

Owner/Developer
 City of Evans
 1100 37th Street
 Evans, CO 80620-2036
 970-339-5344
 Attn: Cameron Parrott

Engineer
 HDR Engineering, Inc.
 303 E. 17th Ave., Suite 700
 Denver, CO 80203-1256
 303-764-1520
 Attn: John Seyer

Surveyor
 King Surveyors, Inc.
 9299 Eastman Park Drive
 970-686-5011
 Windsor, CO 80550

All work shall be constructed to the City of Evans Standards and Specifications

Approved by: _____ Date: _____
 Director of Public Works



<u>Agency</u>	<u>Contact</u>	<u>Phone</u>
Comcast 3737 W. 10th Street Greeley, CO 80634	Justin Van Patten	970-336-6013
Atmos Energy 1200 11th Avenue Greeley, CO 80631	Jerry Adams	970-304-2075
Duke Energy 1324 N. 7th Avenue Greeley, CO 80631	Lew Hagenlock	303-572-8002
Evans Fire Department 1100 37th Street Evans, CO 80620	Warren Jones	970-475-1108
Qwest 12680 Weld County Road 58 Greeley, CO 80634	Carson Ortega	970-350-2941
Xcel Energy 1500 6th Avenue Greeley, CO 80631	Terry Stencil	800-328-8226

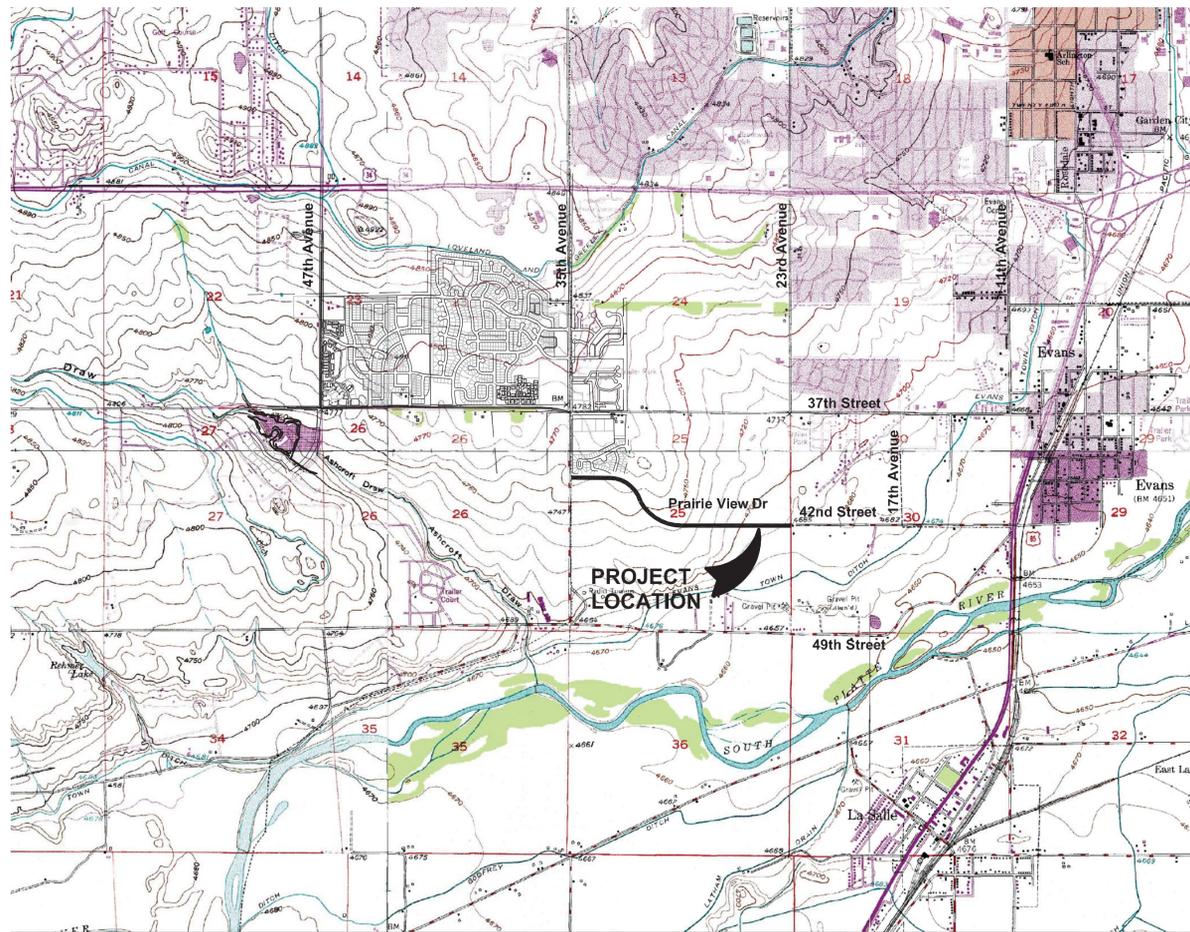


100% DESIGN FOR:

Prairie View Drive

HDR Project No.
00000000058704

City of Evans, Colorado
February, 2008



VICINITY MAP
SCALE: 1"=2000'



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GENERAL DESCRIPTION

A FULLY AUTOMATED SPRINKLER AND DRIP IRRIGATION SYSTEM WILL IRRIGATE TURF AREAS AND TREES. POP-UP SPRAY SPRINKLERS WILL IRRIGATE TURF. INLINE DRIP TUBING WILL IRRIGATE TREES IN MEDIANS.

NON-POTABLE WATER WILL BE USED FOR IRRIGATION WITH A POTABLE WATER BACKUP SYSTEM. THE POINT-OF-CONNECTION (P.O.C.) WILL BE AS SHOWN ON THE IRRIGATION PLANS.

A WALL MOUNT IRRIGATION CONTROLLER COMPATIBLE WITH THE CITY OF EVANS EXISTING CENTRAL CONTROL SYSTEM WILL BE INSTALLED UNDER THIS CONTRACT. THE CONTROLLER WILL UTILIZE A RAIN SENSOR TO FACILITATE THE INTERRUPTION OF IRRIGATION AT SPECIFIED RAINFALL THRESHOLD. A FLOW SENSOR AND MASTER VALVE WILL BE UTILIZED TO FACILITATE AUTOMATIC SHUT DOWN OF THE IRRIGATION SYSTEM IN THE EVENT OF A MAINLINE PIPE BREAK.

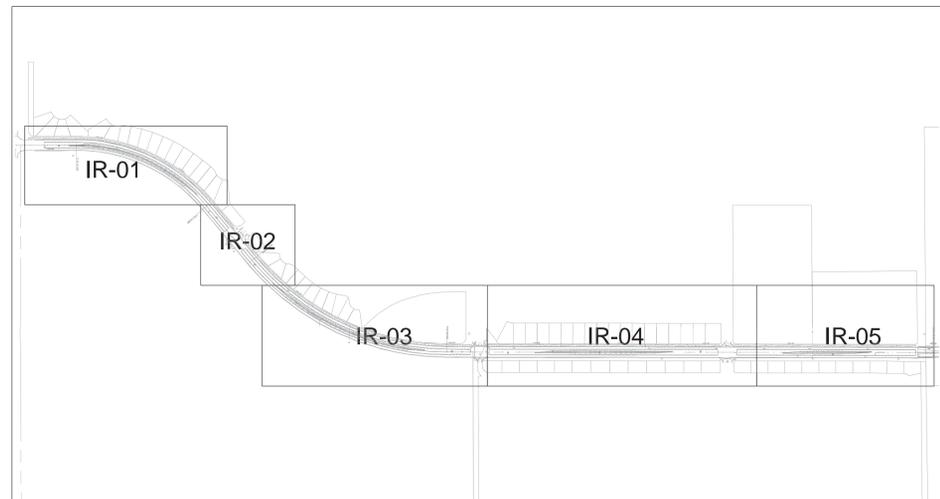
ISOLATION GATE VALVES PERMIT THE ISOLATION OF SECTIONS OF THE SYSTEM FOR REPAIRS OR MAINTENANCE. QUICK COUPLING VALVES HAVE BEEN PROVIDED THROUGHOUT THE SITE FOR INCIDENTAL WATERING.

PROVISIONS HAVE BEEN MADE FOR FUTURE ANTICIPATED IRRIGATION NEEDS.

GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE AND DISCHARGE FOR THE IRRIGATION SYSTEM AT EACH POINT-OF-CONNECTION INDICATED ON THE PLANS. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES WITH THE ASSUMPTIONS
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE ENGINEER.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
 - A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
 - B. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT PERMITTED.
6. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
 - A. TWO OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
 - B. TWO OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
7. SELECT NOZZLES FOR SPRAY SPRINKLERS WITH ARCS THAT PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVERSPRAY FOR THE SITE CONDITIONS.
8. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE TO BE INSTALLED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED, REQUIRES HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR.
9. CONNECT ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
10. WITH REGARD TO PIPE SIZING, THE FOLLOWING SHOULD BE NOTED:

IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
11. INSTALL VAN NOZZLES WHERE SPRAY ANGLES ARE LESS OR GREATER THAN WHAT A FIXED SPRAY NOZZLE CAN IRRIGATE WITHOUT EXCESSIVE OVERSPRAY.



KEYMAP
N.T.S.



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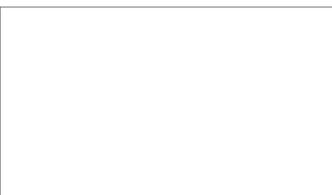
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Prairie View Drive

IRRIGATION COVER SHEET

FILENAME	P--Prairie.DWG	SHEET
SCALE	NTS	IR-00A

LEGEND

-  SLEEVING: PER SPECIFICATIONS
-  MAINLINE PIPE: CLASS 200 PVC PIPE (SIZE AS SHOWN)
-  C900 SDR14 PVC PIPE (SIZE AS SHOWN)
-  BACKFLUSH PIPE
-  LATERAL PIPE TO SPRINKLERS OR DRIP: CLASS 160 PVC PIPE (1-INCH SIZE UNLESS OTHERWISE INDICATED)
-  UNCONNECTED PIPE CROSSING
-  NON-POTABLE WATER METER ASSEMBLY
-  POTABLE WATER METER ASSEMBLY
-  IRRIGATION WATER CONNECTION ASSEMBLY
-  POINT-OF-CONNECTION (P.O.C.)
-  CAPPED MAINLINE FOR FUTURE USE
-  WINTERIZATION ASSEMBLY
-  MASTER VALVE ASSEMBLY
-  FLOW SENSOR ASSEMBLY
-  ISOLATION GATE VALVE ASSEMBLY
-  QUICK COUPLING VALVE ASSEMBLY
-  REMOTE CONTROL VALVE ASSEMBLY
-  SWING CHECK VALVE ASSEMBLY
-  POP-UP SPRAY SPRINKLER: RAIN BIRD 1800-SAM-PRS W/ 5 SERIES NOZZLE
PRESSURE: 30 PSI RADIUS: 5 FEET (SEE DETAILS FOR POP-UP HEIGHT)
FLOW (GPM): Q - 0.10 H - 0.20 F - 0.40
-  POP-UP SPRAY SPRINKLER: RAIN BIRD 1800-SAM-PRS W/ 8 SERIES NOZZLE
PRESSURE: 30 PSI RADIUS: 8 FEET (SEE DETAILS FOR POP-UP HEIGHT)
FLOW (GPM): Q - 0.26 H - 0.52 F - 1.05
-  POP-UP SPRAY SPRINKLER: RAIN BIRD 1800-SAM-PRS W/ 10 SERIES NOZZLE
PRESSURE: 30 PSI RADIUS: 10 FEET (SEE DETAILS FOR POP-UP HEIGHT)
FLOW (GPM): Q - 0.39 H - 0.79 F - 1.57
-  POP-UP SPRAY SPRINKLER: RAIN BIRD 1800-SAM-PRS W/ 12 SERIES NOZZLE
PRESSURE: 30 PSI RADIUS: 12 FEET (SEE DETAILS FOR POP-UP HEIGHT)
FLOW (GPM): Q - 0.65 H - 1.30 F - 2.60
-  POP-UP SPRAY SPRINKLER: RAIN BIRD 1800-SAM-PRS W/ 15 SERIES NOZZLE
PRESSURE: 30 PSI RADIUS: 15 FEET (SEE DETAILS FOR POP-UP HEIGHT)
FLOW (GPM): Q - 0.93 H - 1.85 F - 3.70
-  DRIP REMOTE CONTROL VALVE ASSEMBLY
-  INLINE DRIP TREE RING ASSEMBLY
-  INLINE DRIP FLUSH VALVE ASSEMBLY
-  IRRIGATION CONTROLLER UNIT
CONTROLLER 1: REFER TO SPECIFICATIONS, 40 STATIONS AVAILABLE, 29 STATIONS USED
-  RAIN SENSOR ASSEMBLY

-  INDICATES CONTROLLER AND CONTROLLER STATION NUMBER
-  INDICATES LATERAL DISCHARGE IN GPM
-  INDICATES REMOTE CONTROL VALVE SIZE IN INCHES

