



MIDLAND COUNTY FAIRVIEW CEMETERY

REQUEST FOR PROPOSAL 22MCO600 IRRIGATION AT THE CEMETERY

MIDLAND COUNTY
500 N. LORAIN ST.
MIDLAND, TEXAS
79701



LOCATION MAP

NTS



PROJECT LOCATION:
1620 N. A St.
MIDLAND, TEXAS
79701

MIDLAND COUNTY STAFF - POINT OF CONTACT

Eddie Melendez
Director of Facilities/Operations
(432) 688-4151

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Fairview Cemetery
Landscape Irrigation Renovations



CLIENT
MIDLAND COUNTY
500 N Lorraine Street
Midland, TX 79701
Phone: 432-742-7777

PROJECT NO.
40044.22

KEY PLAN

DATE	DESCRIPTION
11/07/2022	Issued for Bid

Cover Sheet

G001

Parkhill

BID DOCUMENTS

NOVEMBER 2022

Parkhill No. 40044.22

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SITE DEMOLITION GENERAL NOTES
CALL BEFORE YOU DIG: THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND MATERIAL OF ALL UTILITIES THAT WILL BE AFFECTED BY CONSTRUCTION OPERATIONS PRIOR TO BREAKING GROUND, DEMOLITION, OR CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ALL AFFECTED UTILITIES 48 HOURS PRIOR TO THE START OF DEMOLITION. THIS INCLUDES, BUT IS NOT LIMITED TO CONTACTING THE APPROPRIATE ONE-CALL UTILITY NOTIFICATION SERVICE, I.E. TEXAS811 (800) 344-8377 OR NM811 (800) 321-2537
PREPARE THE PROJECT SITE AND DESIGNATED EASEMENTS FOR CONSTRUCTION OPERATIONS BY REMOVING AND DISPOSING OF ALL OBSTRUCTIONS. WHEN REMOVAL OF SUCH OBSTRUCTIONS IS NOT SPECIFICALLY SHOWN ON THE PLANS, IT SHALL BE CONSIDERED INTEGRAL TO THE NEW CONSTRUCTION BID ITEM
PROTECT DESIGNATED FEATURES ON THE RIGHT OF WAY AND PRUNE TREES AND SHRUBS AS DIRECTED. DO NOT PARK EQUIPMENT, SERVICE EQUIPMENT, STORE MATERIALS, OR DISTURB THE ROOT AREA UNDER THE BRANCHES OF TREES DESIGNATED FOR PRESERVATION
NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WHEN ITEMS NOT SHOWN ON THE PLANS AND NOT REASONABLY DETECTABLE (BURIED WITH NO OBVIOUS INDICATION OF PRESENCE) ARE ENCOUNTERED AND REQUIRED TO BE REMOVED
REMOVE OBSTRUCTIONS NOT DESIGNATED FOR PRESERVATION TO A DEPTH OF 2 FEET BELOW NATURAL GROUND IN AREAS RECEIVING EMBANKMENT (FILL). REMOVE OBSTRUCTIONS TO A DEPTH OF 2 FEET BELOW THE EXCAVATION LEVEL IN AREAS TO BE EXCAVATED (CUT). REMOVE OBSTRUCTIONS TO A DEPTH OF 1 FOOT BELOW NATURAL GROUND IN ALL OTHER AREAS, AND CUT TREES AND STUMPS LEVEL WITH EXISTING GRADE. UNLESS OTHERWISE SHOWN ON CONSTRUCTION DOCUMENTS: BACKFILL, COMPACT, AND RESTORE AREAS WHERE OBSTRUCTIONS HAVE BEEN REMOVED WITH APPROVED FILL MATERIAL.
THE CONTRACTOR SHALL ACCEPT OWNERSHIP AND DISPOSE OF REMOVED MATERIALS AND DEBRIS AT LOCATIONS OFF SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS, UNLESS OTHERWISE SHOWN ON CONSTRUCTION DOCUMENTS
STOCKPILE MATERIALS DESIGNATED SALVAGEABLE AT DESIGNATED SITES WHEN SHOWN ON THE PLANS OR AS DIRECTED. PREPARE STOCKPILE SITE BY REMOVING VEGETATION AND TRASH AND BY PROVIDING FOR PROPER DRAINAGE. MATERIAL NOT DESIGNATED TO BE SALVAGED WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS
EXCAVATE (CUT) AREAS AS SHOWN ON THE PLANS OR AS DIRECTED. REMOVE MATERIALS ENCOUNTERED TO THE LINES, GRADES, AND TYPICAL SECTIONS SHOWN ON THE CONSTRUCTION DOCUMENTS; ACCEPT OWNERSHIP OF UNSUITABLE OR EXCESS MATERIAL AND DISPOSE OF MATERIAL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS AT LOCATIONS OFF SITE. MAINTAIN DRAINAGE IN THE EXCAVATED AREA TO AVOID DAMAGE TO AREAS OF CUT/FILL. CORRECT ANY DAMAGE TO THE SUBGRADE CAUSED BY WEATHER AT NO ADDITIONAL COST
THE CONTRACTOR SHALL FURNISH APPROVED FILL MATERIAL CAPABLE OF FORMING A STABLE EMBANKMENT FROM REQUIRED EXCAVATION IN THE AREAS SHOWN ON THE CONSTRUCTION DOCUMENTS FROM APPROVED SOURCES OFF SITE
SALVAGE AND STOCKPILE THE EXISTING TOPSOIL IN ALL AREAS IN WHICH GRADE CHANGE WILL OCCUR IN ORDER TO PROVIDE A MINIMUM 2 FOOT DEPTH IN ALL PLANTING AREAS. USE EASILY CULTIVATED, FERTILE TOPSOIL THAT IS FREE FROM OBJECTIONABLE MATERIAL AND RESISTS EROSION. SECURE ADDITIONAL TOPSOIL IF NECESSARY. FROM APPROVED SOURCES
THE SCOPE OF WORK SHALL INCLUDE DISPOSAL OF ALL DEBRIS ASSOCIATED WITH DEMOLITION AND CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, INSPECTION, AND TESTING REQUIRED FOR LAWFUL DISPOSAL AS REQUIRED BY THE OWNER, LOCAL AND STATE CODE
WHERE EXISTING UTILITIES AND/OR SERVICE LINES ARE CUT, BROKEN, OR DAMAGED, THE CONTRACTOR SHALL REPAIR THE UTILITY OR SERVICE LINES WITH THE SAME MATERIAL AND CONSTRUCTION OR BETTER UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DOCUMENTS AT NO ADDITIONAL COST
THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF FIELD VERIFICATION AND PROTECTION OF EXISTING CONDITIONS AND UTILITIES. THE ACTUAL HORIZONTAL OR VERTICAL LOCATION OF THE EXISTING UTILITIES SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION
THE CONTRACTOR SHALL NOT BEGIN DEMOLITION OPERATIONS UNTIL WRITTEN CONFIRMATION FROM THE OWNER HAS BEEN RECEIVED VERIFYING THAT ALL ITEMS TO BE SALVAGED BY THE OWNER HAVE BEEN REMOVED FROM THE SITE
ALL DAMAGES TO THE OWNER'S PROPERTY ON THE PROJECT SITE PRIOR TO SUBSTANTIAL COMPLETION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS APPROVED BY THE OWNER, AT NO ADDITIONAL COST
EXISTING PAVING TO BE REMOVED SHALL BE SAW-CUT, OR REMOVED TO THE NEAREST JOINT TO CREATE CLEAN EDGES TO TIE INTO THE NEW CONSTRUCTION
DEMOLITION DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR; ANY DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY FOR RESOLUTION
THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF STORM WATER POLLUTION PREVENTION, SITE DRAINAGE, DUST CONTROL, NOISE POLLUTION, TRAFFIC CONTROL, SECURITY, FENCING, LIGHTING, PERMITTING, OR OTHER LOCAL OR STATE CODE REQUIREMENTS REQUIRED FOR CONSTRUCTION OPERATIONS, UNLESS OTHERWISE SHOWN ON CONSTRUCTION DOCUMENTS

SITE / GRADING GENERAL NOTES
THE CONTRACTOR'S WORK SHALL INCLUDE REMOVAL AND PROPER LEGAL DISPOSAL OF DEBRIS REQUIRED FOR INSTALLATION OF ALL IMPROVEMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION, INSPECTION, AND TESTING REQUIRED BY THE OWNER AND/OR CITY
THE CONTRACTOR SHALL CONTACT ALL AFFECTED UTILITIES 48 HOURS PRIOR TO CONSTRUCTION INCLUDING BUT NOT LIMITED TO DIG TESS AT 1-800-344-8377
THE CONTRACTOR SHALL ADOPT APPROPRIATE CONSTRUCTION SITE MANAGEMENT PRACTICES TO PREVENT THE DISCHARGE OF OILS, GREASE, PAINTS, GASOLINE, AND OTHER POLLUTANTS TO STORM WATER
DAMAGES TO EXISTING PROPERTY SHALL BE RESTORED BY THE CONTRACTOR TO THE SAME CONDITION THAT EXISTED PRIOR TO CONSTRUCTION. THIS RESTORATION SHALL BE PERFORMED AT NO COST TO THE OWNER AND IS SUBJECT TO THE OWNER'S APPROVAL
THE CONTRACTOR SHALL PERFORM THE GRADING WORK IN SUCH A MANNER SO AS TO MINIMIZE THE IMPACT ON THE SITE
THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND GRADES, NEW OR EXISTING PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH EXISTING OR NEW CONDITIONS. THE CONTRACTOR SHALL EMPLOY A LICENSED PUBLIC SURVEYOR TO SET ALL GRADES, SPOT ELEVATIONS, FLOW LINES, ETC.
ALL UTILITIES MAY NOT BE SHOWN ON THE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. UTILITIES DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE
SHOULD ANY MODIFICATIONS BE REQUIRED TO THE PROPOSED SPOT GRADES DUE TO CONDITIONS ENCOUNTERED IN THE FIELD, CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY AND PRIOR TO MAKING ANY CHANGES
ALL EXCAVATION IS UNCLASSIFIED AND INCLUDES GRADING AND EXCAVATION TO ELEVATIONS INDICATED, REGARDLESS OF CHARACTER OF MATERIALS AND OBSTRUCTIONS ENCOUNTERED, INCLUDING ROCK OR OTHER HARD MATERIALS
ANY AREA DISTURBED BY THE CONTRACTOR OUTSIDE THE SPECIFIED LIMITS OF THE PROJECT MUST BE REGRADED AND SEEDED AS SPECIFIED. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS ADDITIONAL WORK
NO DEPRESSIONS, "BIRD BATHS", ETC. SHALL BE PERMITTED IN THE PAVING. SHOULD ANY MODIFICATIONS TO THE PROPOSED GRADING BE REQUIRED TO ACHIEVE POSITIVE DRAINAGE, CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY BEFORE MAKING THE CHANGES
CONCRETE PAVING JOINTS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND DETAILS. SEAL ALL JOINTS WITH SELF-LEVELLING SL1
CONTRACTOR SHALL STAKE HARDSCAPE IMPROVEMENTS AND NOTIFY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION FOR APPROVAL
ALL GRADES SHOWN ON GRADING PLAN ARE FINISH GRADE ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS
VALVE BOXES, CLEANOUTS, AND OTHER SITE FEATURES AFFECTED BY NEW SITE IMPROVEMENTS SHALL BE RAISED/LOWERED TO MEET NEW FINISHED GRADES
ALL WORK SHALL MEET PLANS, SPECIFICATIONS, CURRENT LOCAL AND STATE CODES

IRRIGATION GENERAL NOTES
TEXAS 811: CONTRACTOR SHALL COORDINATE WITH CITY OFFICIALS AND UTILITY COMPANIES IN LOCATING UTILITIES. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR LOSSES DUE TO DAMAGE TO UTILITIES. LOCATION FOR ALL UTILITIES SHOWN ON PLANS ARE APPROXIMATE. DIAL 811 FROM ANY PHONE IN TEXAS OR (800) 344-8377
CONTRACTOR MUST VERIFY LOCATION OF ALL OVERHEAD AND UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION
THIS IRRIGATION SYSTEM HAS BEEN DESIGNED FOR THE USE OF
THIS IRRIGATION SYSTEM WAS DESIGNED FOR A MINIMUM STATIC PRESSURE AT THE POINT OF CONNECTION AS LISTED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ACTUAL PSI AND DELIVER RESULTS TO THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. IN THE EVENT THE ACTUAL PSI IS LESS THAN THE LISTED DESIGN PRESSURE, THE CONTRACTOR SHALL RECEIVE DIRECTION FROM THE LANDSCAPE ARCHITECT REGARDING DESIGN MODIFICATIONS IF NECESSARY
ALL IRRIGATION EQUIPMENT TO BE USED ON THE PROJECT SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO DELIVERY AND INSTALLATION
IRRIGATION PLAN SHOWN IS DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DRIP EMITTERS AT EACH PLANT LOCATION AND FULL COVERAGE OF ALL TURF AREAS. ANY DISCREPANCIES IN THE PLANS SHOULD BE BROUGHT TO THE LANDSCAPE ARCHITECT'S ATTENTION PRIOR TO BID
WHEN BACKFLOW PREVENTION IS SHOWN TO BE INSTALLED BELOW GRADE, A WYE STRAINER THE SAME SIZE AS THE BACKFLOW DEVICE SHALL BE INSTALLED UPSTREAM
ALL FITTINGS AND NECESSARY EQUIPMENT REQUIRED TO MAKE THIS IRRIGATION SYSTEM OPERATE PROPERLY AND TO COMPLY WITH LOCAL AND STATE CODES ARE INCIDENTAL TO THESE PLANS AND ARE THE CONTRACTOR'S RESPONSIBILITY
CONTRACTOR WILL BE HELD LIABLE FOR GAINING ACCESS UNDER ALL PAVEMENTS. SLEEVES SHOWN ON THE PLANS SHOULD BE VERIFIED FOR ACCESSIBILITY AND PENETRATION BEFORE ANY CONSTRUCTION
IRRIGATION SLEEVES SHALL BE SIZED TWO FULL PIPE SIZES LARGER THAN PIPE INSTALLED INSIDE THE SLEEVE. FITTINGS SHALL BE INSTALLED INSIDE SLEEVES IF POSSIBLE. TAPE BOTH ENDS OF SLEEVES WITH TWO LAYERS OF DUCT TAPE
THE CONTRACTOR SHALL LOCATE AND VERIFY EACH WATER TAP TO WHICH THIS IRRIGATION SYSTEM WILL CONNECT
ALL EQUIPMENT AND INSTALLATION METHODS SHALL COMPLY WITH LOCAL AND STATE CODES AND THE PLANS AND SPECIFICATIONS
CONTRACTOR IS RESPONSIBLE FOR ALL CONNECTIONS AND METERS REQUIRED FOR THE FULL IMPLEMENTATION OF THE SYSTEM
CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO INITIATING WORK. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE OR INTERRUPTION IN SERVICE CAUSED BY EXCAVATIONS AND/OR WORK
EACH CONTROLLER WILL HAVE AN INDEPENDENT COMMON WIRE
ALL REMOTE CONTROL VALVE WIRES NEED TO BE LABELED AT VALVE W/ WEATHER (WATER) PROOF LABELS, AND AT CONTROLLER WITH CORRESPONDING LABEL
SPLICING OF REMOTE CONTROL VALVE WIRES IS NOT ALLOWED BETWEEN CONTROLLER AND VALVE BOX FOR REMOTE CONTROL VALVES. WIRES MUST BE CONTINUOUS FROM CONTROLLER TO REMOTE CONTROL VALVE WITHOUT SPLICING
CONTRACTOR SHALL PROVIDE A SINGLE 120-VOLT, 20 AMP CIRCUIT FROM ELECTRICAL PANEL TO IRRIGATION CONTROLLER. ALL WORK AND MATERIALS SHALL MEET LOCAL CODES AND THE NATIONAL ELECTRIC CODE (N.E.C.)
CONTRACTOR SHALL SIZE VALVE BOXES TO HOUSE THE ENTIRE ASSEMBLY OF BACKFLOW PREVENTION, VALVE, FILTER AND PRESSURE REDUCER
CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO CONSTRUCT PROPOSED IRRIGATION SYSTEM IN ACCORDANCE WITH PLANS, WRITTEN SPECIFICATIONS AND DETAILS
PIPE SLEEVES SHOWN CROSSING EXISTING PAVING SHALL BE BORED TO AVOID DAMAGE TO EXISTING ROADWAYS
WHEN A BOOSTER PUMP IS SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE AN ELECTRICAL CIRCUIT, CONDUIT, AND WIRING AS REQUIRED FOR FULL FUNCTIONALITY OF THE PUMP SYSTEM. ALL WORK AND MATERIALS SHALL MEET LOCAL CODES AND THE NATIONAL ELECTRIC CODE (N.E.C.)
WHEN A HEATED BACKFLOW ENCLOSURE IS SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE AN ELECTRICAL CIRCUIT, CONDUIT, AND WIRING AS REQUIRED FOR FULL FUNCTIONALITY OF THE HEATER SYSTEM. ALL WORK AND MATERIALS SHALL MEET LOCAL CODES AND THE NATIONAL ELECTRIC CODE (N.E.C.)
PRIOR TO A REQUEST FOR PUNCH LIST REVIEW, THE CONTRACTOR SHALL CYCLE THE ENTIRE IRRIGATION SYSTEM, CHECK FOR REPAIR LEAKS, ADJUST HEAD RADII AND PATTERNS, FILL SETTLED TRENCHES, BRING VALVE BOXES AND HEADS TO FINISH GRADE, CREATE ZONE CHART, INSTALL GRAVEL IN VALVE BOXES, LABEL VALVES, INSTALL SENSORS, INSTALL PROPER WIRE CONNECTORS, INSTALL UNION VALVES, AND PROVIDE AS-BUILT DRAWINGS. SHOULD A PUNCH LIST REVIEW BE REQUESTED AND PERFORMED PRIOR TO THESE ITEMS BEING PERFORMED, THE CONTRACTOR SHALL PAY FOR ADDITIONAL TIME AND TRAVEL EXPENSES REQUIRED BY THE LANDSCAPE ARCHITECT FOR A FOLLOW-UP SITE VISIT

