

W.O. 23-31 MILLICE PARK IRRIGATION SYSTEM REPLACEMENT

BILLINGS, MONTANA

AUGUST 8, 2025

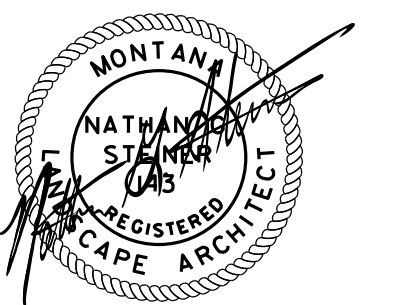
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- 11.2 IRRIGATION DETAILS
- 11.3 IRRIGATION DETAILS
- 11.4 PUMP DETAIL



GENERAL NOTES:

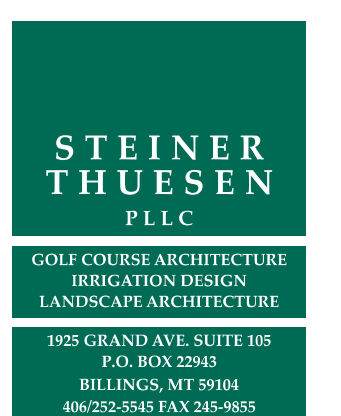
1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. UTILITIES ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE SURVEY. ACCURACY OF INFORMATION IS NOT GUARANTEED. SERVICE LINES MAY NOT BE IN STRAIGHT LINES OR AS INDICATED ON THE PLANS.
3. ALL EXISTING IMPROVEMENTS TO REMAIN AND BE PROTECTED UNLESS NOTED OTHERWISE.
4. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE PREPARED AND SEEDED AS SPECIFIED. A DISTURBED AREA IS DEFINED AS AN AREA WHERE CONSTRUCTION ACTIVITIES INCLUDING DEMOLITION, TRENCHING, EARTHWORK, MATERIAL STORAGE, STAGING, PARKING, OR ANY FORM OF EXCAVATION, COMPACTION, OR TRAFFIC RESULTS IN THE REMOVAL OR DISPLACEMENT OF EXISTING GROUND COVER OR GRADE. CONTRACTOR SHALL REVIEW ALL OTHER CONTRACT DOCUMENTS AND CONTRACTED WORK BY OTHERS TO DETERMINE FULL SCOPE OF POTENTIAL SITE DISTURBANCE TO BE RECLAIMED.
5. REFER TO ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



PREPARED FOR:



PREPARED BY:



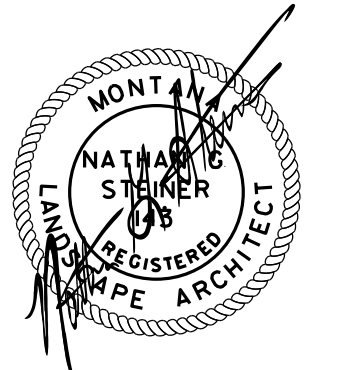


LEGEND:

SYMBOL	DESCRIPTION	SIZE	MANUF.	MODEL NUMBER
	ROTOR SPRINKLER	55' RADIUS	RAINBIRD	6504-10 10.0 GPM @ 60 PSI (GREY)
	AIR RELIEF VALVE	2"	BERMAD	C10-SP
	ISOLATION VALVE	LINE SIZE	AS SPECIFIED	
	MAINLINE DRAIN VALVE	AS SPECIFIED	AS SPECIFIED	
	QUICK COUPLING VALVE	1"	RAINBIRD	44NP
	ELECTRIC CONTROL VALVE	AS NOTED	RAINBIRD	I/M-PESB
	SATELLITE CONTROLLER	60 STATION	RAINBIRD	ESP-LXIVM-IQNCC4G W/ LXMSS
	MASTER VALVE/FLOW SENSOR	2 1/2"	SUPERIOR/FLOMEC	3300200 W/ DC LATCHING SOLENOID/QS200-20
	PUMP STATION	AS SPECIFIED		
	IRRIGATION MAIN- PVC	AS SHOWN		CLASS 200
	LATERAL LINE - PVC	AS SHOWN		CLASS 200
	SLEEVES - PVC	SEE NOTES		SCHEDULE 40
	ZONE # SURGE DEVICE			
	GPM			

- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
 - IRRIGATION PLAN IS DIAGRAMMATIC IN NATURE. FIELD ADJUSTMENT OF IRRIGATION COMPONENTS MAY BE NECESSARY TO AVOID CONFLICTS WITH EXISTING SITE FEATURES. REASONABLE CHANGES IN PIPE LAYOUT MAY BE MADE BY THE CONTRACTOR WITH THE ADVANCE APPROVAL OF THE ARCHITECT. LINES SHOWN BELOW PAVEMENT ADJACENT TO TURF AREAS ARE TO BE LOCATED IN TURF AREAS.
 - SCHEDULE 40 PVC SLEEVES ARE REQUIRED UNDER ALL HARD AND GRAVEL SURFACES. EXISTING AND PROPOSED. LOCATION AND NUMBER OF SLEEVES IS THE RESPONSIBILITY OF THE CONTRACTOR FOR INSTALLATION OF THE IRRIGATION SYSTEM AS SHOWN. ALL PIPE SLEEVES TO BE 2 PIPE SIZES LARGER THAN PIPE TO BE INSTALLED THROUGH SLEEVE. PROVIDE SEPARATE SLEEVES FOR BOTH 120 V. AND 240 V. WIRING. WIRE SLEEVES TO BE 4" MIN. ANY SLEEVES INDICATED ON THE PLAN ARE FOR THE CONVENIENCE OF THE CONTRACTOR.
 - CONTRACTOR SHALL PROVIDE ALL DEVICES, WIRING AND PROGRAMMING FOR A COMPLETE OPERATIONAL SYSTEM.
 - LOCATIONS OF MAINLINE DRAINS MAY VARY. ACTUAL LOCATIONS SHALL BE IN ALL LOW SPOTS ALONG THE MAINLINE IN APPROXIMATE LOCATIONS AS SHOWN.
 - LOCATIONS OF AIR RELIEF VALVES MAY VARY. ACTUAL LOCATIONS SHALL BE IN ALL HIGH SPOTS ALONG THE MAINLINE IN APPROXIMATE LOCATIONS AS SHOWN.
 - CONTRACTOR SHALL MAINTAIN AN ACCURATE, CURRENT AS-BUILT ON THE JOB AT ALL TIMES.
 - ZONES WITH FLOWS THROUGH 60 GPM TO HAVE 1-1/2" CONTROL VALVES. ZONES WITH FLOWS 61 GPM AND GREATER TO HAVE 2" CONTROL VALVES.
 - CONTRACTOR SHALL COORDINATE AND PAY FOR TECHNICAL SUPPORT NEEDS WITH CONTROL SYSTEM MANUFACTURER AND SERVICE PROVIDERS AS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM.
 - ALL CONDUIT TO BE 1" MINIMUM, UNLESS NOTED OTHERWISE. CONCEAL OR BURY WHEREVER POSSIBLE. ALL VISIBLE CONDUITS SHALL BE ROUTED AS DIRECTED AND PAINTED TO MATCH MOUNTING SURFACES. ALL BURIED CONDUITS SHALL BE ELECTRICAL GRADE SCHEDULE 40 PVC. ALL CONDUITS ABOVE GRADE SHALL BE SCHEDULE 80 PVC.
 - ADJUST ALL HEADS AS REQUIRED TO PREVENT OVERSPRAY ONTO BUILDINGS AND STREETS.
 - CONTROLLER LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
 - DESIGN BASED ON 0.28"/DAY WATER REQUIREMENT, 5 DAYS/WEEK WITH AN 8 HOUR WATER WINDOW WITH 60 PSI AT ALL 6504 IRRIGATION HEADS. OVERALL SYSTEM REQUIREMENTS AT THE POC ARE 135 GPM @ 82 PSI. (INCLUDES FILTER FLUSH AND SCREEN FLOWS)
 - POWER FOR CONTROLLER TO BE SUPPLIED AT PUMP STATION.
 - OWNER'S APPROVAL REQUIRED FOR WORK WITHIN 10' OF ANY TREE. SEE SPECIAL PROVISIONS.
 - REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

- KEY NOTES:**
- IRRIGATION CONTROLLER TO BE MOUNTED ON EXTERIOR OF PUMP STATION ENCLOSURE. SEE 1/1.4.
 - REFER TO 2/11.4 FOR INFORMATION REGARDING ELECTRICAL SERVICE.
 - REMOVE AND RETURN EXISTING PUMP TO OWNER. REMOVE EXISTING ENCLOSURE AND WET WELL.
 - VERIFY LOCATION OF MEADOWLARK SCHOOL IRRIGATION SPRINKLERS. ADJUST NEW SPRINKLERS AS REQUIRED TO ENSURE THEY ARE SOUTH OF MEADOWLARK SPRINKLERS.
 - NEW PUMP STATION AND WET WELL. SEE 1/11.4.



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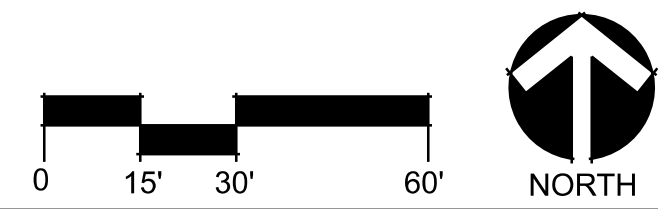
W.O. 23-31 MILLICE PARK IRRIGATION SYSTEM REPLACEMENT IRRIGATION PLAN

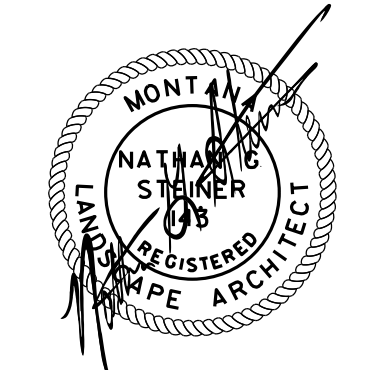
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GOLF COURSE ARCHITECTURE IRRIGATION DESIGN LANDSCAPE ARCHITECTURE
 1925 GRAND AVE. SUITE 105
 P.O. BOX 22943
 BILLINGS, MT 59104
 406/252-5545 FAX 245-9855

DRAWN BY: JAV, GSG
 DATE: 8/8/25
 CHECKED BY: NGS
 DATE: 8/8/25
 REV: -
 REV: -
 FILE: 11.1 IRRIGATION PLAN.DGN





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W.O. 23-31 MILLICE PARK IRRIGATION SYSTEM REPLACEMENT IRRIGATION DETAILS