FLAG NOTES

- 1 INSTALL A POTABLE WATER METER ASSEMBLY IN THE APPROXIMATE LOCATION SHOWN. COORDINATE INSTALLATION OF THE CURB STOP VALVE, SERVICE LINE, AND POTABLE WATER METER ASSEMBLY WITH THE CITY OF EVANS. COORDINATE EXACT PLACEMENT OF POTABLE WATER METER ASSEMBLY WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 2 EXCAVATE AND EXPOSE EXISTING 4-INCH C900 PVC NON-POTABLE IRRIGATION MAINLINE STUB-OUT AT THE APPROXIMATE LOCATION SHOWN. EXTEND C900 IRRIGATION MAINLINE PIPE TO THE NON-POTABLE WATER METER ASSEMBLY. COORDINATE EXACT LOCATION OF THE EXISTING NON-POTABLE STUB-OUT WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 3 INSTALL NON-POTABLE WATER METER ASSEMBLY IN THE APPROXIMATE LOCATION SHOWN. COORDINATE EXACT LOCATION OF THE NON-POTABLE WATER METER ASSEMBLY WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 4 INSTALL THE IRRIGATION WATER CONNECTION ASSEMBLY IN THE APPROXIMATE LOCATION SHOWN. COORDINATE THE EXACT LOCATION OF THE IRRIGATION WATER CONNECTION ASSEMBLY WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 5 INSTALL WALL MOUNT IRRIGATION CONTROLLER INSIDE THE IRRIGATION WATER CONNECTION ASSEMBLY ENCLOSURE. ELECTRICAL POWER WILL BE PROVIDED TO WITHIN 5- FEET OF CONTROLLER LOCATION. COORDINATE EXACT LOCATION OF ELECTRICAL POWER WITH THE ELECTRICAL DRAWINGS AND NECESSARY TRADES ON SITE. PROVIDE ALL NECESSARY CONDUIT AND CONDUCTORS BETWEEN ELECTRICAL POWER SOURCE AND IRRIGATION CONTROLLER. MAKE ALL NECESSARY CONNECTIONS. COORDINATE EXACT PLACEMENT OF CONTROLLER WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 6 INSTALL RAIN SENSOR ON IRRIGATION WATER CONNECTION ASSEMBLY ENCLOSURE EXTERIOR AND ROUTE ABOVE GRADE RAIN SENSOR WIRING WITHIN ELECTRICAL CONDUIT. ROUTE RAIN SENSOR WIRING TO THE IRRIGATION CONTROLLER AND CONNECT THE RAIN SENSOR WIRING TO THE IRRIGATION CONTROLLER PER MANUFACTURER'S GUIDELINES. COORDINATE EXACT RAIN SENSOR PLACEMENT ON THE ENCLOSURE WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 7 FOR FUTURE USE: INSTALL DRIP REMOTE CONTROL VALVE ASSEMBLY PER THE IRRIGATION DETAILS IN THE APPROXIMATE LOCATION SHOWN. EXTEND 3- FEET OF LATERAL PIPE FROM THE ASSEMBLY AND CAP THE END OF THE LATERAL PIPE WITH A SOLVENT WELD SCH. 40 PVC CAP. INSTALL A 10-INCH ROUND VALVE BOX ABOVE THE CAPPED LATERAL PIPE. COORDINATE EXACT PLACEMENT OF THE DRIP REMOTE CONTROL VALVE ASSEMBLY WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 8 INSTALL A 14-INCH SLEEVE UNDER EXISTING ROADWAY. EMPLOY HORIZONTAL BORING TECHNIQUES TO INSTALL THE SLEEVE. INSTALL CASING SPACERS AND JOINT RESTRAINTS ON THE PVC PIPE ROUTED WITHIN SLEEVE PER PIPE MANUFACTURER'S RECOMMENDATIONS. REPAIR ANY DAMAGE TO THE WALK AFTER BORING AND SLEEVING ACTIVITIES. COORDINATE SLEEVE INSTALLATION WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 9 INSTALL ONE 6-INCH AND ONE 4-INCH SLEEVE UNDER EXISTING ROADWAY. THE 6-INCH SLEEVE IS INTENDED FOR MAINLINE AND THE 4-INCH SLEEVE FOR IRRIGATION WIRING. SOLVENT WELD PVC PIPE THAT IS ROUTED WITHIN SLEEVE. EMPLOY HORIZONTAL BORING TECHNIQUES TO INSTALL THE SLEEVES. REPAIR ANY DAMAGE TO THE ROADWAY AFTER BORING AND SLEEVING ACTIVITIES. COORDINATE SLEEVE INSTALLATION WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 10 INSTALL TWO AWG #14 CONTROL WIRES AND ONE AWG #12 COMMON WIRE FROM CONTROLLER "1" TO EACH OF THE REMOTE CONTROL VALVE ASSEMBLIES INDICATED FOR USE AS SPARE WIRE IN CASE OF CONTROL WIRE FAILURE. PROVIDE A 3-FOOT COILED LENGTH OF TWO SPARE WIRES IN ALL REMOTE CONTROL VALVE BOXES.
- 11 FOR FUTURE USE: PROVIDE 13 CONTROL WIRES AND TWO COMMON WIRES FROM CONTROLLER "1" INSIDE A 10-INCH ROUND VALVE BOX LOCATED ADJACENT TO THE CAPPED MAINLINE. COIL 3-FOOT LENGTH OF EACH WIRE INSIDE THE VALVE BOX. 11 CONTROL WIRES AND ONE COMMON WIRE IS INTENDED FOR FUTURE IRRIGATION ALONG 35TH AVENUE. THE REMAINING CONTROL WIRES AND COMMON WIRE ARE INTENDED FOR SPARE WIRING IN CASE OF CONTROL WIRE FAILURE.
- 12 FOR FUTURE USE: CAP MAINLINE PIPE IN THE APPROXIMATE LOCATION INDICATED. INSTALL AN ISOLATION GATE VALVE ASSEMBLY AT THE END OF THE MAINLINE IN THE APPROXIMATE LOCATION SHOWN. INSTALL A PUSH ON DUCTILE IRON CAP ON THE DISCHARGE SIDE OF THE ISOLATION VALVE AND RESTRAIN THE CAP WITH A THRUST BLOCK. INSTALL A QUICK COUPLING VALVE UPSTREAM OF THE ISOLATION VALVE FOR PROPER WINTERIZATION. COORDINATE EXACT LOCATION OF THE ISOLATION GATE VALVE AND QUICK COUPLER WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 13 IRRIGATION PIPE AND VALVES MAY BE SHOWN OUTSIDE OF THE PLANTING AREA IN THE HARDSCAPE FOR CLARITY ONLY. INSTALL ALL IRRIGATION COMPONENTS IN TURF AREA ON THE NORTH SIDE OF PRAIREVIEW DRIVE.
- 14 FIELD LOCATE EXISTING IRRIGATION MAINLINE PIPE IN THE APPROXIMATE LOCATION SHOWN. EXCAVATE AND EXPOSE EXISTING IRRIGATION MAINLINE PIPE AND WIRING AND INSTALL DRIP REMOTE CONTROL VALVE ASSEMBLY PER THE IRRIGATION DETAILS AND INSTALL NECESSARY REPAIR COUPLINGS. COORDINATE EXACT LOCATION WHERE THE DRIP REMOTE CONTROL VALVE ASSEMBLY IS TO BE INSTALLED WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 15 INSTALL A 3-INCH SLEEVE UNDER EXISTING ROADWAY. THE 3-INCH SLEEVE IS INTENDED FOR LATERAL PIPE ROUTING. EMPLOY HORIZONTAL BORING TECHNIQUES TO INSTALL THE SLEEVES. REPAIR ANY DAMAGE TO THE ROADWAY AFTER BORING AND SLEEVING ACTIVITIES. COORDINATE SLEEVE INSTALLATION WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 16 FOR FUTURE USE: INSTALL DRIP REMOTE CONTROL VALVE ASSEMBLY PER THE IRRIGATION DETAILS IN THE APPROXIMATE LOCATION SHOWN. FIELD LOCATE EXISTING IRRIGATION MAINLINE PIPE IN THE APPROXIMATE LOCATION SHOWN. EXCAVATE AND EXPOSE EXISTING IRRIGATION MAINLINE PIPE AND WIRING AND INSTALL DRIP REMOTE CONTROL VALVE ASSEMBLY. INSTALL NECESSARY REPAIR COUPLINGS. COORDINATE EXACT LOCATION WHERE THE DRIP REMOTE CONTROL VALVE ASSEMBLY IS TO BE INSTALLED WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 17 EXTEND LATERAL PIPE FROM THE DRIP REMOTE CONTROL VALVE ASSEMBLY AND TERMINATE THE LATERAL PIPE END WITHIN THE MEDIAN IN THE APPROXIMATE LOCATION SHOWN. CAP THE END OF THE LATERAL PIPE WITH A SOLVENT WELD SCH. 40 PVC CAP. INSTALL A 10-INCH ROUND VALVE BOX ABOVE THE CAPPED LATERAL PIPE. COORDINATE EXACT PLACEMENT OF THE CAPPED LATERAL PIPE WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.
- 18 INSTALL ONE 4-INCH SLEEVE UNDER EXISTING ROADWAY INTENDED FOR ELECTRICAL POWER WIRE ROUTING FROM THE EXISTING TRANSFORMER TO THE IRRIGATION WATER CONNECTION ASSEMBLY. EMPLOY HORIZONTAL BORING TECHNIQUES TO INSTALL THE SLEEVE. REPAIR ANY DAMAGE TO THE ROADWAY AFTER BORING AND SLEEVING ACTIVITIES. COORDINATE SLEEVE INSTALLATION WITH THE OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.

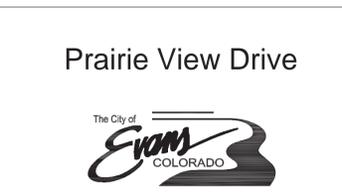
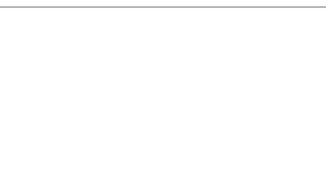


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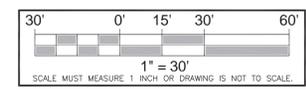
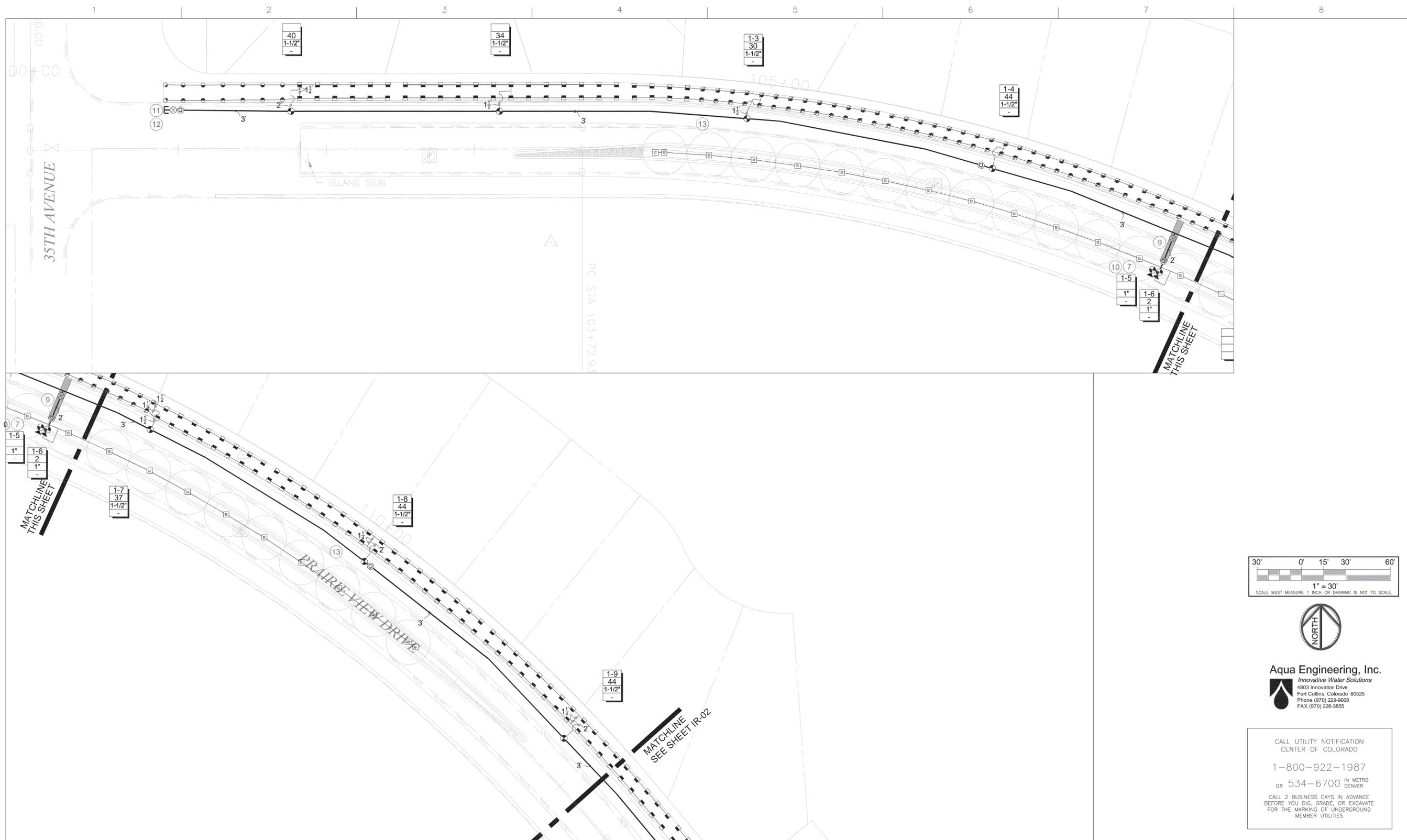


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3	2/22/08	100% FINAL DESIGN
2	1/15/08	100% DESIGN REVIEW SUBMITTAL
1	12/20/07	90% SUBMITTAL

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IRRIGATION COVER SHEET		
FILENAME	P--Prairie.DWG	SHEET
SCALE	NTS	IR-00B



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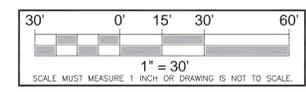
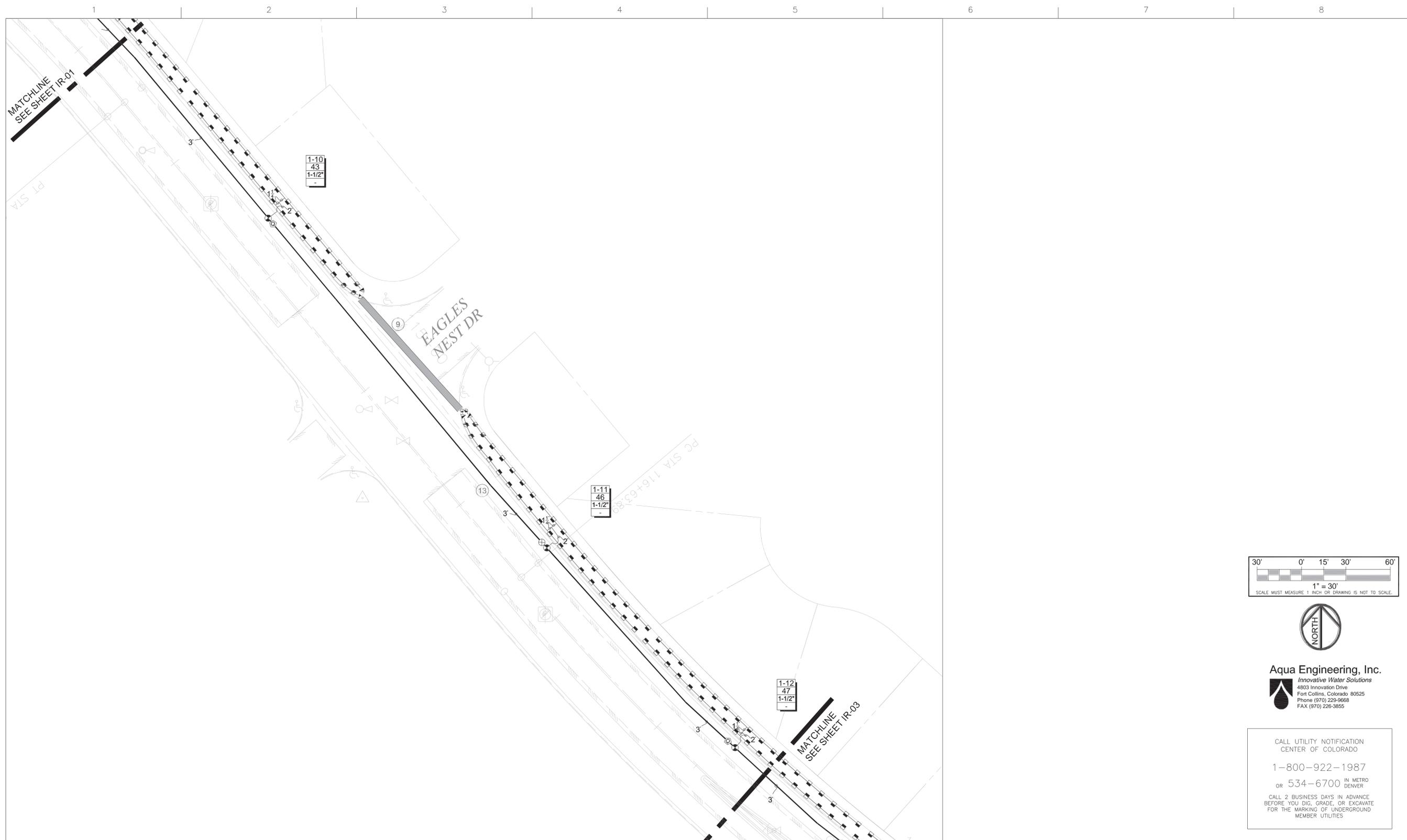
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Prairie View Drive



