



BUILDING OFFICIAL  
REVIEWED FOR COMPLIANCE WITH THE CITY CODE, ADOPTED BUILDING CODES, ZONING ORDINANCE AND DESIGN STANDARDS. THIS REVIEW AND APPROVAL DOES NOT REPRESENT THE DEVELOPER OR HIS AGENTS OF ANY RESPONSIBILITY FOR COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS, OR ADDRESS OR OVERRULE THE REQUIREMENTS OF OTHER JURISDICTIONS OR AGENCIES, UNLESS SPECIFICALLY NOTED OTHERWISE.

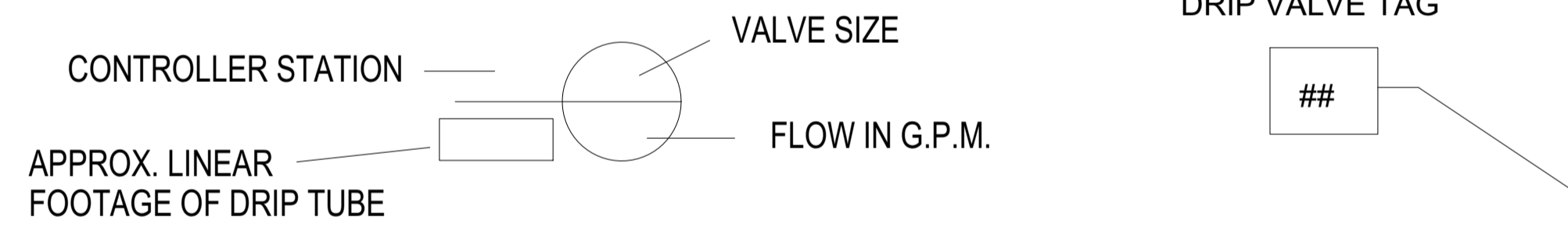
*Kevin R. Perin* 04/25/23  
SIGNATURE DATE  
PRJ2023-00032

### INSTALLATION NOTES

- COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE MANDATED IRRIGATION ORDINANCES AND CODES, AND WILL SECURE ALL REQUIRED PERMITS. L.I.C. SHALL PAY ANY ASSOCIATED FEES UNLESS OTHERWISE NOTED. ALL LOCAL CODES SHALL PREVAIL OVER ANY DISCREPANCIES HEREIN AND SHALL BE ADDRESSED BEFORE ANY CONSTRUCTION BEGINS.
- NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN THE ROOT ZONE OF EXISTING TREES. HAND-DIG ONLY, WITHIN THE ROOT ZONES OF EXISTING TREES. NO ROOTS OVER 1" DIAMETER SHALL BE CUT. STAKE ALL PROPOSED TRENCH ROUTES NEAR EXISTING TREES FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE DIGGING BEGINS.
- CONFIRM MINIMUM STATIC WATER PRESSURE OF 65 PSI AT THE HIGHEST ELEVATION OF THE SYSTEM LIMITS, AND MAXIMUM STATIC WATER PRESSURE OF 90 P.S.I. AT THE LOWEST ELEVATION OF THE SYSTEM LIMITS AT LEAST 7 DAYS BEFORE BEGINNING WORK. IF STATIC WATER PRESSURE IS OUTSIDE THE RANGE STATED ABOVE, DO NOT PROCEED UNTIL DIRECTED BY THE LANDSCAPE ARCHITECT.
- LATERAL PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES. MAINLINE PIPE AND WIRES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES. NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN EXISTING TREE ROOT ZONES. WHEN HAND - TRENCHING WITHIN EXISTING TREE ROOT ZONES, NO ROOTS LARGER THAN 1" DIAMETER SHALL BE CUT.
- UNSLEEVED PIPES MAY BE SHOWN UNDER PAVEMENT FOR GRAPHIC CLARITY ONLY. INSTALL THESE PIPES IN ADJACENT LANDSCAPED AREAS.
- ELECTRIC POWER SHALL BE PROVIDED WITHIN FIVE FEET OF CONTROLLER LOCATION BY GENERAL CONTRACTOR. L.I.C. TO PROVIDE FINAL HARD-WIRE TO CONTROLLER.
- 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR "IRRIGATION WIRE". WIRE SPLICES SHALL INCLUDE DBY CONNECTORS AS MANUFACTURED BY 3M COMPANY. ALL FIELD SPLICES SHALL BE LOCATED IN A ROUND VALVE BOX OF SUFFICIENT SIZE TO ALLOW INSPECTION.
- VALVE BOXES SHALL BE INSTALLED FLUSH WITH GRADE, SUPPORTED BY BRICKS IF NEEDED, WITH 3 INCHES OF CLEAN PEA GRAVEL LOCATED BELOW THE VALVE. USE 12" x 17" RECTANGULAR VALVE BOXES WITH PURPLE LID FOR QUICK COUPLING VALVES, AND 10" ROUND BOXES FOR ELECTRIC VALVES UNLESS NOTED OTHERWISE. D.C.A., WITH UPSTREAM BALL VALVE AND WYE FILTER SHALL BE BOXED AND LOCATED ACCORDING TO LOCAL CODE.
- USE RIGID SCH. 80 PVC SWING JOINT ASSEMBLIES TO CONNECT ALL QUICK COUPLERS.
- ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12" MINIMUM LENGTH OF 1/2" FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND #P-70 PRIMER.
- PROVIDE ONE QUICK COUPLER KEY WITH SWIVEL HOSE ELL FOR EVERY SIX Q.C. VALVES. (MINIMUM ONE SET).
- CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
- LATERAL PIPE TO TREE STREAM BUBBLER HEADS IS OMITTED FOR GRAPHIC CLARITY. CONNECT TREE BUBBLER HEADS TO VALVES AS SHOWN WITH CLASS 200 PVC PIPE SIZED TO ALLOW A MAXIMUM FLOW VELOCITY OF 5 FEET PER SECOND.
- THE PROPOSED LOCATIONS OF ALL ABOVE-GROUND EQUIPMENT INCLUDING BACKFLOW PREVENTORS, CONTROLLERS AND WEATHER SENSORS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE BEFORE THESE ITEMS ARE INSTALLED.
- ALL HEADS SHALL BE INSTALLED A MINIMUM OF 4" FROM PAVEMENT EDGES. (6" OR GREATER WHERE REQUIRED BY LOCAL CODE) FINAL HEAD ADJUSTMENTS BY THE CONTRACTOR SHALL INCLUDE THE ADDITION OF CHECK VALVES WHERE NEEDED TO PREVENT EXCESSIVE LOW HEAD DRAINAGE. THE CONTRACTOR SHALL BUDGET FOR, AND INSTALL CHECK VALVES FOR UP TO 10% OF THE TOTAL NUMBER OF HEADS WHEN NEEDED, WITH NO ADDITIONAL COST TO THE OWNER.
- WHERE SHOWN ON THE PLANS, MASS SHRUB / GROUND COVER BEDS SHALL INCLUDE NETAFIM TECHLINE TLHCVXR SERIES DRIP TUBE WITH PRE-INSTALLED .53 GPH DRIP EMITTERS AT 12" INTERVALS (TLHCVXR5-12), INSTALLED IN CENTER-FED GRIDS WITH ROWS SPACED 18" APART. INDIVIDUAL DRIP TUBE RUNS SHALL NOT EXCEED 150 L.F. PVC LATERAL "TRUNK" LINES SHALL BE INSTALLED 10" DEEP. DRIP TUBE SHALL BE SET 2" BELOW FINISHED SOIL GRADE (NOT INCLUDING MULCH LAYER), SECURELY STAKED EVERY 18". NETAFIM #TL050MPV-1 FLUSH VALVES SHALL BE INSTALLED AT THE FARTHEST POINTS FROM THE ZONE VALVE. USE 17 MM BARBED FITTINGS FOR DRIP LINE CONNECTIONS. SET THE MAXIMUM OPERATING PRESSURE AT 50 PSI. TECHLINE CV SHALL BE INSTALLED PERPENDICULAR TO SLOPE FACE. INSTALL TLVC IN-LINE CHECK VALVES FOR EVERY 4.5 FEET OF DRIP LINE ELEVATION CHANGE WITHIN THE ZONE. USE NETAFIM STAPLES (#TL56) TO SECURE TUBING EVERY 18" EACH DRIP ZONE SHALL INCLUDE ONE MAINTENANCE "FLAG" WHICH SHALL CONSIST OF A 12" POP-UP SPRAY HEAD AND COMPLETELY CLOSED SPRAY NOZZLE. THE POP-UP HEAD SHALL BE CONNECTED TO THE DRIP ZONE PIPE, SET FLUSH WITH GRADE, AND LOCATED AT THE FARTHEST DISTANCE FROM THE DRIP VALVE ASSEMBLY. INSTALL THE "FLAG" HEAD ADJACENT TO EDGING OR IN LOW PLANTINGS FOR EASE OF VIEWING. SPARSLEY SPACED, INDIVIDUAL SHRUB PLANTINGS MAY INCLUDE RAINBIRD #XBT-10 SINGLE-OUTLET EMITTERS OR RAINBIRD #XBT-10-6 MULTI-OUTLET EMITTERS INSTALLED AS DETAILED. PROVIDE MINIMUM TWO, 1 G.P.H. OUTLETS PER INDIVIDUAL SHRUB. SINGLE / MULTI-OUTLET EMITTERS MAY BE CONNECTED TO THE SAME DRIP ZONE VALVE WHICH SERVES ADJACENT DRIP TUBE GRIDS, UNLESS NOTED OTHERWISE.