TWO-WIRE GENERAL NOTES
GROUNDING RODS TO BE INSTALLED AT EVERY 12TH DECODER OR EVERY 1000' WHICHEVER IS SHORTER. THE FINAL DECODER IN ANY WIRE RUN SHOULD BE GROUNDED
INSTALL (1) SINGLE STATION ICD-100 AT THE MASTER VALVE
DECODER GROUNDING HARDWARE SHOULD ALWAYS BE CONNECTED AND PLACED AT RIGHT ANGLES TO THE RUN OF THE TWO-WIRE PATH
ID 1 14AWG WIRE RUNS NOT TO EXCEED 10,000' AND ID 2 12AWG WIRE RUNS NOT TO EXCEED 15,000'
MAXIMUM DISTANCE BETWEEN SOLENOID AND DECODER SHALL BE 100'
INSTALL (1) ICD-SEN DECODER AT FLOW SENSORS
ALL CONNECTIONS AND SPICES IN THE RED/BLUE TWO-WIRE PATH (DWIRE) MUST BE MADE WITH DRY-4 OR EQUAL WATERPROOF CONNECTORS
PROVIDE 5 FEET ADDITIONAL WIRE / SLACK AT ALL WIRE SPICES OR CONNECTIONS TO PREVENT DAMAGE FROM CONTRACTION OF THE WIRE, AND TO ALLOW THE SPICES TO BE REMOVED FROM THE VALVE BOX FOR SERVICE AND INSPECTION
INSTALL THE GROUNDING WIRE AND EARTH GROUND HARDWARE AT RIGHT ANGLES FROM THE TWO-WIRE PATHS, WHEN POSSIBLE
ALL DECODERS SHOULD BE PROGRAMMED ACCORDING TO THE INTENDED VALVE ICD-HP TO INSTALLATION. PROGRAMMING SHALL TAKE PLACE AT THE CONTROLLER OR VIA AN ICD-HP HANDHELD PROGRAMMING DEVICE

RAIN / FREEZE SENSOR GENERAL NOTES
SENSOR SHALL BE INSTALLED ON THE SOUTH OR SOUTHWESTERN FACING AREA OF THE ROOF. THE AREA SELECTED SHALL BE IN A CLEAR OPEN AREA OF THE ROOF NOT EFFECTED BY SHADE FROM ANOTHER BUILDING OR TREE. THE CONTRACTOR SHALL INSTALL THE SENSOR ON AN EAVE OR FASCIA BOARD PER THE DIRECTION OF THE LANDSCAPE ARCHITECT. ALL WIRING SHALL BE CONCEALED PER THE DIRECTION OF THE LANDSCAPE ARCHITECT EITHER WITHIN PVC CONDUIT OR OTHER MEANS AS DIRECTED BY THE LANDSCAPE ARCHITECT

TCEQ GENERAL NOTES
THIS IRRIGATION SYSTEM HAS BEEN DESIGNED AND SHALL BE INSTALLED ACCORDING TO TEXAS ADMINISTRATIVE CODE, TITLE 30 - ENVIRONMENTAL QUALITY, PART 1 - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), CHAPTER 344 - LANDSCAPE IRRIGATION. THE FOLLOWING INFORMATION IS PROVIDED AS A COURTESY AND IS NOT A COMPLETE LIST OF TCEQ REQUIREMENTS
THE MAXIMUM SPACING BETWEEN EMISSION DEVICES MUST NOT EXCEED THE MANUFACTURER'S PUBLISHED RADIUS OR SPACING OF THE DEVICE
NEW IRRIGATION SYSTEMS SHALL NOT UTILIZE ABOVE-GROUND SPRAY EMISSION DEVICES IN LANDSCAPES THAT ARE LESS THAN 48 INCHES NOT INCLUDING THE IMPERVIOUS SURFACES IN EITHER LENGTH OR WIDTH AND WHICH CONTAIN IMPERVIOUS PEDESTRIAN OR VEHICULAR TRAFFIC SURFACES ALONG TWO OR MORE PERIMETERS
EMISSION DEVICES MUST BE INSTALLED TO OPERATE AT THE MINIMUM AND NOT ABOVE THE MAXIMUM SPRINKLER HEAD PRESSURE AS PUBLISHED BY THE MANUFACTURER FOR THE NOZZLE AND HEAD SPACING THAT IS USED
IRRIGATION SYSTEMS SHALL NOT SPRAY WATER OVER SURFACES MADE OF CONCRETE, ASPHALT, BRICK, WOOD, STONES SET WITH MORTAR, OR ANY OTHER IMPERVIOUS MATERIAL, SUCH AS, BUT NOT LIMITED TO, SIDEWALKS, STREETS, ETC.
ALL NEW IRRIGATION SYSTEMS THAT ARE INSTALLED USING PVC PIPE AND FITTINGS SHALL BE PRIMED WITH A COLORED PRIMER PRIOR TO APPLYING THE PVC CEMENT
THE IRRIGATION SYSTEM MUST INCLUDE AN ISOLATION VALVE BETWEEN THE WATER METER AND THE BACKFLOW PREVENTION DEVICE
WATER CONTAINED WITHIN THE PIPING OF AN IRRIGATION SYSTEM IS DEEMED TO BE NON-POTABLE. NO DRINKING OR DOMESTIC WATER USAGE, SUCH AS, BUT NOT LIMITED TO, FILLING SWIMMING POOLS OR DECORATIVE FOUNTAINS, SHALL BE CONNECTED TO AN IRRIGATION SYSTEM
HOSE BIBS MUST BE INSTALLED USING A QUICK COUPLER KEY ON A QUICK COUPLER INSTALLED IN A COVERED PURPLE VALVE BOX AND THE HOSE BIB AND ANY HOSES CONNECTED TO THE BIB MUST BE LABELED "NON-POTABLE, NOT SAFE FOR DRINKING." AN ISOLATION VALVE MUST BE INSTALLED UPSTREAM OF A QUICK COUPLER CONNECTING A HOSE BIB TO AN IRRIGATION SYSTEM
A LICENSED IRRIGATOR OR A LICENSED IRRIGATION TECHNICIAN SHALL BE ON-SITE AT ALL TIMES WHILE THE LANDSCAPE IRRIGATION SYSTEM IS BEING INSTALLED
UPON COMPLETION OF THE IRRIGATION SYSTEM, THE IRRIGATOR OR IRRIGATION TECHNICIAN WHO PROVIDED SUPERVISION FOR THE ON-SITE INSTALLATION SHALL BE REQUIRED TO COMPLETE FOUR ITEMS: (1) A FINAL "WALK THROUGH" WITH THE IRRIGATION SYSTEM'S OWNER OR THE OWNER'S REPRESENTATIVE TO EXPLAIN THE OPERATION OF THE SYSTEM, (2) THE MAINTENANCE CHECKLIST ON WHICH THE IRRIGATOR OR IRRIGATION TECHNICIAN SHALL OBTAIN THE SIGNATURE OF THE IRRIGATION SYSTEM'S OWNER OR OWNER'S REPRESENTATIVE AND SHALL SIGN, DATE, AND SEAL THE CHECKLIST, (3) A PERMANENT STICKER WHICH CONTAINS THE IRRIGATOR'S NAME, LICENSE NUMBER, COMPANY NAME, TELEPHONE NUMBER AND THE DATES OF THE WARRANTY PERIOD SHALL BE AFFIXED TO EACH AUTOMATIC CONTROLLER INSTALLED BY THE IRRIGATOR OR IRRIGATION TECHNICIAN, (4) THE IRRIGATION PLAN INDICATING THE ACTUAL INSTALLATION OF THE SYSTEM MUST BE PROVIDED TO THE IRRIGATION SYSTEM'S OWNER OR OWNER REPRESENTATIVE
THE ITEMS ON THE MAINTENANCE CHECKLIST SHALL INCLUDE BUT ARE NOT LIMITED TO: (A) THE MANUFACTURER'S MANUAL FOR THE AUTOMATIC CONTROLLER, IF THE SYSTEM IS AUTOMATIC, (B) A SEASONAL (SPRING, SUMMER, FALL, WINTER) WATERING SCHEDULE BASED ON EITHER CURRENT/REAL TIME EVAPOTRANSPIRATION OR MONTHLY HISTORICAL REFERENCE EVAPOTRANSPIRATION (HISTORICAL ET) DATA, MONTHLY EFFECTIVE RAINFALL ESTIMATES, PLANT LANDSCAPE COEFFICIENT FACTORS, AND SITE FACTORS, (C) A LIST OF COMPONENTS, SUCH AS THE NOZZLE, OR PUMP FILTERS, AND OTHER SUCH COMPONENTS, THAT REQUIRE MAINTENANCE AND THE RECOMMENDED FREQUENCY FOR THE SERVICE, AND (D) THE STATEMENT, "THIS IRRIGATION SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL LAWS, ORDINANCES, RULES, REGULATIONS OR ORDERS. I HAVE TESTED THE SYSTEM AND DETERMINED THAT IT HAS BEEN INSTALLED ACCORDING TO THE IRRIGATION PLAN AND IS PROPERLY ADJUSTED FOR THE MOST EFFICIENT APPLICATION OF WATER AT THIS TIME."
THE IRRIGATOR SHALL PRESENT THE IRRIGATION SYSTEM'S OWNER OR OWNER'S REPRESENTATIVE WITH A WRITTEN WARRANTY COVERING MATERIALS AND LABOR FURNISHED IN THE NEW INSTALLATION OF THE IRRIGATION SYSTEM. THE IRRIGATOR SHALL BE RESPONSIBLE FOR ADHERING TO TERMS OF THE WARRANTY. IF THE IRRIGATOR'S WARRANTY IS LESS THAN THE MANUFACTURER'S WARRANTY FOR THE SYSTEM COMPONENTS, THEN THE IRRIGATOR SHALL PROVIDE THE IRRIGATION SYSTEM'S OWNER OR THE OWNER'S REPRESENTATIVE WITH APPLICABLE INFORMATION REGARDING THE MANUFACTURER'S WARRANTY PERIOD. THE WARRANTY MUST INCLUDE THE IRRIGATOR'S SEAL, SIGNATURE, AND DATE. WRITTEN WARRANTY ON NEW IRRIGATION SYSTEMS MUST SPECIFY THE IRRIGATOR'S NAME, BUSINESS ADDRESS, AND BUSINESS TELEPHONE NUMBER(S). MUST CONTAIN THE SIGNATURE OF THE IRRIGATION SYSTEM'S OWNER OR OWNER'S REPRESENTATIVE CONFIRMING RECEIPT OF THE WARRANTY AND MUST INCLUDE THE STATEMENT: "IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), MC-178, P.O. BOX 130897, AUSTIN, TEXAS 78711-3087. TCEQ'S WEBSITE IS: WWW.TCEQ.STATE.TX.US
ON ALL MAINTENANCE, ALTERATIONS, REPAIRS, OR SERVICE TO EXISTING IRRIGATION SYSTEMS, AN IRRIGATOR SHALL PRESENT THE IRRIGATION SYSTEM'S OWNER OR OWNER'S REPRESENTATIVE A WRITTEN DOCUMENT THAT IDENTIFIES THE MATERIALS FURNISHED IN THE MAINTENANCE, ALTERATION, REPAIR, OR SERVICE AND ALL APPLICABLE WARRANTIES




11/07/2022

Parkhill.com

Fairview Cemetery
Landscape Irrigation Renovations



CLIENT
MIDLAND COUNTY
 500 N Loraine Street
 Midland, TX 79701
 Phone: 432-742-7777