IRRIGATION PLAN

FILENAME	P--Prairie.DWG	SHEET
SCALE	1' = 30'-0"	IR-01



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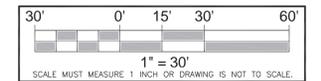
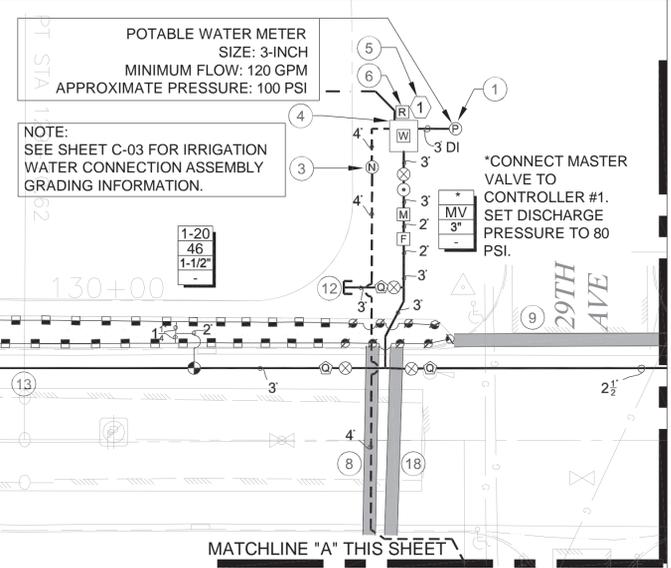
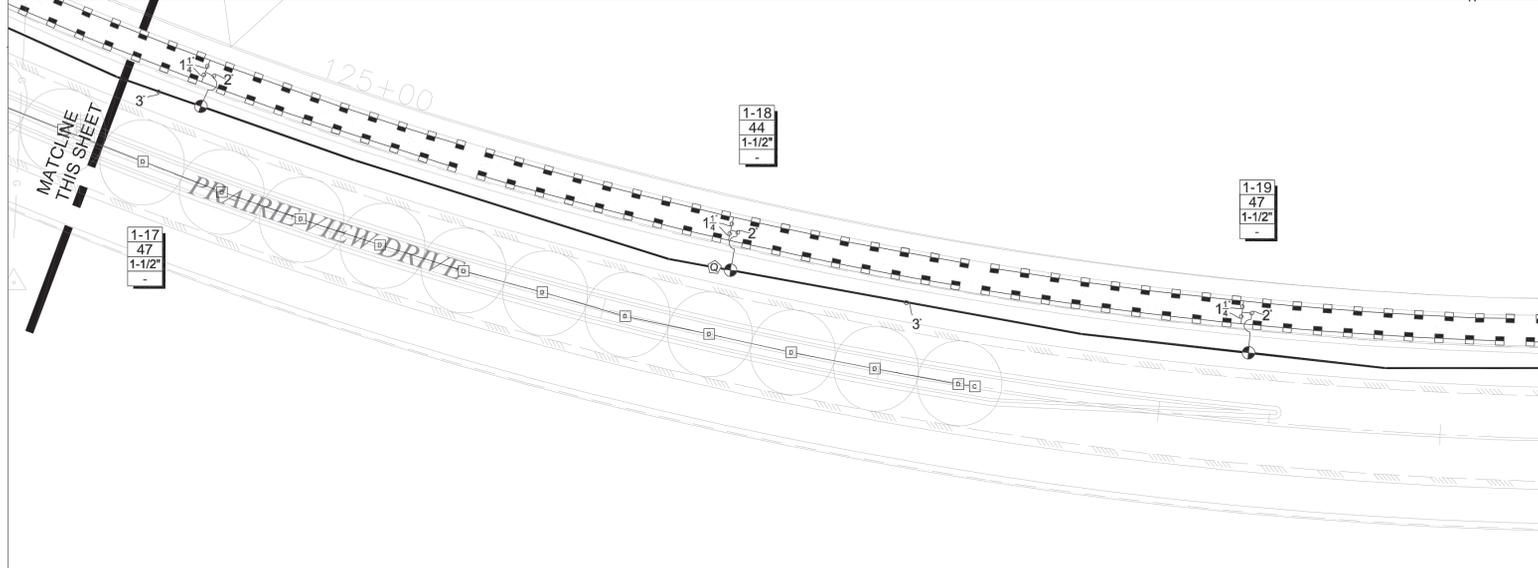
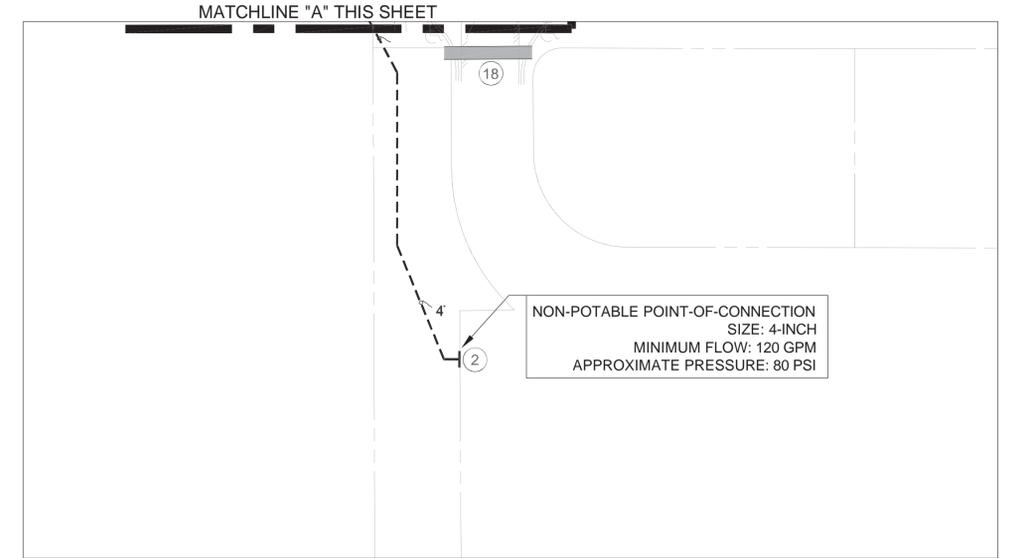
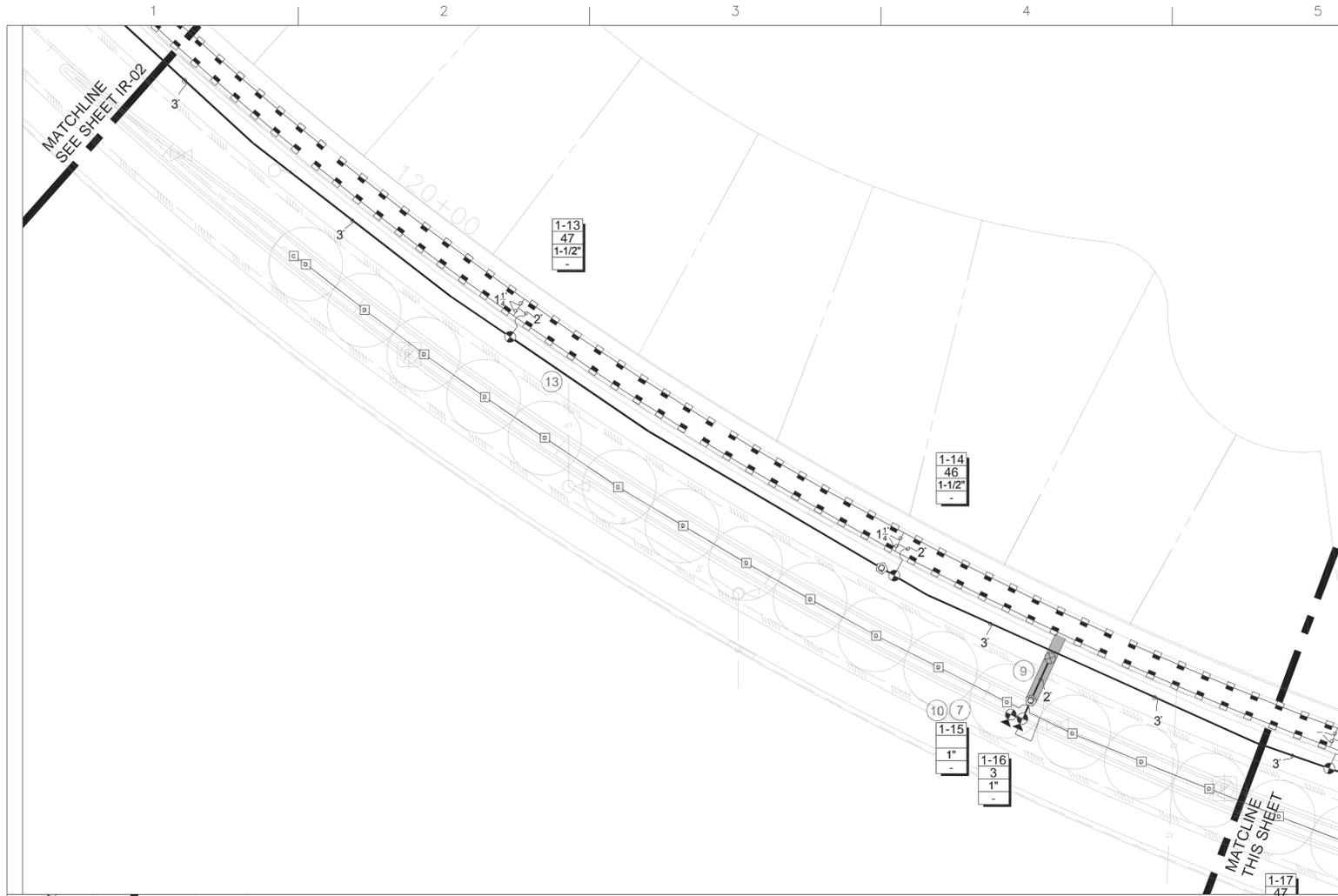
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Prairie View Drive

The City of
EVANS
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IRRIGATION PLAN

FILENAME	P--Prairie.DWG	SHEET	IR-02
SCALE	1' = 30'-0"		



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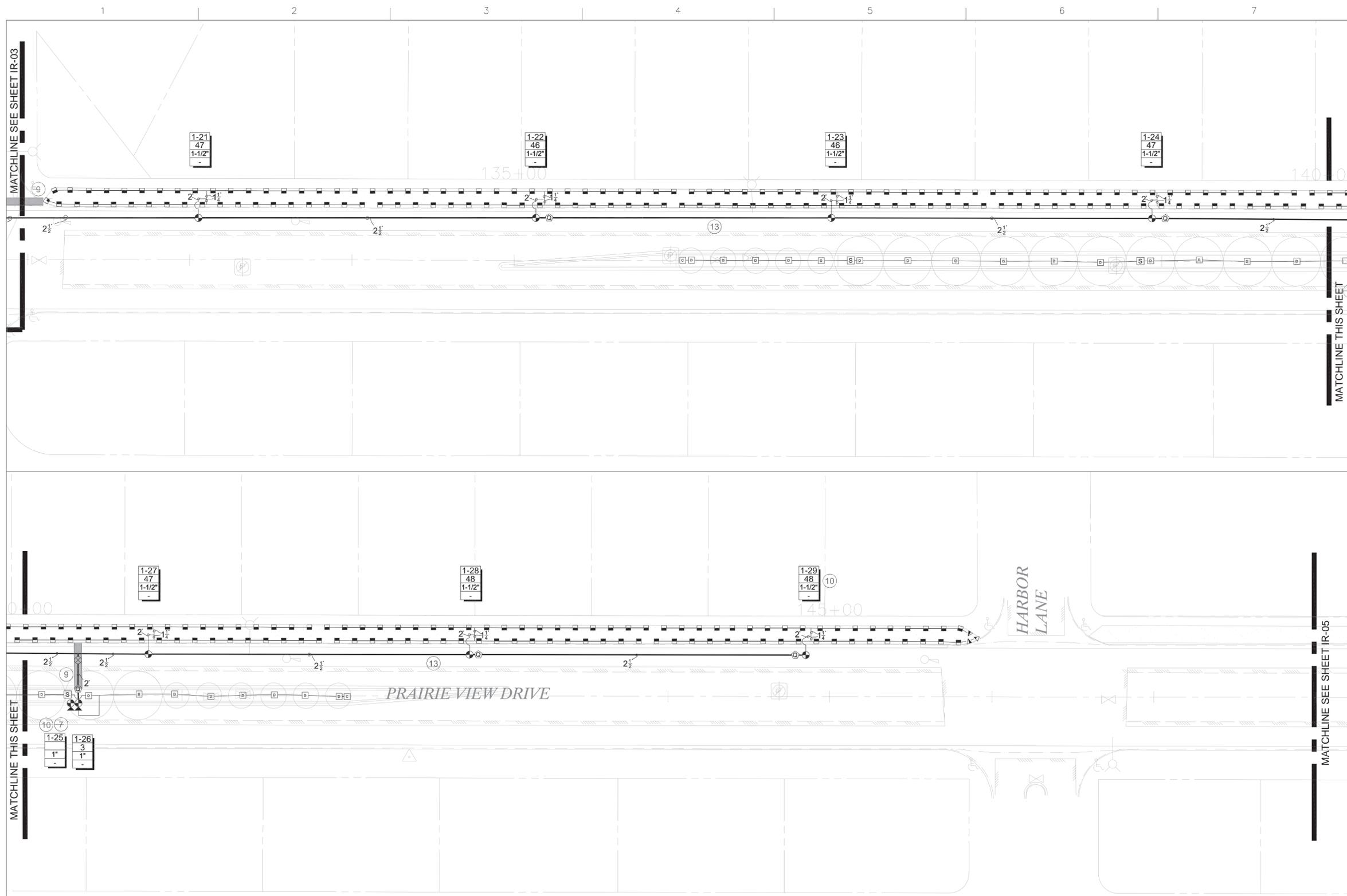
PROJECT MANAGER CBK
 PROJECT NUMBER 00000000058704

Prairie View Drive



IRRIGATION PLAN

FILENAME	P--Prairie.DWG	SHEET
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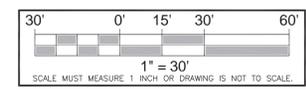