### IRRIGATION LEGEND

- RAINBIRD XERI-BUG SINGLE / MULTI OUTLET ( XBT-10-PC / XBT-10-6 ) POINT SOURCE DRIP EMITTERS.  
SEE INSTALLATION NOTE #16 REGARDING EMITTER LAYOUT AND CONNECTION TO DRIP VALVE ASSEMBLY
  - RAINBIRD 1806-SAM-PRS SERIES POP UP SPRAY HEADS WITH ADAPTER AND RAINBIRD #1402 SERIES BUBBLER NOZZLES. ( TWO PER TREE )  
SEE INSTALLATION NOTE #13 REGARDING TREE BUBBLER LATERAL PIPE
  - RAINBIRD 1804-SAM-PRS SERIES POP UP SPRAY HEAD WITH SST / EST SERIES NOZZLE AS NOTED BELOW
  - RAINBIRD 1804-SAM-PRS SERIES POP UP SPRAY HEAD WITH U-SERIES NOZZLE AS NOTED BELOW
  - NETAFIM TECHLINE TLHCVXR5-12 SERIES DRIP TUBE IN SHRUB BED INSTALLED AT 2" DEPTH  
SEE INSTALLATION NOTE #16 REGARDING DRIP TUBE LAYOUT IN SHRUB BEDS.
  - RAINBIRD PEB SERIES ELECTRIC REMOTE CONTROL VALVE
  - RAINBIRD PEB SERIES ELECTRIC REMOTE CONTROL. "TREE BUBBLER ZONE" VALVE  
SEE INSTALLATION NOTE #13 REGARDING TREE BUBBLER LATERAL PIPE
  - NETAFIM CONTROL ZONE KIT MODEL #NCZ-1S SERIES WITH 50 PSI PRESSURE REGULATOR AND SCREEN FILTER
  - RAINBIRD 33-DNP QUICK COUPLING VALVE WITH LOCKING PURPLE COVER AND 3/4" PVC BALL VALVE
  - ZURN / WILKINS 350 SERIES D.C.A. INSTALLED PER CITY CODE, WITH SAME SIZE ZURN / WILKINS 850 SERIES BRONZE BALL VALVE AND ZURN / WILKINS YB SERIES BRONZE WYE FILTER WITH 20 MESH STAINLESS STEEL SCREEN
  - LASCO "V101N" SERIES SCH. 80 PVC TRUE UNION BALL VALVE, MAINLINE SIZE
  - IRRIGATION WATER METER AND TAP, SIZE AS NOTED ON THE PLAN
  - RAINBIRD ESP-M6 SERIES AUTOMATIC CONTROLLER WITH TWO ESPSM6 MODULES, LNK WIFI MODULE, AND WR2-RFC RAIN / FREEZE SENSOR LOCATE SENSOR AS FIELD DIRECTED BY THE LANDSCAPE ARCHITECT
  - MASTER ELECTRIC VALVE
  - CLASS 200 PVC MAINLINE PIPE
  - CLASS 200 ( EXCEPT 1/2 INCH #315 ) PVC LATERAL PIPE
  - ONE 4" CLASS 200 SLEEVE PIPE
  - TWO 4" CLASS 200 SLEEVE PIPES
- L.I.C. SHALL SELECT SPRAY NOZZLES FOR "HEAD-TO-HEAD" COVERAGE, ADJUSTED FOR NO OVERSPRAY ONTO WALLS AND WALKS. NO OVERSPRAY INTO STREETS IS PERMITTED.



**IRRIGATION SLEEVE NOTES**

Piping and control wires shall be installed in separate sleeves under paving. Refer to the irrigation plan for sleeve size and location.