PROJECT NO.
 40044.22

KEY PLAN

DATE	DESCRIPTION
11/07/2022	Issued for Bid

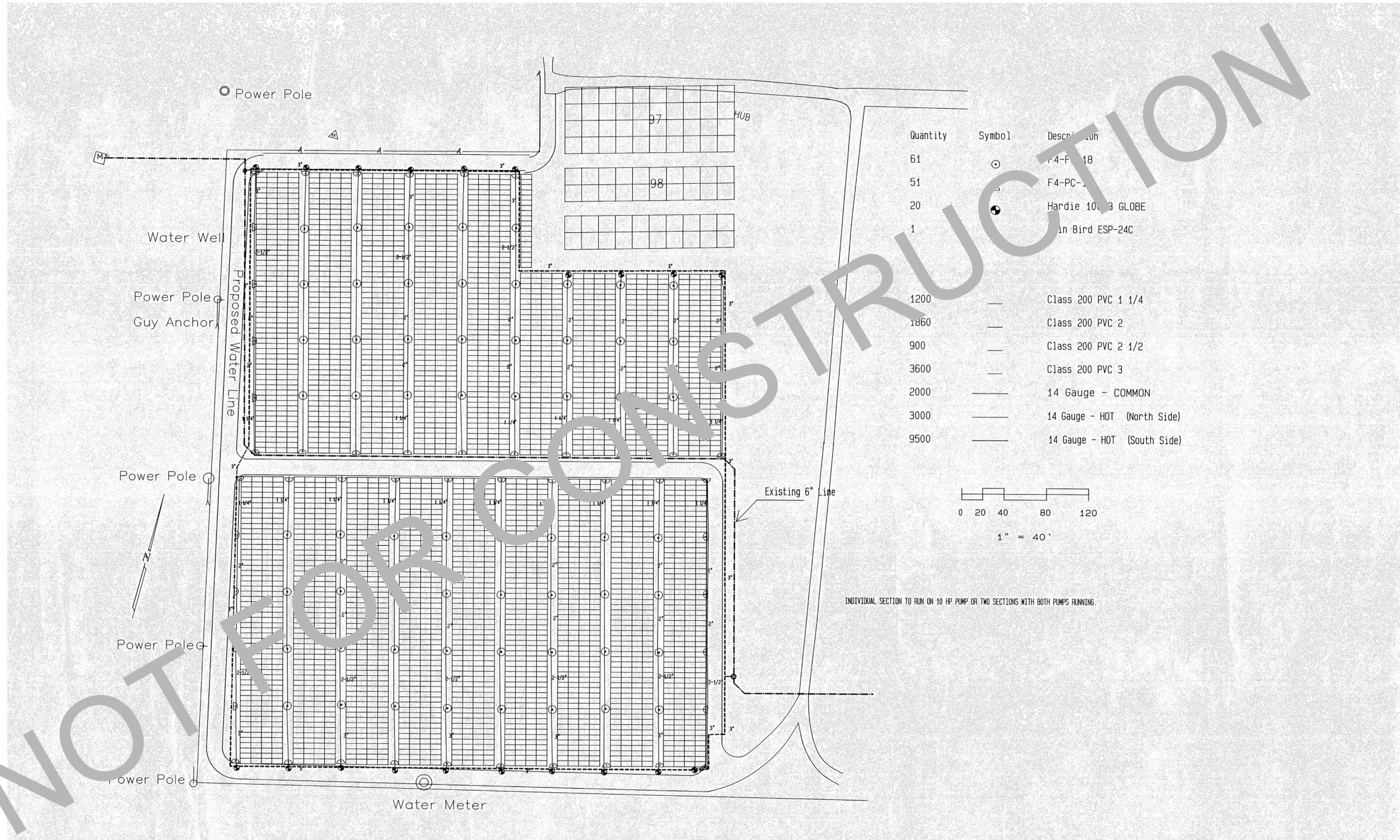
GENERAL NOTES & SCHEDULES

L001

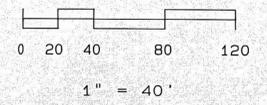


CONTRACTOR IS RESPONSIBLE TO CONTACT UTILITIES & ONE CALL SYSTEM 14 DAYS PRIOR TO DIGGING

ALL SECTIONS DIGTEST @ 1-800-344-8377



Quantity	Symbol	Description
61	⊙	F4-F 1/8
51	⊙	F4-PC-1
20	⊙	Hardie 10 3 GLOBE
1	⊙	in Bird ESP-24C
1200	—	Class 200 PVC 1 1/4
1860	—	Class 200 PVC 2
900	—	Class 200 PVC 2 1/2
3600	—	Class 200 PVC 3
2000	—	14 Gauge - COMMON
3000	—	14 Gauge - HOT (North Side)
9500	—	14 Gauge - HOT (South Side)



INDIVIDUAL SECTION TO RUN ON 10 HP PUMP OR TWO SECTIONS WITH BOTH PUMPS RUNNING.

A:\2022\04\22\03_DSGN01_DWG\090_LAND\01-002-0104.DWG, 11/07/2022 2:37:51 PM, TSBco

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Landscape Irrigation Renovations



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MIDLAND COUNTY
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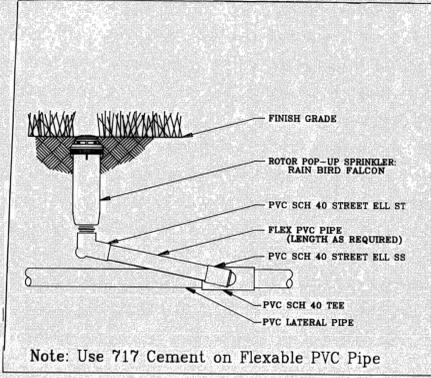
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KEY PLAN

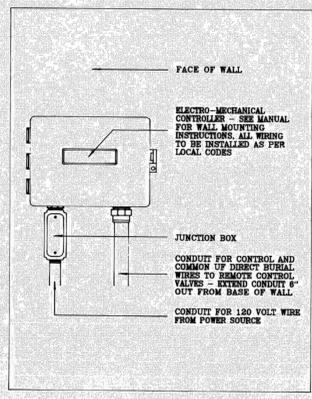
#	DATE	DESCRIPTION
1	11/07/2022	Issued for Bid

EXISTING CONDITIONS PLAN

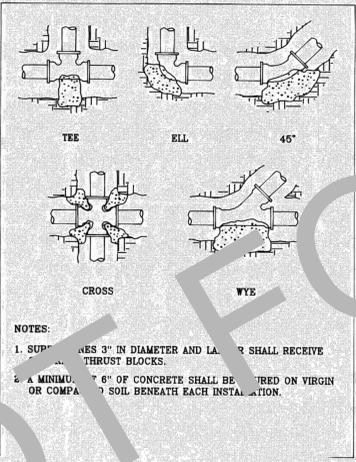
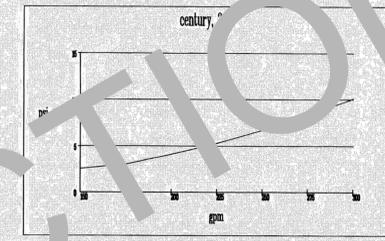
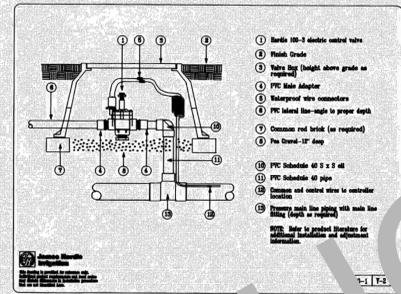
L002



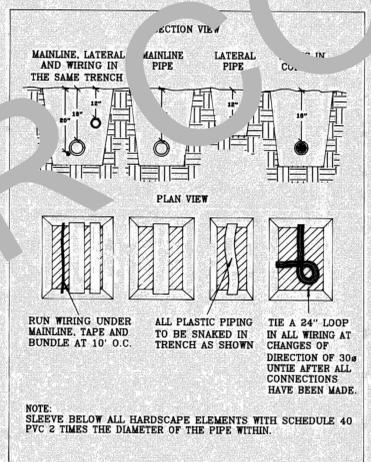
ROTOR ON FLEXIBLE PVC



CONTROLLER - WALL MOUNT



CONCRETE THRUST BLOCKS



PIPE & WIRE TRENCHING

ROTOR
Full or Part Circle Rotor

The full or part circle rotor shall be a single stream, water lubricated, gear drive type capable of covering a 360 degree (370°) arc at a flow pressure of _____ gpm per square foot with a discharge rate of _____ gpm per square foot. The part circle rotor shall have adjustable arc coverage of 45 degrees to 300 degrees. Arc adjustment can be performed with or without the rotor in operation and shall require only a flat blade screwdriver. The rotor shall be capable of full circle (360 degree) operation in either the single direction mode (S) or the bi-directional mode (B). The rotor shall have a rotating nozzle independent of the rotor stem. The portion of the rotor stem that is in contact with the rotor seal shall be non-rotating.

The rotor shall have a pressure activated, multi-function, self-adjusting rotor seal that will close when the pop-up stem is in retracted. This rotor seal shall prevent the rotor from sticking in the up position, and be capable of sealing the rotor cover stem to the rotor cover under normal operating pressure. The rotor shall have a layered plastic rotor stem that will assist in the sliding motion of the rotor as it pop-up, as well as when it pop-down. The rotor stem shall not rest against the multi-function rotor seal to assure no flow-by when fully actuated.

The rotor shall have a screen attached to the drive housing to filter sand water, protect the drive from chipping and simplify its removal for cleaning and flushing of the system. The rotor body shall have a 1" female (F) or (M) bottom inlet.

The rotor shall have a standard rubber cover which designates the full circle rotor from the top, as well as designates each adjustment opening from the top. The rotor shall have a front-load nozzle assembly which will allow the nozzle to be installed without a static loading change. The rotor shall have eight color-coded nozzles that are marked independently of each other in several modes of manual operation. The rotor shall have a stainless steel adjusting screw capable of reducing the radius up to 25%. The angle of trajectory shall be 25 degrees from the horizontal.

The rotor shall have a strong stainless steel retentive spring for positive pop-down. The rotor shall have a standard 3/4" x 1/2" (100) device capable of holding up to 10 feet of hose (approximately 4.5 psi), to prevent low head drainage. Pop-up height as measured from the top of the cover to the middle of the rotor nozzle shall be 1 1/8 inches. The rotor's overall height shall be 4 1/2 inches and the diameter shall be 3 1/8 inches.

RAIN BIRD FALCON-SS SPECIFICATION
Full or Part Circle Pop-up Rotor Sprinkler with Stainless Steel Rotor Stem Optional Feature Specifications

When so indicated on the design, the rotor shall have a stainless steel control nozzle ferrule and rotor stem. The rotor stem shall be tapered and conform to the standard plastic rotor stem in all other ways.

The rotor shall be as manufactured by Rain Bird Sprinkler Mfg. Corp., Goleta, California.

Contractor should verify pump output and capacity before installation begins.
WELLS HAVE CK. VALVES INSTALLED
BACKFLOW MUST COMPLY W/CITY & STATE



CLIENT
MIDLAND COUNTY
500 N Loraine Street
Midland, TX 79701
Phone: 432-742-7777

PROJECT NO.
40044.22

KEY PLAN

#	DATE	DESCRIPTION

EXISTING
CONDITIONS
PLAN

L003



GENERAL NOTES

- A. COORDINATE ALL STORAGE AREAS WITH OWNER PRIOR TO CONSTRUCTION OPERATIONS
- B. LOCATE PROJECT SIGNAGE AS DIRECTED BY OWNER
- C. IRRIGATION SYSTEM SHALL BE INSTALLED IN PHASES ACCEPTABLE TO AND COORDINATED WITH OWNER'S BURIAL SCHEDULES AND MODIFIED AS REQUIRED
- D. THE PROJECT SITE IS OPEN TO THE PUBLIC 24 HOURS PER DAY, 7 DAYS PER WEEK, 365 DAYS PER YEAR. ALL AREAS NOT CURRENTLY UNDER CONSTRUCTION SHALL BE OPEN AND ACCESSIBLE TO THE PUBLIC
- E. ALL AREAS OF ACTIVE EXCAVATION SHALL BE MONITORED BY THE CONTRACTOR TO ENSURE PUBLIC SAFETY
- F. OPEN EXCAVATIONS TO REMAIN UN-MONITORED SHALL BE SECURED BY INSTALLATION OF TEMPORARY FENCING TO ENSURE PUBLIC SAFETY
- G. VEHICULAR PAVING DEMOLITION AND REPAIR SHALL BE COORDINATED WITH OWNER. INSTALL TEMPORARY PAVING AS REQUIRED TO PROVIDE VEHICULAR USE WITHIN 24 HOURS OF REMOVAL
- H. PIPE INSTALLED BELOW PAVING SHALL BE INSTALLED AS PER DETAIL B31502 OR BORED AT THE CONTRACTOR'S OPTION
- I. PIPE SLEEVE INSTALLED ACROSS A STREET SHALL BE BORED AS PER LOCAL CODE

IRRIGATION SLEEVE LEGEND

- PIPE SLEEVE: EXISTING IRRIGATION SLEEVE FIELD VERIFY SIZE, LOCATION, AND PASSABILITY
- PIPE SLEEVE: PIPE BENEATH PAVING
- PIPE SLEEVE: SDR 26 - CLASS 160 IPS - ASTM D2241



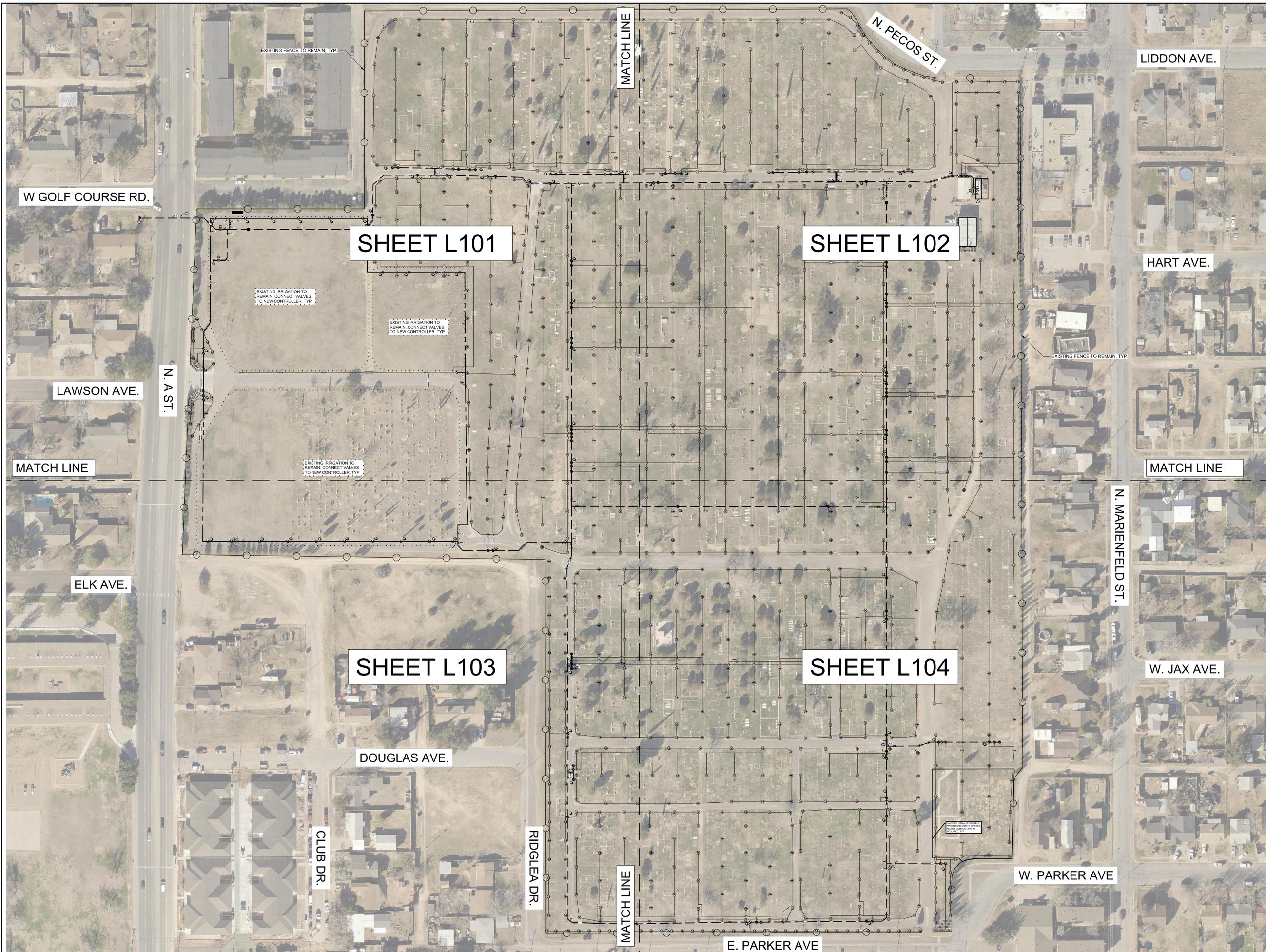
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 Phone: 432-742-7777