MATCHLINE SEE SHEET IR-03

MATCHLINE THIS SHEET

MATCHLINE THIS SHEET

MATCHLINE SEE SHEET IR-05



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 BHA Design
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 80525
 voice: 970.223.7577
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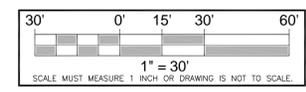
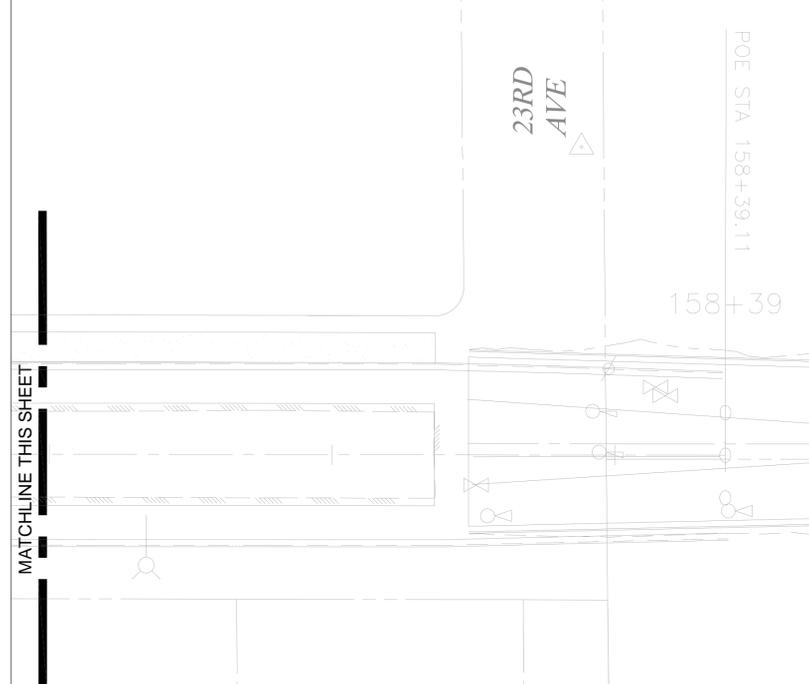
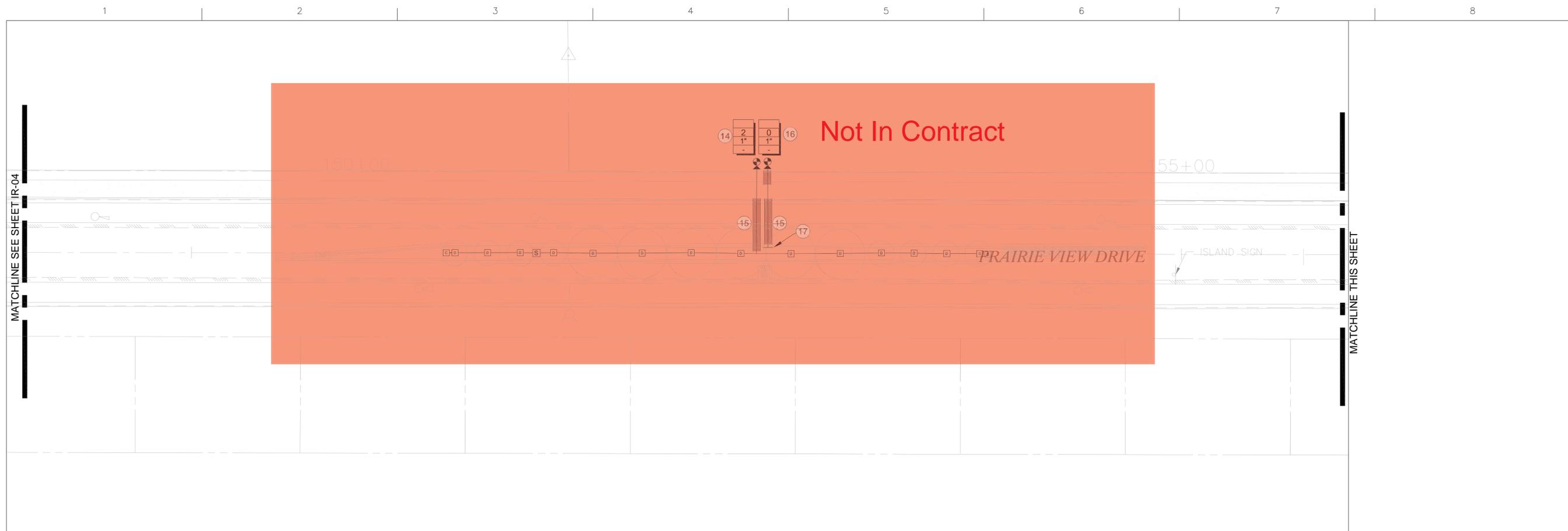
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ISSUE	DATE	DESCRIPTION
3	2/22/08	100% FINAL DESIGN
2	1/15/08	100% DESIGN REVIEW SUBMITTAL
1	12/20/07	90% SUBMITTAL

PROJECT MANAGER	CBK
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IRRIGATION PLAN	
FILENAME	P--Prairie.DWG
SCALE	1' = 30'-0"
SHEET	IR-04



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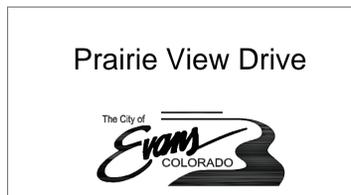
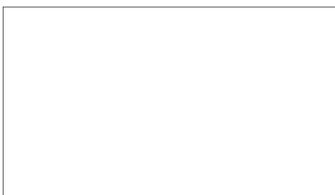
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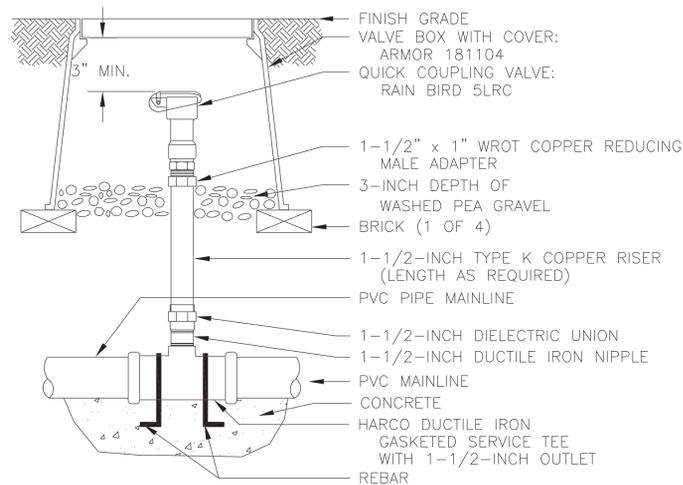
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PROJECT MANAGER	CBK
PROJECT NUMBER	000000000058704



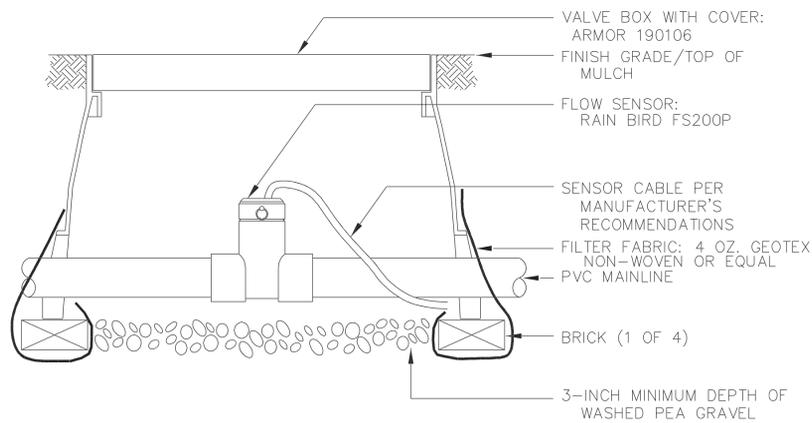
IRRIGATION PLAN

FILENAME	P--Prairie.DWG	SHEET
SCALE	1' = 30'-0"	IR-05



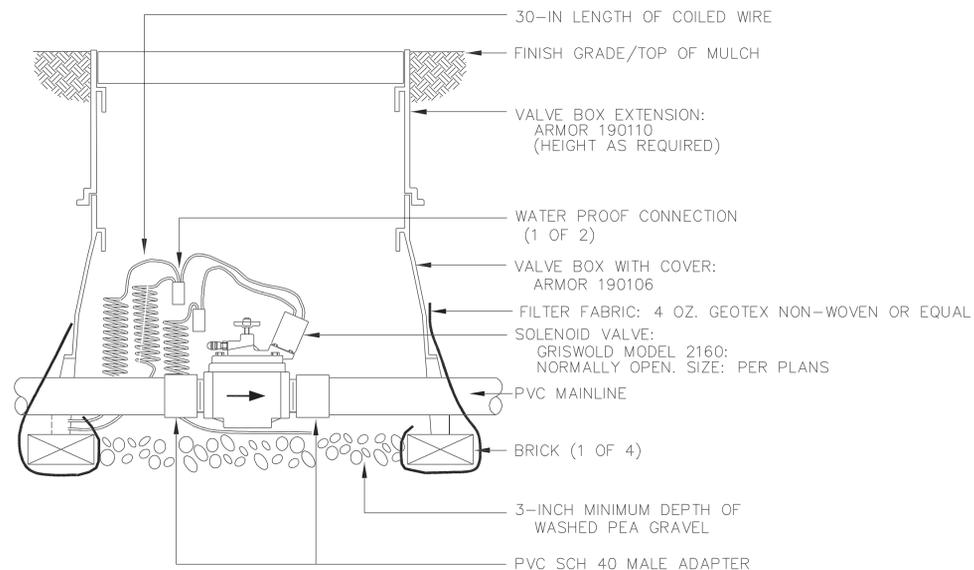
NOTE:
1. INSTALL A 4-INCH THICK CONCRETE PAD BELOW VALVE WITH NO. 4 REBAR WHEN USING PUSH ON TYPE VALVES OR TEES.

1 WINTERIZATION ASSEMBLY N.T.S.



NOTES:
1. ALLOW 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT RUN OF PIPE TO ACHIEVE PROPER FLOW REGIME.
2. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
3. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
4. UPSIZE PVC MAINLINE DOWNSTREAM OF FLOW SENSOR TO 3-INCH MAINLINE PIPE PER THE FLOW SENSOR MANUFACTURER'S GUIDELINES.

3 FLOW SENSOR ASSEMBLY N.T.S.



NOTES:
1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
4. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
5. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID.
6. INSTALL SO THAT NO PEA GRAVEL IS IN CONTACT WITH VALVE ASSEMBLY.
7. DOWNSIZE MAINLINE PIPE TO 2-INCH DOWNSTREAM OF MASTER VALVE ASSEMBLY AND IN ACCORDANCE TO THE FLOW SENSOR MANUFACTURER'S GUIDELINES.

2 MASTER VALVE ASSEMBLY N.T.S.

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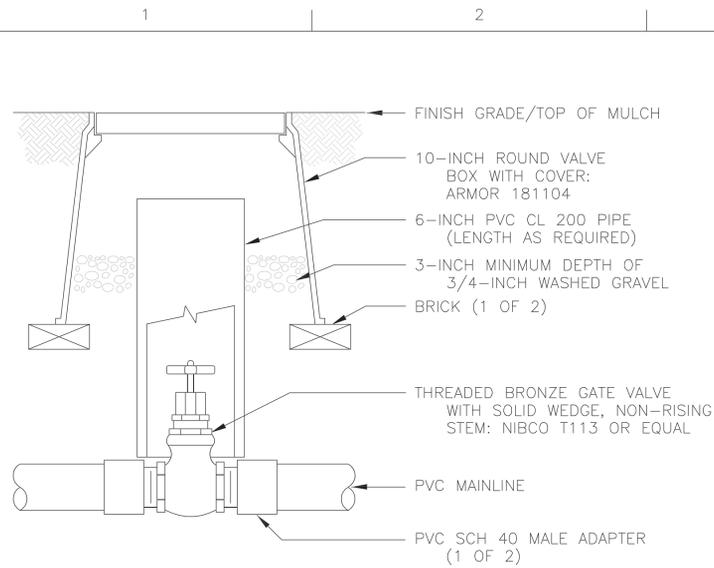
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PROJECT MANAGER	CBK
PROJECT NUMBER	000000000058704

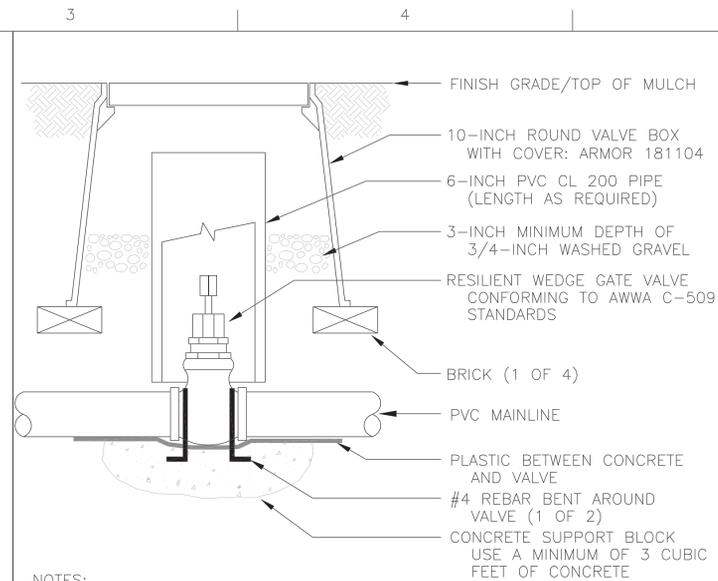
Prairie View Drive
The City of
EVANS
COLORADO

IRRIGATION DETAILS		
FILENAME	PD--Prairie.DWG	SHEET
SCALE	VARIABLE	IR-06



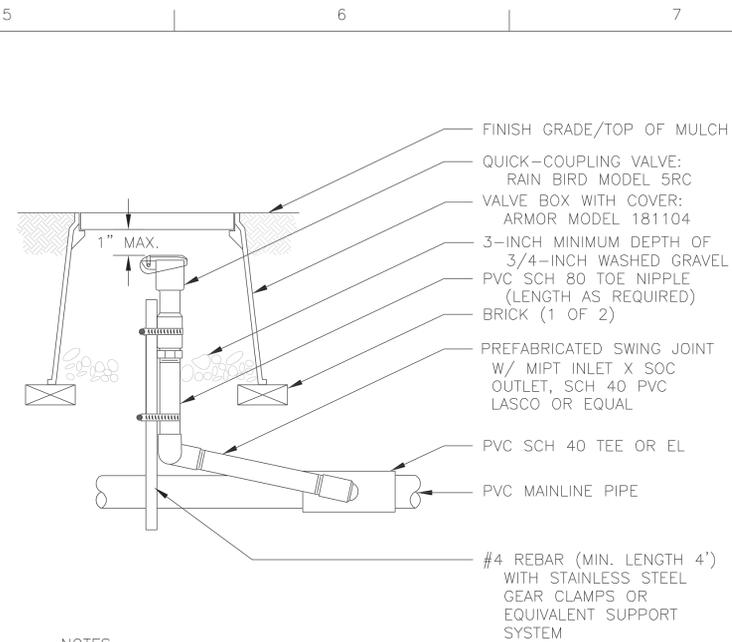
NOTE:
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.

1 ISOLATION GATE VALVE ASSEMBLY (2-1/2-INCH AND SMALLER) N.T.S.



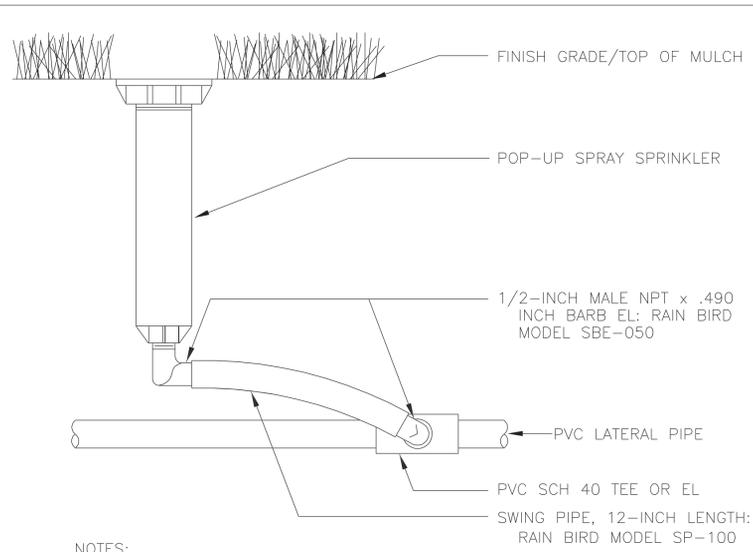
NOTES:
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.
2. INSTALL A 4-INCH THICK CONCRETE PAD BELOW VALVE WITH NO. 4 REBAR WHEN USING PUSH ON TYPE VALVES.
3. RESILIENT WEDGE GATE VALVE MAY HAVE EITHER MECHANICAL JOINT OR PUSH-ON GASKETED ENDS. THE OPERATOR IS A WRENCH NUT.
4. ANCHOR ISOLATION VALVE TO CONCRETE BY BENDING REBAR OVER EACH END OF VALVE AND EXTENDING A MINIMUM OF 6-INCHES INTO CONCRETE SUPPORT BLOCK.
5. USE NIBCO, KENNEDY, OR CLOW GATE VALVE.