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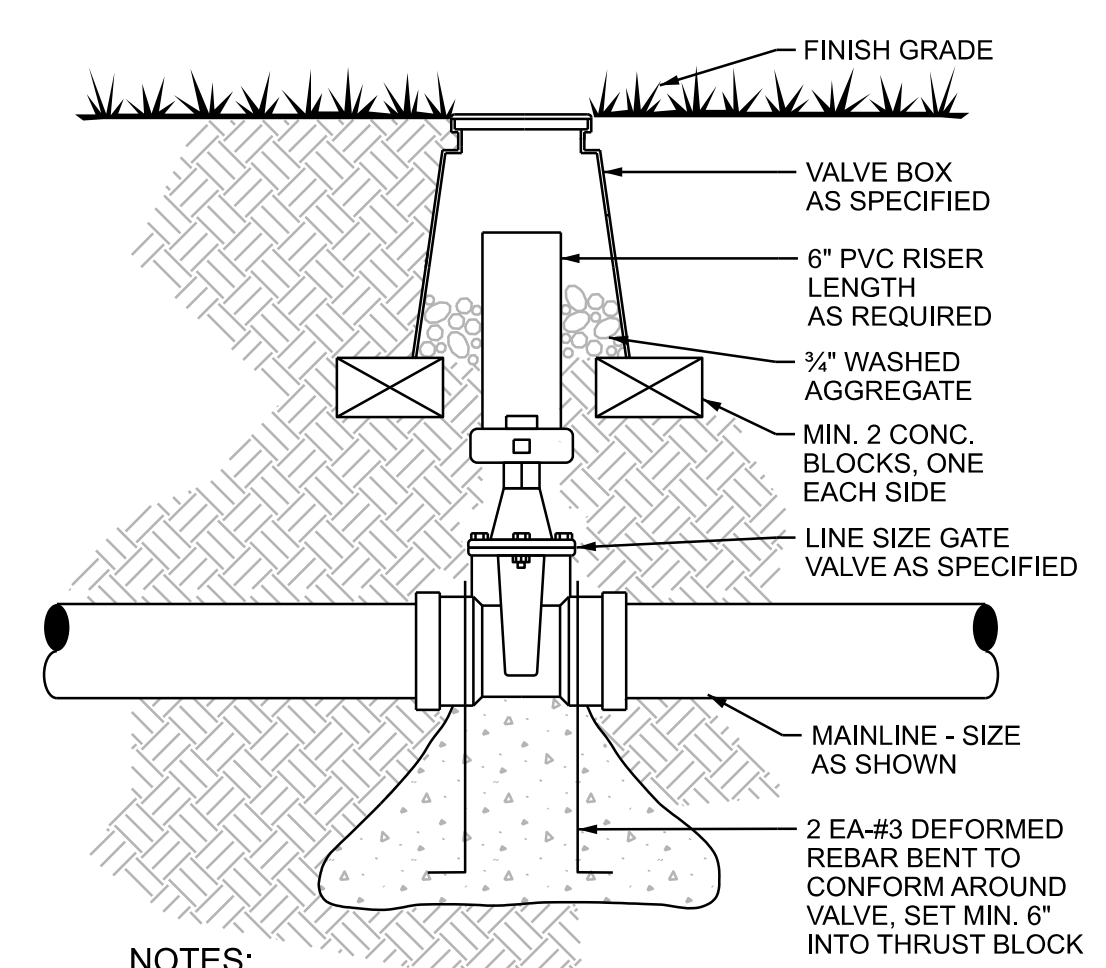
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GOLF COURSE ARCHITECTURE IRRIGATION DESIGN LANDSCAPE ARCHITECTURE

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

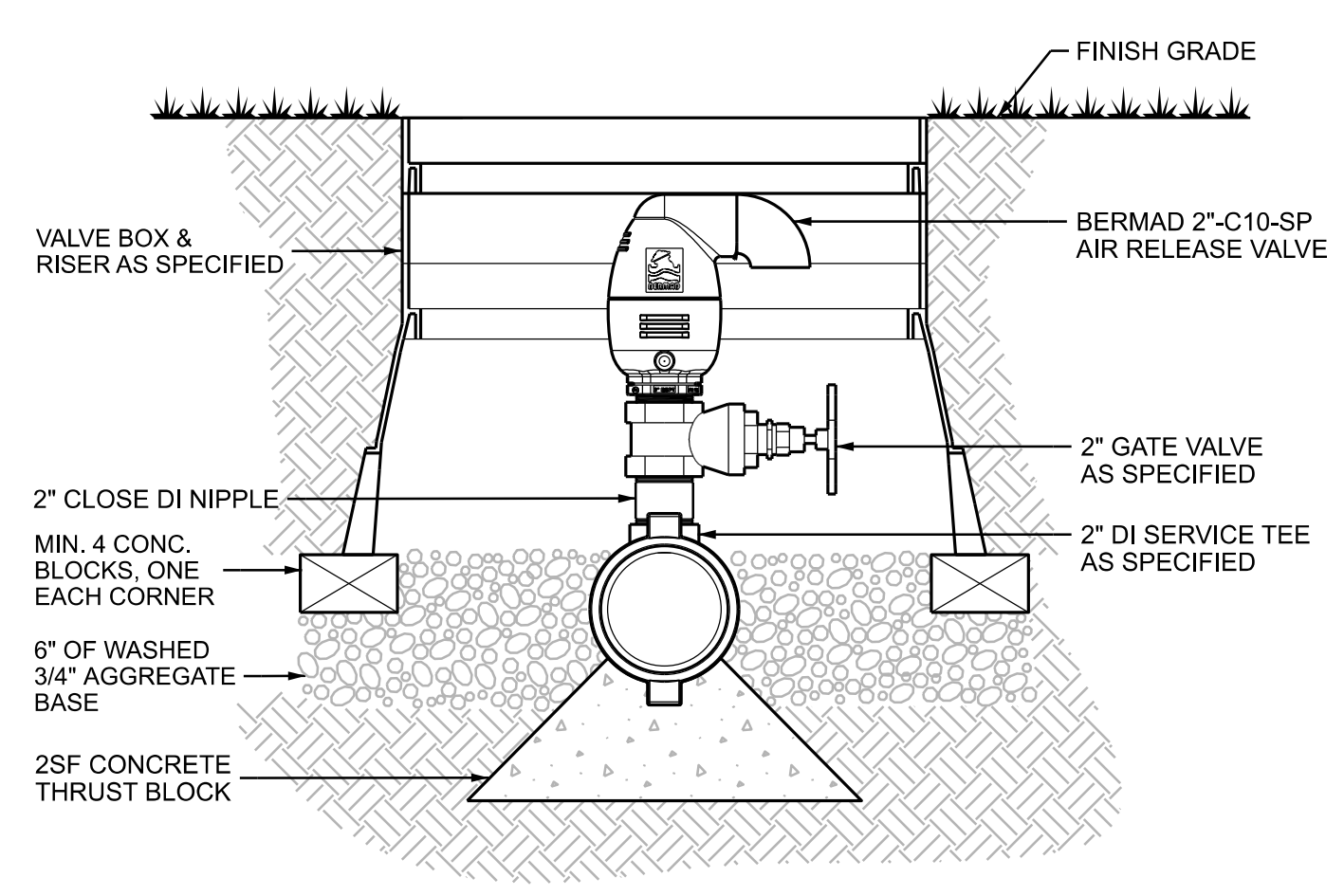
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SHEET 11.2



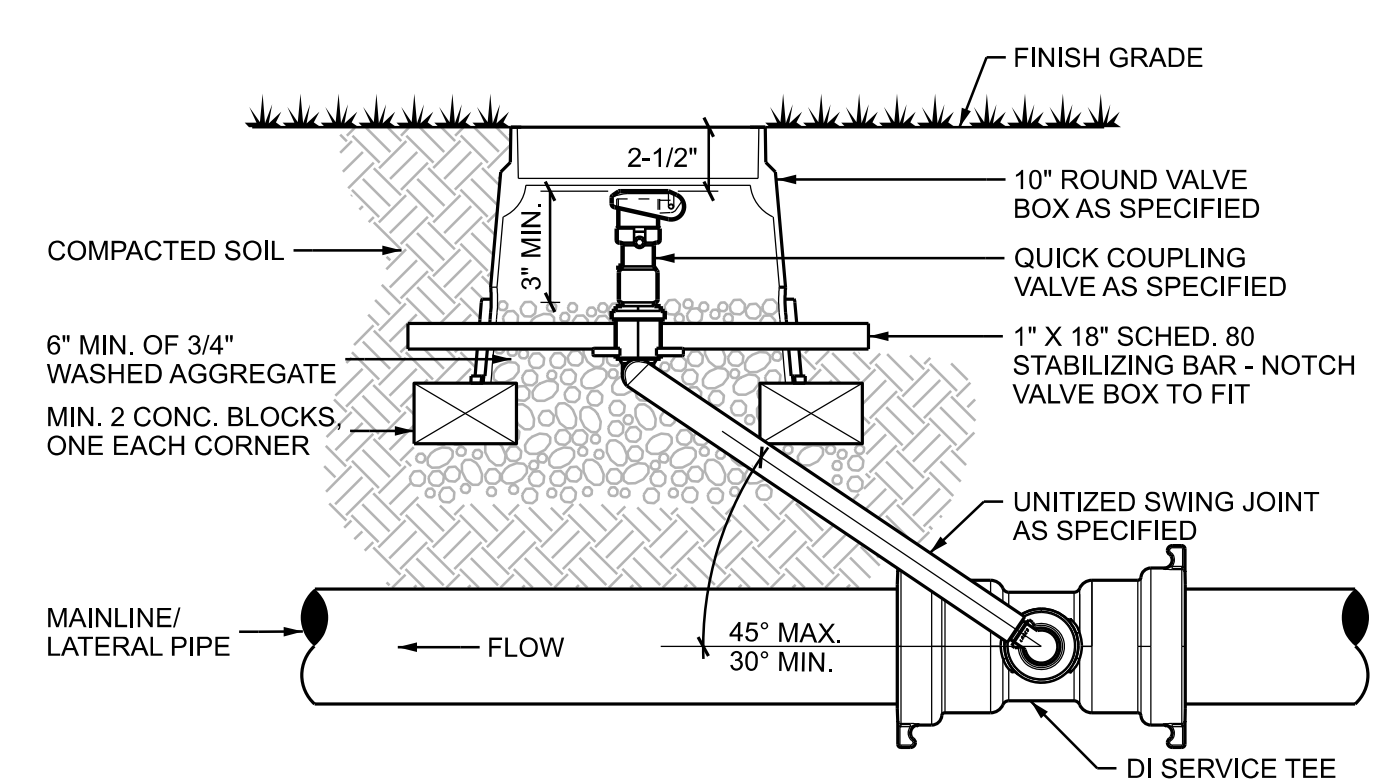
NOTES:
1. FOR THRUST BLOCK SIZES, SEE THRUST BLOCK DETAIL AND SIZE THRUST BLOCK BASED ON TEES OF SAME SIZE AS ISOLATION VALVE.
2. THIS DETAIL FOR VALVES 3" AND LARGER.