PROJECT NO.
 40044.22
 KEY PLAN

DATE	DESCRIPTION
11/07/2022	Issued for Bid

Demolition Plan

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MIDLAND COUNTY
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Midland, TX 79701
Phone: 432-742-7777

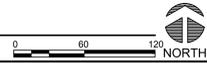
PROJECT NO.
40044.22

KEY PLAN

#	DATE	DESCRIPTION
1	11/07/2022	Issued for Bid

Irrigation Plan Overall

L100



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IRRIGATION GENERAL NOTES

A. SEE SHEET L001 FOR IRRIGATION GENERAL NOTES

IRRIGATION SCHEDULE

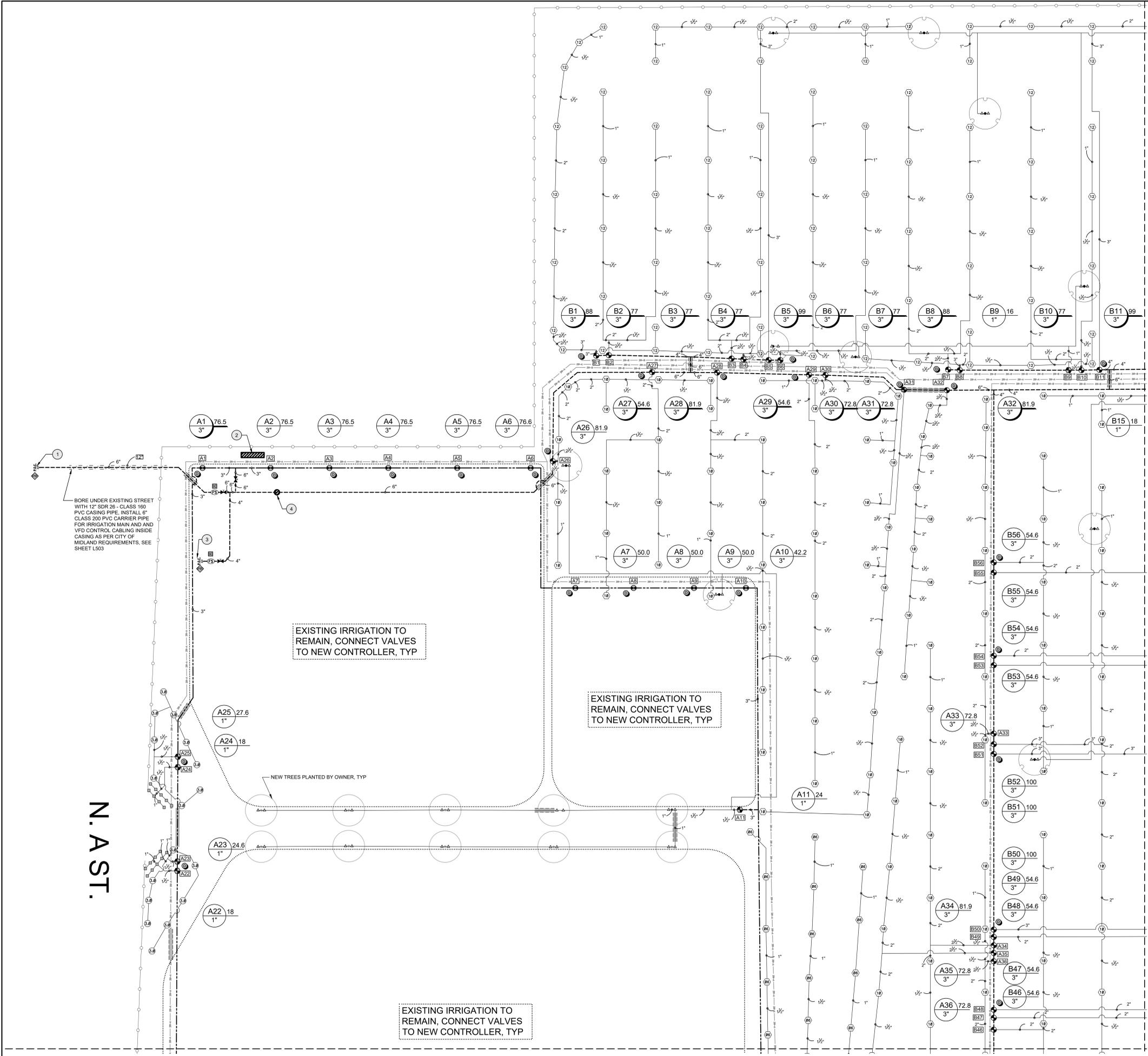
A. SEE SHEET L001 FOR IRRIGATION SCHEDULES

IRRIGATION WIRE SCHEDULE

- TWO-WIRE PATH 'A'
- TWO-WIRE PATH 'B'
- TWO-WIRE PATH 'C'

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	SUBMERSIBLE WELL #1
2	EXISTING ELECTRICAL RACK: CONTRACTOR TO INSTALL TWO NEW OUTDOOR RATED VFD DRIVES - ONE PER WELL. MCI CONTROLS SOLUTIONS VSDP SERIES SIZED PER WELL APPLICATION OR APPROVED EQUAL. EXISTING WELL 1 SUBMERSIBLE PUMP RATED AT 15HP, 250GPM, 480VAC, 3PHASE. EXISTING WELL 2 SUBMERSIBLE PUMP RATED AT 7.5HP, 75GPM, 480VAC, 3PHASE. CONTRACTOR TO INSTALL CONDUIT AND VFD CABLES SPECIFIC TO SIZE AND PUMP IN ACCORDANCE TO NFPA70E CODE AND PROJECT SPECIFICATIONS. CONTRACTOR TO MODIFY EXISTING ELECTRICAL RACK AND SERVICE IF NEEDED. VFD DRIVE UNITS TO OPERATE IN A CASCADE SEQUENCE WITH ONE DRIVE AS PRIMARY AND THE OTHER AS SECONDARY. VFDs TO OPERATE BASED ON SYSTEM PRESSURE AS PROVIDED BY NEW PRESSURE TRANSMITTER. VFDs TO MAINTAIN OPERATOR SETTABLE PRESSURE SETPOINT. VFDs TO AUTOMATICALLY START/STOP TO MAINTAIN SYSTEM PRESSURE WITHOUT EXCEEDING PIPE, FITTINGS, CONNECTIONS, SPRAY NOZZLES AND OTHER DEVICES AS INDICATED BY MANUFACTURER(S).
3	EXISTING SUBMERSIBLE WELL #2
4	NEW PRESSURE TRANSMITTER: CONTRACTOR TO INSTALL NEW 0-150PSIG PRESSURE TRANSMITTER. PRESSURE TRANSMITTER TO COMMUNICATE TO NEW VFD DRIVE UNITS. CONTRACTOR TO INSTALL PRESSURE TRANSMITTER WITH ISOLATION VALVES IN BETWEEN PRESSURE TRANSMITTER AND PIPE CONNECTION WITHIN AN IN GROUND JUNCTION BOX AT MINIMUM ACCESS OPENING OF 12"x18". CONTRACTOR TO INSTALL 3/4" CONDUIT UNDERGROUND FROM PRESSURE TRANSMITTER INSTALLED LOCATION TO EXISTING ELECTRICAL RACK. CONTRACTOR TO UTILIZE #16AWG TWISTED SHIELDED PAIR SIGNALING CABLES TERMINATED AT PRESSURE TRANSMITTER AND AT PRIMARY VFD.
5	EXISTING SUBMERSIBLE WELL #3: CONTRACTOR TO INSTALL ONE NEW OUTDOOR RATED VFD DRIVE. MCI CONTROLS SOLUTIONS VSDM4-SP SERIES SIZED PER WELL APPLICATION OR APPROVED EQUAL. EXISTING WELL 3 SUBMERSIBLE PUMP RATED AT 7.5HP, 75GPM, 230VAC, 1PHASE. CONTRACTOR TO INSTALL CONDUIT AND VFD CABLES SPECIFIC TO SIZE AND PUMP IN ACCORDANCE TO NFPA70E CODE AND PROJECT SPECIFICATIONS. CONTRACTOR TO ERCT NEW ELECTRICAL RACK AND SECURE TO INTERIOR OF EXISTING SHOP FACILITY. CONTRACTOR TO COORDINATE WITH OWNER AS TO LOCATION. CONTRACTOR TO MODIFY ELECTRICAL SERVICE IF NEEDED. CONTRACTOR TO INSTALL SIGNALING CABLE TO NEW DRIVE UNITS LOCATED ON WEST SIDE OF PROPERTY. VFD DRIVE UNITS TO OPERATE IN A CASCADE SEQUENCE WITH ONE DRIVE AS PRIMARY AND THE OTHERS AS SECONDARY. SEE NOTES ON DRAWING L101.



BORE UNDER EXISTING STREET WITH 12" SDR 26 - CLASS 160 PVC CASING PIPE. INSTALL 6" CLASS 200 PVC CARRIER PIPE FOR IRRIGATION MAIN AND VFD CONTROL CABLING INSIDE CASING AS PER CITY OF MIDLAND REQUIREMENTS, SEE SHEET L503

EXISTING IRRIGATION TO REMAIN, CONNECT VALVES TO NEW CONTROLLER, TYP

EXISTING IRRIGATION TO REMAIN, CONNECT VALVES TO NEW CONTROLLER, TYP

EXISTING IRRIGATION TO REMAIN, CONNECT VALVES TO NEW CONTROLLER, TYP

MATCH LINE (SEE SHEET L102)

MATCH LINE (SEE SHEET L103)

A1 IRRIGATION PLAN
1" = 30'

A1202240044.22003_DWG090_LANDU-01-1-104.DWG 10/28/2022 3:20:20 PM TSBco



CLIENT
MIDLAND COUNTY
500 N Loraine Street
Midland, TX 79701
Phone: 432-742-7777

PROJECT NO.
40044.22
KEY PLAN

11/07/2022 Issued for Bid
DATE DESCRIPTION

Irrigation Plan

L102

IRRIGATION GENERAL NOTES

A. SEE SHEET L001 FOR IRRIGATION GENERAL NOTES

IRRIGATION SCHEDULE

A. SEE SHEET L001 FOR IRRIGATION SCHEDULES

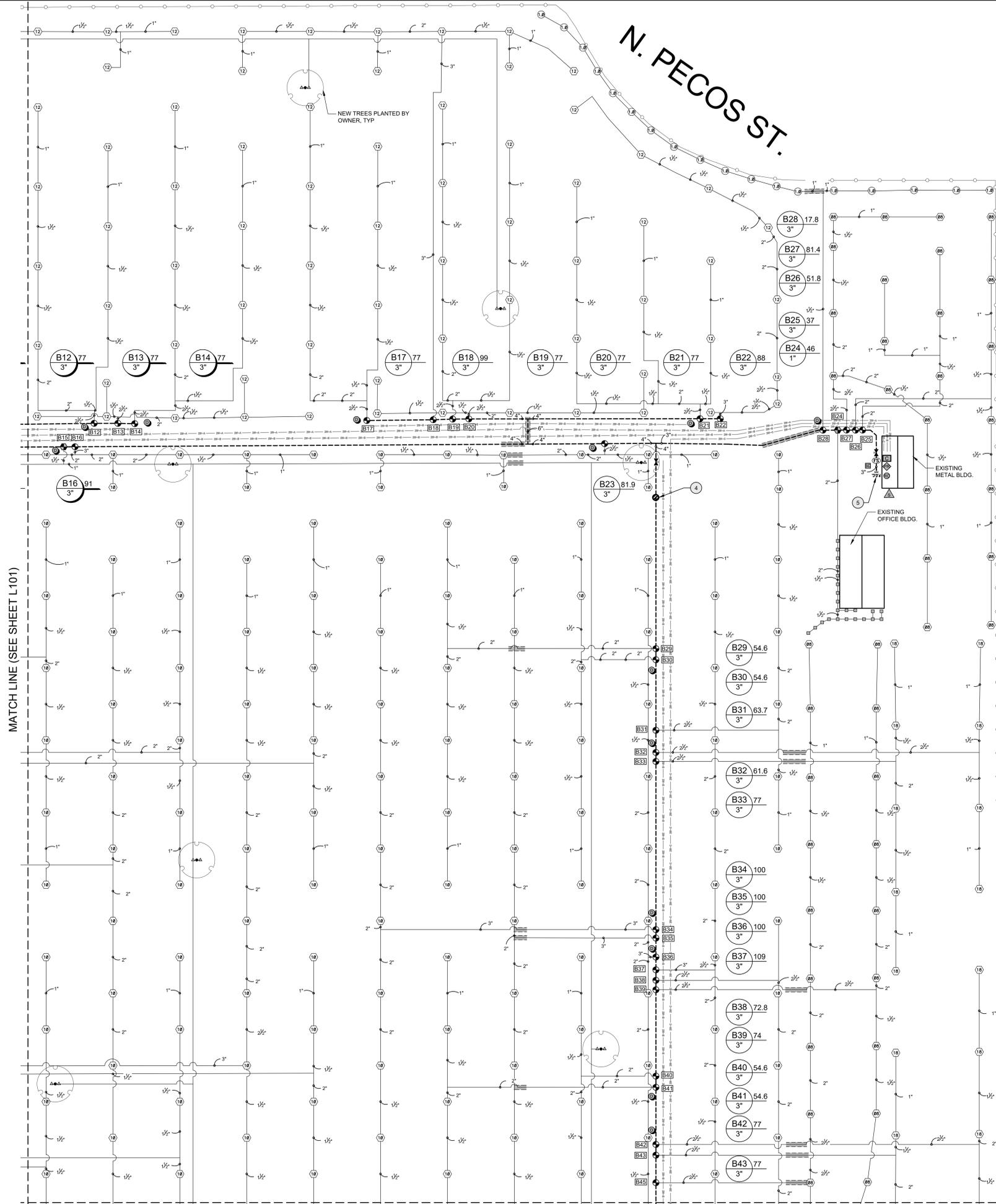
IRRIGATION WIRE SCHEDULE

- TWO-WIRE PATH 'A'
- TWO-WIRE PATH 'B'
- TWO-WIRE PATH 'C'