Sleeve elevation shall be twenty-four (24") inches below top of pavement.

Sleeves shall extend one (1') foot beyond the edge of pavement and be staked for location.

All sleeves shall be Schedule 40 PVC pipe, capped on both ends, and sized at least two times larger than the diameter of the pipe inside the sleeve. Sleeve locations shall be marked onto the top of curb with a saw-cut of two parallel lines that are two (2") inches long and one (1") inch apart.

The Contractor responsible for the installation of sleeves shall also be responsible to locate any sleeve which cannot be found during the installation of the irrigation system.



Date	Description	No.
Revisions		

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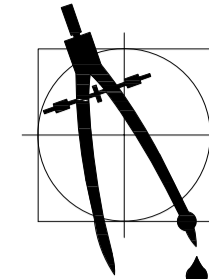
**LANGAN**  
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Project: **McDONALD'S NEW PROJECT**  
L/C 024-1290  
3720 WEST SUNSHINE STREET  
SPRINGFIELD  
GREENE COUNTY MISSOURI

Drawing Title: **NOTES & DETAILS**

Project No.	520054201	Drawing No.	L11.1
Date	01/04/2023		
Drawn By	GA		
Checked By	AM	Sheet	12 of 12

**James Pole**  
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04/25/23

PRJ2023-00032

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Project No. 520054201



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Date	Description	No.
Revisions		

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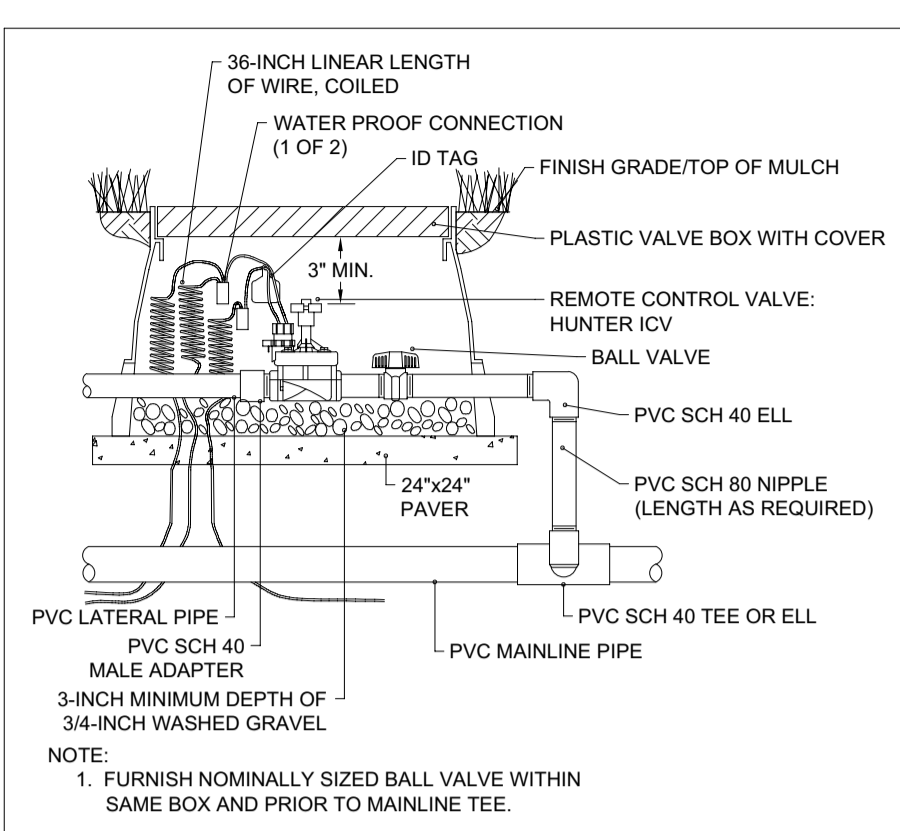
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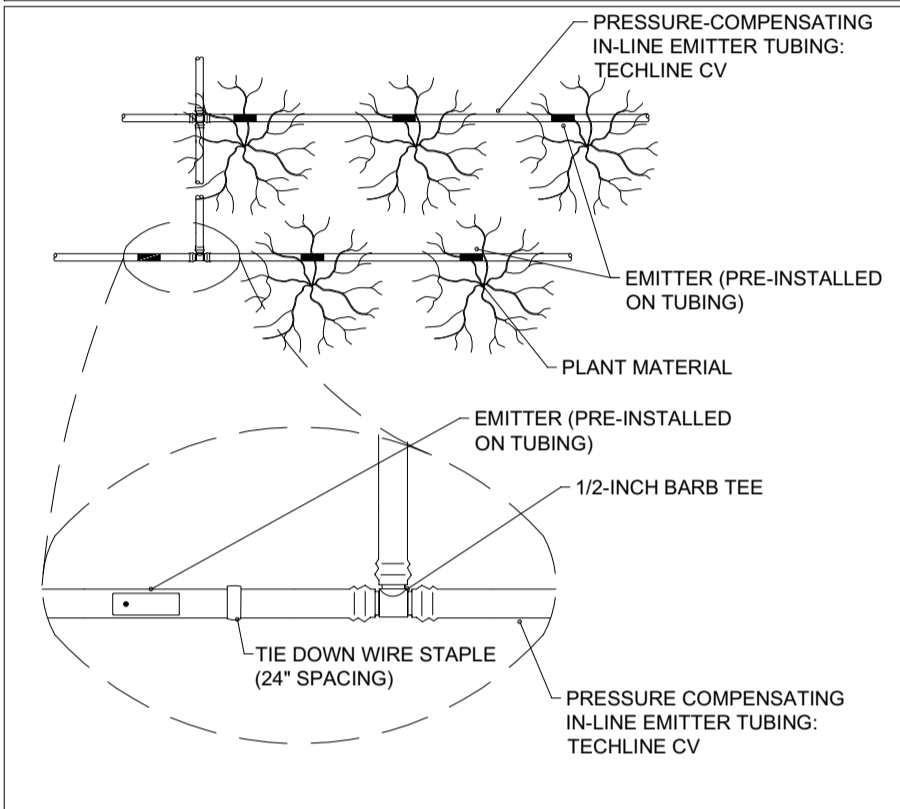
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Sheet	12 of 12