4 MAINLINE ISOLATION VALVE NOT TO SCALE



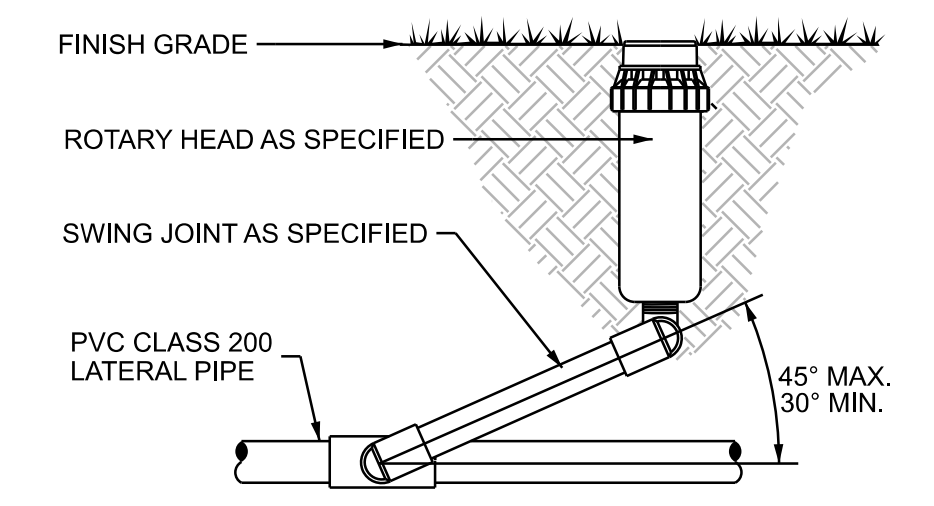
NOTES:
1. ROTATE TEE ON MAINLINE AS NECESSARY TO ENSURE CLEARANCE IS PROVIDED BETWEEN LID AND TOP OF AIR RELEASE VALVE.
2. PROVIDE 1" MIN. SPACE BETWEEN BOTTOM OF VALVE BOX AND TOP OF MAINLINE.

3 AIR RELIEF VALVE NOT TO SCALE

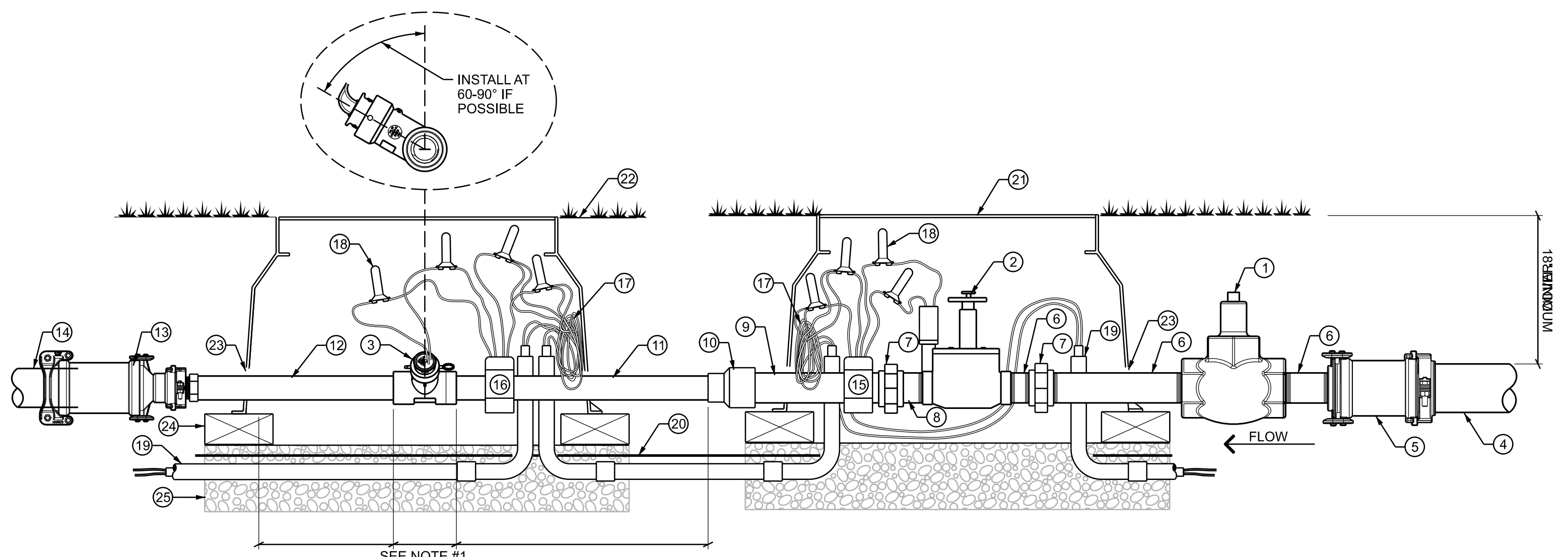


NOTES:
1. DO NOT DRIVE REBAR THROUGH TABS ON SWING JOINT, STABILIZING BAR TO BE USED.

2 TYPICAL QUICK COUPLER NOT TO SCALE



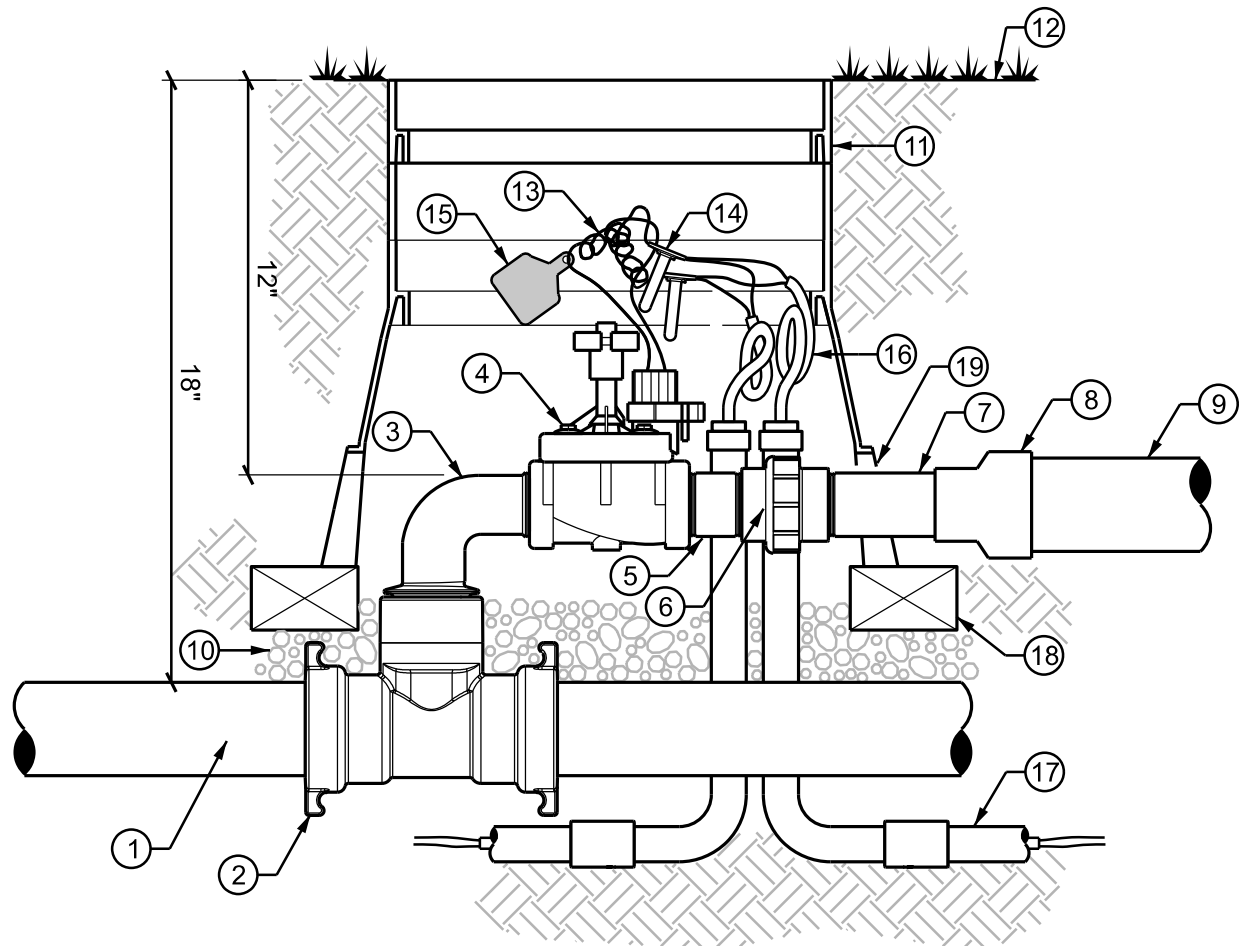
1 TYPICAL ROTOR HEAD NOT TO SCALE



LEGEND:
1. GATE VALVE, SAME SIZE AS MASTER VALVE.
2. MASTER VALVE.
3. FLOW SENSOR, ANGLE PER MANUFACTURER'S REQUIREMENTS.
4. MAINLINE.
5. DI TAPPED CAP W/ RESTRAINT.
6. DI NIPPLE, SIZE TO MATCH MASTER VALVE.
7. SCH 80 PVC UNION. USE BRASS UNION ON 2" AND LARGER.
8. SCH 80 PVC TOE NIPPLE.
9. PVC PIPE, SAME SIZE AS MASTER VALVE.
10. SCH 80 PVC REDUCER, AS REQUIRED.
11. PIPE SIZE TO MATCH SIZE OF FLOW SENSOR.
12. CLASS 200 PVC, SIZE TO MATCH FLOW SENSOR.
13. DI REDUCER W/ RESTRAINT.
14. SUBMAINLINE PIPE TO CONTROL VALVES. SEE PLAN FOR SIZE.
15. IVM-OUT FIELD DECODER WITH WIRES TO MASTER VALVE AND 2-WIRE PATH.
16. IVM-SEN SENSOR DECODER WITH WIRES TO FLOW SENSOR, 2-WIRE PATH & GROUND ROD.
17. SLACK DECODER PATH WIRE, AS SPECIFIED.
18. WIRE CONNECTORS, AS SPECIFIED.
19. 2-WIRE PATH TO CONTROLLER/DECODERS IN CONDUIT, 1" MIN.
20. MARKER TAPE OVER 2-WIRE PATH IN CONDUIT.
21. VALVE BOX AND EXTENSION, AS SPECIFIED.
22. FINISH GRADE.
23. 1" MINIMUM SPACE BETWEEN LATERAL AND VALVE BOX.
24. MIN. 4 CONCRETE BLOCKS, TWO EACH SIDE.
25. 3/4" WASHED AGGREGATE

NOTES:
1. INLET PIPE LENGTH OF FLOW SENSOR MUST BE MIN. 10X PIPE DIA. STRAIGHT, CLEAN RUN OF PIPE, NO FITTINGS OR TURNS. OUTLET PIPE LENGTH OF FLOW SENSOR MUST BE MIN. 5X PIPE DIA. OF STRAIGHT CLEAN RUN OF PIPE, NO FITTINGS OR TURNS.
2. REFER TO LEGEND ON PLAN SHEETS FOR ADDITIONAL INFORMATION FOR MASTER VALVE AND FLOW SENSOR.