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	SUBMERSIBLE WELL #1
2	EXISTING ELECTRICAL RACK. CONTRACTOR TO INSTALL TWO NEW OUTDOOR RATED VFD DRIVES - ONE PER WELL. MCI CONTROLS SOLUTIONS VSDP SERIES SIZED PER WELL APPLICATION OR APPROVED EQUAL. EXISTING WELL 1 SUBMERSIBLE PUMP RATED AT 15HP, 250GPM, 480VAC, 3PHASE. EXISTING WELL 2 SUBMERSIBLE PUMP RATED AT 7.5HP, 75GPM, 480VAC, 3PHASE. CONTRACTOR TO INSTALL CONDUIT AND VFD CABLES SPECIFIC TO SIZE AND PUMP IN ACCORDANCE TO NFPA/NEC CODE AND PROJECT SPECIFICATIONS. CONTRACTOR TO MODIFY EXISTING ELECTRICAL RACK AND SERVICE IF NEEDED. VFD DRIVE UNITS TO OPERATE IN A CASCADE SEQUENCE WITH ONE DRIVE AS PRIMARY AND THE OTHER AS SECONDARY. VFDs TO OPERATE BASED ON SYSTEM PRESSURE AS PROVIDED BY NEW PRESSURE TRANSMITTER. VFDs TO MAINTAIN OPERATOR SETTABLE PRESSURE SETPOINT. VFDs TO AUTOMATICALLY START/STOP TO MAINTAIN SYSTEM PRESSURE WITHOUT EXCEEDING PIPE, FITTINGS, CONNECTIONS, SPRAY NOZZLES AND OTHER DEVICES AS INDICATED BY MANUFACTURER(S).
3	EXISTING SUBMERSIBLE WELL #2
4	NEW PRESSURE TRANSMITTER. CONTRACTOR TO INSTALL NEW 0-150PSIG PRESSURE TRANSMITTER. PRESSURE TRANSMITTER TO COMMUNICATE TO NEW VFD DRIVE UNITS. CONTRACTOR TO INSTALL PRESSURE TRANSMITTER WITH ISOLATION VALVES IN BETWEEN PRESSURE TRANSMITTER AND PIPE CONNECTION WITHIN AN IN GROUND JUNCTION BOX AT MINIMUM ACCESS OPENING OF 12"x18". CONTRACTOR TO INSTALL 3/4" CONDUIT UNDERGROUND FROM PRESSURE TRANSMITTER INSTALLED LOCATION TO EXISTING ELECTRICAL RACK. CONTRACTOR TO UTILIZE #16AWG TWISTED SHIELDED PAIR SIGNALING CABLES TERMINATED AT PRESSURE TRANSMITTER AND AT PRIMARY VFD.
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N. PECOS ST.



MATCH LINE (SEE SHEET L101)

MATCH LINE (SEE SHEET L104)

A1 IRRIGATION PLAN
1" = 30'

A:2022/10/04 2:03 PM DWG090_LAND_L101 - L104.DWG 10/28/2022 3:20:20 PM TSBco



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DATE DESCRIPTION

LANDSCAPE IRRIGATION PLAN

IRRIGATION GENERAL NOTES

A. SEE SHEET L001 FOR IRRIGATION GENERAL NOTES

IRRIGATION SCHEDULE

A. SEE SHEET L001 FOR IRRIGATION SCHEDULES

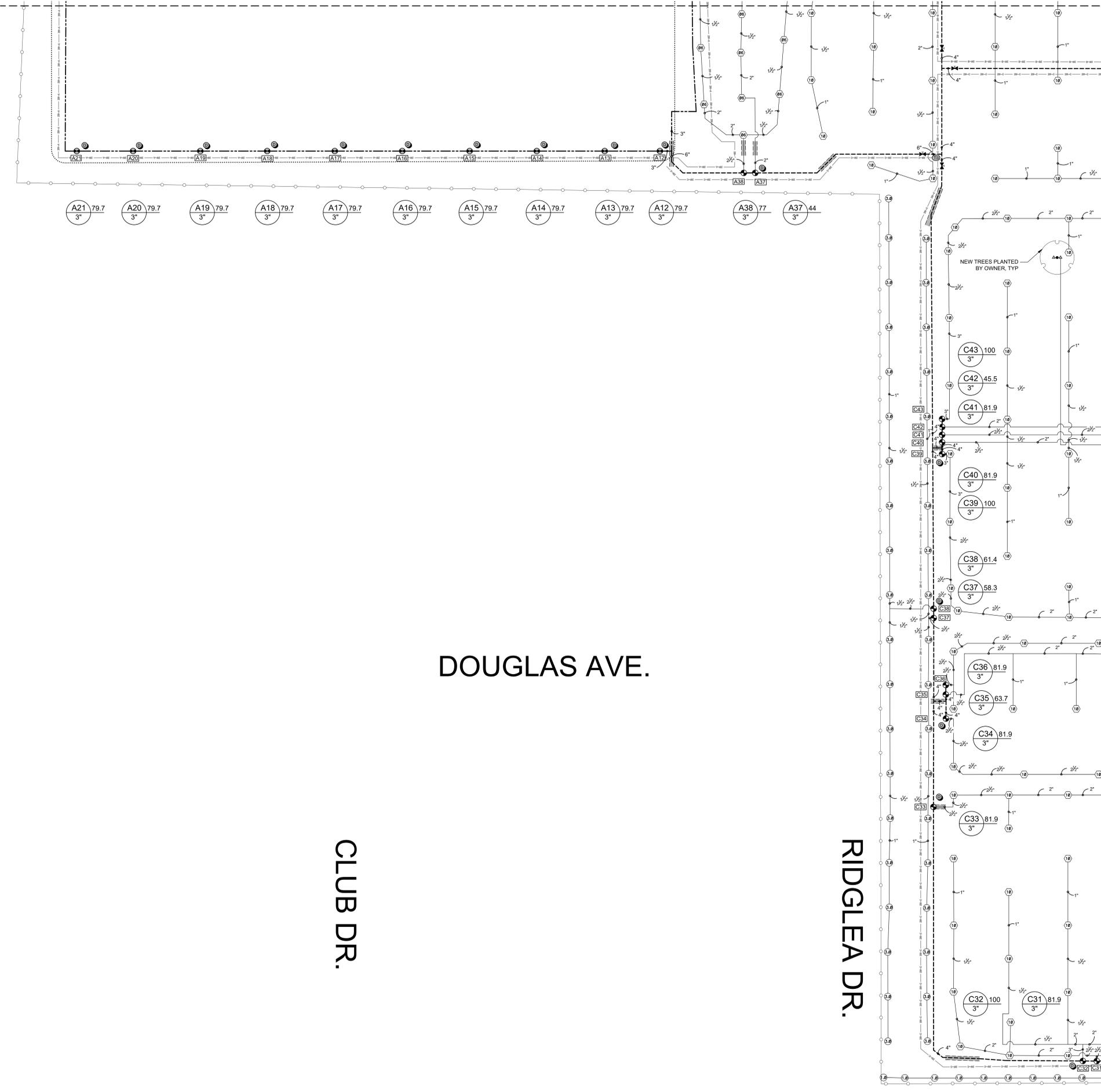
IRRIGATION WIRE SCHEDULE

- TWO-WIRE PATH 'A'
- TWO-WIRE PATH 'B'
- TWO-WIRE PATH 'C'

REFERENCE NOTES SCHEDULE

- | SYMBOL | DESCRIPTION |
|--------|---|
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| 4 | NEW PRESSURE TRANSMITTER: CONTRACTOR TO INSTALL NEW 0-150PSIG PRESSURE TRANSMITTER. PRESSURE TRANSMITTER TO COMMUNICATE TO NEW VFD DRIVE UNITS. CONTRACTOR TO INSTALL PRESSURE TRANSMITTER WITH ISOLATION VALVES IN BETWEEN PRESSURE TRANSMITTER AND PIPE CONNECTION WITHIN AN IN GROUND JUNCTION BOX AT MINIMUM ACCESS OPENING OF 12"x18". CONTRACTOR TO INSTALL 3/4" CONDUIT UNDERGROUND FROM PRESSURE TRANSMITTER INSTALLED LOCATION TO EXISTING ELECTRICAL RACK. CONTRACTOR TO UTILIZE #16AWG TWISTED SHIELDED PAIR SIGNALING CABLING TERMINATED AT PRESSURE TRANSMITTER AND AT PRIMARY VFD. |
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MATCH LINE (SEE SHEET L101)



MATCH LINE (SEE SHEET L104)

DOUGLAS AVE.

CLUB DR.

RIDGLEA DR.



CLIENT
MIDLAND COUNTY
500 N Loraine Street
Midland, TX 79701
Phone: 432-742-7777

PROJECT NO.
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LANDSCAPE IRRIGATION PLAN

L104

IRRIGATION GENERAL NOTES

A. SEE SHEET L001 FOR IRRIGATION GENERAL NOTES

IRRIGATION SCHEDULE

A. SEE SHEET L001 FOR IRRIGATION SCHEDULES

IRRIGATION WIRE SCHEDULE

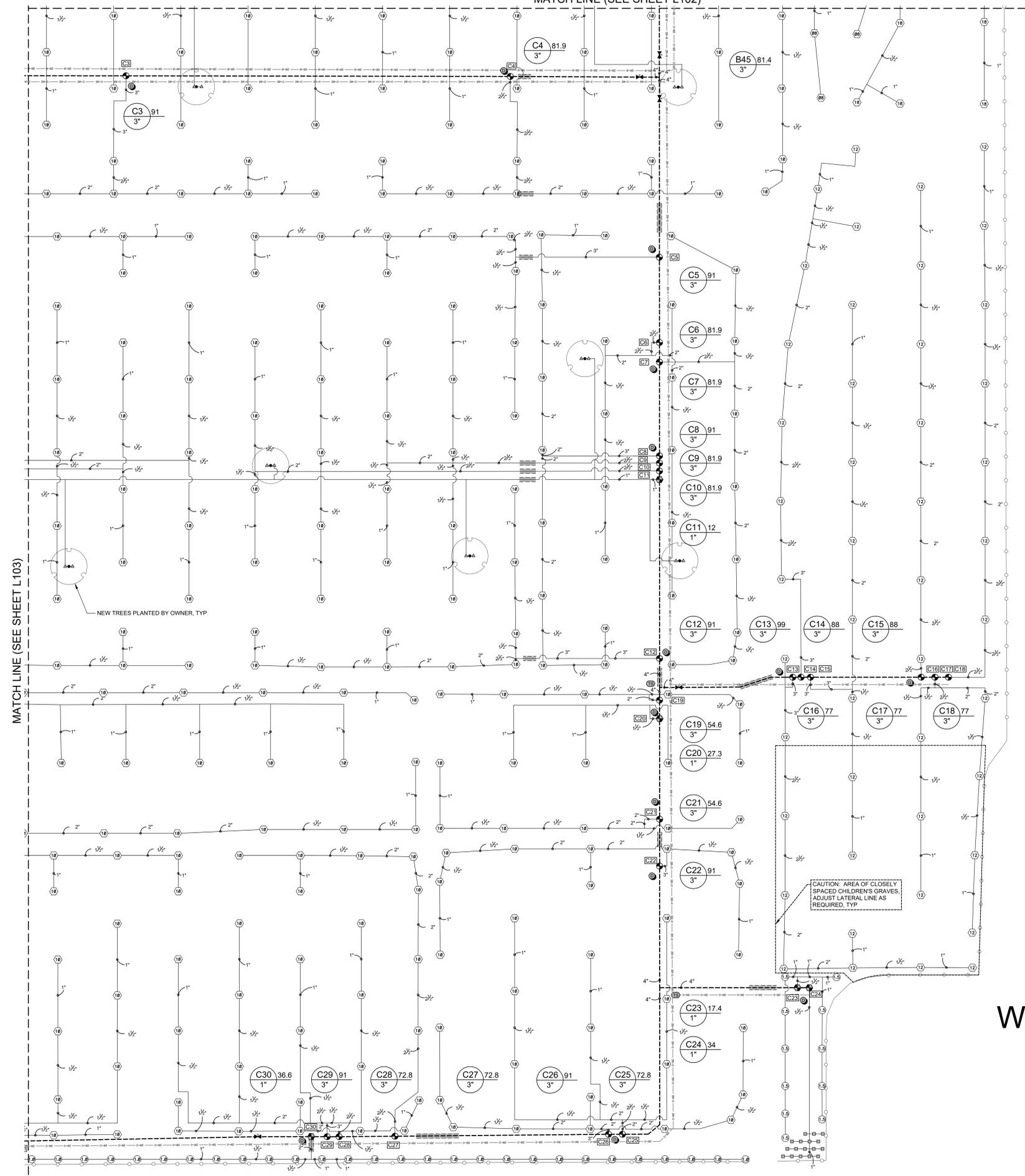
- TWO-WIRE PATH 'A'
- TWO-WIRE PATH 'B'
- TWO-WIRE PATH 'C'

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
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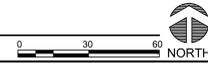
MATCH LINE (SEE SHEET L102)

MATCH LINE (SEE SHEET L103)



E. PARKER AVE

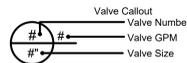
A1 IRRIGATION PLAN
1" = 30'



