearing surface for laying the pipe. When necessary, Contractor must provide barricades and lights for public protection. Minimum depth of cover shall be at least twenty four (24) inches for the main piping, and at least twelve (12) inches for the lateral branch lines.</p>	<p>2.15 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>3.03 PIPE INSTALLATION</p> <p>A. All pipe lines shall be installed in the locations and of the sizes indicated, and of the materials specified. Parallel piping may be installed in the same trench. Piping shall be laid accurately to the line and grade required, with full uniform bearing on the trench bottom. No piping shall be laid on rock, fill or other unstable material. No direct contact, with other piping or structures, will be permitted at crossing. Interior of piping shall be kept clear of foreign matter before installation, and shall be kept clean by means of plugged or capped ends after lowering into the trench. The supply main lines shall be flushed out and tested for leaks, with control valves in place, before backfilling the joints. All lateral piping sections shall be flushed out before sprinkler heads are attached. All pipe shall be installed in strict accordance with recommendations of the manufacturer. This shall apply to thrust blocking, handling, storage, depth of cover, expansion allowance, testing, etc.</p>	<p>2.16 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>3.04 BACKFILLING</p> <p>A. As soon as the work has been installed, inspected and accepted, all excavations and trenches shall be filled and water settled with fine earth materials, free from clods, rocks, or other unsuitable substances. Trenches must be left flush with adjacent finished grade after compacting to the original density of the soil. Flooding of trenches will be permitted downstream of zone valves. Core soil shall be taken to place previously tilled and fertilized soil in the top portion of the trench, and subsoil will not be allowed in the top six (6) inches of the backfill.</p>	<p>2.17 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>3.05 SPRINKLER HEADS</p> <p>A. Sprinklers shall be set plumb and level with the turf at locations shown on the drawings. In lawn areas where grass has not been established, the heads shall be installed in temporary risers at least three (3) inches above the grade. After the turf is established, lower the heads to their permanent positions flush with the finished grade. This elevation is critical and Contractor shall exercise care to set them exactly at grade – never below.</p>	<p>2.18 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	
<p>3.06 AUTOMATIC VALVES</p>	<p>2.19 TESTING</p> <p>A. After all supports, anchors, and thrust blocks are in place, the line shall be tested at a pressure of 150 psi for 30 minutes. Should any leaks be found, they shall be repaired and the line retested until satisfactory. Zone lines shall be tested at 80 psi in like manner. After testing, the system shall be thoroughly flushed out before the heads may be installed. Upon completion, an operating test shall be performed to visually check the coverage of the system. Any heads which do not function according to the manufacturer's data shall be replaced with sprinklers that do so or the installation shall be otherwise corrected to provide satisfactory performance. Final adjustment to the sprinkler heads and automatic equipment will be done by the Contractor upon completion of the installation to the satisfaction of the Landscape Architect. Minor adjustment from then on shall be made by the Owner's Maintenance Staff.</p>	



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PRELIMINARY
 NOT FOR
 CONSTRUCTION OR RECORDING

Red Mountain Group
 Project number: 22038
 Date: October 4, 2023

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