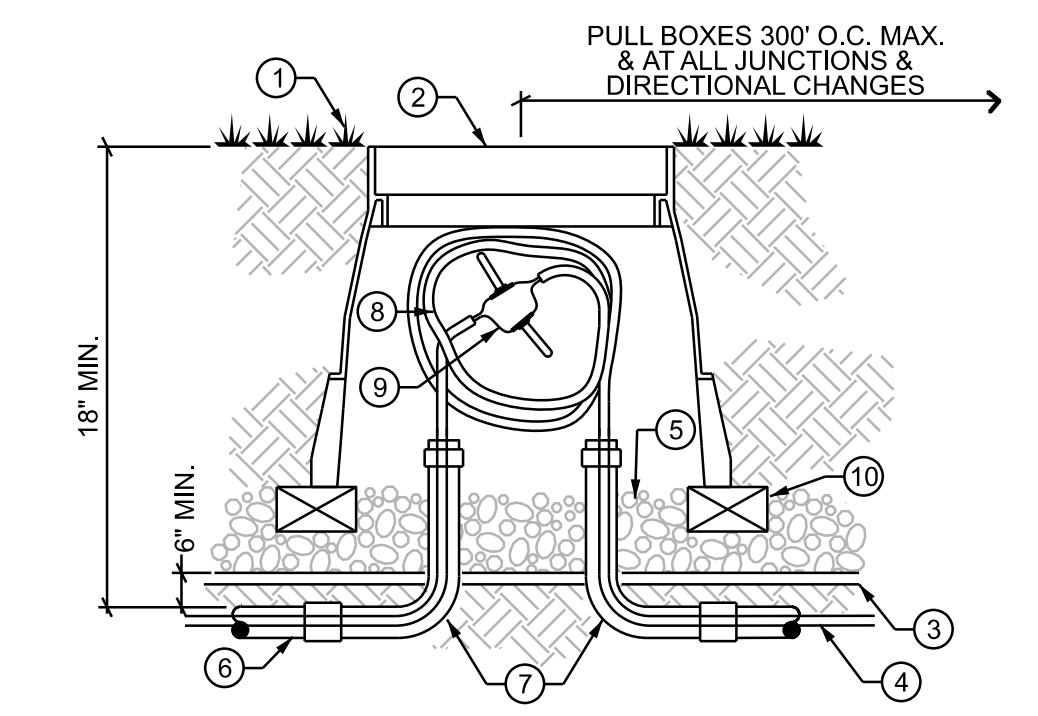
6 MASTER VALVE & FLOW SENSOR - RAINBIRD IVM NOT TO SCALE



LEGEND:
1. MAINLINE.
2. HARCO D.I. SWIVEL TEE.
3. 2" HARCO LATERAL 90° SWIVEL.
4. ELECTRIC VALVE AS SPECIFIED.
5. 2" X 2" T.B.E. SCH 80 NIPPLE.
6. 2" X 1" T SCH. 80 UNION.
7. 2" X 4" SCH. 80 T.O.E. NIPPLE.
8. 3" X 2" SCH 80 1 PIECE REDUCER COUPLING.
9. SOLVENT WELD PIPE TO LATERALS.
10. 6" OF WASHED 3/4" AGGREGATE BASE, MAINTAIN 2" CLEARANCE BELOW VALVE.
11. VALVE BOX AS SPECIFIED, RISER AS REQUIRED.
12. FINISH GRADE.
13. PROVIDE 20 EXPANSION COILS EACH WIRE.
14. DBY WIRE CONNECTORS AS SPECIFIED, MAKE ALL SPLICES IN VALVE BOX.
15. VALVE ID TAG, AS SPECIFIED.
16. PROVIDE 3' MINIMUM OF 2-WIRE CABLE ON EACH LEG COILED UP NEATLY IN VALVE BOX.
17. 2-WIRE CONTROL CABLE IN CONDUIT, 1" MIN. SEAL ENDS WITH DUCT SEALANT.
18. MIN. 4 CONC. BLOCKS, ONE EACH CORNER.
19. 1" MIN. SPACE BETWEEN LATERAL AND VALVE BOX.

NOTES:
1. ADJUST SIZE OF LATERAL 90°, AND PVC FITTINGS TO MATCH ELECTRIC VALVE SIZE CALLED FOR ON PLANS.

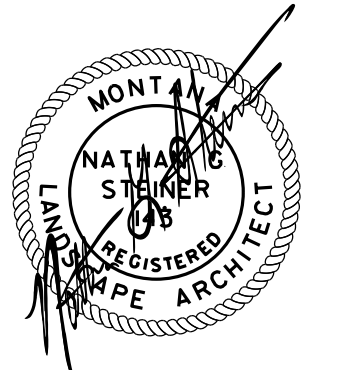
5 TYPICAL ELECTRIC CONTROL VALVE - IVM NOT TO SCALE



LEGEND:
1. FINISH GRADE
2. CARSON 1419-12 BOX & 1419-3B GREY COVER, ELECTRICAL MARKING.
3. PANDUIT HTDU 3R-E MARKER TAPE CONTINUOUS.
4. 2-WIRE COMM CABLE TO CONTROLLERS AND DECODERS.
5. MIN. 4" DEPTH CRUSHED AGGREGATE.
6. PVC SCHED 40 CONDUIT SIZE AS REQUIRED, 1" MIN.
7. 90° SWEEP ELL.
8. MIN. 60° LOOP OF CONDUCTORS IN PULL BOX.
9. SPLICES MADE WITH DBY SPLICE KITS. FIELD SPLICES PERMITTED ONLY AT DECODERS.
10. CONC. SUPPORT BLOCK EACH CORNER.

NOTES:
1. AT PULL/SPLICE LOCATIONS EXTEND CONDUIT TO WITHIN 6" OF CARSON BOX COVER AND CLOSE CONDUIT WITH DUCT SEALANT.
2. INCLUDE PULL/SPLICE BOXES ON AS-BUILT DRAWINGS.

7 2-WIRE CONTROL PULL / SPLICE BOX NOT TO SCALE



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GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

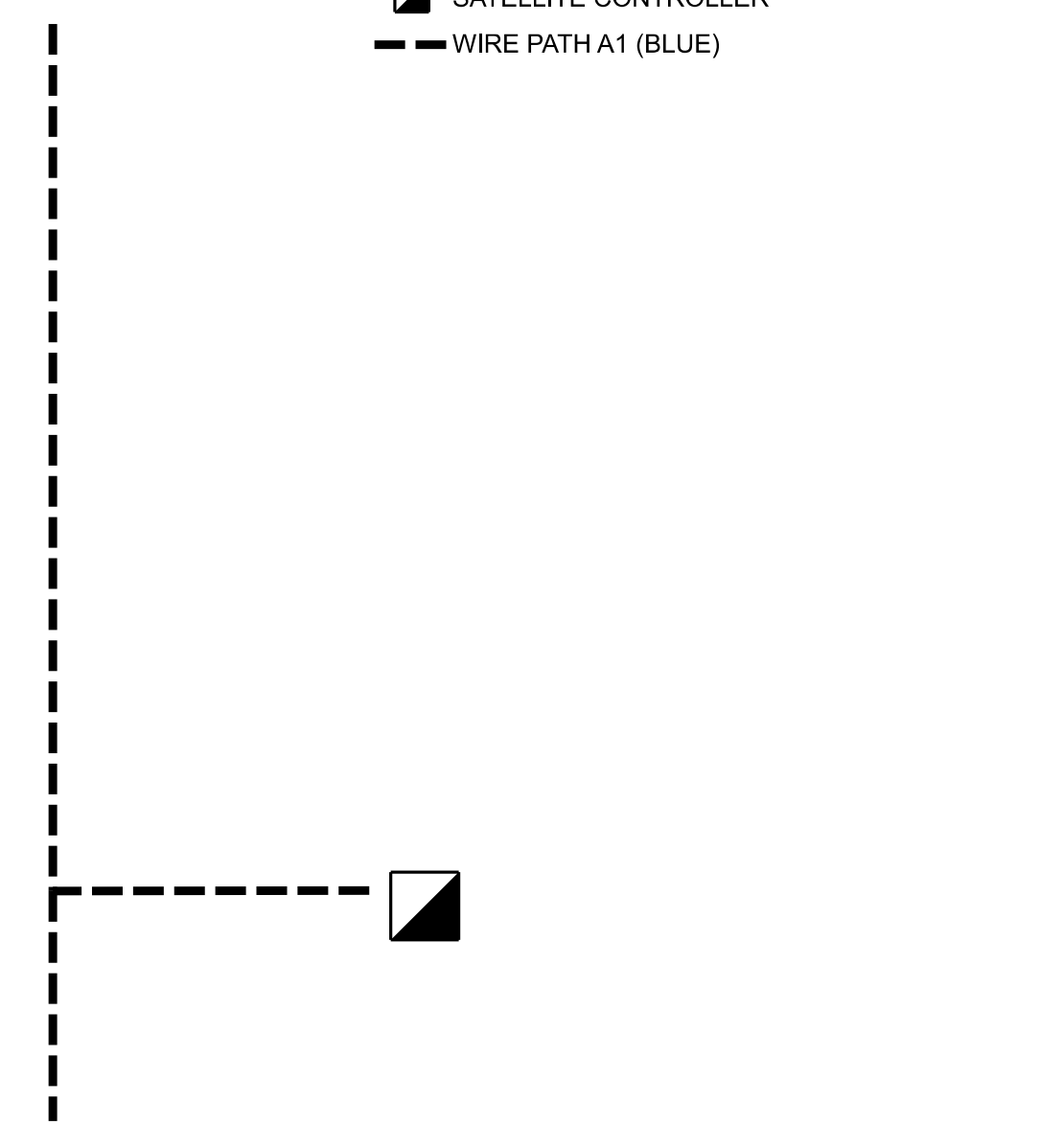
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV, GSG
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REV: -
FILE: 11.3 IRRIGATION DETAILS.DGN

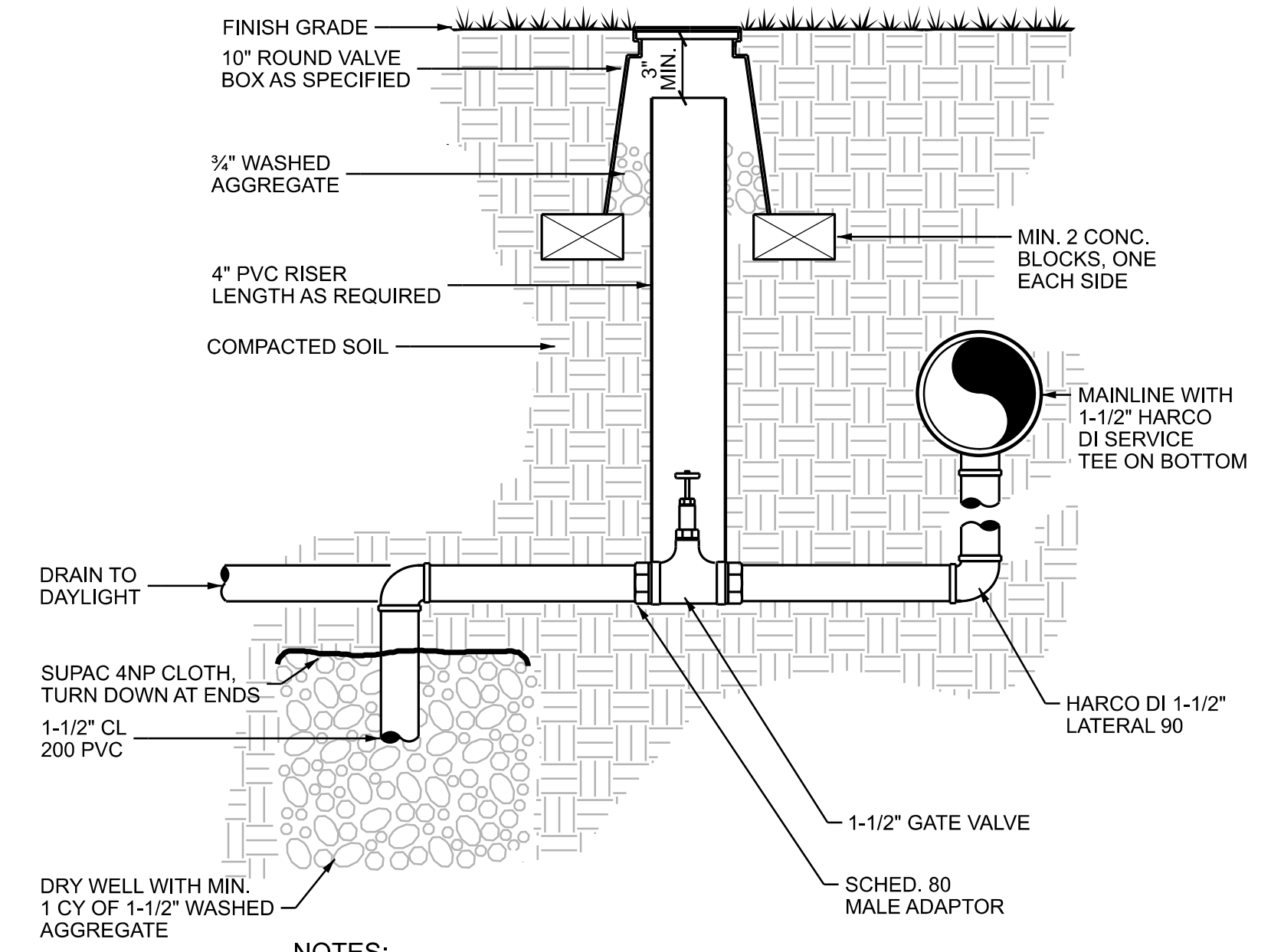
SHEET
11.3

NOTES:
1. ALL WIRE SHALL BE INSTALLED IN CONDUIT, 1" MIN. ALONG MAINLINE. INSTALL MARKER TAPE OVER 2-WIRE PATH.