A:2022/10/04 2:03_DWG090_LANDU-101-1-104.DWG 10/28/2022 3:20:20 PM TSBco

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS	DETAIL
▲	RAIN BIRD 1800-1400 FLOOD 1404 FIXED FLOW RATE 0.25 GPM - 2.0 GPM, FULL CIRCLE BUBBLER, 1/2" FIPT.	70	360	20	1	3'	E3/L501
■	RAIN BIRD 1800-1400 FLOOD 1408 FIXED FLOW RATE 0.25 GPM - 2.0 GPM, FULL CIRCLE BUBBLER, 1/2" FIPT.	58	360	20	2	3'	E3/L501
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS	DETAIL
1.0	RAIN BIRD 5004-PC-R-LA 1.0 TURF ROTOR, 4" POP-UP, PLASTIC RISER, ADJUSTABLE TO FULL CIRCLE, LOW ANGLE NOZZLE, PRESSURE REGULATING.	55	45	0.99	29'		E2/L501
1.5	RAIN BIRD 5004-PC-R-LA 1.5 TURF ROTOR, 4" POP-UP, PLASTIC RISER, ADJUSTABLE TO FULL CIRCLE, LOW ANGLE NOZZLE, PRESSURE REGULATING.	11	45	1.58	31'		E2/L501
5.0	RAIN BIRD 5004-PC-R-LA 3.0 TURF ROTOR, 4" POP-UP, PLASTIC RISER, ADJUSTABLE TO FULL CIRCLE, LOW ANGLE NOZZLE, PRESSURE REGULATING.	56	45	3.07	35'		E2/L501
06	RAIN BIRD 6504-PC, FC 06 TURF ROTOR, 4.0" POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE, WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1" FEMALE THREADED INLET.	22	60	5.5	49'		E1/L501
08	RAIN BIRD 6504-PC, FC 08 TURF ROTOR, 4.0" POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE, WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1" FEMALE THREADED INLET.	44	60	7.4	51'		E1/L501
10	RAIN BIRD 6504-PC, FC 10 TURF ROTOR, 4.0" POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE, WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1" FEMALE THREADED INLET.	525	60	9.1	53'		E1/L501
12	RAIN BIRD 6504-PC, FC 12 TURF ROTOR, 4.0" POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE, WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1" FEMALE THREADED INLET.	188	60	11	55'		E1/L501
18	RAIN BIRD 6504-PC, FC 18 TURF ROTOR, 4.0" POP-UP, PLASTIC RISER, ADJUSTABLE AND FULL CIRCLE, WITH REMOVABLE SEAL-A-MATIC CHECK VALVE, 1" FEMALE THREADED INLET.	19	60	15.4	59'		E1/L501
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	PSI	GPM	RADIUS	DETAIL
☉	EXISTING IRRIGATION VALVE HARDY 100-3 GLOBE (RRITROL 100) 3" ELECTRIC REMOTE CONTROL VALVE, GLOBE CONFIGURATION, PRESSURE RANGE OF 20-220 PSI.	20					N/A
☉	RAIN BIRD 300-BPES ANGLE 3" BRASS ELECTRIC REMOTE CONTROL VALVE, WITH ANGLE CONFIGURATION, WITH A PATENTED NYLON SCRUBBER THAT SCRAPES A STAINLESS STEEL SCREEN TO PREVENT DEBRIS BUILD-UP AND CLOGGING.	101					B1/L501
☉	RAIN BIRD PESSB 1" 1/2" 2" PLASTIC INDUSTRIAL VALVES, LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION, WITH SCRUBBER TECHNOLOGY FOR RELIABLE PERFORMANCE IN DIRTY WATER IRRIGATION APPLICATIONS.	13					B2/L501
✂	MIBCO P-619-RW 2" TO 2" CAST IRON GATE VALVE, SAME SIZE AS MAINLINE PIPE WHERE LOCATED. RESILIENT WEDGE NON-RISING STEM FLOW CONTROL WITH IPS PUSH-ON ENDS.	14					B3/L501
☐	HUNTER A2C-75D-M 75 STATION BASE MODEL, DECODER CONTROLLER, GRAY METAL WALL MOUNT, WITH (2) 75 STATION DECODER EXPANSION MODULES, (1) A2C-F3 FLOW METER EXPANSION MODULE, (1) INTERNAL W-FI MODULE	1					A1/L501
Ⓚ	HUNTER ICD-100 SINGLE STATION DECODER W/SURGE SUPPRESSION AND GROUND WIRE. TO BE INSTALLED ON UNIVERSAL DECODER STAKE KIT (DECSTAKE10).	35					B4/L501
Ⓚ	HUNTER ICD-200 2-STATION DECODER WITH SURGE SUPPRESSION AND GROUND WIRE. TO BE INSTALLED ON UNIVERSAL DECODER STAKE KIT (DECSTAKE10).	19					B4/L501
Ⓚ	HUNTER ICD-400 4-STATION DECODER WITH SURGE SUPPRESSION AND GROUND WIRE. TO BE INSTALLED ON UNIVERSAL DECODER STAKE KIT (DECSTAKE10).	13					B4/L501
Ⓚ	HUNTER ICD-600 6-STATION DECODER WITH SURGE SUPPRESSION AND GROUND WIRE. TO BE INSTALLED ON UNIVERSAL DECODER STAKE KIT (DECSTAKE10).	3					B4/L501
Ⓚ	HUNTER ICD-SEN 2-INPUT SENSOR DECODER WITH SURGE SUPPRESSION AND GROUND WIRE. TO BE INSTALLED ON UNIVERSAL DECODER STAKE KIT (DECSTAKE10).	3					A5/L501
Ⓚ	HUNTER PRR-63 PUMP START RELAY, 40 MAX FULL LOAD AMPS, HP AT 110VAC = 5, HP AT 240VAC = 7.5, THREE PHASE.	3					N/A
Ⓚ	HUNTER ROAMXL-KIT TRANSMITTER AND RECEIVER. ROAM REMOTE ALLOWS FOR CONTROLLER OPERATION UP TO 2 MILES. CONTRACTOR, LARGE-SCALE SITES. WORKS WITH HUNTER ACC, I-CORE, PRO-C, PCC, AND X-CORE CONTROLLERS. SMARTPORT WIRING HARNESS INCLUDED.	1					N/A
Ⓚ	HUNTER WSS WIRELESS SOLAR, RAIN FREEZE SENSOR WITH OUTDOOR INTERFACE, CONNECTS TO HUNTER PCC, PRO-C, AND I-CORE CONTROLLERS, INSTALL AS NOTED, INCLUDES 10 YEAR LITHIUM BATTERY AND RUBBER MODULE COVER, AND GUTTER MOUNT BRACKET.	1					A3/L501
Ⓚ	HUNTER HFS-400 FLOW SENSOR FOR USE WITH ACC CONTROLLER, 4" SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	3					A5/L501
Ⓚ	T-SPLICE INSTALL 3 WAY DECODER WIRE T-SPLICE IN RECTANGULAR VALVE BOX WITH DBRY-C CONNECTORS, INCLUDE 5' SLACK ON EACH SIDE OF SPLICE TO ALLOW ABOVE GROUND SERVICE	3					N/A
P.O.C. 1"	EXISTING IRRIGATION WELL 7.5 HP 75 GPM PUMP, 230 VAC, 1 PHASE, STATIC LEVEL 38', PUMP SET 60', TOTAL DEPTH 62', CONTACT JAR'S WATER WELL SERVICE INC. (432) 687-3236 FOR ADDTL. INFO	1					N/A
P.O.C. 1"	EXISTING IRRIGATION WELL 15 HP 250 GPM PUMP, 460 VAC, 3 PHASE, GOULDS 250L15, J19628A77E, STATIC LEVEL 19', PUMP SET 55', TOTAL DEPTH 61', CONTACT JAR'S WATER WELL SERVICE INC. (432) 687-3236 FOR ADDTL. INFO	1					N/A
P.O.C. 1"	EXISTING IRRIGATION WELL 7.5 HP 75 GPM PUMP, 460 VAC, 3 PHASE, STATIC LEVEL 20', PUMP SET 63', TOTAL DEPTH 69', CONTACT JAR'S WATER WELL SERVICE INC. (432) 687-3236 FOR ADDTL. INFO	1					N/A
---	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	51,271 L.F.					B1/L502
---	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21	6,664 L.F.					B1/L502
---	IRRIGATION MAINLINE: EXISTING IRRIGATION MAIN LINE: PVC CLASS 200 SDR 21	2,036 L.F.					N/A
---	PIPE SLEEVE: EXISTING IRRIGATION SLEEVE FIELD VERIFY SIZE, LOCATION, AND PASSABILITY	30.6 L.F.					N/A
---	PIPE SLEEVE: PIPE BENEATH PAVING	724.4 L.F.					B3/L502
---	PIPE SLEEVE: SDR 26 - CLASS 160 IPS - ASTM D2241	76.3 L.F.					N/A

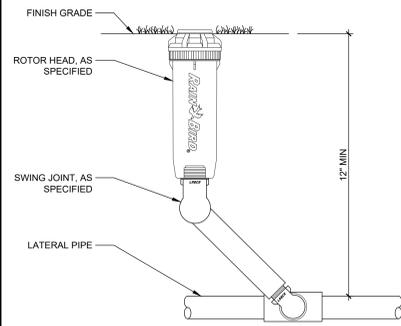


VALVE SCHEDULE

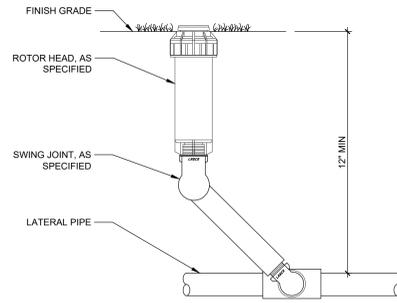
NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE 1"	PIPE 1 1/2"	PIPE 2"	PIPE 2 1/2"	PIPE 3"	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PSI @ POC	PRECIP
A1	EXISTING IRRIGATION VALVE	3"		76.48							50	3.3	2.5	55.8	56.1	0.55 inH
A2	EXISTING IRRIGATION VALVE	3"		76.48							50	3.25	2.5	55.7	56.1	0.55 inH
A3	EXISTING IRRIGATION VALVE	3"		76.48							50	3.24	2.5	55.7	56.4	0.55 inH
A4	EXISTING IRRIGATION VALVE	3"		76.48							50	3.24	2.5	55.7	56.8	0.55 inH
A5	EXISTING IRRIGATION VALVE	3"		76.48							50	3.25	2.5	55.8	57.1	0.55 inH
A6	EXISTING IRRIGATION VALVE	3"		76.51							50	3.25	2.5	55.8	57.5	0.55 inH
A7	EXISTING IRRIGATION VALVE	3"		49.96							50	3.1	2.5	55.6	57.9	0.55 inH
A8	EXISTING IRRIGATION VALVE	3"		49.96							50	3.1	2.5	55.6	58.1	0.55 inH
A9	EXISTING IRRIGATION VALVE	3"		49.96							50	3.09	2.5	55.6	58.2	0.55 inH
A10	EXISTING IRRIGATION VALVE	3"		42.16							50	2.11	2.5	54.6	57.3	0.55 inH
A11	RAIN BIRD PESSB	1"	BUBBLER	24	24	1.182	50.9				20	2.63	3.98	26.6	29.5	3.55 inH
A12	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.58	2.5	56.1	58.7	0.55 inH
A13	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.58	2.5	56.1	58.6	0.55 inH
A14	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.57	2.5	56.1	58.7	0.55 inH
A15	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.58	2.5	56.1	58.8	0.55 inH
A16	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.59	2.5	56.1	58.9	0.55 inH
A17	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.56	2.5	56.1	58.9	0.55 inH
A18	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.57	2.5	56.1	58.9	0.55 inH
A19	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.55	2.5	56.1	58.9	0.55 inH
A20	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.57	2.5	56.1	58.9	0.55 inH
A21	EXISTING IRRIGATION VALVE	3"	EXISTING IRRIGATION	79.65							50	3.58	2.5	56.1	58.8	0.55 inH
A22	RAIN BIRD PESSB	1"	TURF ROTOR	24.56	9	46.7	17.9				20	3.22	2.68	22.9	25.0	6.97 inH
A23	RAIN BIRD PESSB	1"	TURF ROTOR	24.56	8	172.8	8.6				45	1.59	4.13	50.7	52.8	1.15 inH
A24	RAIN BIRD PESSB	1"	BUBBLER	18	9	46.7	32.0				20	0.3	2.68	23.0	24.7	6.92 inH
A25	RAIN BIRD PESSB	1"	TURF ROTOR	27.63	9	176.8	32.2				45	1.72	4.96	51.7	53.4	1.65 inH
A26	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	81.9	9	96.2	116.0	77.0	21.2		50	2.63	5.67	58.5	59.3	0.86 inH
A27	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	54.6	6	99.5	164.9	58.4			50	3.2	6.07	60.0	61.1	0.43 inH
A28	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	81.9	9	99.1	173.4	140.0	58.2		50	4.68	5.67	60.4	61.5	0.36 inH
A29	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	54.6	6	49.3	99.1	179.9			50	3.15	6.07	61.3	62.6	0.34 inH
A30	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	72.8	8	131.2	63.9	58.5	4.4		50	2.14	6.22	58.4	59.7	0.85 inH
A31	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	72.8	8	98.6	81.5	115.9	146.3		50	5.43	6.22	61.7	63.0	0.68 inH
A32	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	81.9	9	74.8	52.9	75.1	89.6		50	3.15	6.07	58.8	60.2	0.85 inH
A33	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	72.8	8	73.9	103.6	145.2	6.5		50	3.59	6.22	59.3	61.6	0.52 inH
A34	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	81.9	9	100.0	20.2	100.5	49.8		50	3.61	5.67	59.8	61.6	0.52 inH
A35	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	72.8	8	92.7	201.6	51.5	97.7		50	3.69	6.22	58.4	61.7	0.51 inH
A36	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	72.8	8	97.3	100.6	124.6	6.8		50	3.3	6.22	59.5	61.9	0.58 inH
A37	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	44	8	111.9	90.8	96.7			50	4.86	6.07	61.7	64.4	0.27 inH
A38	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	252.7	260.2	41.9	25.5		50	3.22	6.04	60.1	61.8	0.55 inH
B1	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	88	8	24.3	72.2	108.1	73.1	33.0	50	4.66	4.94	59.6	61.2	1.09 inH
B2	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	108.3	260.1	39.3	11.8		50	3.96	6.04	60.0	61.6	0.39 inH
B3	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	108.0	249.5	53.2	14.6		50	3.65	6.04	59.7	61.0	0.38 inH
B4	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	108.0	249.5	53.2	14.6		50	2.12	6.04	58.1	59.4	0.9 inH
B5	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	99	9	88.1	123.3	41.4		272.8	50	4.46	3.62	58.1	59.4	0.9 inH
B6	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	108.0	273.4	43.0	33.0		50	4.55	6.04	60.0	61.9	0.35 inH
B7	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	109.9	251.6	72.7	12.8		50	3.96	6.04	60.0	62.2	0.37 inH
B8	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	88	8	74.7	170.6	8.4		4.4	50	2.23	4.94	57.2	59.3	0.78 inH
B9	RAIN BIRD PESSB	1"	BUBBLER	16	16	1.447					20	5.8	2.46	33.0	34.7	3.55 inH
B10	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	109.1	247.5	86.1	8.5		50	4.07	6.04	60.1	61.8	0.37 inH
B11	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	99	9	98.4	153.0	47.9		280.4	50	4.93	3.62	58.6	60.2	0.81 inH
B12	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	109.9	246.6	83.7	8.9		50	4.04	6.04	60.1	61.8	0.38 inH
B13	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	109.9	246.6	83.7	8.9		50	4.04	6.04	60.1	61.8	0.38 inH
B14	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	109.7	277.1	38.8	43.8		50	4.76	6.04	60.8	62.6	0.39 inH
B15	RAIN BIRD PESSB	1"	BUBBLER	18	18	2.110	12.0				20	5.35	2.68	28.0	29.7	3.55 inH
B16	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	91	10	159.2	91.7	92.0		5.5	50	2.39	4.58	56.3	58.5	0.75 inH
B17	RAIN BIRD 300-BPES ANGLE	3"	TURF ROTOR	77	7	109.7	238.3	77.7	13.6		50	4.03	6.04	60.1	62.4	0.39 inH</

