
IRRIGATION SCHEDULE

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | PSI | APPROX. GPM | MAX. SPACING |
|---|---|---|---|---|---|
| A1 | Turf Rotor Sprinkler, Pressure Regulated to 45 psi Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve, Standard Nozzle. | 3 | 45 | 1.5 | 24' |
| A2 | Turf Rotor Sprinkler, Pressure Regulated to 45 psi Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve, Standard Nozzle. | 35 | 45 | 2.5 | 28' |
| A3 | Turf Rotor Sprinkler, Pressure Regulated to 45 psi Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve, Standard Nozzle. | 2 | 45 | 3.0 | 30' |
| A4 | Turf Rotor Sprinkler, Pressure Regulated to 45 psi Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve, Standard Nozzle. | 14 | 45 | 4.0 | 32' |
| A5 | Turf Rotor Sprinkler, Pressure Regulated to 45 psi Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve, Standard Nozzle. | 113 | 45 | 5.0 | 33' |
| A6,A7,A8,A9 | Turf Rotary Nozzles on Spray Body Turf Rotator, 6" (15.24 cm) pop-up with factory installed check valve, pressure regulated to 40 psi (2.76 bar) Rotator nozzle: B= adj arc 90-210 deg, Y= adj. arc 210-270 deg A=360 arc. | 1 | 40 | VARIES | 30' |
| B | Turf Rotary Nozzles on Spray Body Turf Rotator, 6" (15.24 cm) pop-up with factory installed check valve, pressure regulated to 40 psi (2.76 bar) Rotator nozzle: B= adj arc 90-210 deg, Y= adj. arc 210-270 deg A=360 arc. | 4 | 40 | VARIES | 35' |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY |
|---|---|---|
| | Electric Zone Valve 1", 1-1/2", 2", Plastic Electric Remote Control Valves, Globe Configuration, with Scrubber. | 12 |
| M | Electric Master Valve 2" Brass Globe Valve with Scrubber | 1 |
| | Quick Coupling Valve 1" Brass Quick-Coupling Valve. | 2 |
| | Manual Isolation Valve Cast Iron Gate Valve with Cross Handle,non-rising stem. | 15 |
| M | Water Meter 2" | 1 |
| BF | Reduced Pressure Backflow Preventer 2" | 1 |
| IC | 2-Wire Decoder Controller (with remote web interface) Plastic, locking, wall-mount enclosure. | 1 |
| FS | Flow Sensor Flow Sensor for use with two-wire controller | 1 |
| ——— | Irrigation Lateral Line: PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Minimum 1-Inch. | 5,600 l.f. |
| — — — | Irrigation Mainline: PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. | 1,500 l.f. |
| - - - - - | Pipe Sleeve: PVC Class 160 SDR 26 | 550 l.f. |

Valve Callout
A1 • 83 — Valve Number, Valve Flow
2" • — Valve Size

GRAPHIC SCALE 1" = 30'

0' 15' 30' 60' 90'