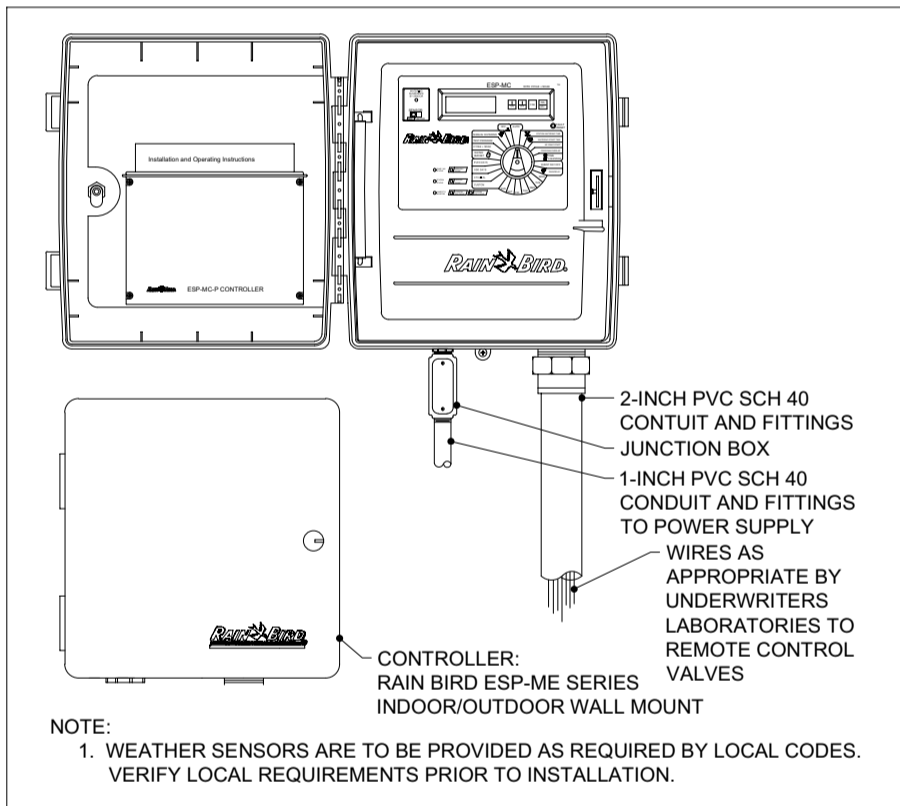
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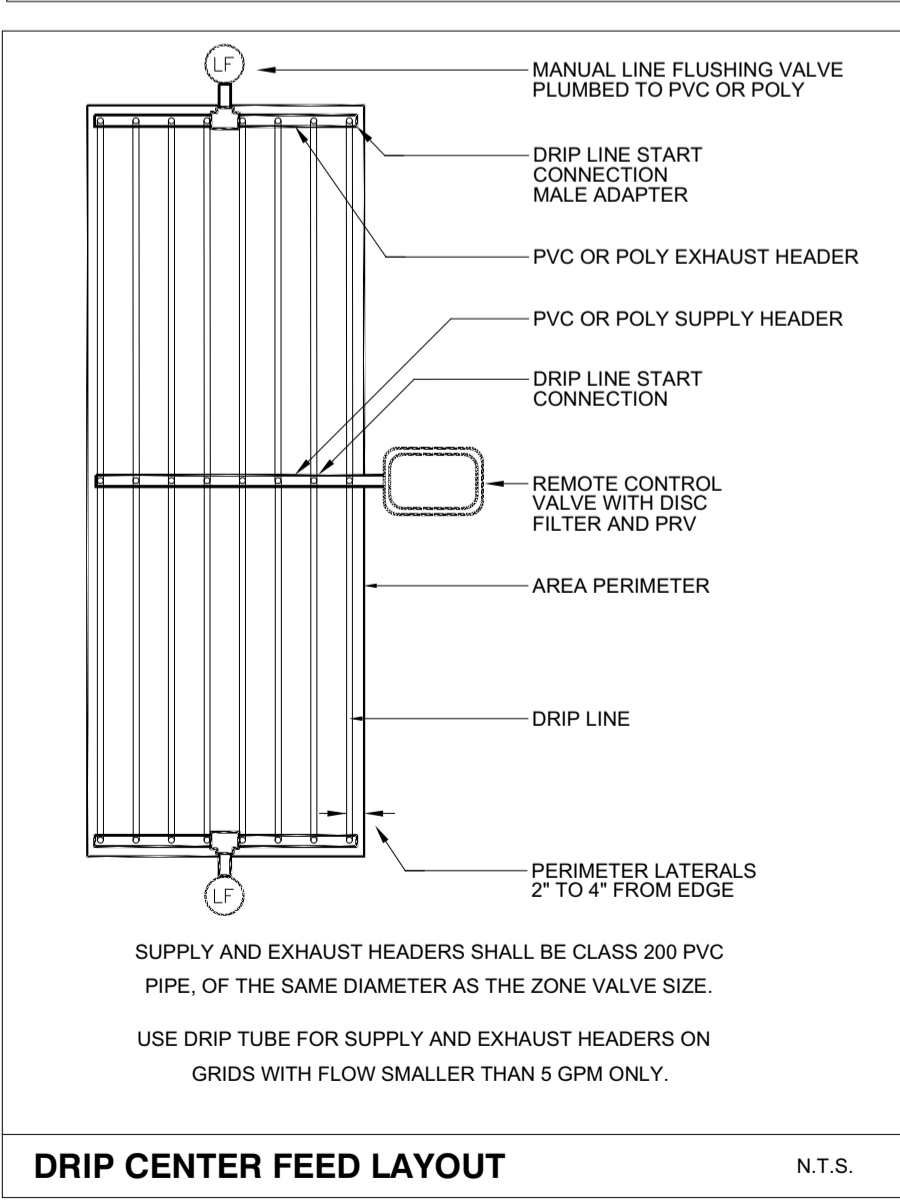
ICV REMOTE CONTROL VALVE N.T.S.