WATERING SCHEDULE

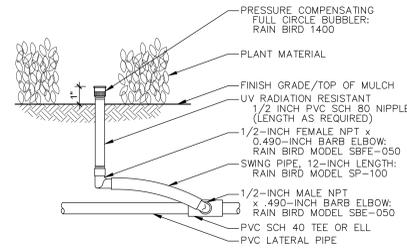
NUMBER	MODEL	TYPE	PRECIP	SUN	MON	TUE	WED	THU	FRI	SAT	IN/WEEK	MIN/WEEK	GAL/WEEK	GAL/DAY
A1	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A2	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A3	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A4	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A5	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A6	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A7	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A8	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A9	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A10	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A11	RAIN BIRD PESB	BUBBLER	3.55 in/h											
A12	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A13	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A14	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A15	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A16	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A17	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A18	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A19	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A20	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A21	EXISTING IRRIGATION VALVE	EXISTING IRRIGATION	0.83 in/h											
A22	RAIN BIRD PESB	BUBBLER	6.97 in/h											
A23	RAIN BIRD PESB	TURF ROTOR	1.15 in/h	4 min	0.5	27	663.1	94.7						
A24	RAIN BIRD PESB	BUBBLER	6.92 in/h											
A25	RAIN BIRD PESB	TURF ROTOR	1.05 in/h	3 min	0.5	19	525.0	75.0						
A26	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.92 in/h	5 min	0.5	33	2,970	424.3						
A27	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.43 in/h	10 min	0.5	70	4,200	600						
A28	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	6,660	951.4						
A29	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.4 in/h	11 min	0.5	76	4,560	651.4						
A30	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.0 in/h	5 min	0.5	31	2,480	354.3						
A31	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.68 in/h	7 min	0.5	45	3,600	514.3						
A32	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.92 in/h	5 min	0.5	33	2,970	424.3						
A33	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.52 in/h	9 min	0.5	58	4,640	662.9						
A34	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.54 in/h	8 min	0.5	56	5,040	720						
A35	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.82 in/h	6 min	0.5	37	2,980	422.9						
A36	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.59 in/h	8 min	0.5	51	4,080	582.9						
A37	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.43 in/h	11 min	0.5	71	3,408	486.9						
A38	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.67 in/h	7 min	0.5	45	3,760	540						
B1	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.19 in/h	4 min	0.5	26	2,538	362.5						
B2	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.44 in/h	10 min	0.5	69	5,893	841.8						
B3	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.39 in/h	11 min	0.5	77	6,576	930.4						
B4	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.93 in/h	5 min	0.5	33	2,818	402.6						
B5	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.08 in/h	4 min	0.5	28	3,074	439.2						
B6	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.42 in/h	11 min	0.5	72	6,149	878.4						
B7	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.38 in/h	12 min	0.5	79	6,747	963.8						
B8	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.91 in/h	5 min	0.5	34	3,318	474.1						
B9	RAIN BIRD PESB	BUBBLER	3.55 in/h											
B10	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	73	6,234	890.6						
B11	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.88 in/h	5 min	0.5	34	3,733	533.3						
B12	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.42 in/h	11 min	0.5	73	6,234	890.6						
B13	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.95 in/h	5 min	0.5	32	2,733	390.4						
B14	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.43 in/h	11 min	0.5	71	6,063	866.2						
B15	RAIN BIRD PESB	BUBBLER	3.55 in/h											
B16	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.83 in/h	6 min	0.5	37	3,700	528.6						
B17	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.43 in/h	10 min	0.5	70	5,978	854						
B18	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.94 in/h	5 min	0.5	32	3,514	501.9						
B19	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.43 in/h	10 min	0.5	70	5,978	854						
B20	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.97 in/h	5 min	0.5	31	2,647	378.2						
B21	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.4 in/h	11 min	0.5	75	6,405	915						
B22	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.24 in/h	4 min	0.5	25	2,440	348.6						
B23	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.82 in/h	6 min	0.5	37	3,330	475.7						
B24	RAIN BIRD PESB	BUBBLER	6.85 in/h											
B25	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.5 in/h	9 min	0.5	61	2,501	357.3						
B26	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.85 in/h	6 min	0.5	36	2,066	295.2						
B27	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.81 in/h	6 min	0.5	37	3,337	476.8						
B28	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.56 in/h	8 min	0.5	54	962.3	137.5						
B29	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B30	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B31	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.06 in/h	5 min	0.5	29	2,030	290						
B32	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.35 in/h	4 min	0.5	23	1,573	224.7						
B33	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.11 in/h	4 min	0.5	28	2,394	342						
B34	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	8,140	1,163						
B35	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	8,140	1,163						
B36	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	8,140	1,163						
B37	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	8,880	1,289						
B38	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.99 in/h	5 min	0.5	31	2,480	354.3						
B39	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.84 in/h	6 min	0.5	36	2,952	421.7						
B40	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B41	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B42	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.94 in/h	5 min	0.5	33	4,031	568.7						
B43	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.09 in/h	4 min	0.5	28	2,394	342						
B45	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.98 in/h	5 min	0.5	31	2,798	399.5						
B46	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B47	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B48	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B49	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B50	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	8,140	1,163						
B51	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	8,140	1,163						
B52	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	8,140	1,163						
B53	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B54	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B55	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
B56	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.41 in/h	11 min	0.5	74	4,440	634.3						
C3	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.82 in/h	6 min	0.5	37	3,700	528.6						
C4	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.8 in/h	6 min	0.5	38	3,420	488.6						
C5	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.98 in/h	5 min	0.5	31	3,100	442.9						
C6	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	0.4 in/h	11 min	0.5	76	6,840	977.1						
C7	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.12 in/h	4 min	0.5	27	2,430	347.1						
C8	RAIN BIRD 300-BPES ANGLE	TURF ROTOR	1.0 in/h	5 min	0.5	31	3,100	442.9						



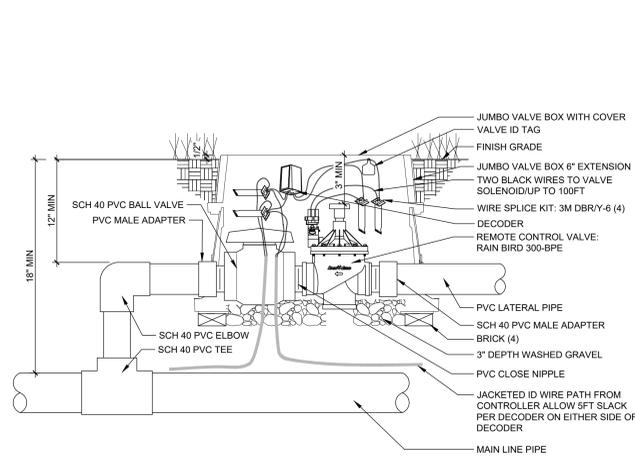
E1 RAINBIRD 6504 ROTOR
3" = 1'-0" PSC-MID-MCO-328403-04



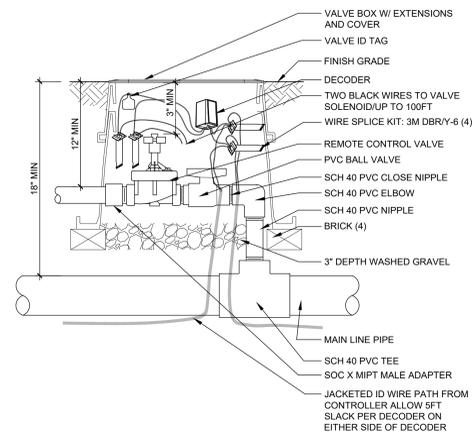
E2 RAINBIRD 5004 ROTOR
3" = 1'-0" PSC-MID-MCO-328403-05



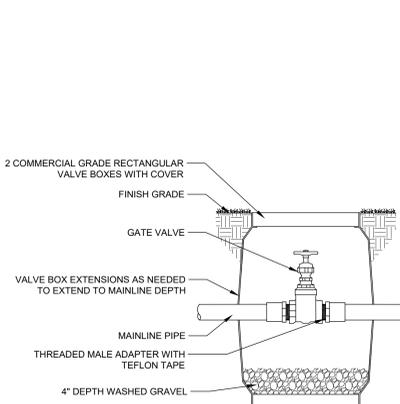
E3 BUBBLER ON RISER
3" = 1'-0" PSC-MID-MCO-328403-03



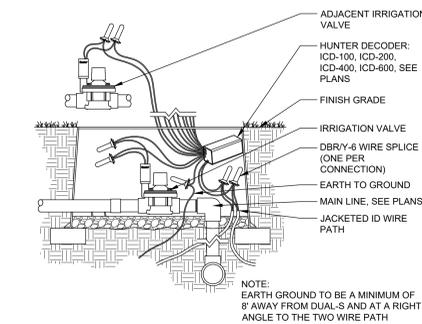
B1 3" ZONE VALVE
1 1/2" = 1'-0" PSC-MID-MCO-328406-09



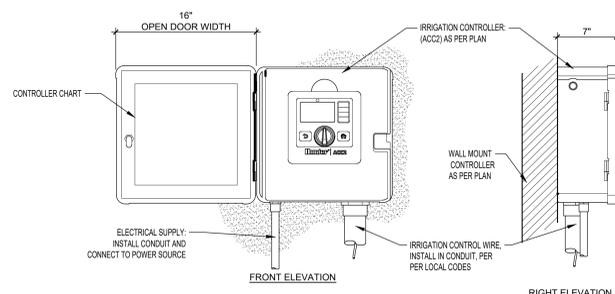
B2 RAINBIRD PESB VALVE
1 1/2" = 1'-0" PSC-MID-MCO-328406-10



B3 GATE VALVE
1 1/2" = 1'-0" PSC-MID-MCO-328406-01

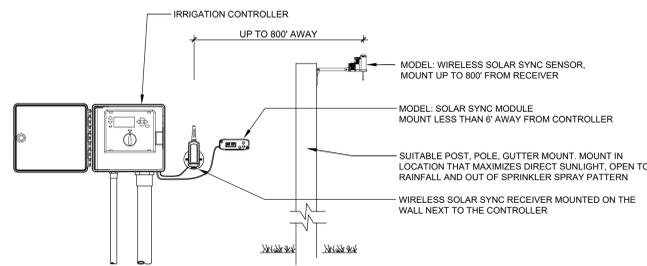


B4 HUNTER DECODER
1 1/2" = 1'-0" PSC-MID-MCO-328409-01

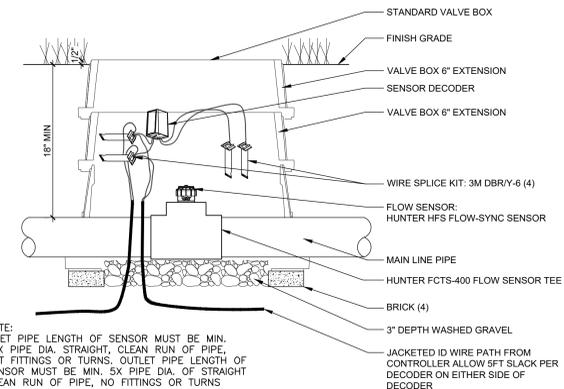


A1 IRRIGATION CONTROLLER - ACC2 WALL MOUNT
1 1/2" = 1'-0" PSC-MID-MCO-328409-07

NOTE: MOUNT CONTROLLER LCD SCREEN AT EYE LEVEL. CONTROLLER SHALL BE HARD-WIRED TO GROUND/ED 110 VAC POWER SOURCE



A3 WIRELESS SOLAR SYNC
1" = 1'-0" PSC-MID-MCO-27



NOTE: INLET PIPE LENGTH OF SENSOR MUST BE MIN. 18X PIPE DIA. STRAIGHT, CLEAN RUN OF PIPE, NOT FITTINGS OR TURNS. OUTLET PIPE LENGTH OF SENSOR MUST BE MIN. 5X PIPE DIA. OF STRAIGHT CLEAN RUN OF PIPE, NO FITTINGS OR TURNS

A5 FLOW SENSOR
1 1/2" = 1'-0" PSC-MID-MCO-02



CLIENT
MIDLAND COUNTY
500 N Loraine Street
Midland, TX 79701
Phone: 432-742-7777

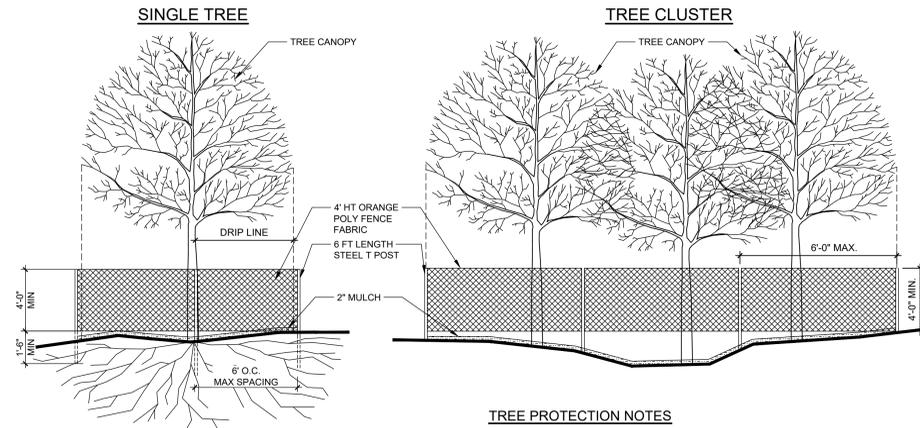
PROJECT NO.
40044.22

KEY PLAN

DATE	DESCRIPTION
11/07/2022	Issued for Bid

Irrigation Details

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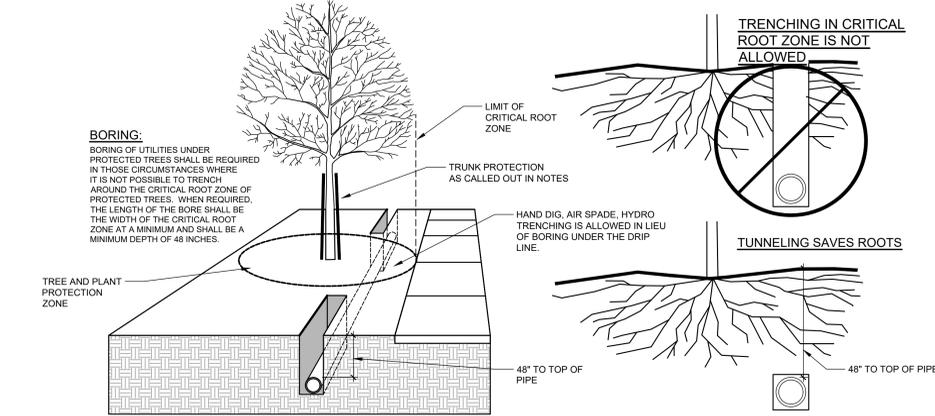
TREE PROTECTION NOTES