2 ISOLATION GATE VALVE ASSEMBLY (3-INCH AND LARGER) N.T.S.



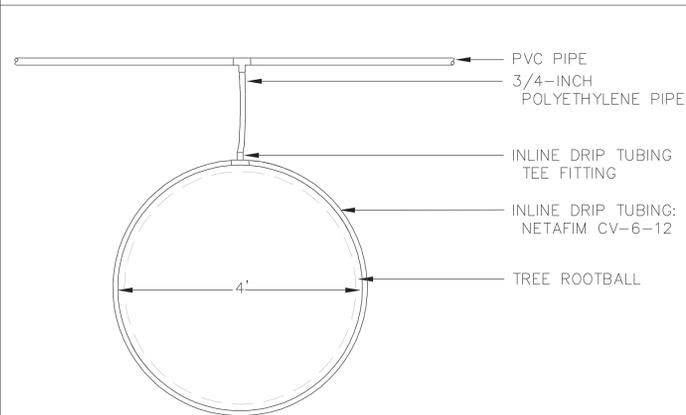
NOTES:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.
2. IF DUCTILE IRON FITTINGS ARE CALLED FOR IN THE SPECIFICATIONS, DELETE PVC SERVICE TEE SHOWN AND USE DUCTILE IRON SERVICE TEE.

3 QUICK COUPLING VALVE ASSEMBLY N.T.S.



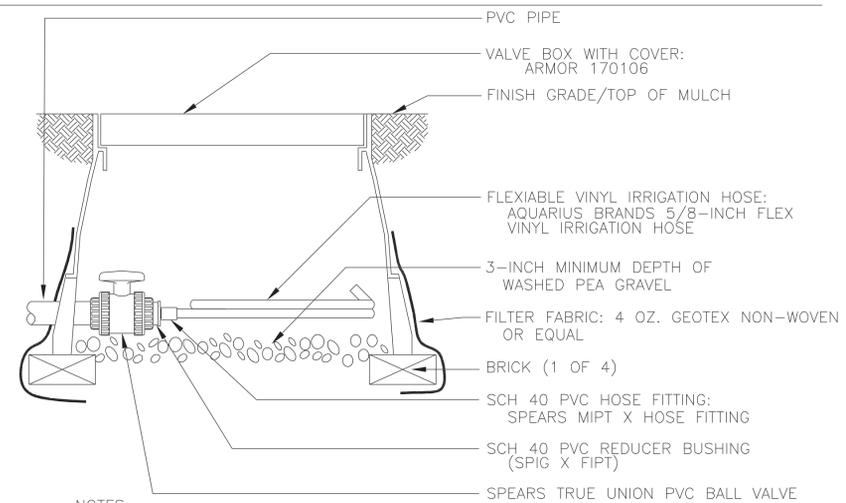
NOTES:
1. INSTALL 4-INCH POP-UP HEIGHT FOR TURF.

4 POP-UP SPRAY SPRINKLER ASSEMBLY N.T.S.



NOTES:
1. PROVIDE A RING OF INLINE DRIP TUBING AROUND EACH TREE ROOTBALL. EMITTER FLOW OF 0.6 GPH EACH, SPACED AT 1-FOOT O.C. ESTIMATED FLOW PER TREE IS 7 GPH (APPROXIMATELY 0.12 GPM PER TREE).
2. INSTALL INLINE DRIP TUBING 4-INCHES BELOW GRADE AROUND EACH TREE.

5 INLINE DRIP TREE RING ASSEMBLY N.T.S.



NOTES:
1. NOMINAL SIZE OF BALL VALVE TO MATCH NOMINAL LATERAL SIZE.
2. USE FOR FLUSHING AND WINTERIZATION OF DRIP LATERAL.
3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.

6 INLINE DRIP FLUSH VALVE ASSEMBLY N.T.S.

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ISSUE	DATE	DESCRIPTION
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2	1/15/08	100% DESIGN REVIEW SUBMITTAL
1	12/20/07	90% SUBMITTAL

PROJECT MANAGER	CBK
PROJECT NUMBER	000000000058704

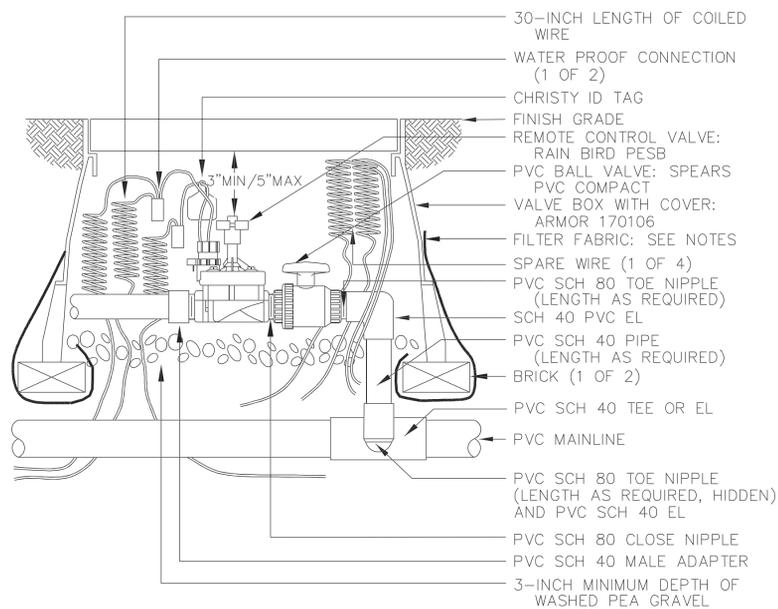
Prairie View Drive

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IRRIGATION DETAILS

FILENAME	P--Prairie.DWG
SCALE	VARIES

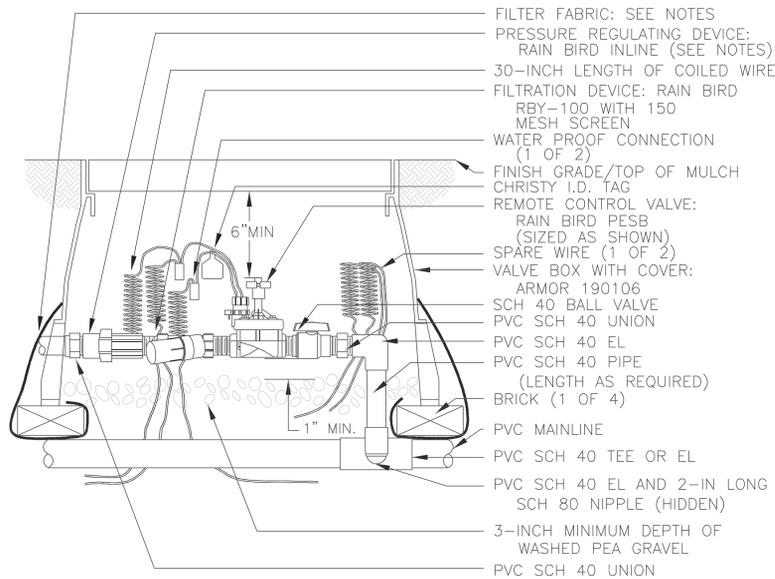
SHEET	IR-07
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NOTES:

1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
4. TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
5. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
6. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID, AND PROPER OPERATION OF BALL VALVE.
7. INSTALL SO THAT NO PEA GRAVEL IS IN CONTACT WITH VALVE ASSEMBLY.
8. INSTALL 4 OZ. GEOTEX NON-WOVEN FILTER FABRIC OR EQUAL.

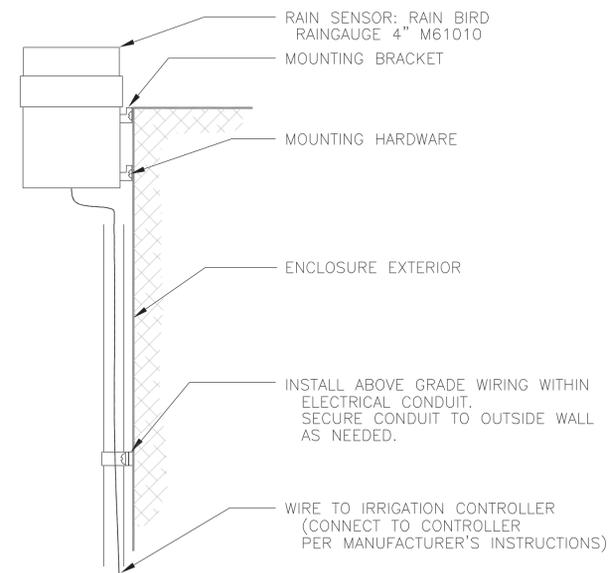
1 REMOTE CONTROL VALVE ASSEMBLY N.T.S.



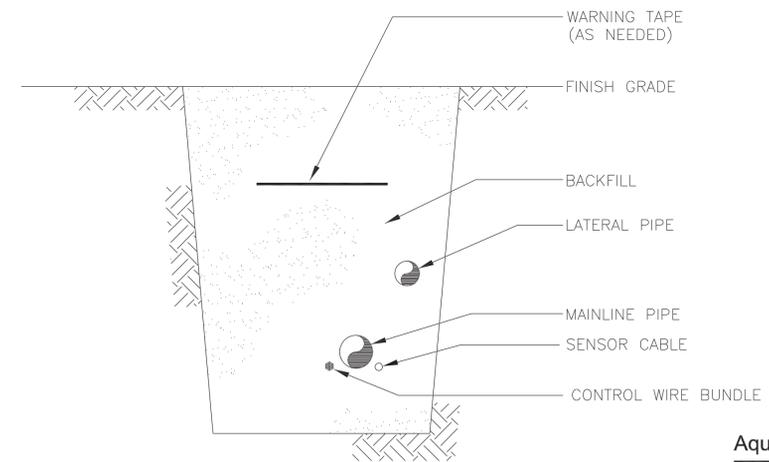
NOTES:

1. INSTALL RAIN BIRD PSI-L30X-075 PRESSURE REGULATOR ON REMOTE CONTROL VALVES WITH FLOWS BETWEEN 0.1-5 GPM.
2. INSTALL RAIN BIRD PSI-M40X-100 PRESSURE REGULATOR ON REMOTE CONTROL VALVES WITH FLOWS BETWEEN 6-15 GPM.
3. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
4. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
5. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
6. TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
7. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
8. POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID, AND PROPER OPERATION OF BALL VALVE.
9. INSTALL SO THAT NO PEA GRAVEL IS IN CONTACT WITH VALVE ASSEMBLY.
10. INSTALL 4 OZ. GEOTEX NON-WOVEN FILTER FABRIC OR EQUAL.

2 DRIP REMOTE CONTROL VALVE ASSEMBLY N.T.S.



3 RAIN SENSOR ASSEMBLY N.T.S.



NOTES:

1. REFER TO IRRIGATION SPECIFICATIONS FOR COVERAGE DEPTH TO BURIED PIPE AND WIRE.
2. INSTALL COPPER TRACING WIRE TEST STATION EVERY 500 FEET.
3. INSTALL COPPER TRACING WIRE ON TOP OF MAINLINE PIPE. TAPE THE COPPER TRACING WIRE TO THE MAINLINE PIPE EVERY 3 TO 4 FEET INTERVALS.

4 TYPICAL TRENCH DETAIL N.T.S.

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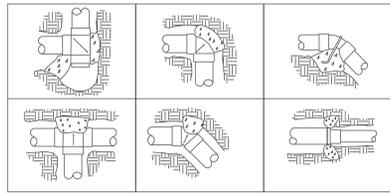
ISSUE	DATE	DESCRIPTION
3	2/22/08	100% FINAL DESIGN
2	1/15/08	100% DESIGN REVIEW SUBMITTAL
1	12/20/07	90% SUBMITTAL

PROJECT MANAGER	CBK
PROJECT NUMBER	00000000058704

Prairie View Drive

The City of **EVANS** COLORADO

IRRIGATION DETAILS		
FILENAME	P--Prairie.DWG	SHEET
SCALE	VARIES	IR-08

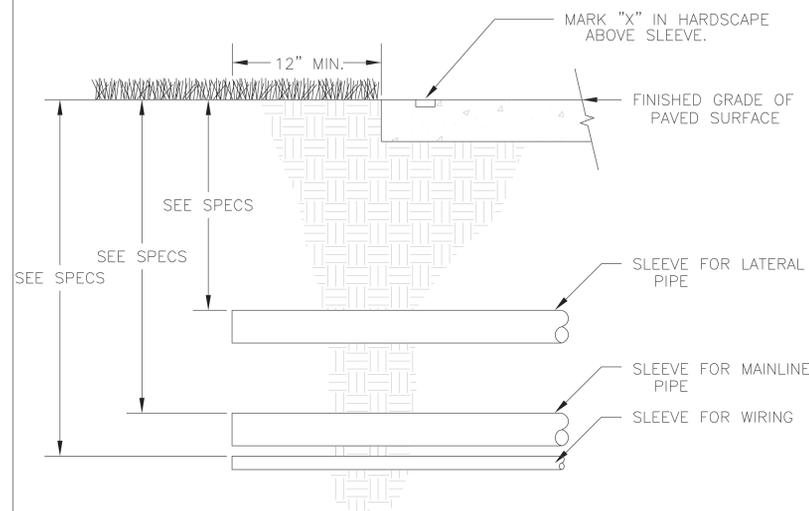


THRUST BLOCK SURFACE AREA AGAINST UNDISTURBED SOIL (SF)

FITTING SIZE	11 1/4" BEND	22 1/2" BEND	45° BEND	90° BEND	TEE OR DEAD END
3"	0.35	0.66	1.29	2.35	1.67
4"	0.56	1.08	2.12	3.87	2.75

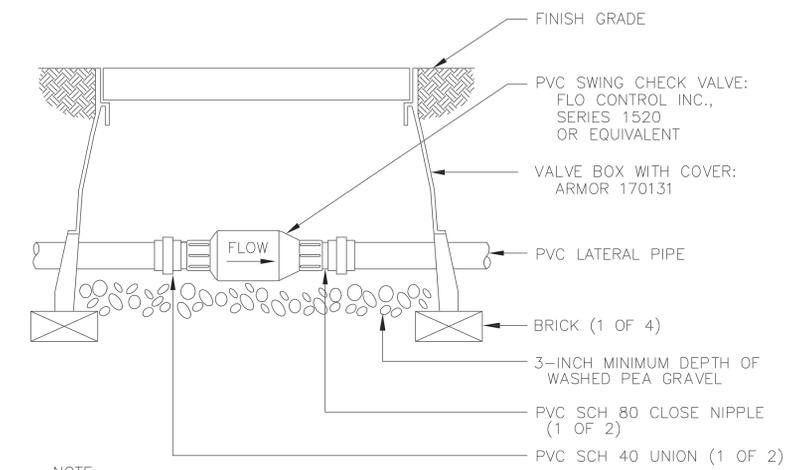
- NOTES:
1. INSTALL AND TEST ALL MAINLINE ACCORDING TO MANUFACTURER'S INSTALLATION SPECIFICATIONS.
 2. REFER TO SPECIFICATIONS FOR ALL TRENCH DEPTHS AND WIDTHS.
 3. USE NO. 4 REBAR WITH MASTIC COATING WHERE PIPE MUST BE ANCHORED TO THRUST BLOCK.
 4. INSTALL THRUST BLOCK SO THE HORIZONTAL AND VERTICAL DIMENSIONS OF THE THRUST BLOCK ARE APPROXIMATELY EQUAL.
 5. DETAIL IS FOR GENERAL INFORMATION ONLY AND IS BASED ON 140 PSI PRESSURE. EACH SITE WILL HAVE SPECIFIC REQUIREMENTS. SUBMIT THRUST BLOCK SIZING TO CITY OF EVANS FOR APPROVAL PRIOR TO INSTALLATION.