IRRIGATION NOTES

1. SEE IRRIGATION DETAILS AND SPECIFICATIONS SECTION 328400 FOR ADDITIONAL REQUIRED INFORMATION.
2. COORDINATE FINAL LOCATION OF SPRINKLERS, NOZZLES, AND VALVE BOXES WITH FINAL APPROVED LANDSCAPE.
3. ALL PIPE AND VALVE LOCATIONS ARE DIAGRAMMATIC FOR CLARITY; CONTRACTOR SHALL FIELD VERIFY.
4. SPECIFIED VALVE BOXES IN NATURAL TURF AREAS SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE.
5. INSTALL MANUAL ISOLATION VALVES BEFORE EACH ELECTRIC ZONE VALVE. PLACEMENT ON THIS PLAN IS SHOWN FOR CLARITY, REFER TO DETAIL.
6. ALL CONTROL WIRE SHALL BE 14/2 AWG GAUGE TWO-WIRE
7. IRRIGATION SYSTEM IS DESIGNED FOR NEW DOMESTIC WATER SUPPLY FROM BUILDING TO PROVIDE 75 GPM MAXIMUM. DOMESTIC WATER SUPPLY TO PROVIDE 90-PSI DYNAMIC PRESSURE MAXIMUM. CONTRACTOR SHALL TEST DYNAMIC PRESSURE BEFORE STARTING WORK AND REPORT ANY DEVIATION TO THE OWNER'S REPRESENTATIVE BEFORE CONTINUING.
8. INSTALL NEW IRRIGATION CONTROLLER IN NEW PLASTIC LOCKING WALL MOUNTED ENCLOSURE WITHIN BUILDING GENERALLY WHERE SHOWN ON DRAWING AS DIRECTED BY OWNER'S REPRESENTATIVE. HARD WIRE TO 120 VOLT, DEDICATED 20-AMP CIRCUIT POWER SUPPLY USING LICENSED ELECTRICIAN. ROUTE ALL TWO-WIRE TO CONTROLLER IN CONDUIT THROUGH BUILDING.
9. ALL ABOVE GROUND WIRING SHALL BE INSTALLED IN RIGID, METALLIC CONDUIT FOR VANDALISM PROTECTION.
10. COORDINATE LOCATION OF ALL EXISTING AND FUTURE UTILITIES ON SITE, CONTACT PROPER AUTHORITIES AND UTILITY COMPANIES BEFORE THE START OF WORK.
11. FLUSH ALL LATERAL LINES BEFORE INSTALLING SPRINKLERS (NO INTERNALS).
12. CONTRACTOR MUST SUBMIT IRRIGATION PRODUCTS AS PER THE WRITTEN SPECIFICATIONS TO REVIEW ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIAL AND BEGINNING WORK.
13. MATERIAL SUBSTITUTIONS WHICH VARY FROM THE SPECIFIED PRODUCTS MUST BE SUBMITTED TO REVIEW ENGINEER FOR APPROVAL AS PART OF THE SUBMITTAL PROCESS.
14. ONCE APPROVED SUBMITTALS HAVE BEEN RETURNED TO THE CONTRACTOR, WORK MAY BEGIN. OWNER'S REPRESENTATIVE MUST BE NOTIFIED 7 DAYS IN ADVANCE OF THE START OF WORK TO COORDINATE ON-SITE SUPERVISION AND ADMINISTRATION.
15. FINAL LOCATION AND CONFIGURATION OF IRRIGATION SYSTEM SHALL BE APPROVED BY OWNER'S REPRESENTATIVE AND PER LOCAL AUTHORITIES.

IRRIGATION & WATER SUPPLY DESIGN BY:

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# BEVERLY MIDDLE SCHOOL

CABOT STREET
BEVERLY, MA 01915

KEYNOTE LEGEND: (REFERENCE SHEETS A1.01 & A1.02 FOR MASTER KEYNOTE LIST AND KEYNOTES NOT LISTED)

BID PACKAGE #3
FOUNDATIONS, STRUCTURAL STEEL, & SITEWORK

NORTH ARROW

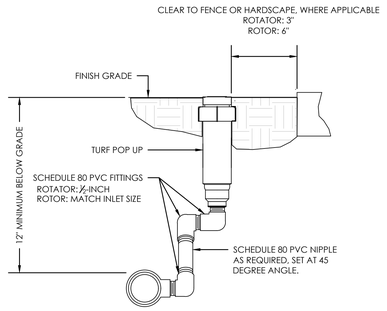
KEYPLAN


DRAWING NAME:

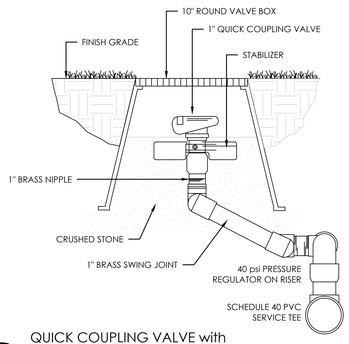
IRRIGATION LAYOUT PLAN

| | |
|---|---|
| DRAWN BY: | SSM |
| REVIEWED BY: | MI |
| SCALE: | 1"=30' |
| JOB NO.: | 1403.00 |
| DATE: | April 18, 2016 |