LEGEND:

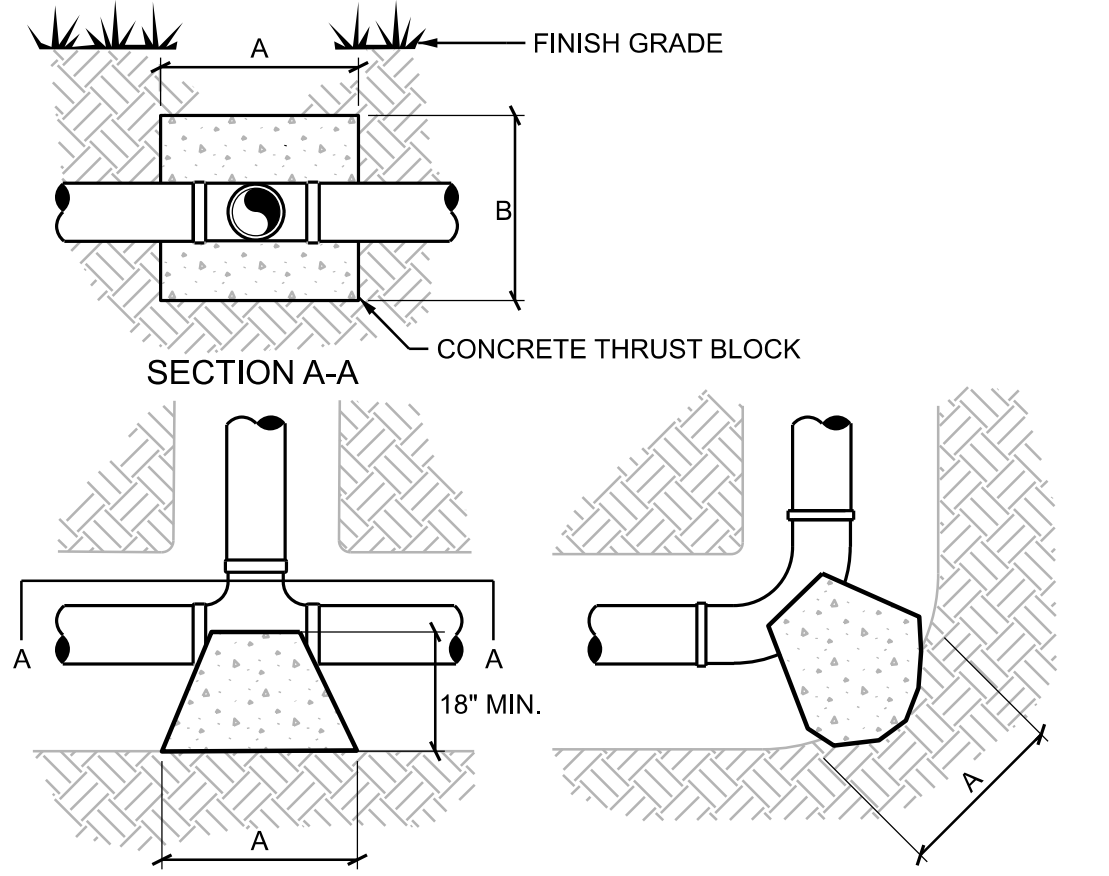


4 2-WIRE COMMUNICATIONS CABLE PATH SCHEMATIC NOT TO SCALE



NOTES:
1. DRAIN TO DAYLIGHT WHEREVER POSSIBLE. TRANSITION TO STEEL PIPE 36" BEFORE END OF PIPE.

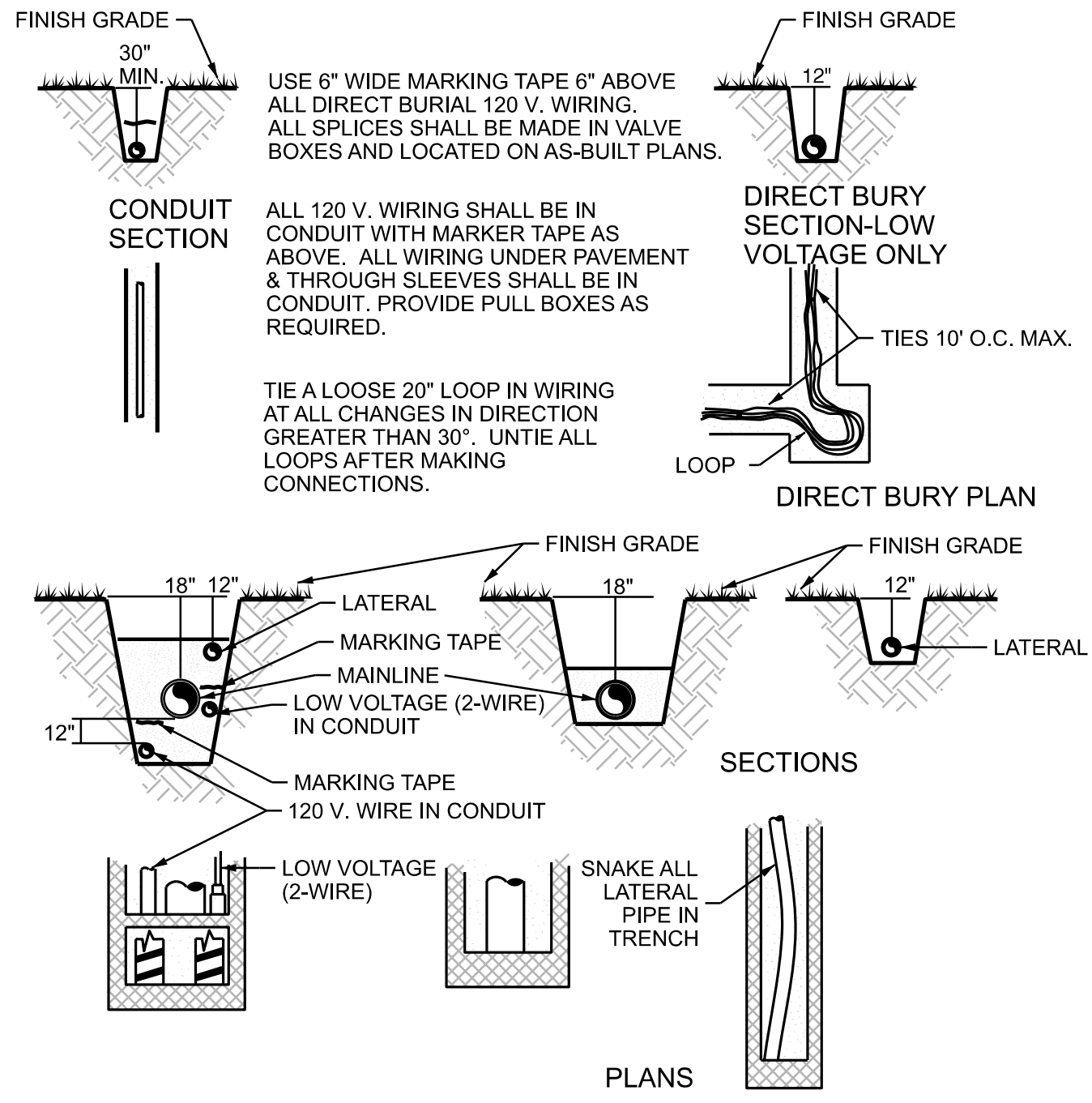
3 TYP. MAINLINE DRAIN NOT TO SCALE



PIPE SIZE	TEES & PLUGS		ELBOWS					
	A	B	22-1/2°		45°		90°	
3-4"	24"	12"	9"	12"	12"	17"	21"	18"
6"	33"	18"	12"	18"	24"	18"	32"	24"
8"	40"	24"	16"	24"	30"	24"	45"	30"
10"	50"	30"	20"	30"	40"	30"	61"	36"
12"	61"	36"	28"	30"	56"	30"	87"	36"

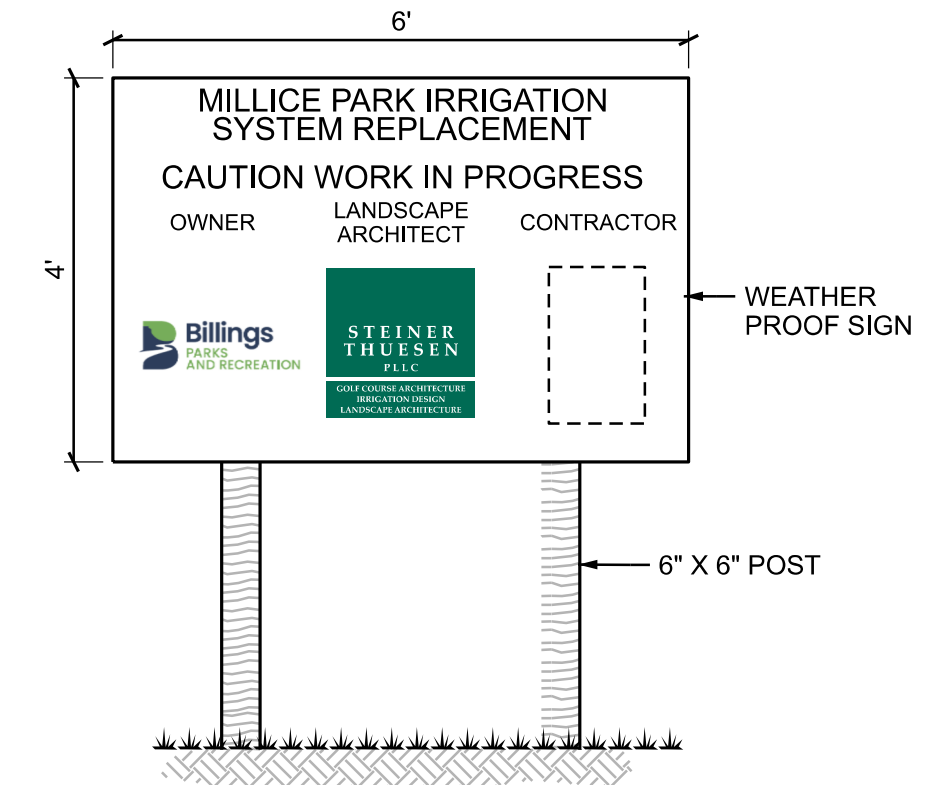
NOTES:
1. ALL PIPES TO BE CENTERED ON THRUST BLOCKS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING ADEQUATE THRUST BLOCKS IN ALL PIPING INSTALLATION.
3. THRUST BLOCKS NOT REQUIRED ON 2-1/2" & SMALLER PIPE.