1 TYPICAL THRUST BLOCK DETAIL N.T.S.



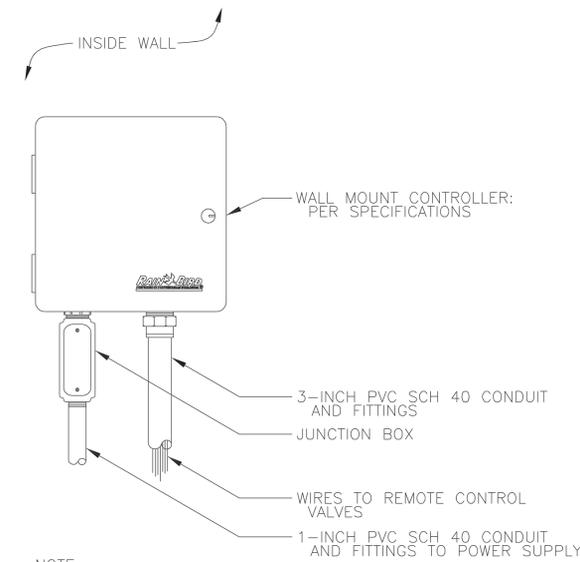
- NOTE:
1. INSTALL SLEEVE SO THAT ITS LOWEST ELEVATION OCCURS AT ONE END - NOT ALONG ITS LENGTH.

2 TYPICAL SLEEVING DETAIL N.T.S.



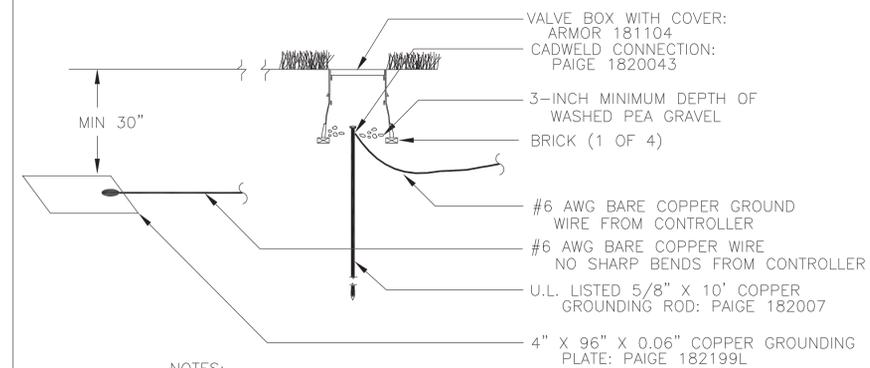
- NOTE:
1. NOMINAL SIZE OF CHECK VALVE TO MATCH NOMINAL SIZE OF LATERAL PIPE.

3 SWING CHECK VALVE ASSEMBLY N.T.S.



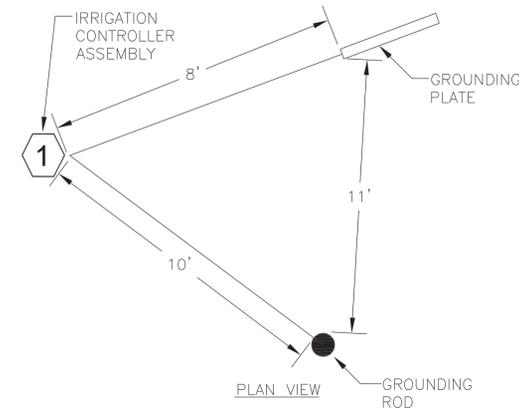
- NOTE:
1. PROVIDE ANTENNA PER SPECIFICATIONS.

4 IRRIGATION CONTROLLER ASSEMBLY N.T.S.



- NOTES:
1. INSTALL GROUND WIRE IN SEPARATE TRENCH FROM ALL OTHER WIRE.
 2. INSTALL GROUND ROD A MINIMUM OF 10- FEET FROM CONTROLLER.

5 CONTROLLER GROUNDING DETAIL N.T.S.



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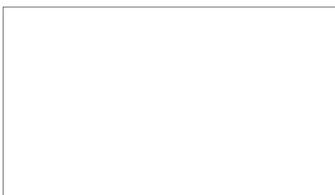
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PROJECT MANAGER	CBK
PROJECT NUMBER	000000000058704



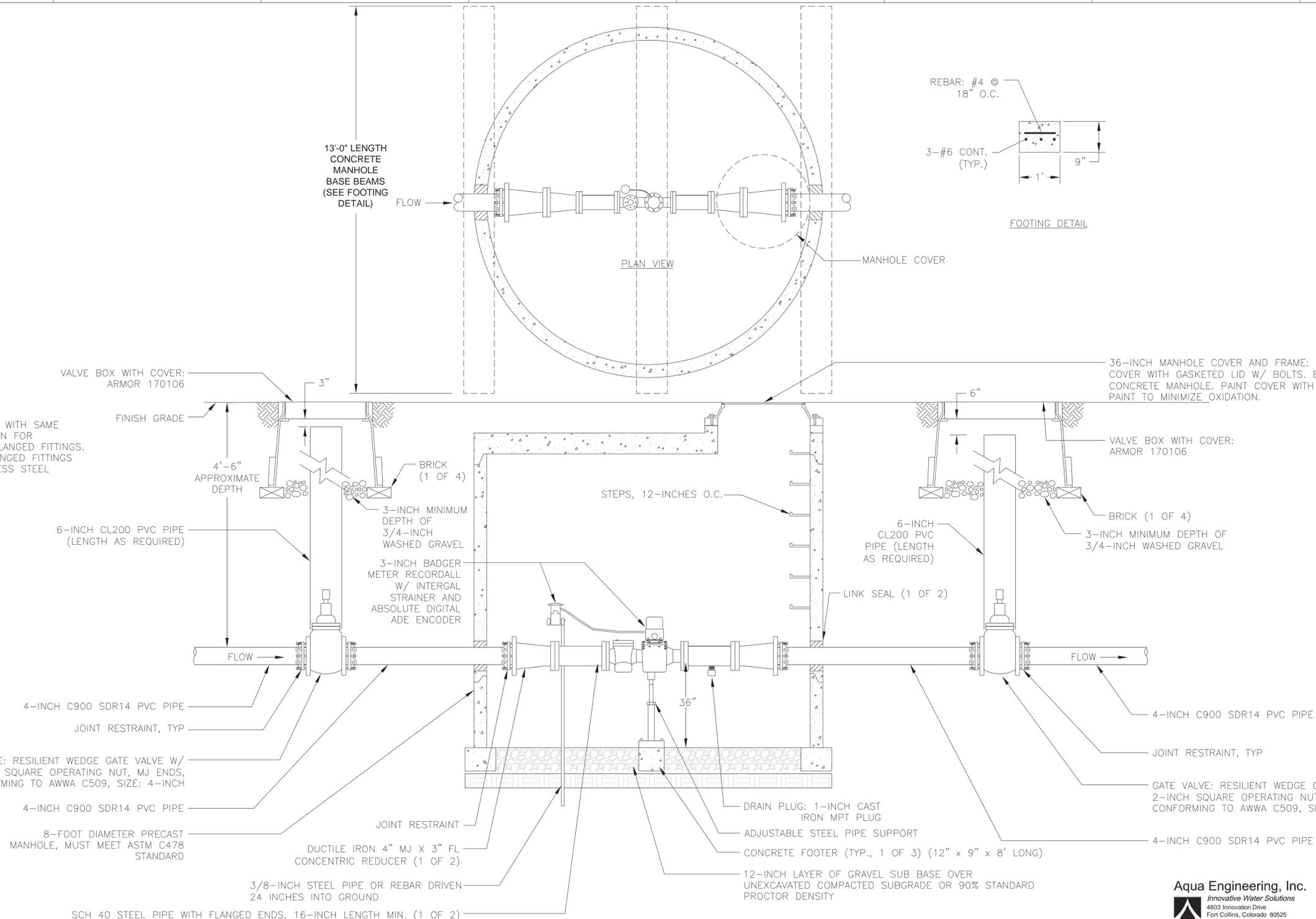
IRRIGATION DETAILS

FILENAME	P--Prairie.DWG	SHEET
SCALE	VARIES	IR-09

1 2 3 4 5 6 7 8

D
C
B
A

NOTES:
1. USE FLANGES WITH SAME BOLT PATTERN FOR ADJOINING FLANGED FITTINGS.
2. CONNECT FLANGED FITTINGS WITH STAINLESS STEEL BOLTS.



1 NON-POTABLE WATER METER ASSEMBLY

N.T.S.

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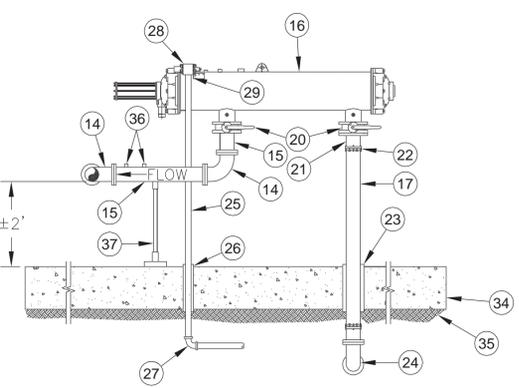
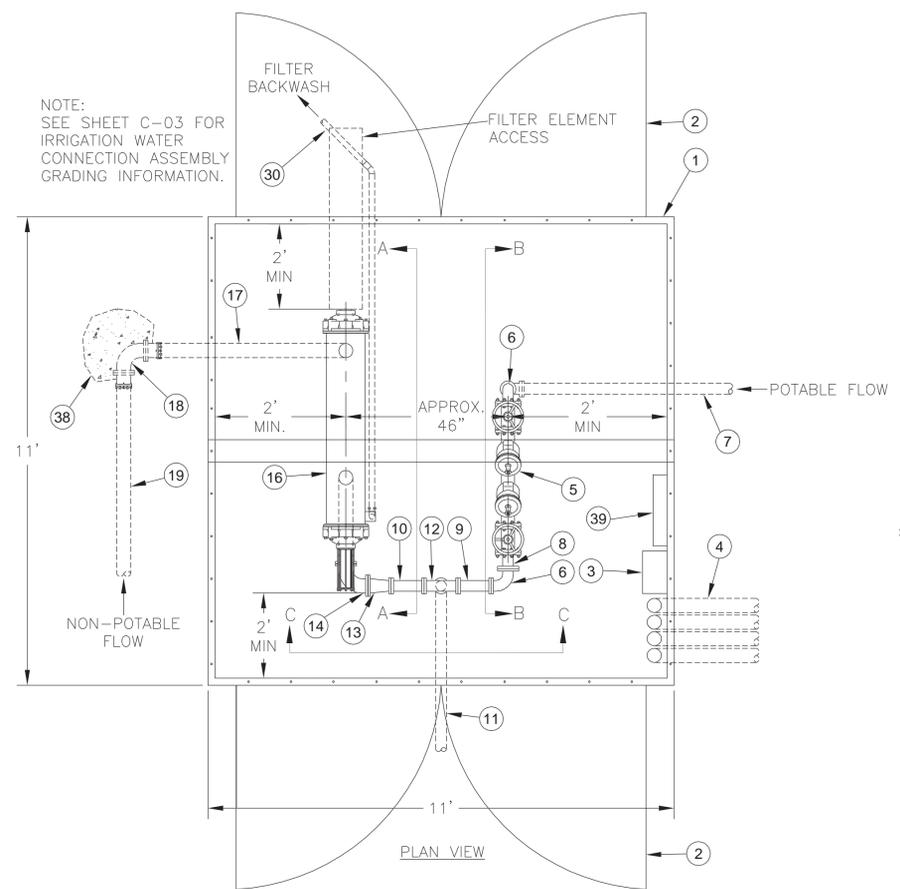
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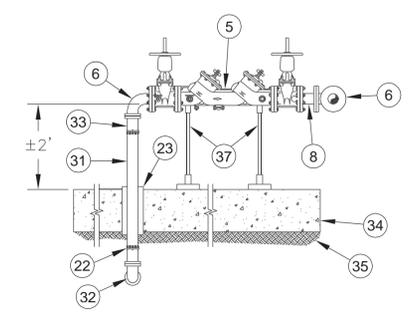
PROJECT MANAGER	CBK
PROJECT NUMBER	000000000058704

Prairie View Drive
The City of **EVANS** COLORADO

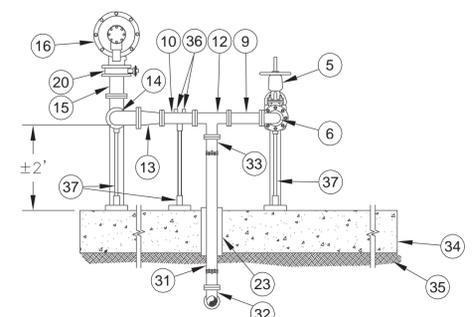
IRRIGATION DETAILS		
FILENAME	P--Prairie.DWG	SHEET
SCALE	VARIES	IR-10