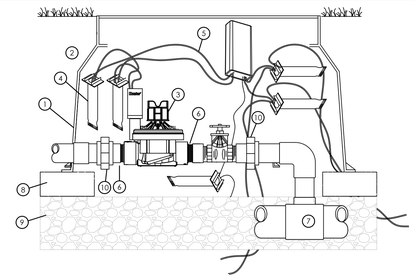
DRAWING NUMBER: I1.0




1 TURF ROTOR and ROTATOR SPRINKLER
NOT TO SCALE

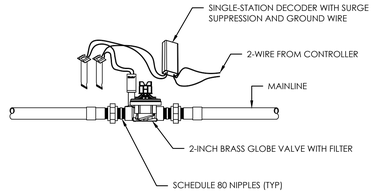



2 QUICK COUPLING VALVE with PRESSURE REGULATOR
NOT TO SCALE



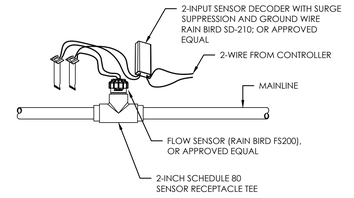
1. VALVE BOX (SEE SPECIFICATIONS)
2. FINISH GRADE
3. ELECTRIC CONTROL VALVE
4. WATERPROOF DBY-6 CONNECTORS
5. TWO WIRE
6. SCH 80 TOE NIPPLE
7. MAINLINE SERVICE TEE
8. BRICK SUPPORTS (4)
9. 4" WASHED 3/4" GRAVEL
10. PVC SLIP UNIONS
11. MANUAL ISOLATION VALVE

3 ELECTRIC ZONE VALVE with DECODER
NOT TO SCALE



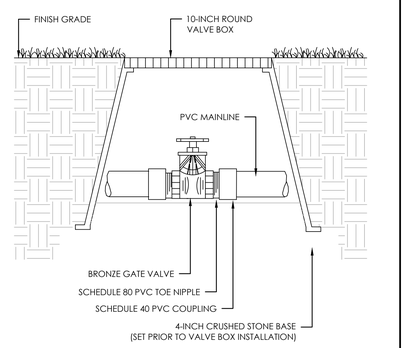

NOTE:
1. ALL PLUMBING WITHIN BUILDING MUST BE COMPLETED BY LICENSED PLUMBER AND MEET ALL APPLICABLE CODES.

4 MASTER VALVE with DECODER
NOT TO SCALE

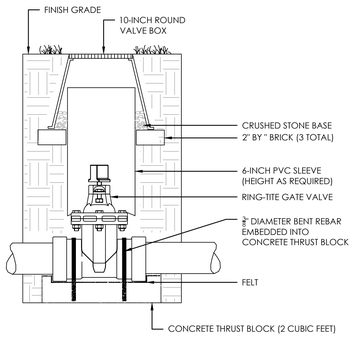



NOTE:
1. INLET PIPE LENGTH OF SENSOR MUST BE MINIMUM 10 TIMES PIPE DIAMETER STRAIGHT, CLEAN RUN OF PIPE. NO FITTINGS OR TURNS.
2. OUTLET PIPE LENGTH OF SENSOR MUST BE MINIMUM 5 TIMES PIPE DIAMETER OF STRAIGHT CLEAN RUN OF PIPE. NO FITTINGS OR TURNS.
3. ALL PLUMBING WITHIN BUILDING MUST BE COMPLETED BY LICENSED PLUMBER AND MEET ALL APPLICABLE CODES.