2 TYPICAL THRUST BLOCKS NOT TO SCALE



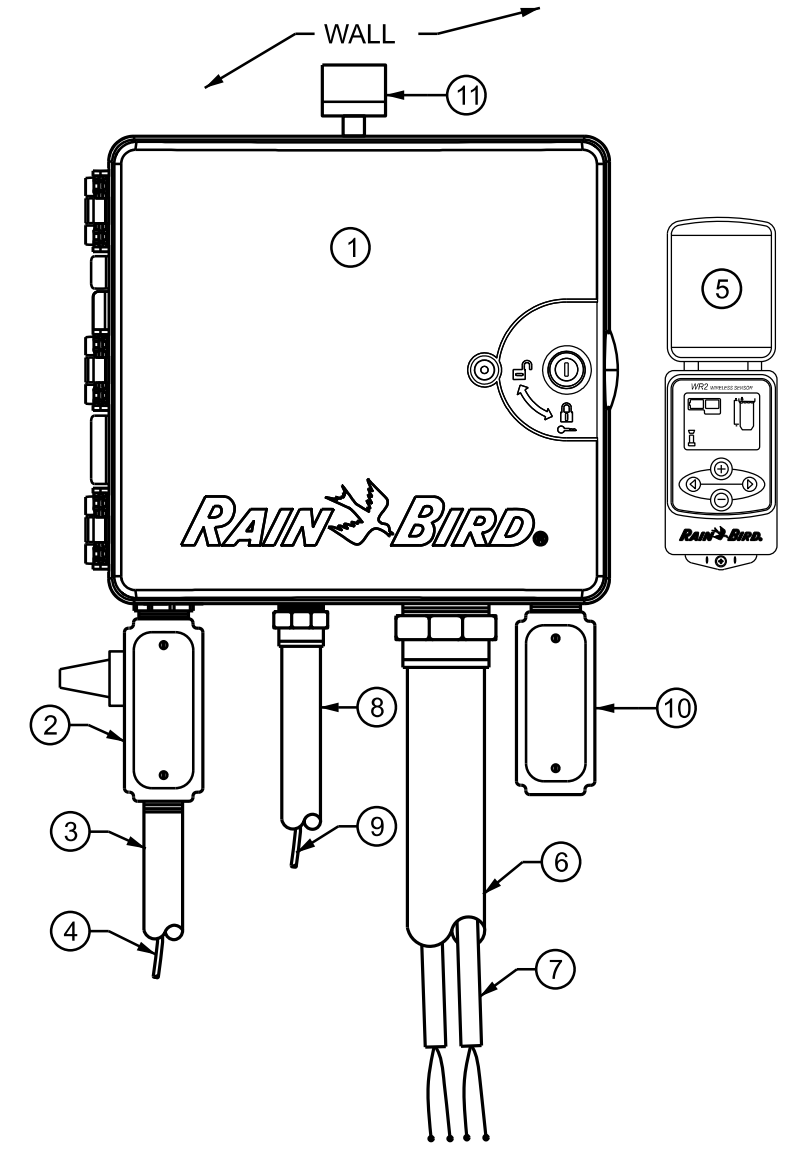
NOTES:
1. 120 V. WIRE TO BE INSTALLED ON THE SIDE OF THE MAINLINE AS SHOWN ON THE PLANS. SEE ELECTRICAL.
2. LOW VOLTAGE WIRE TO BE INSTALLED IN 1" CONDUIT (MIN.) INSTALLED OPPOSITE THE 120 V. WIRE AT MAINLINE PIPE DEPTH.

1 TRENCHING DETAILS NOT TO SCALE



NOTES:
1. PROVIDE COLOR SHOP DRAWING FOR APPROVAL.
2. BACKGROUND TO BE WHITE.
3. PROJECT TITLE TO BE GREEN.
4. "OWNER", "LANDSCAPE ARCHITECT", AND "CONTRACTOR" TO BE BLACK.
5. LOGOS TO BE FULL COLOR.
6. LOCATION TO BE DETERMINED.
7. REMOVE AT END OF PROJECT.

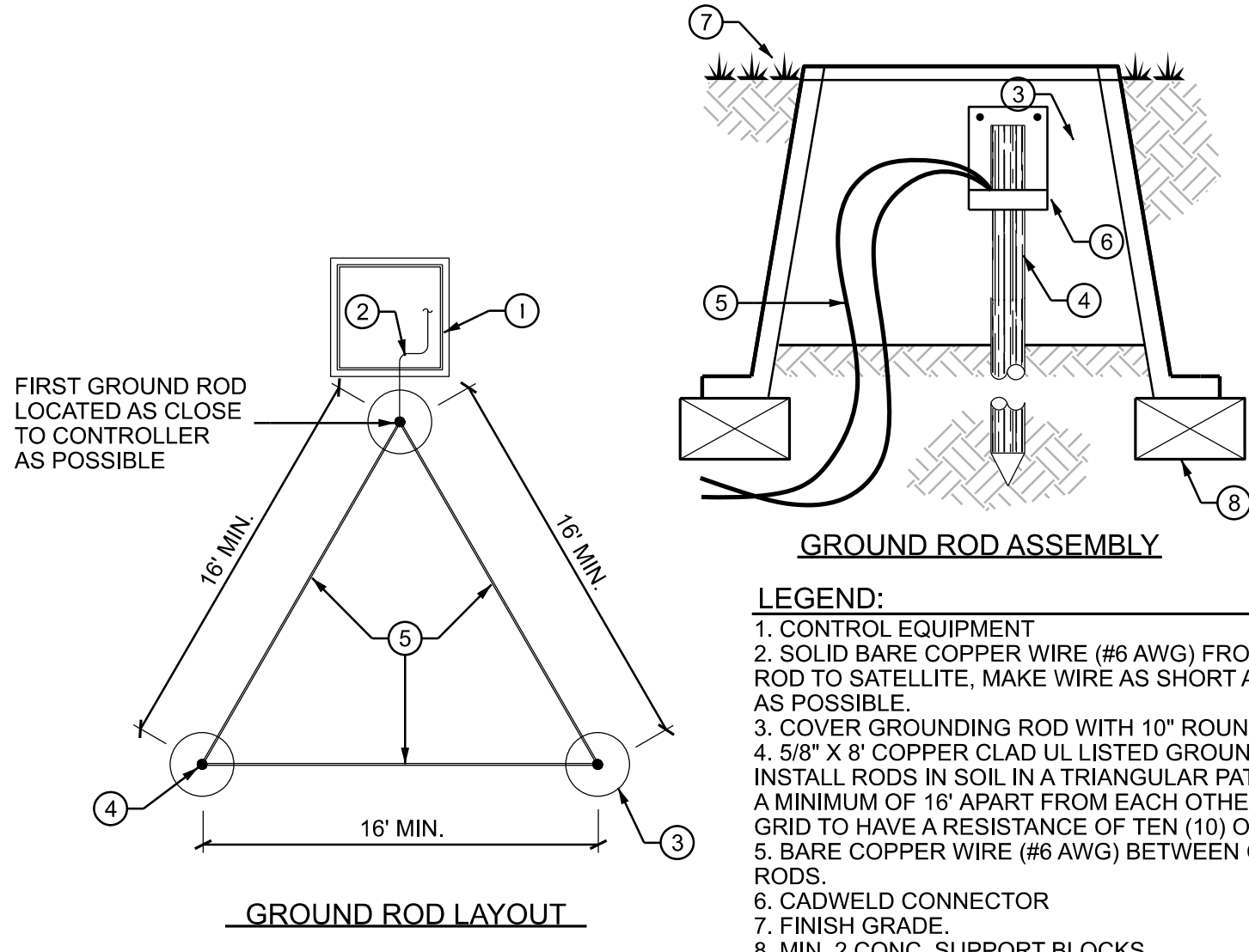
8 PROJECT SIGN NOT TO SCALE



KEY NOTES:
 1 WALL MOUNT CONTROLLER AS SPECIFIED.
 2 120 V. JUNCTION BOX WITH INTERMATIC #AG-2401 120 V SURGE ARRESTOR.
 3 1" CONDUIT AND FITTINGS TO POWER SUPPLY.
 4 120 V. POWER SUPPLY WIRE.
 5 RAIN SENSOR CONTROLLER INTERFACE WITH CABLE HARNESS. MOUNT INSIDE OF PUMP STATION ENCLOSURE.
 6 2" CONDUIT AND FITTINGS FOR TWO-WIRE CABLE.
 7 MAXICABLE 2-WIRE PATH TO DECODERS USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
 8 1" CONDUIT AND FITTINGS TO GROUNDING GRID.
 9 #10 BARE COPPER WIRE TO GROUNDING GRID.
 10 1" MIN. LB CONNECTOR WITH SENSOR WIRE TO RAIN SENSOR CONTROLLER. SEAL CONNECTOR CONNECTION AT PUMP ENCLOSURE.
 11 EXTERNAL ANTENNA.

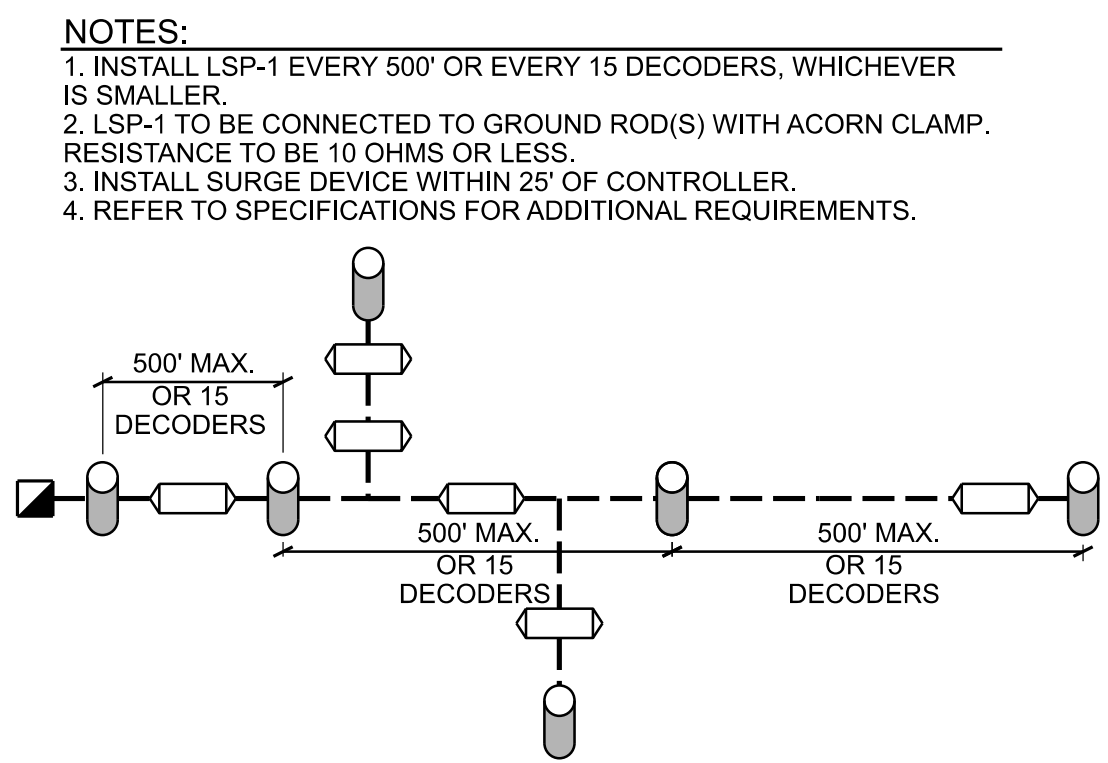
NOTES:
 1. SEAL ALL PENETRATIONS.
 2. PROVIDE ALL FITTINGS AS REQUIRED FOR PROPER INSTALLATION.
 3. ALL CONDUIT SHALL BE INSTALLED IN A NEAT AND CLEAN MANNER AND BE SECURED TO ALL SURFACES.
 4. VERIFY SIGNAL STRENGTH FOLLOWING INSTALLATION OF ANTENNA.