SECTION AA



SECTION BB



SECTION CC

EQUIPMENT LIST

- ① 11' x 11' OUTSIDE DIMENSION, ALUMINUM ENCLOSURE WITH HINGED DOUBLE DOORS ON OPPOSING SIDES, REFER TO SPECIFICATIONS
- ② HINGED DOUBLE DOORS
- ③ WALL MOUNTED IRRIGATION CONTROLLER, REFER TO IRRIGATION PLANS AND SPECIFICATIONS
- ④ 4-INCH CL 200 SLEEVES (1 OF 4). INSTALL LONG RADIUS SCH 40 PVC SWEEP ELBOWS (NOT SHOWN) AND EXTEND SLEEVE ENDS 4- FEET MINIMUM BEYOND CONCRETE PAD. INSTALL A 10-INCH ROUND VALVE BOX OVER EACH SLEEVE END.
- ⑤ 3-INCH FEBCO 860 REDUCED PRESSURE BACKFLOW PREVENTOR
- ⑥ 3-INCH SCH 40 STEEL ELL, (FL x FL)
- ⑦ 3-INCH DUCTILE IRON PIPE FROM POTABLE WATER METER ASSEMBLY
- ⑧ 3-INCH SCH 40 STEEL PIPE, LENGTH AS REQUIRED, (FL X FL)
- ⑨ 3-INCH SCH 40 STEEL BLIND FLANGE SPOOL PIECE, LENGTH: 8-INCHES
- ⑩ 3-INCH SCH 40 STEEL OPEN FLANGE SPOOL PIECE, LENGTH: 8-INCHES
- ⑪ 3-INCH CL 200 PVC PIPE
- ⑫ 3-INCH SCH 40 STEEL TEE, (FL X FL x FL)
- ⑬ 4" x 3" SCH 40 STEEL CONCENTRIC REDUCER, (FL X FL)
- ⑭ 4-INCH SCH 40 STEEL ELL, (FL x FL)
- ⑮ 4-INCH SCH 40 STEEL PIPE, LENGTH AS REQUIRED, (FL X FL)
- ⑯ 4-INCH AMIAD FILTOMAT 104LP HYDRAULIC FILTER WITH 300 MICRON SCREEN AND 4-INCH FLANGE CONNECTIONS.
- ⑰ 4-INCH DUCTILE IRON PIPE, LENGTH AS REQUIRED
- ⑱ DUCTILE IRON MJ x MJ ELL RESTRAINED WITH JOINT RESTRAINTS, BOTH SIDES
- ⑲ 4-INCH C900 SDR14 PVC PIPE FROM NON-POTABLE WATER METER ASSEMBLY
- ⑳ 4-INCH SCH 40 STEEL BUTTERFLY VALVE
- ㉑ 4-INCH DUCTILE IRON MJ x FL FITTING
- ㉒ JOINT RESTRAINT
- ㉓ 12-INCH SCH 40 PVC SLEEVE
- ㉔ 4-INCH DUCTILE IRON ELL
- ㉕ 1-1/2-INCH SCH 40 PVC BACKFLUSH PIPE
- ㉖ 6-INCH CL 200 PVC SLEEVE
- ㉗ 1-1/2-INCH SCH 40 PVC ELL
- ㉘ 1-1/2-INCH MPT FILTER BACKFLUSH VALVE DISCHARGE END
- ㉙ NECESSARY 1-1/2-INCH SCH 40 PVC FITTINGS
- ㉚ 1-1/2-INCH SCH 40 45° FITTING
- ㉛ 3-INCH DUCTILE IRON PIPE
- ㉜ 3-INCH DUCTILE IRON ELL
- ㉝ 3-INCH DUCTILE IRON MJ x FL FITTING
- ㉞ 12-INCH THICK CONCRETE PAD, 3000 PSI CONCRETE WITH #6 REBAR, 12 INCHES O.C. BOTH WAYS. EXTEND CONCRETE PAD 12-INCHES ALL DIRECTIONS FROM ALUMINUM ENCLOSURE.
- ㉟ COMPACT SUBGRADE TO 90% STANDARD PROCTOR DENSITY
- ㊱ 1-INCH THREAD-O-LETS (2)
- ㊲ STEEL PIPE SUPPORT
- ㊳ THRUST BLOCK
- ㊴ 500 WATT WALL MOUNTED ELECTRIC HEATER, 240 VOLT SINGLE PHASE INPUT, GRAINGER STOCK MODEL NUMBER 3UH18 OR EQUAL

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1 IRRIGATION WATER CONNECTION ASSEMBLY

1/2" = 1'



bha
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 1403 Innovation Drive
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 80525
 voice: 970.223.7577
 fax: 970.223.1827

HDR
 HDR Engineering, Inc.

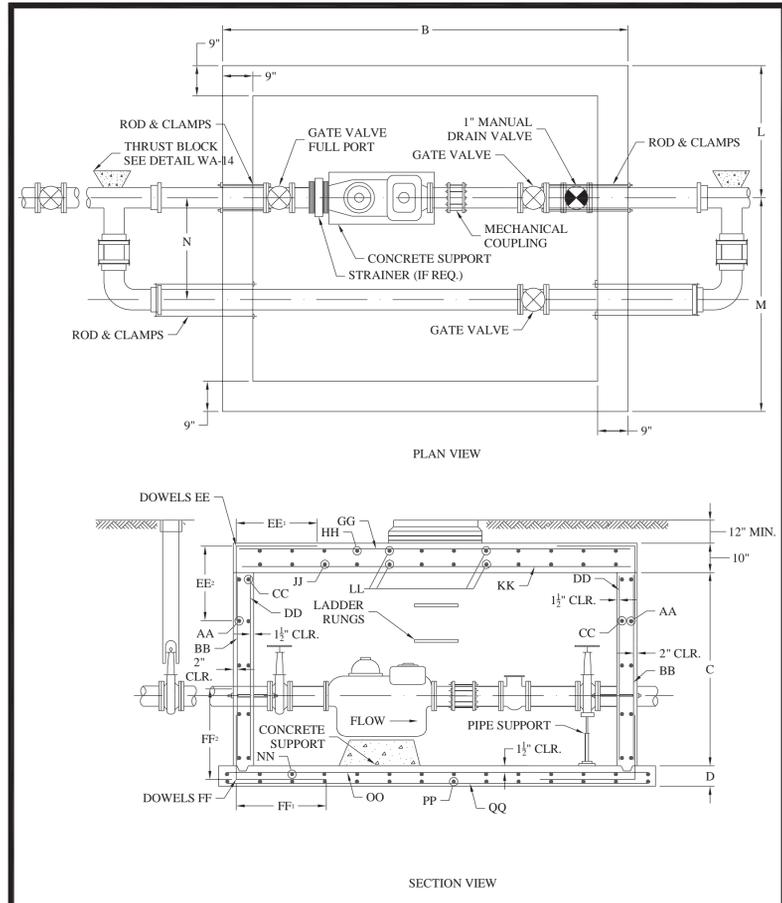
ISSUE	DATE	DESCRIPTION
3	2/22/08	100% FINAL DESIGN
2	1/15/08	100% DESIGN REVIEW SUBMITTAL
1	12/20/07	90% SUBMITTAL

PROJECT MANAGER	CBK
PROJECT NUMBER	00000000058704

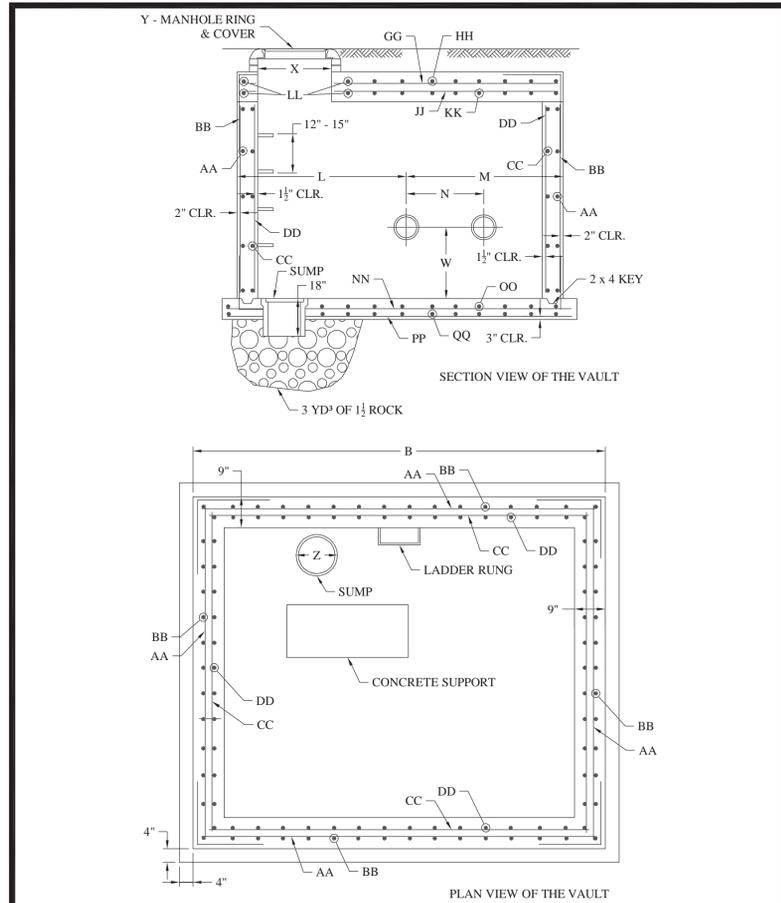
Prairie View Drive

IRRIGATION DETAILS

FILENAME	PD-Prairie.DWG	SHEET
SCALE	VARIABLE	IR-11



EVANS COLORADO
Public Works Department
METER SETTING DETAIL FOR 3" AND LARGER
SHEET 1 OF 4
Scale: N.T.S. WA-9 April 2004



EVANS COLORADO
Public Works Department
METER SETTING DETAIL FOR 3" AND LARGER
SHEET 2 OF 4
Scale: N.T.S. WA-9 April 2004

- NOTES:
 1. THE POTABLE WATER DETAILS FROM THE CITY OF EVANS HAVE BEEN PROVIDED FOR REFERENCE.
 2. INSTALL THE 3-INCH METER PER CITY STANDARDS.
 3. COORDINATE INSTALLATION OF THE SERVICE LINE, CURB STOP VALVE, AND METER WITH THE CITY OF EVANS.

1 POTABLE WATER METER DETAILS
N.T.S.

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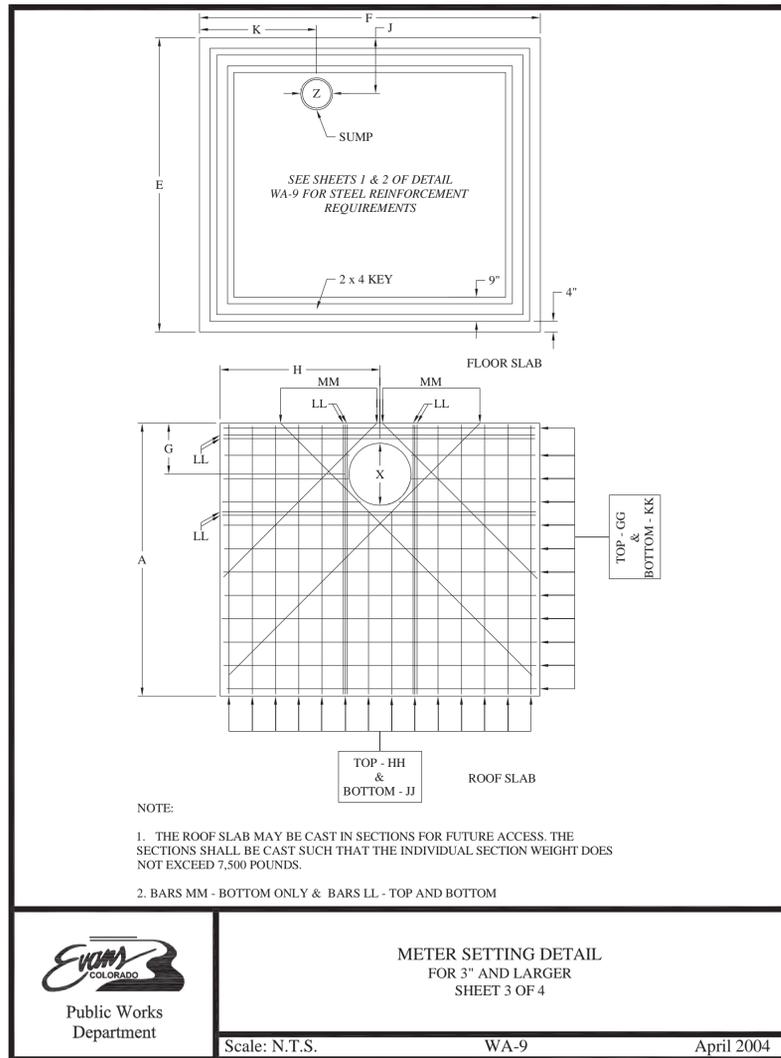
PROJECT MANAGER	CBK
PROJECT NUMBER	00000000058704

Prairie View Drive
The City of **EVANS COLORADO**

IRRIGATION DETAILS		FILENAME	P--Prairie.DWG	SHEET	IR-12
SCALE	VARIABLES				

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MEMBER UTILITIES



METER SETTING DETAIL FOR 3" AND LARGER SHEET 3 OF 4

Scale: N.T.S. WA-9 April 2004

METER SIZE	PIPE SIZE DIA.	VAULT DIMENSIONS																MANHOLE			SUMP	REMARKS
		A	B	C*	D	E	F	G	H	J	K	L	M	N	P	W	X	Y	Z			
3"	3"	8'-6"	10'-6"	6'-0"	0'-8"	9'-2"	11'-2"	2'-3"	4'-8"	1'-9"	2'-8"	3'-3"	5'-3"	2'-6"	0'-9"	2'-0"	36"	24"x36"	12"	USE 5/16"x 7" MIDDLE RING ON COUPLINGS.		
4"	4"	8'-6"	11'-11"	6'-0"	0'-8"	9'-2"	12'-7"	2'-3"	5'-4"	1'-9"	3'-4"	3'-3"	5'-3"	2'-6"	1'-0"	2'-6"	36"	24"x36"	12"	USE 5/16"x 7" MIDDLE RING ON COUPLINGS.		
6"	6"	8'-6"	13'-6"	6'-0"	0'-8"	9'-2"	14'-2"	2'-3"	5'-8"	1'-9"	3'-8"	3'-3"	5'-3"	2'-6"	1'-6"	2'-6"	36"	24"x36"	12"	USE 5/16"x 7" MIDDLE RING ON COUPLINGS.		
8"	8"	8'-6"	15'-5"	6'-0"	0'-10"	9'-2"	16'-1"	2'-3"	5'-3"	2'-3"	3'-0"	3'-3"	5'-3"	2'-6"	2'-0"	2'-6"	36"	24"x36"	18"	USE 5/16"x 7" MIDDLE RING ON COUPLINGS.		
10"	10"	8'-6"	17'-9"	6'-0"	0'-10"	9'-2"	17'-5"	2'-3"	4'-11"	2'-3"	3'-0"	3'-3"	5'-3"	2'-6"	2'-6"	2'-6"	36"	24"x36"	18"	USE 3/8"x 7" MIDDLE RING ON COUPLINGS.		
12"	12"	8'-6"	19'-10"	6'-0"	0'-10"	9'-2"	20'-6"	2'-3"	5'-0"	2'-3"	3'-0"	3'-3"	5'-3"	2'-6"	3'-0"	2'-6"	36"	24"x36"	18"	USE 3/8"x 7" MIDDLE RING ON COUPLINGS.		

METER SIZE	WALLS				WALL DOWELS				ROOF SLAB				FLOOR SLAB																				
	AA BAR	BB DIST.	CC BAR	DD DIST.	EE & FF BAR	EE DIST.	FF1 BAR	FF2 DIST.	GG BAR	HH DIST.	JJ BAR	KK DIST.	LL TOP	MM BOT.	NN BAR	OO DIST.	PP BAR	QQ DIST.															
3"	No.4	16"	No.4	12"	No.5	12"	2'-6"	2'-0"	3'-0"	2'-0"	No.7	12"	No.7	12"	No.7	No.7	No.5	12"	No.5	12"													
4"	No.4	16"	No.4	12"	No.5	12"	2'-6"	2'-0"	3'-0"	2'-0"	No.7	12"	No.7	12"	No.7	No.7	No.5	12"	No.5	12"													
6"	No.4	16"	No.4	12"	No.5	12"	2'-6"	2'-0"	3'-0"	2'-0"	No.7	12"	No.7	12"	No.7	No.7	No.5	12"	No.5	12"													
8"	No.4	16"	No.5	12"	No.4	16"	No.5	12"	No.5	12"	3'-0"	2'-6"	3'-0"	2'-6"	No.5	12"	No.5	12"	No.5	12"	No.5	12"	No.5	12"									
10"	No.4	16"	No.5	12"	No.4	16"	No.5	12"	No.5	12"	3'-0"	2'-6"	3'-0"	2'-6"	No.5	12"	No.5	12"	No.7	12"	No.8	9"	No.5	No.7	No.7	No.5	12"	No.5	12"	No.5	12"	No.5	12"
12"	No.4	16"	No.5	12"	No.4	16"	No.5	12"	No.5	12"	3'-0"	2'-6"	3'-0"	2'-6"	No.5	12"	No.5	12"	No.7	12"	No.8	9"	No.5	No.7	No.7	No.5	12"	No.5	12"	No.5	12"	No.5	12"



Public Works Department

METER SETTING FOR 3" AND LARGER SHEET 4 OF 4

Scale: N.T.S.