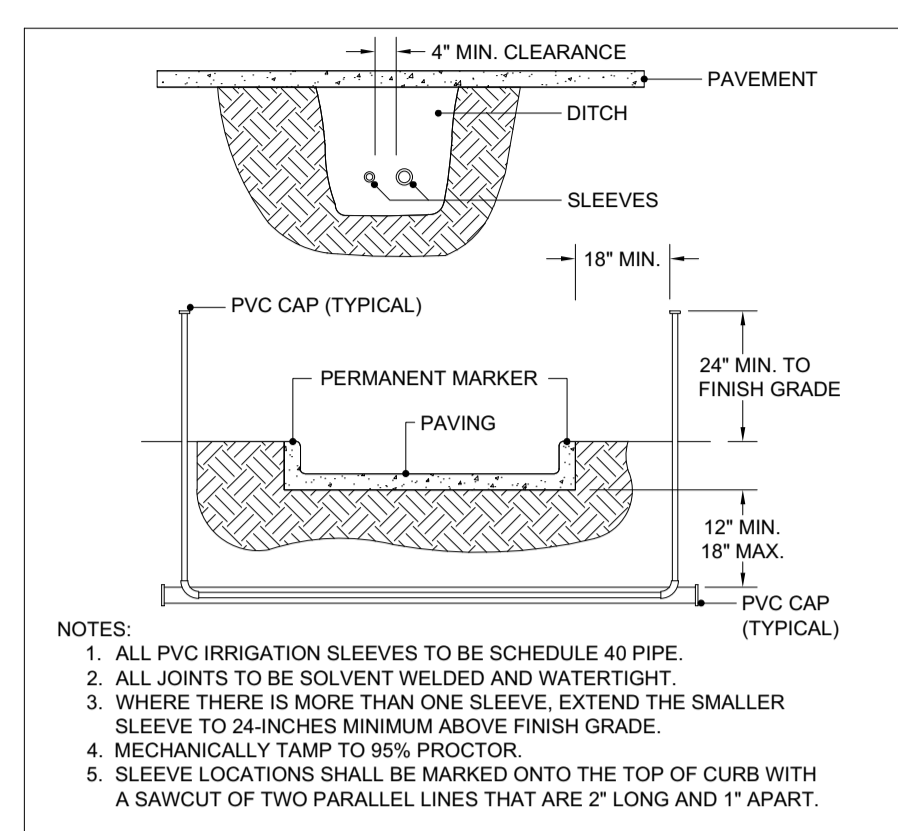
TECHLINE CV DRIPLINE N.T.S.



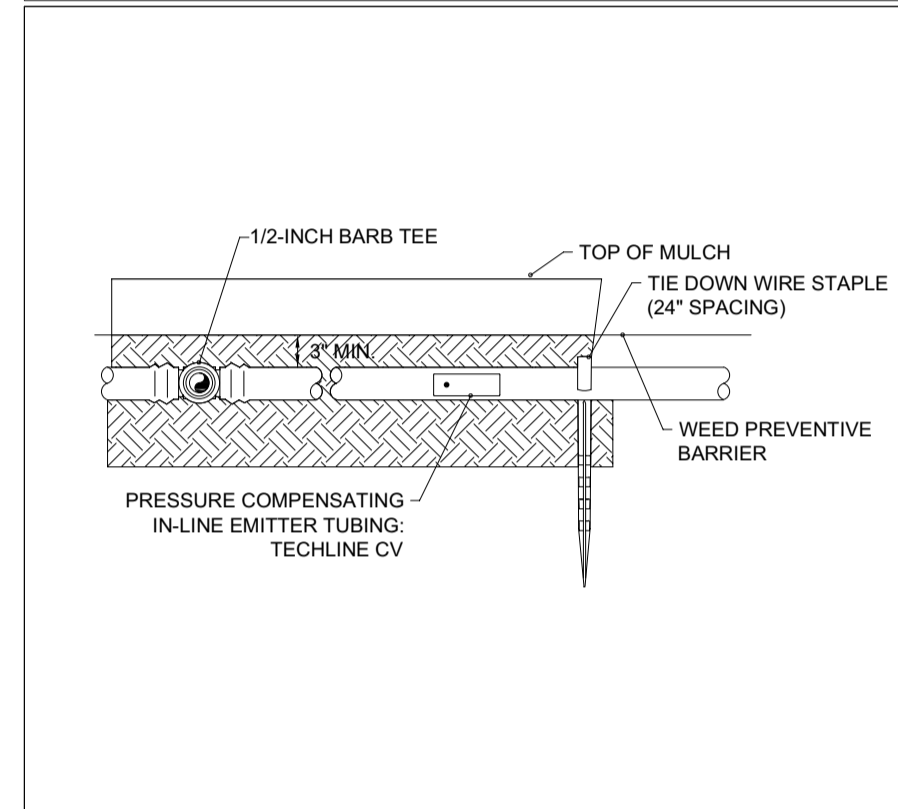
ESP-ME CONTROLLER N.T.S.



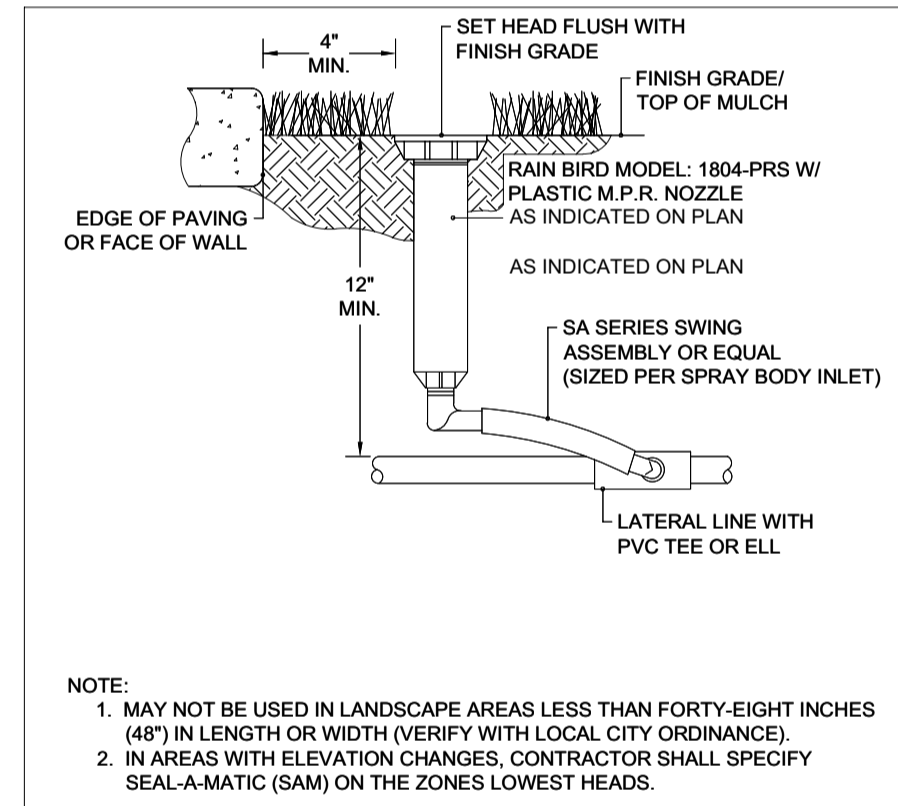
DRIIP CENTER FEED LAYOUT N.T.S.