7 CONTROLLER NOT TO SCALE



LEGEND:
 1. CONTROL EQUIPMENT
 2. SOLID BARE COPPER WIRE (#6 AWG) FROM GROUNDING ROD TO SATELLITE. MAKE WIRE AS SHORT AND STRAIGHT AS POSSIBLE.
 3. COVER GROUNDING ROD WITH 10" ROUND VALVE BOX.
 4. 5/8" X 8" COPPER CLAD UL LISTED GROUNDING ROD.
 INSTALL RODS IN SOIL IN A TRIANGULAR PATTERN SPACED A MINIMUM OF 16' APART FROM EACH OTHER. GROUNDING GRID TO HAVE A RESISTANCE OF TEN (10) OHMS OR LESS.
 5. BARE COPPER WIRE (#6 AWG) BETWEEN GROUNDING RODS.
 6. CADWELD CONNECTOR
 7. FINISH GRADE.
 8. MIN. 2 CONG. SUPPORT BLOCKS.

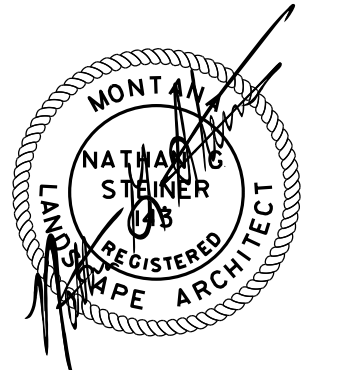
6 GROUNDING GRID NOT TO SCALE



5 DECODER GROUNDING SCHEMATIC - IVM NOT TO SCALE

LEGEND:

NOTES:
 1. INSTALL LSP-1 EVERY 500' OR EVERY 15 DECODERS, WHICHEVER IS SMALLER.
 2. LSP-1 TO BE CONNECTED TO GROUND ROD(S) WITH ACORN CLAMP. RESISTANCE TO BE 10 OHMS OR LESS.
 3. INSTALL SURGE DEVICE WITHIN 25' OF CONTROLLER.
 4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



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W.O. 23-31 MILLICE PARK IRRIGATION SYSTEM REPLACEMENT PUMP DETAIL

PUMP STATION SPECIFICATIONS:

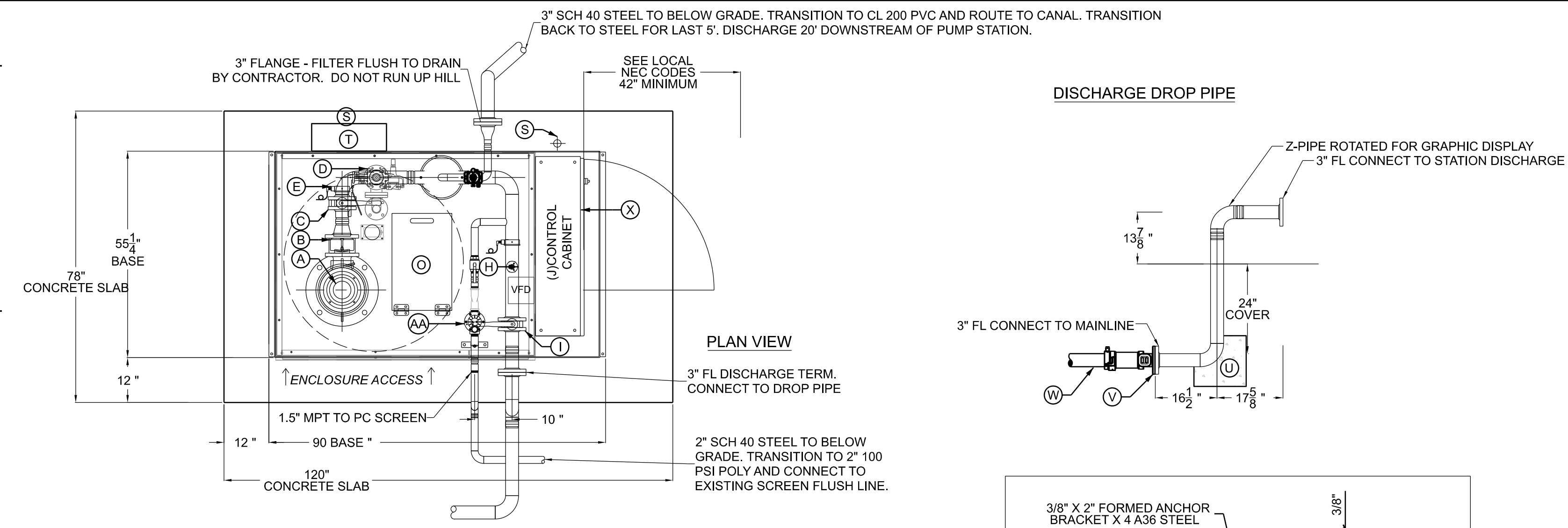
NAME: MILLICE PARK
 STATION MODEL: WM/TV-9000-7A-15-480-3-135-82
 STATION TOTAL PERFORMANCE: 135 GPM @ 82 PSI
 REGULATE PSI: 82
 PUMP HORSEPOWER: PUMP NO. 1: 15 HP
 CHECK VALVE SIZE: PUMP NO. 1: 4"
 ISOLATION VALVE SIZES: PUMP NO. 1: 3"
 DISCHARGE ISOLATION VALVE SIZE: 3"
 RELIEF VALVE SIZE: 2"
 PUMP STATION DISCONNECT: 60 AMP
 DISCHARGE MANIFOLD SIZE: 3"
 EXHAUST FAN REQUIREMENTS: 230 CFM
 POWER REQUIREMENTS: 480 V, 60 HZ, 3 PH, 32 FLA (EST.)
 POWER TO BE VERIFIED BY CONTRACTOR

STATION COMPONENTS:

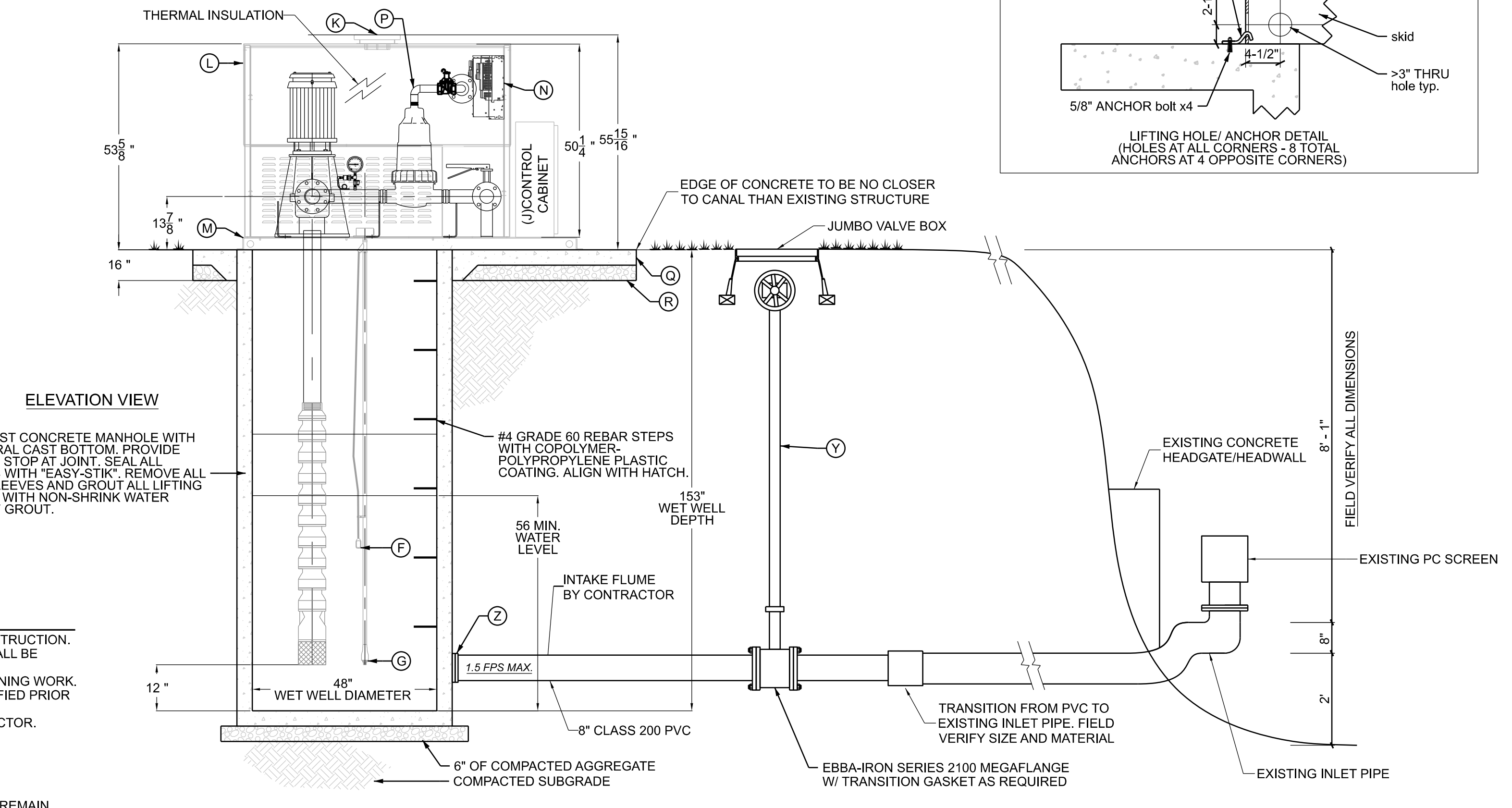
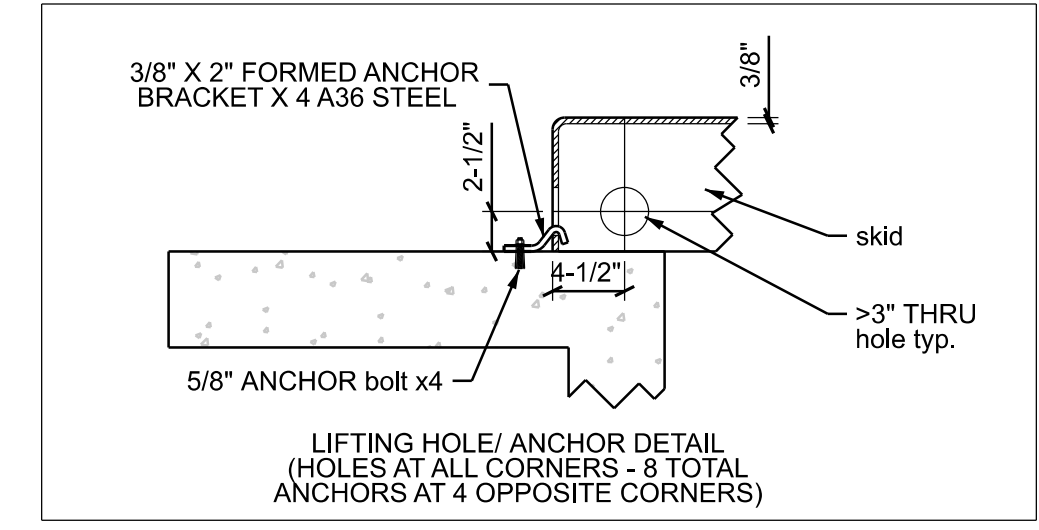
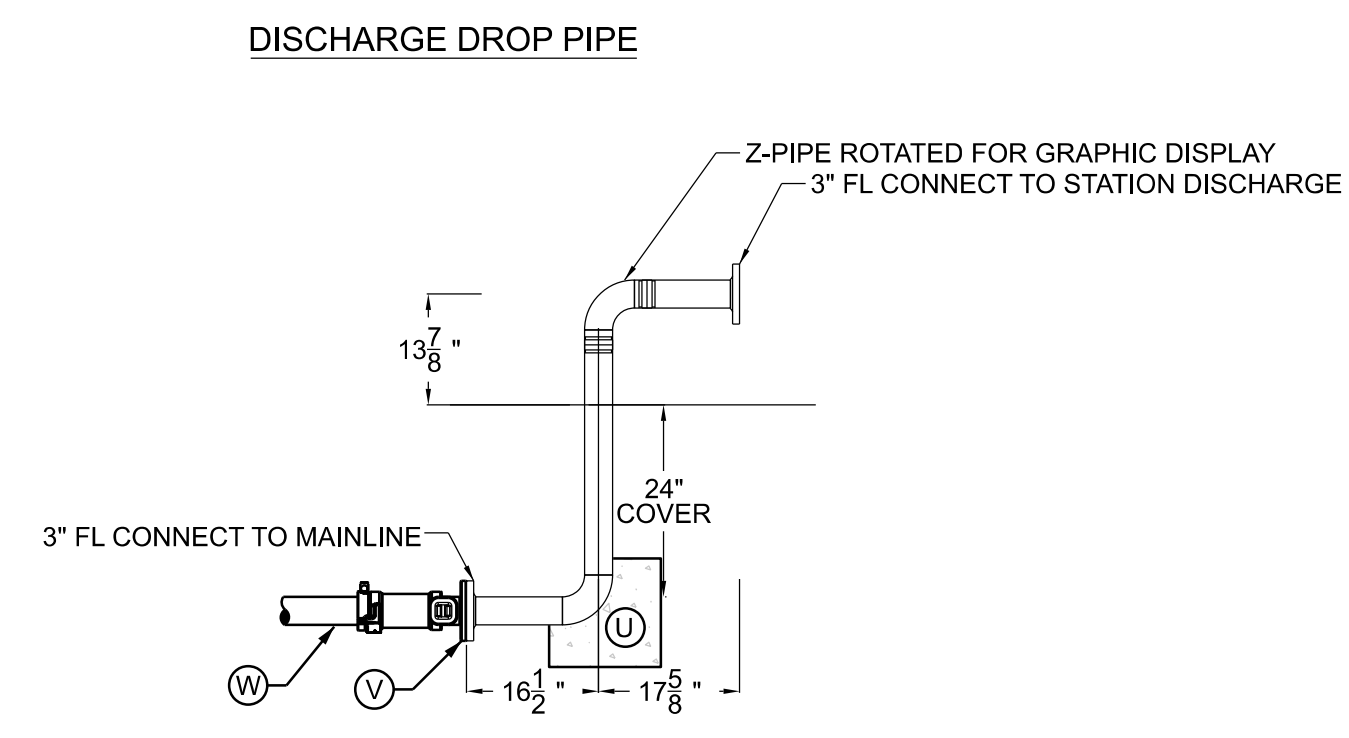
- (A) 15HP PUMP AND MOTOR
- (B) CHECK VALVE
- (C) PUMP ISOLATION VALVE
- (D) PRESSURE RELIEF VALVE
- (E) PRESSURE TRANSDUCER W/ GAUGE
- (F) LOW LEVEL FLOAT SWITCH
- (G) LEVEL TRANSDUCER
- (H) FLOW SENSOR
- (I) STATION ISOLATION VALVE 3"
- (J) CONTROL CABINET (DEAD FRONT)
- (K) ENCLOSURE FAN
- (L) MARINE GRADE ALUMINUM ENCLOSURE (UNPAINTED)
- (M) STAINLESS STEEL BASE (UNPAINTED)
- (N) VFD
- (O) WET WELL ACCESS HATCH
- (P) VAF V-200 STAINLESS STEEL FILTER - AUTOMATIC FLUSH - 500 MICRON
- (Q) 8" THICK M-4000 CONCRETE PAD WITH #5 REBAR @ 12" O.C., BOTH WAYS
- (R) 8" OF COMPACTED 1-1/2" MINUS AGGREGATE OVER COMPACTED SUB-GRADE
- (S) CONDUITS FOR POWER, CONTROL CABLE, GROUNDING, ETC. SHALL PENETRATE SLAB.
- (T) IRRIGATION CONTROLLER MOUNTED TO ENCLOSURE, COORDINATE WITH PUMP STATION MANUFACTURER
- (U) CONCRETE THRUST BLOCK, 2X SCHEDULE SIZE.
- (V) 3" D.I. FLG X BELL ADAPTER W/ FITTING TO PIPE RESTRAINT
- (W) MAINLINE
- (X) 480 / 120 V TRANSFORMER INSIDE OF DISCONNECT PANEL
- (Y) 8" MATCO BSRWG BUTTERFLY VALVE W/ GEAR OPERATOR AND MATCHING EXTENSION. PROVIDE SPACERS AS REQUIRED.
- (Z) LINK SEAL
- (AA) RAINBIRD PESB SERIES VALVE

NOTES:

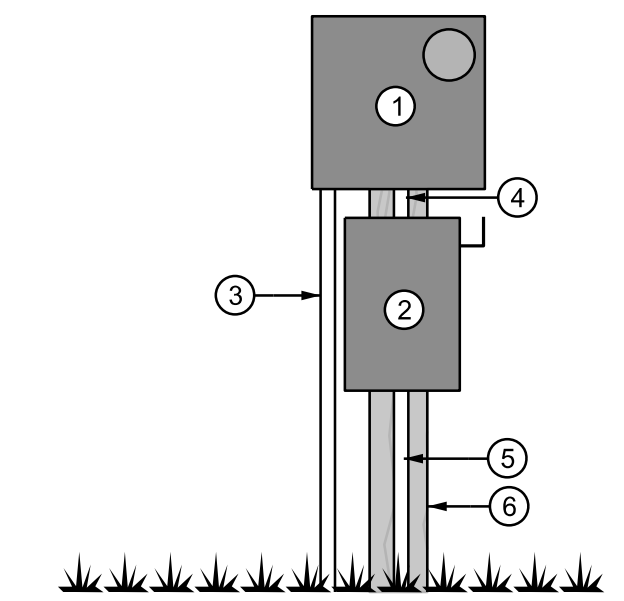
1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. ALL DIMENSIONS, LOCATION OF EXISTING EQUIPMENT, ETC. SHALL BE VERIFIED PRIOR TO SUBMITTING PUMP STATION SHOP DRAWINGS.
3. EXISTING PUMP AND CONTROL EQUIPMENT TO BE REMOVED BY CONTRACTOR.
4. SEAL ALL PENETRATIONS.
5. PROVIDE DEDICATED 120 V. CIRCUIT TO CONTROLLER.
6. CONCRETE PAD IS RECOMMENDED MINIMUM. TRANSFORMER, AND DISCONNECT MAY CHANGE POSITIONS.
7. PAINT ALL EXTERIOR PIPE & FITTINGS TO MATCH PUMP STATION PIPING.
8. EXISTING HEADWALL/HEADGATE, ROTATING SCREEN, AND INLET PIPE TO REMAIN AND BE PROTECTED.
9. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.



PLAN VIEW



ELEVATION VIEW



KEY NOTES:

1. 200 AMP METER AND BASE. METER BY UTILITY PROVIDER. CONTRACTOR SUPPLIED METER PANEL TO BE APPROVED BY UTILITY PROVIDER PRIOR TO ORDERING.
2. 60A, 600V, 3PH, NEMA 3R FUSED DISCONNECT.
3. CONDUCTORS IN CONDUIT FROM MAIN TRANSFORMER BY UTILITY PROVIDER. CONTRACTOR TO PROVIDE CONDUIT, 3" MIN. COORDINATE WITH UTILITY PROVIDER.
4. CONDUCTORS IN CONDUIT FROM METER TO DISCONNECT.
5. CONDUCTORS IN CONDUIT TO PUMP STATION DISCONNECT.
6. ALL NEW ELECTRICAL EQUIPMENT SHALL BE MOUNTED ON AN 8" SQ PRESSURE TREATED TIMBER.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS. DAMAGE TO ANY EXISTING UTILITIES OR EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. REMOVE EXISTING METER/BASE AND DISCONNECT FEEDING EXISTING PUMP AND CONTROLS.
3. REMOVE ANY UNUSED ELECTRICAL EQUIPMENT (EXISTING DISCONNECT, MOTOR STARTER AND MOTOR CIRCUIT).
4. ALL EQUIPMENT TO BE GROUNDED PER NEC.
5. COORDINATE WITH UTILITY PROVIDER AS REQUIRED.
6. COORDINATE LOCATION OF METER AND DISCONNECT WITH OWNER'S REPRESENTATIVE. DISCONNECT CAN BE INSTALLED ON OPPOSITE SIDE OF POST FROM METER.
7. EXPOSED CONDUIT SHALL BE RIGID METAL CONDUIT.
8. ALL ELECTRICAL WORK TO BE DONE PER THE NEC.
9. ELECTRICAL SERVICE TO BE 480 V, 3PH.

1 PUMP STATION DETAIL

NOT TO SCALE

2 ELECTRICAL SERVICE UPGRADE SCHEMATIC

NOT TO SCALE

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GOLF COURSE ARCHITECTURE
 IRRIGATION DESIGN
 LANDSCAPE ARCHITECTURE

1925 GRAND AVE. SUITE 105
 P.O. BOX 22943
 BILLINGS, MT 59104
 406/252-5545 FAX 245-9855

DRAWN BY: JAV, GSG
 DATE: 8/8/25
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 DATE: 8/8/25
 REV: -
 REV: -
 FILE: 11.4 PUMP DETAIL.DGN

SHEET 11.4