- A. *CRITICAL ROOT ZONE:**
THE AREA OF UNDISTURBED NATURAL SOIL AROUND A TREE DEFINED BY A CONCENTRIC CIRCLE WITH A RADIUS TO THE DISTANCE FROM THE TREE TRUNK TO THE OUTERMOST PORTION OF THE DRIP LINE.
- B. DRIP LINE:**
A VERTICAL LINE RUN THROUGH THE OUTERMOST PORTION OF THE CANOPY OF TREE AND EXTENDING TO THE GROUND.
- C. PROTECTIVE FENCING:**
ORANGE VINYL CONSTRUCTION FENCING, CHAIN LINK FENCING, SNOW FENCING, OR OTHER SIMILAR FENCING AS SPECIFIED AT LEAST FOUR FEET (4') HIGH AND SUPPORTED AT A MAXIMUM OF SIX FOOT (6') INTERVALS BY APPROVED METHOD SUFFICIENT ENOUGH TO KEEP THE FENCE UPRIGHT AND IN PLACE. THIS FENCING SHALL BE OF A HIGHLY VISIBLE MATERIAL.
- A.** THE CONTRACTOR SHALL PROTECT THE TREE AND PLANT PROTECTION ZONE AT ALL TIMES FROM COMPACTION OF THE SOIL, DAMAGE OF ANY KIND TO TRUNKS, BARK, BRANCHES, LEAVES AND ROOTS OF ALL PLANTS, AND CONTAMINATION OF THE SOIL, BARK OR LEAVES WITH CONSTRUCTION MATERIALS, DEBRIS, SILT, FUELS, OILS, AND ANY CHEMICALS SUBSTANCE. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY SPILLS, COMPACTION OR DAMAGE AND TAKE CORRECTIVE ACTION IMMEDIATELY USING METHODS APPROVED BY THE OWNER'S REPRESENTATIVE.
- B.** TREE BRANCHES THAT INTERFERE WITH THE CONSTRUCTION MAY BE TIED BACK OR PRUNED TO CLEAR ONLY TO THE POINT NECESSARY TO COMPLETE THE WORK. OTHER BRANCHES SHALL ONLY BE REMOVED WHEN SPECIFICALLY INDICATED BY THE OWNER'S REPRESENTATIVE. TYING BACK OR TRIMMING OF ALL BRANCHES AND THE CUTTING OF ROOTS SHALL BE IN ACCORDANCE WITH ACCEPTED ARBORICULTURAL PRACTICES (ANSI A300, PART 8) AND BE PERFORMED UNDER SUPERVISION OF AN ARBORIST.
- C.** TRUNK PROTECTION ONLY WHERE FENCE IS NOT CONSTRUCTIBLE. PROTECT THE TRUNK OF EACH TREE TO REMAIN BY COVERING IT WITH A RING OF 8 FOOT LONG 2 INCH X 6 - INCH PLANKS LOOSELY BANDED ONTO THE TREE WITH 3 STEEL BANDS. STAPLE THE BANDS TO THE PLANKS AS NECESSARY TO HOLD THEM SECURELY IN PLACE THROUGHOUT THE CONSTRUCTION PERIOD. REMOVE TRUNK PROTECTION UPON SUBSTANTIAL COMPLETION.

***PROHIBITED ACTIVITIES WITHIN CRITICAL ROOTZONE**

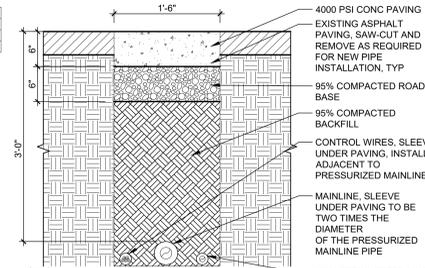
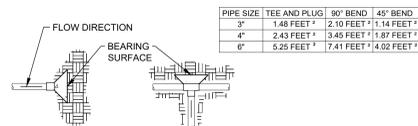
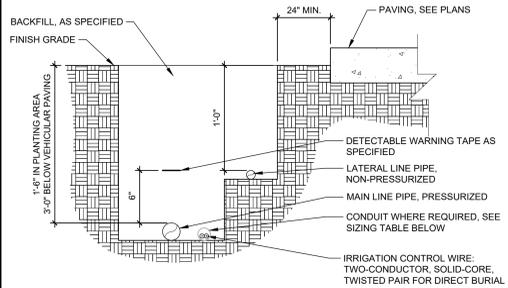
- 1. MATERIAL STORAGE:** NO STORAGE OR PLACEMENT OF MATERIALS INTENDED FOR USE IN CONSTRUCTION OR WASTE MATERIALS ACCUMULATED DUE TO EXCAVATION OR DEMOLITION SHALL BE PLACED WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF ANY PROTECTED TREE. EQUIPMENT CLEANING LIQUID DISPOSAL, NO EQUIPMENT SHALL BE CLEANED OR OTHER LIQUIDS, INCLUDING, WITHOUT LIMITATION, PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR OR SIMILAR MATERIALS DEPOSITED OR ALLOWED TO FLOW INTO THE CRITICAL ROOT ZONE OF A PROTECTED TREE.
- 2. TREE ATTACHMENTS:** NO SIGNS, WIRES OR OTHER ATTACHMENTS, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY PROTECTED TREE.
- 3. VEHICULAR TRAFFIC:** NO VEHICULAR AND/OR CONSTRUCTION EQUIPMENT TRAFFIC OR PARKING SHALL TAKE PLACE WITHIN THE CRITICAL ROOT ZONE OF ANY PROTECTED TREE OTHER THAN ON EXISTING STREET PAVEMENT. THIS RESTRICTION DOES NOT APPLY TO SINGLE INCIDENT ACCESS WITHIN THE CRITICAL ROOT ZONE FOR PURPOSES OF ESTABLISHING THE BUILDING PAD AND ASSOCIATED LOT GRADING, VEHICULAR TRAFFIC NECESSARY FOR ROUTINE UTILITY MAINTENANCE, EMERGENCY RESTORATION OF UTILITY SERVICE, OR ROUTINE MOWING OPERATIONS.
- 4. GRADE CHANGES:** PAVING WITHIN THE DRIP LINE SHALL BE APPROVED PRIOR TO CONSTRUCTION BY THE OWNER'S REPRESENTATIVE.
- 5. IMPERVIOUS PAVING:** NO PAVING WITH ASPHALT, CONCRETE OR OTHER IMPERVIOUS MATERIAL SHALL BE PLACED WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE.
- 6. ROOT PRUNING:** ALL ROOTS ONE INCHES OR LARGER IN DIAMETER WHICH ARE EXPOSED AS A RESULT OF TRENCHING OR OTHER EXCAVATION SHALL BE CUT OFF SQUARE WITH A SHARP MEDIUM TOOTH SAW AND COVERED WITH PRUNING COMPOUND WITHIN TWO HOURS OF INITIAL EXPOSURE.

TREE TRENCHING AND TUNNELING



TREE TRENCHING AND TUNNELING NOTES

- A.** IN THE EVENT THAT CONSTRUCTION ACTIVITY IS UNAVOIDABLE WITHIN THE TREE AND PLANT PROTECTION AREA, NOTIFY THE OWNER'S REPRESENTATIVE AND SUBMIT A DETAILED WRITTEN PLAN OF ACTION FOR APPROVAL. THE PLAN SHALL INCLUDE: A STATEMENT DETAILING THE REASON FOR THE ACTIVITY INCLUDING WHY OTHER AREAS ARE NOT SUITED; A DESCRIPTION OF THE PROPOSED ACTIVITY, THE TIME PERIOD FOR THE ACTIVITY, AND A LIST OF REMEDIAL ACTIONS THAT WILL REDUCE THE IMPACT ON THE TREE AND PLANT PROTECTION AREA FROM THE ACTIVITY. REMEDIAL ACTIONS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO THE FOLLOWING: IN GENERAL, DEMOLITION AND EXCAVATION WITHIN THE DRIP LINE OF TREES AND SHRUBS SHALL PROCEED WITH EXTREME CARE EITHER BY THE USE OF HAND TOOLS, DIRECTIONAL BORING AND OR AIR KNIFE EXCAVATION WHERE INDICATED OR WITH OTHER LOW IMPACT EQUIPMENT THAT WILL NOT CAUSE DAMAGE TO THE TREE, ROOTS OR SOIL.
- B.** WHEN ENCOUNTERED, EXPOSED ROOTS, 1 INCHES AND LARGER IN DIAMETER SHALL BE WORKED AROUND IN A MANNER THAT DOES NOT BREAK THE OUTER LAYER OF THE ROOT SURFACE (BARK). THESE ROOTS SHALL BE COVERED IN WOOD CHIPS AND SHALL BE MAINTAINED ABOVE PERMANENT WILT POINT AT ALL TIMES. ROOTS ONE INCH AND LARGER IN DIAMETER SHALL NOT BE CUT WITH OUT THE APPROVAL OF THE OWNER'S REPRESENTATIVE. EXCAVATION SHALL BE TUNNELED UNDER THESE ROOTS WITHOUT CUTTING THEM. IN THE AREAS WHERE ROOTS ARE ENCOUNTERED, WORK SHALL BE PERFORMED AND SCHEDULED TO CLOSE EXCAVATIONS AS QUICKLY AS POSSIBLE OVER EXPOSED ROOTS.

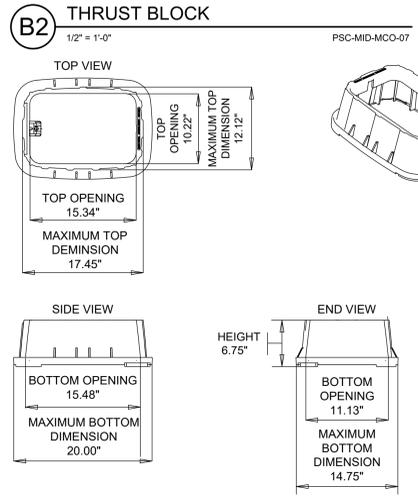
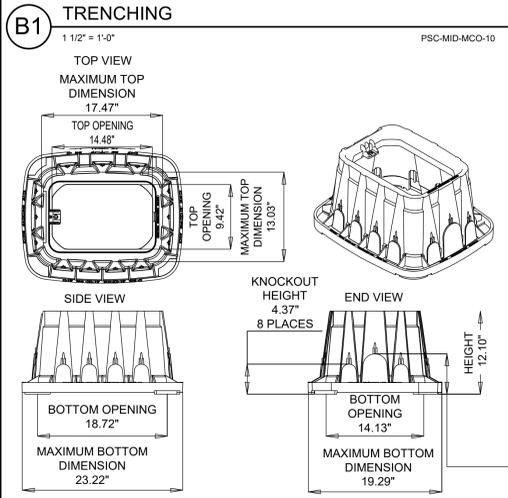


- NOTES:**
- SEE IRRIGATION LEGEND FOR MAIN LINE AND LATERAL LINE PIPE SIZE AND MATERIAL.
 - DIRECT BURIAL CONTROL WIRES SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT AT ALL PAVING CROSSINGS AND AS SHOWN ON PLANS. SEE SIZING TABLE BELOW.
 - INSTALL DETECTABLE LOCATOR TAPES ABOVE ALL NEW MAIN LINE PIPING. BURY SIX INCHES (6") ABOVE TOP OF PIPE ELEVATION.

CONDUIT FOR IRRIGATION CONTROL WIRES				
WIRE SIZE (AWG)	CONDUIT SIZE	MAX NUMBER OF WIRES PER CONDUIT	MINIMUM DEPTH BELOW PEDESTRIAN PAVING	MINIMUM DEPTH BELOW VEHICULAR PAVING
14	1" SCH 40	10	1'-6"	3'-0"
14	2" SCH 40	40	1'-6"	3'-0"
14	3" SCH 40	88	1'-6"	3'-0"
14	4" SCH 40	150	1'-6"	3'-0"
12	1" SCH 40	7	1'-6"	3'-0"
12	2" SCH 40	33	1'-6"	3'-0"
12	3" SCH 40	63	1'-6"	3'-0"
12	4" SCH 40	110	1'-6"	3'-0"

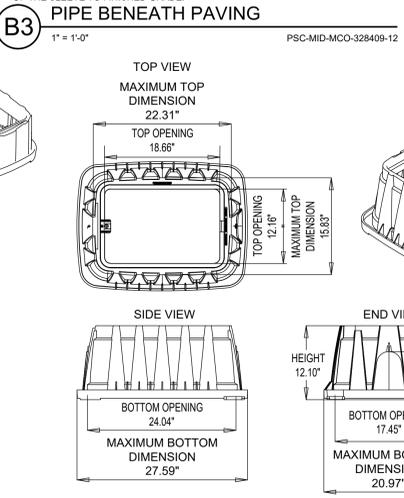
- NOTES:**
- SIZE THRUST BLOCKS SHALL BE SPECIFIED AS SHOWN IN THE TABLE
 - THRUST BLOCKS SHALL BE INSTALLED ON MAIN LINE PIPE ONLY
 - CONTROL WIRES SHALL NOT BE ENCASED IN CONCRETE
 - ALL FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE TO PREVENT CONCRETE FROM ADHERING TO PIPE, FITTINGS OR BOLTS
 - JOINTS AND BOLTS SHALL BE ACCESSIBLE FOR REPAIRS
 - THRUST BLOCKS SHALL BE A MINIMUM OF 6" THICK
 - ONE 80 LBS. SACK OF CONCRETE SHALL COVER 6 FT.²

- NOTES:**
- SEE IRRIGATION LEGEND FOR MAINLINE SIZE AND TYPE
 - ALL SLEEVES SHALL BE SCH. 40 PVC PIPE
 - ALL SLEEVES SHALL EXTEND 12" BEYOND THE EDGE OF PAVEMENT
 - END OF SLEEVES SHALL BE LOCATED WITH A PVC PIPE LOCATORS SHALL RUN CONTINUOUSLY FROM THE END OF THE SLEEVE TO FINISHED GRADE.

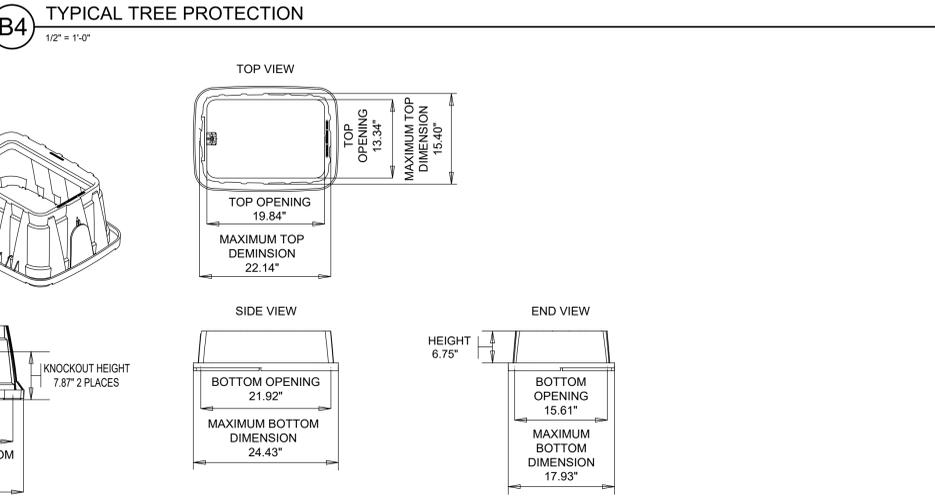


A1 RAIN BIRD STANDARD VALVE BOX DIMENSIONS
N.T.S. PSC-MID-MCO-13

A2 RAIN BIRD 6" STANDARD EXTENSION DIMENSIONS
N.T.S. PSC-MID-MCO-16



B3 PIPE BENEATH PAVING
1" = 1'-0" PSC-MID-MCO-328409-12



B4 TYPICAL TREE PROTECTION
1/2" = 1'-0" PSC-MID-MCO-015639-01



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Midland, TX 79701
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PROJECT NO.
40044.22
KEY PLAN

Irrigation Details

L502