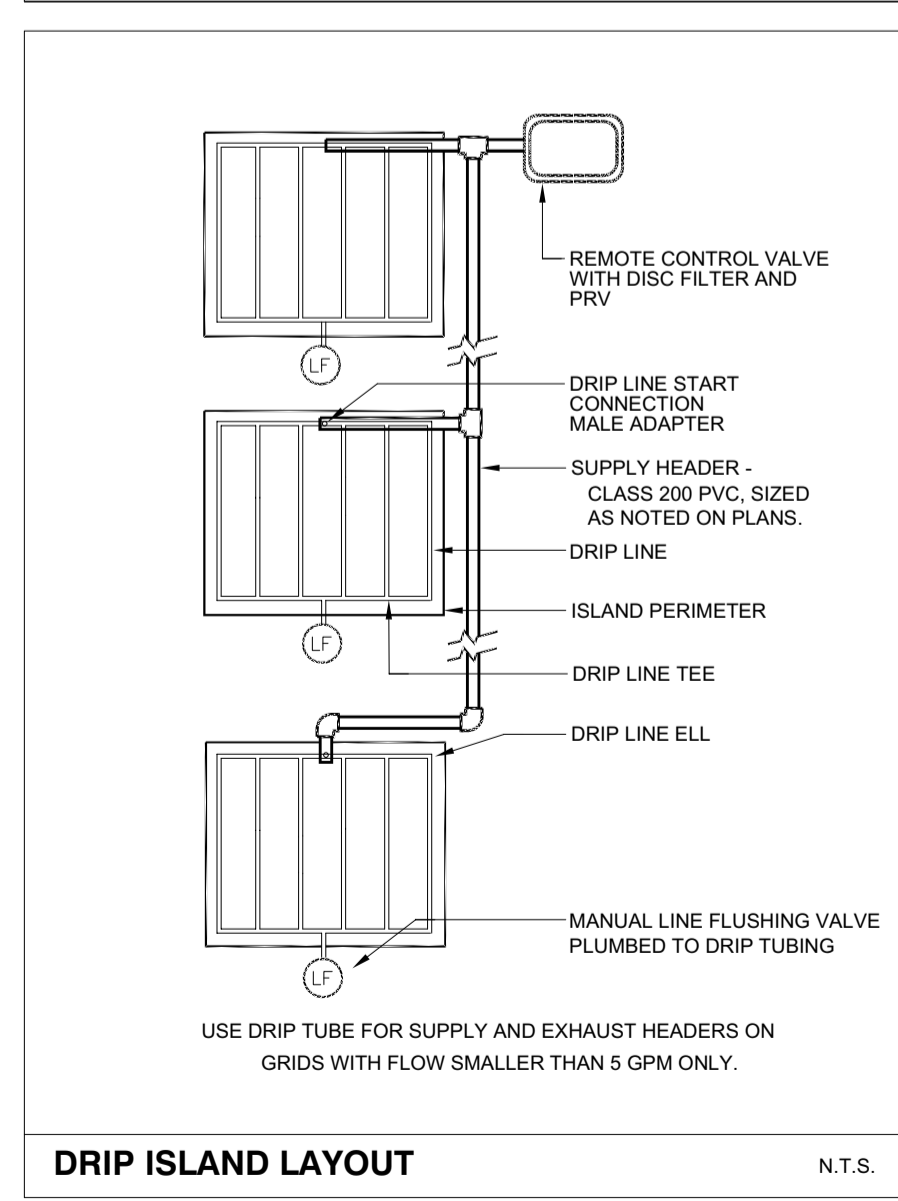
IRRIGATION PVC SLEEVES N.T.S.



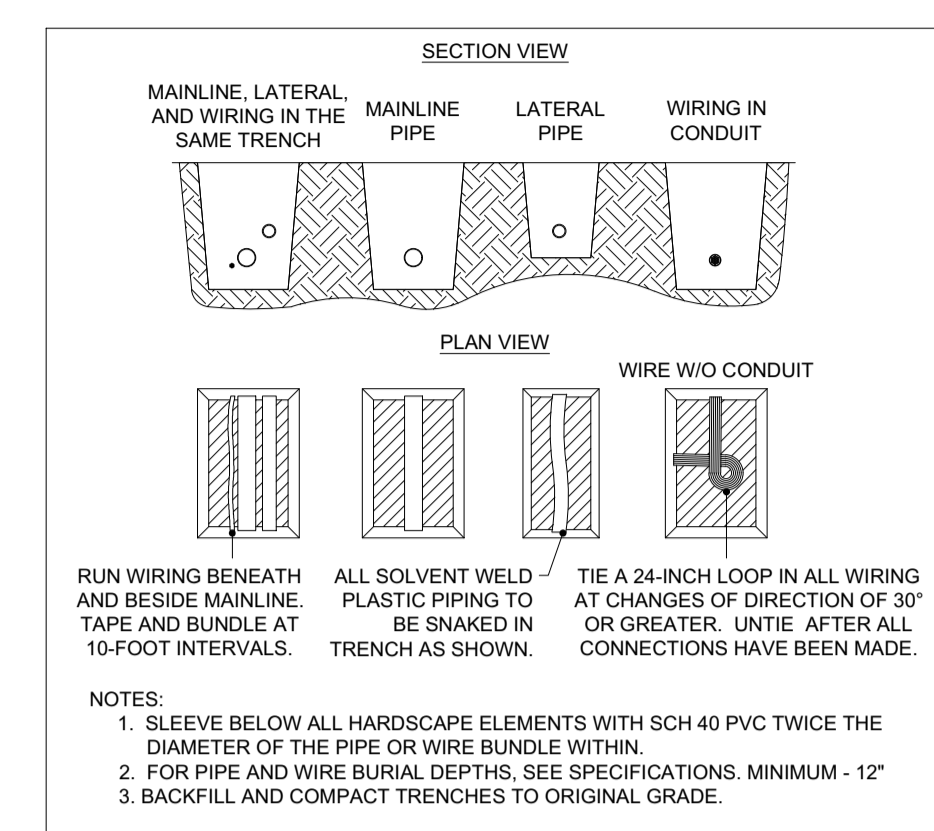
DRIPLINE TECHLINE CV N.T.S.