WA-9

April 2004

- NOTES:
1. THE POTABLE WATER DETAILS FROM THE CITY OF EVANS HAVE BEEN PROVIDED FOR REFERENCE.
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 OR 534-6700 IN METRO DENVER
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1 POTABLE WATER METER DETAILS N.T.S.

bha BHA Design Incorporated
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HDR
 HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION
3	2/22/08	100% FINAL DESIGN
2	1/15/08	100% DESIGN REVIEW SUBMITTAL
1	12/20/07	90% SUBMITTAL

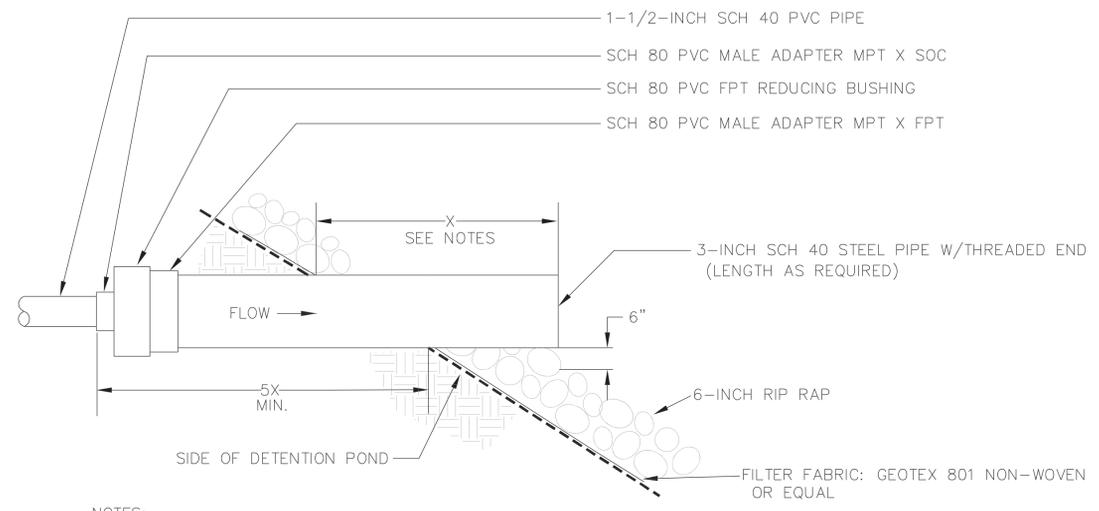
PROJECT MANAGER	CBK
PROJECT NUMBER	00000000058704

Prairie View Drive

IRRIGATION DETAILS

FILENAME	P--Prairie.DWG	SHEET
SCALE	VARIABLES	IR-13

1 2 3 4 5 6 7 8



- NOTES:
1. EXTEND FILTER BACKFLUSH PIPE OUTLET 24-INCHES MINIMUM BEYOND POND PENETRATION.
 2. INSTALL RIP RAP 36-INCHES WIDE FROM 12-INCHES ABOVE PIPE TO BOTTOM OF POND ON FILTER FABRIC, RIP RAP IS TO BE 12-INCHES DEEP.
 3. COMPACT AROUND PIPE PENETRATION AT 90% STANDARD PROCTOR DENSITY.
 4. COORDINATE EXACT LOCATION AND ELEVATION OF BACKFLUSH PIPE OUTLET WITH OWNER'S REPRESENTATIVE ON SITE PRIOR TO CONSTRUCTION.

1 BACKFLUSH PIPE OUTLET
DETAIL
N.T.S.

D
C
B
A

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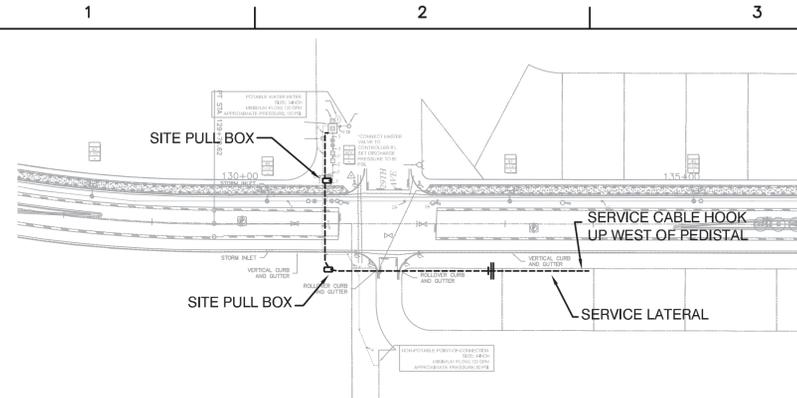
PROJECT MANAGER	CBK
PROJECT NUMBER	000000000058704

Prairie View Drive

The City of
EVANS
COLORADO

Prairie View Drive

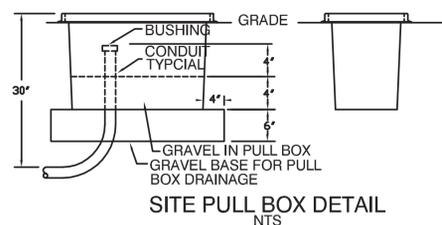
IRRIGATION DETAILS		FILENAME	P--Prairie.DWG	SHEET	IR-14
SCALE	VARIES				



ELECTRICAL SITE PLAN
SCALE ----- 1/8" = 10"



COVER DETAIL
NTS



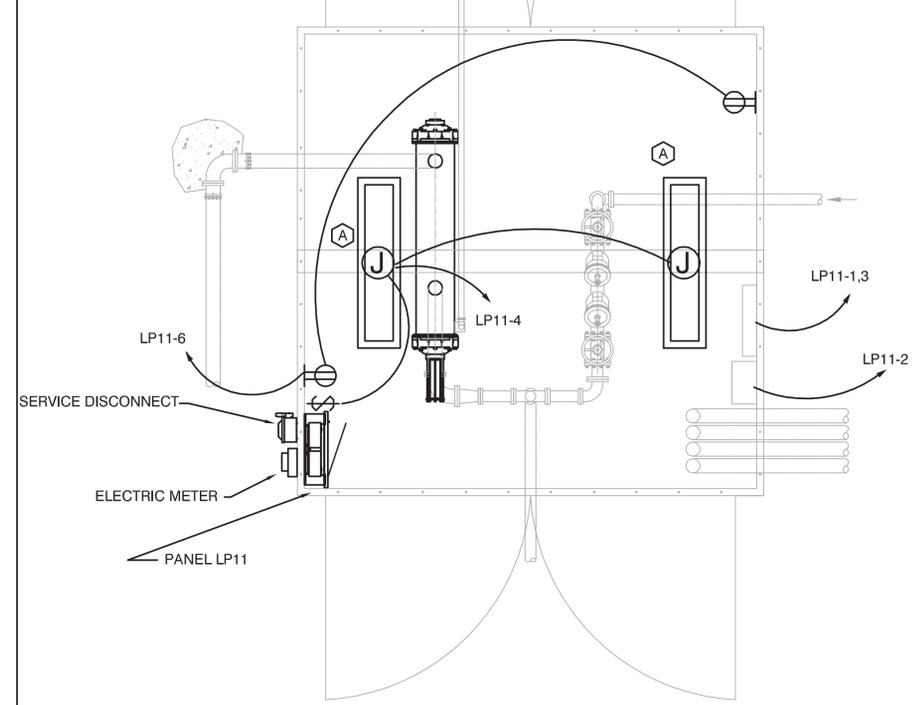
SITE PULL BOX DETAIL
NTS

PANELBOARD SCHEDULE									
Phase to Neutral Voltage: 120		Phase to Phase Voltage: 240		Bus Rating: 100 AMP		Main Breaker: M.L.O.		No. of Wires: 3	
MOUNTING: SURFACE		LIGHTS LN		EQUIP. LN		EQUIP. LL		PHASE	
BRKR NO.	Description	Breaker/Phase	volts	volts	volts	volts	volts	volts	Phase
1	ELECTRIC HEATER	15/2						250	A
3								250	B
5	SPARE	20/1							A
7	SPARE	20/1							B
9	SPARE	20/1							A
11	SPARE	20/1							B
13	SPARE	20/1							A
15	SPARE								B
17	SPARE								A
19	SPARE								B
21	SPARE								A
23	SPARE								B
25	SPARE								A
27	SPARE								B
29	SPARE								A
31	SPARE								B
33	SPARE								A
2	CONTROLLER	20/1				500			A
4	LIGHTS	20/1	120						B
6	DUPLEX	20/1				300			A
8	SPARE	20/1							B
10	SPARE	20/1							A
12	SPARE	20/1							B
14	SPARE	20/1							A
16	SPARE								B
18	SPARE								A
20	SPARE								B
22	SPARE								A
24	SPARE								B
26	SPARE								A
28	SPARE								B
30	SPARE								A
Phase A Totals (VA):		1,110	0	300	500	250			A
Phase B Totals (VA):		374	120	0	0	250			B
Column Totals (VA):			120	300	500	500			
Phase A Current (Amps):		9						1,494	
Phase B Current (Amps):		3							
Neutral Current (Amps):		6							
Special Requirements:									
Demand Load (KVA):								1,515	

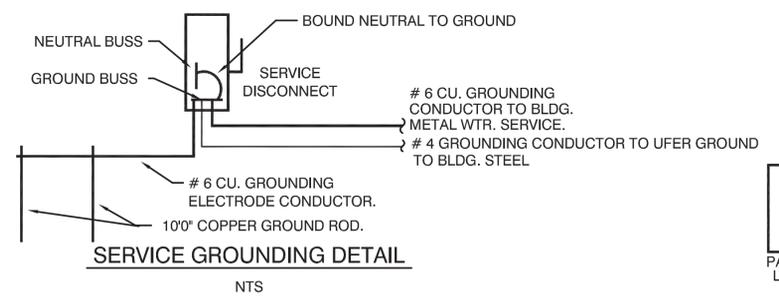
ONE LINE SCHEDULE			
	FEEDER	FEEDER	FEEDER
INITIAL 3 PHASE ASCI	12632	3,097	3,088
FEEDER OVER CURRENT PROTECTION	NONE	NONE	100 AMP FRN-R
FED FROM	UTILITY TRANSFORMER	ELECTRIC METER	MAIN SERVICE SWITCH
FED TO	ELECTRIC METER	MAIN SERVICE SWITCH	PANEL LP11
LOCATION OF LOAD EQUIPMENT	OUTSIDE BUILDING	OUTSIDE BUILDING	INSIDE BUILDING
FEEDER SIZE, CU.	3 # 1	3 # 1 & 1 # 6 GROUND	3 # 1 & 1 # 6 GROUND
CONDUIT SIZE, INCHES	1 1/2"	1 1/2"	1 1/2"
NUMBER OF PARALLEL FEEDERS	1	1	1
ESTIMATED FEEDER LENGTH	450	1	5
LINE TO LINE VOLTAGE	240	240	240
C FACTOR	7692	7692	7692
F FACTOR	3.079173167	0.002901988	0.008362578
M FACTOR	0.24514772	0.95710641	0.991705381
NOTES			
FINAL 3 PHASE ASCI AT LOAD	3,097	3,088	3,082

LIGHTING SCHEDULE:

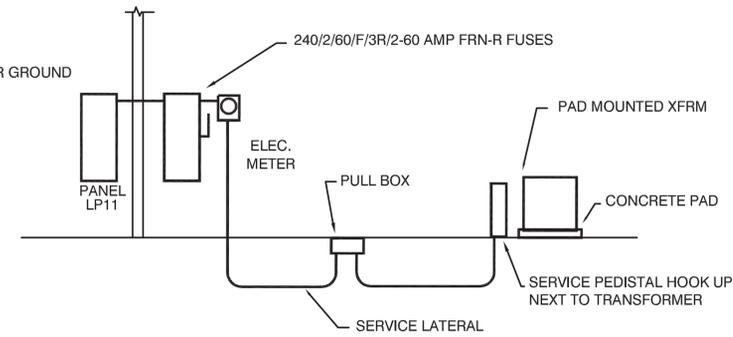
"A" METALUX # VT2-2-32-LEX-120-EB18-WL-VR, 2-T8 LAMPS, 120 VOLT OPERATION, LISTED FOR WET LOCATIONS, FIBERGLASS HOUSING, LEXAN LENS, ELECTRONIC BALLAST.



ELECTRICAL BUILDING PLAN
SCALE ----- 1/2" = 10"



SERVICE GROUNDING DETAIL
NTS



ELECTRICAL ONE LINE
NTS

LIGHTING LEGEND

- 1'X4' SURFACE MOUNT FLUORESCENT
- FIXTURE DESIGNATION
- SINGLE POLE SWITCH, WEATHERPROOF COVER.

POWER LEGEND

- DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPT TYPE, WEATHERPROOF COVER AND ENCLOSURE, MOUNT 24" ABOVE FLOOR.
- H.P. RATED DISCONNECT. VOLTAGE/POLES/AMPS/FUSED/NEMA RATING/FUSES
- PANELBOARD

CIRCUITS LEGEND, LIGHTING AND POWER

- HOME RUN. ADD NUMBER OF ARROWS AS REQUIRED FOR TOTAL NUMBER OF HOME RUN CIRCUITS
- J-BOX
- SHORT LINE INDICATES NEUTRAL WIRES AND LONGER LINE INDICATES PHASE CONDUCTORS. ONE EQUIPMENT GROUND ALSO REQUIRED.
- PANELBOARD NAME - PANELBOARD BREAKER SPACE(S)
- BRANCH CIRCUIT IN CONDUIT, HIDDEN IN WALL OR CEILING. 2 WIRES WITH ONE EQUIPMENT GROUND.
- BRANCH CIRCUIT IN CONDUIT, BELOW FLOOR. 2 WIRES WITH ONE EQUIPMENT GROUND.

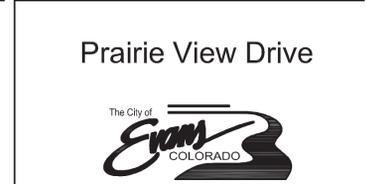
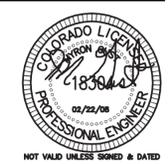
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3/5/2008 12:03:35 PM



ISSUE	DATE	DESCRIPTION
4	2/22/08	100% FINAL DESIGN
3	1/15/08	100% DESIGN REVIEW SUBMITTAL
2	7/13/07	90% DESIGN REVIEW SUBMITTAL
1	4/27/07	30% PRELIMINARY DESIGN

PROJECT MANAGER	JOHN SEYER
PROJECT NUMBER	00000000058704



ELECTRICAL PLAN AND DETAILS	
FILENAME	00G-BD01-01.dwg
SCALE	
SHEET	E1