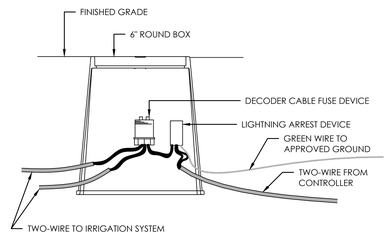
5 FLOW SENSOR with DECODER
NOT TO SCALE



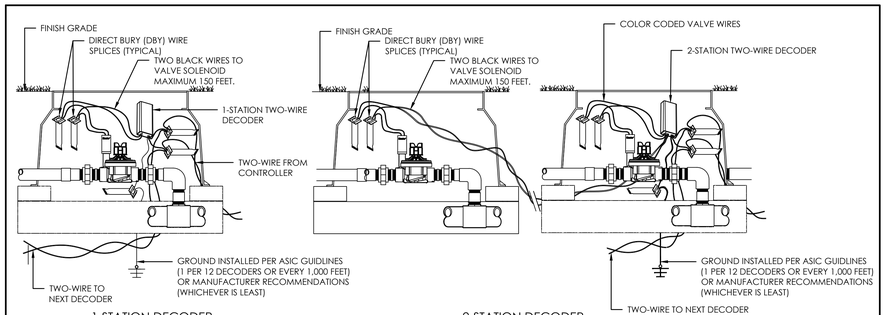

6 SMALL ISOLATION VALVE
NOT TO SCALE




7 LARGE ISOLATION VALVE
NOT TO SCALE

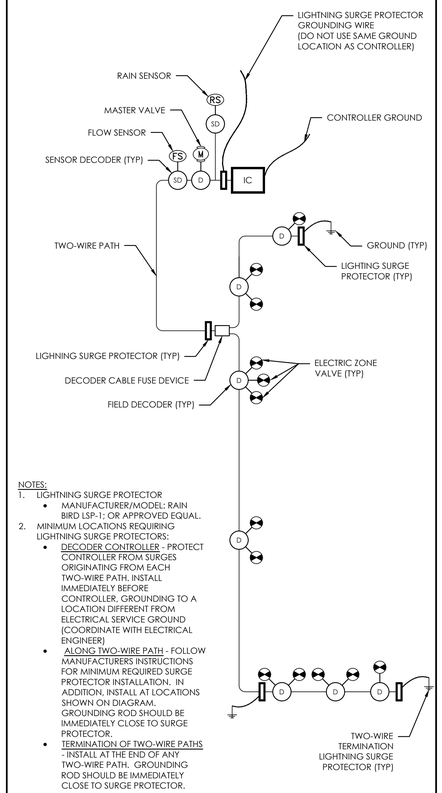



8 LIGHTNING ARREST AND DECODER FUSE DEVICE
NOT TO SCALE



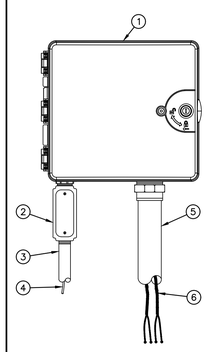

ACCEPTABLE MODELS:
RAIN BIRD FD DECODERS OR
APPROVED EQUAL

9 TWO-WIRE DECODER
NOT TO SCALE




NOTES:
1. LIGHTNING SURGE PROTECTOR
   - MANUFACTURER/MODEL: RAIN BIRD LSP-1; OR APPROVED EQUAL.
2. MINIMUM LOCATIONS REQUIRING LIGHTNING SURGE PROTECTORS:
   - DECODER CONTROLLER - PROTECT CONTROLLER FROM SURGES ORIGINATING FROM EACH TWO-WIRE PATH. INSTALL IMMEDIATELY BEFORE CONTROLLER. GROUNDING TO A LOCATION DIFFERENT FROM ELECTRICAL SERVICE GROUND (COORDINATE WITH ELECTRICAL ENGINEER)
   - ALONG TWO-WIRE PATH - FOLLOW MANUFACTURERS INSTRUCTIONS FOR MINIMUM REQUIRED SURGE PROTECTOR INSTALLATION. IN ADDITION, INSTALL AT LOCATIONS SHOWN ON DIAGRAM. GROUNDING ROD SHOULD BE IMMEDIATELY CLOSE TO SURGE PROTECTOR.
   - TERMINATION OF TWO-WIRE PATHS - INSTALL AT THE END OF ANY TWO-WIRE PATH. GROUNDING ROD SHOULD BE IMMEDIATELY CLOSE TO SURGE PROTECTOR.

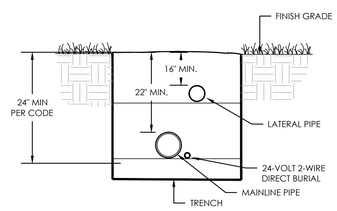
14 SCHEMATIC ELECTRICAL DIAGRAM
NOT TO SCALE




1. TWO-WIRE DECODER CONTROLLER: CONTROLLER IN PLASTIC, LOCKING CABINET WITH WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
   MODEL: RAIN BIRD ESP-LXD WITH IQ, OR APPROVED EQUAL
2. JUNCTION BOX
3. 1-INCH CONDUIT AND FITTINGS TO POWER SUPPLY
4. POWER SUPPLY WIRE
5. 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
6. TWO-WIRE PATH TO DECODERS