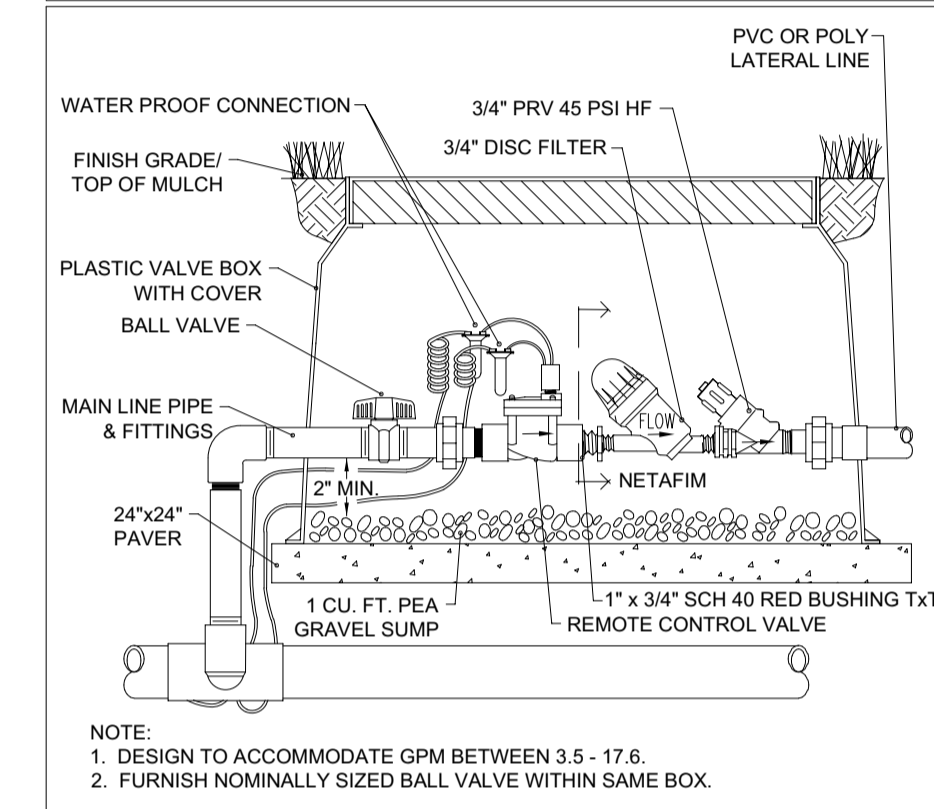
TURF POP-UP SPRAY HEAD N.T.S.



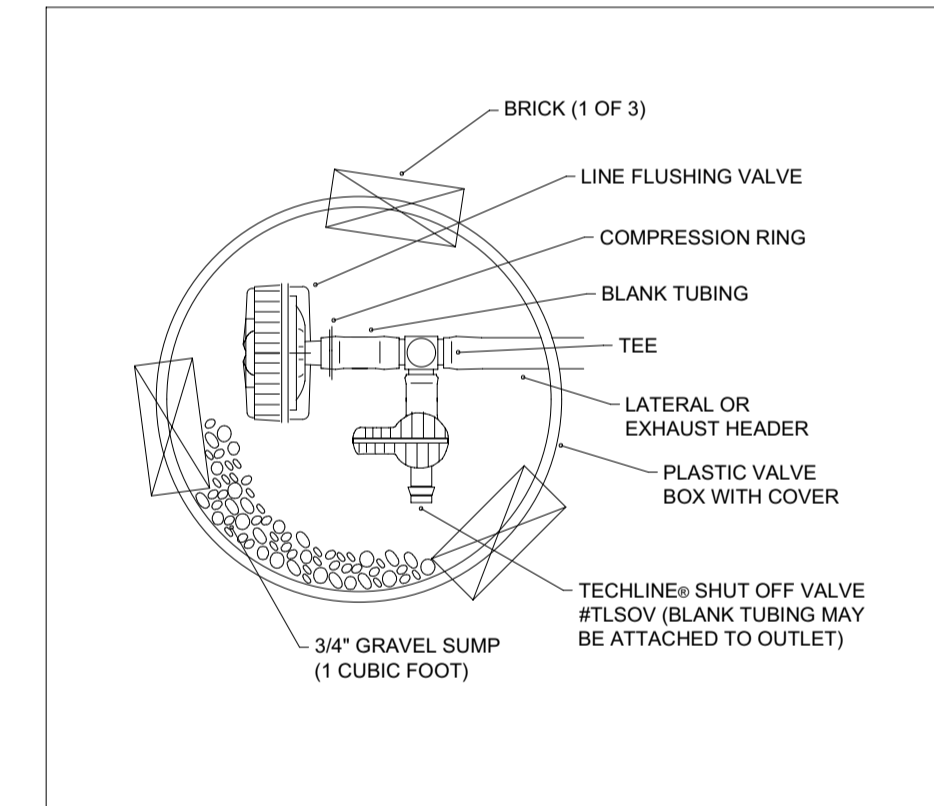
DRIIP ISLAND LAYOUT N.T.S.



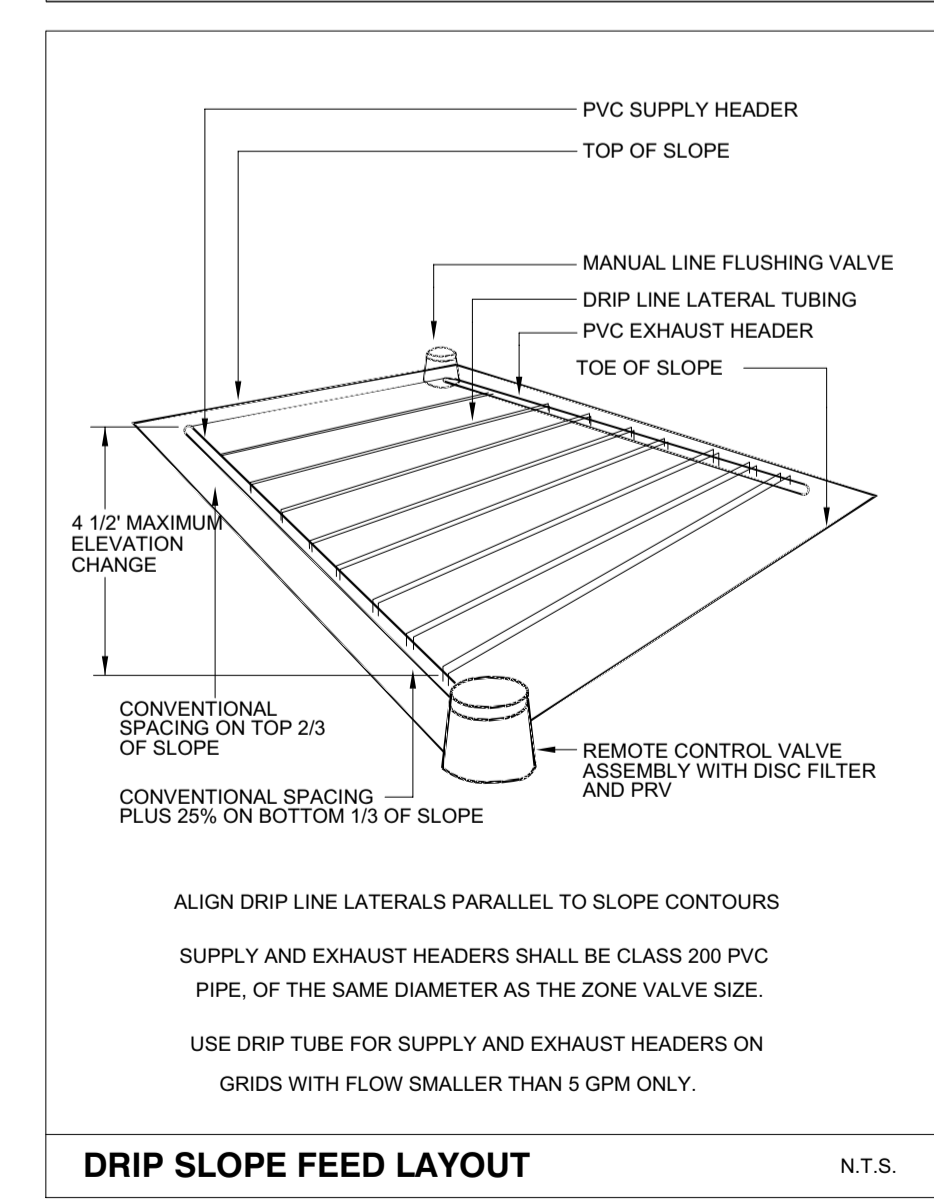
PIPE AND WIRING TRENCHING N.T.S.