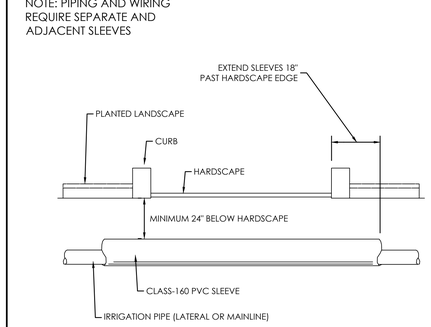
NOTES:
1. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS
2. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.
3. WALL MOUNT CONTROLLER INDOORS IN LOCATION SPECIFIED BY OWNER.

10 TWO-WIRE IRRIGATION CONTROLLER
NOT TO SCALE

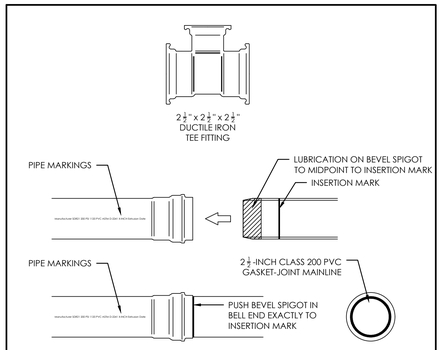



NOTES:
1. TAPE WIRE AT 10 FOOT INTERVALS
2. TIE LOOSE LOOP OF WIRE AT CHANGES OF DIRECTION

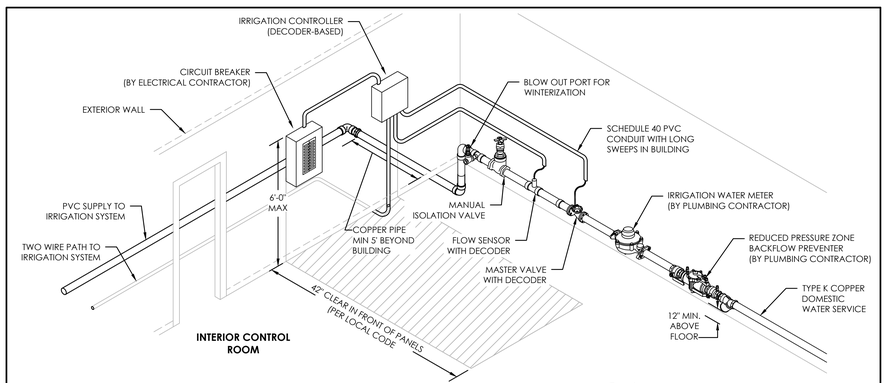
11 TRENCH AND WIRE
NOT TO SCALE



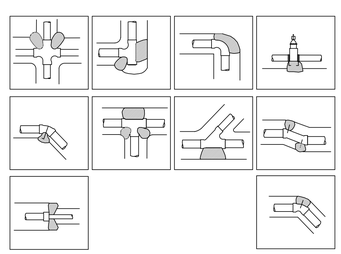

12 TYPICAL PIPE AND WIRE SLEEVE
NOT TO SCALE




13 MAINLINE GASKET JOINT
NOT TO SCALE




15 CONTROL ROOM LAYOUT
NOT TO SCALE



CONTRACTOR RESPONSIBLE FOR PROPER SIZING AND PLACEMENT OF CONCRETE THRUST BLOCKS AS PER ASAE STANDARD 376.1 THRUST BLOCKS REQUIRED ON BELL & GASKET PIPE AND FITTINGS ONLY.

16 THRUST BLOCKING
NOT TO SCALE


IRRIGATION & WATER SUPPLY DESIGN BY:

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BID PACKAGE #3
FOUNDATIONS, STRUCTURAL STEEL, & SITEWORK

NORTH ARROW

KEYPLAN


DRAWING NAME:

IRRIGATION DETAILS

| | |
|---|---|
| DRAWN BY: | SSM |
| REVIEWED BY: | MI |
| SCALE: AS NOTED | DRAWING NUMBER: |
| JOB NO.: 1403.00 | I2.0 |
| DATE: April 18, 2016 | |