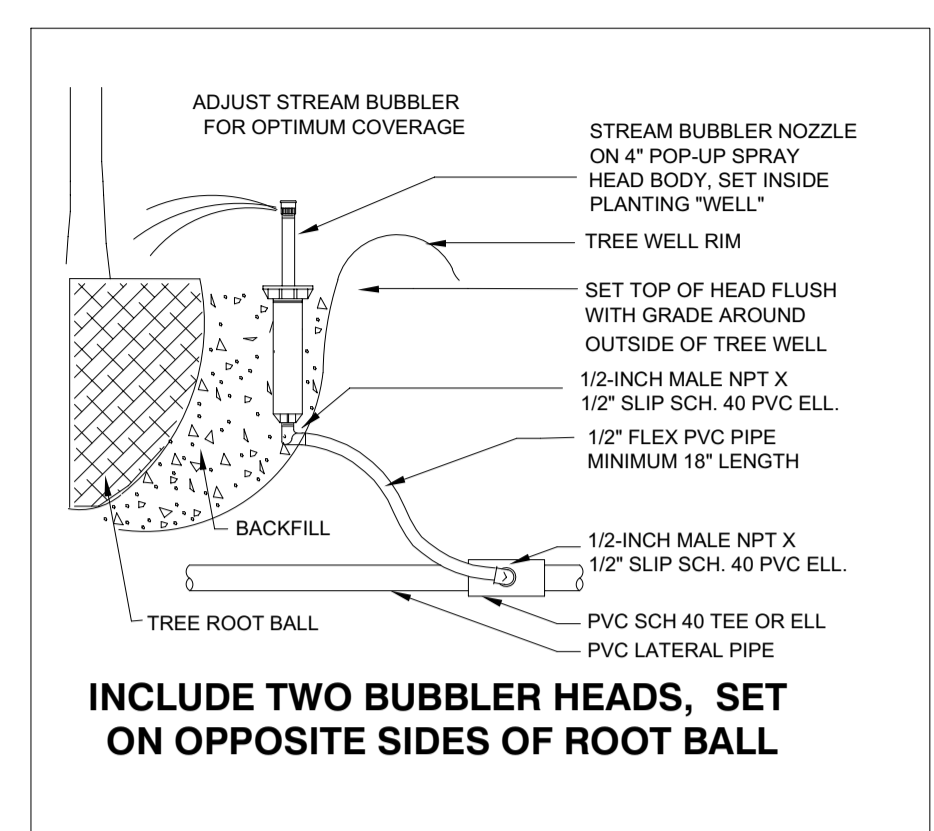
LOW VOLUME CONTROL ASSEMBLY N.T.S.



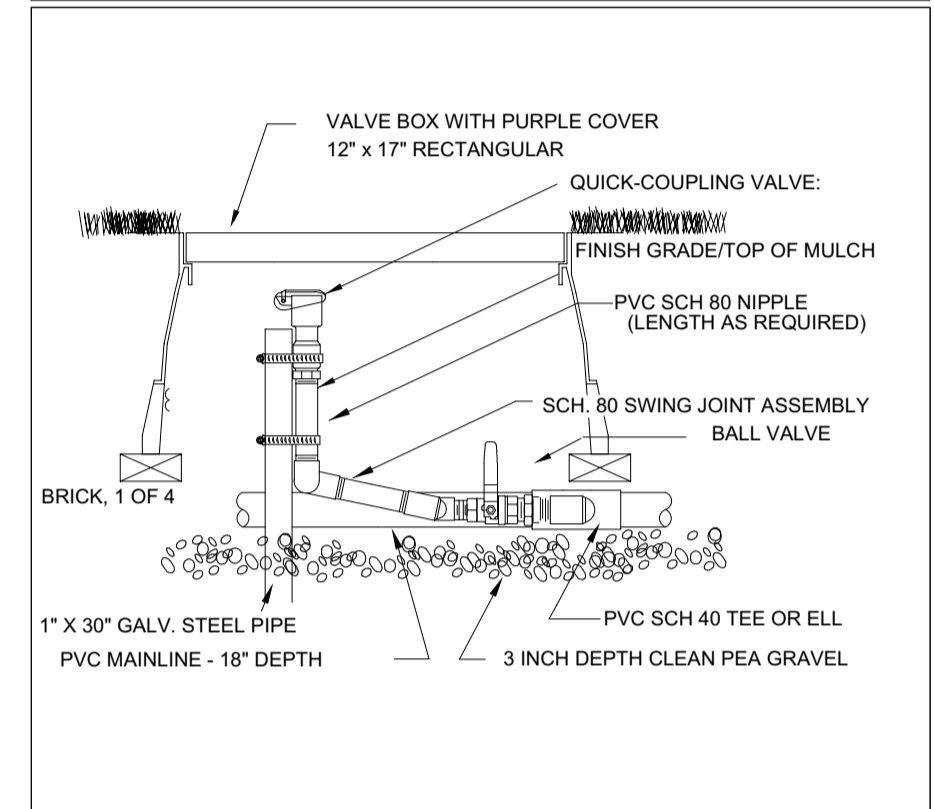
LINE FLUSH VALVE W/ SHUT OFF N.T.S.



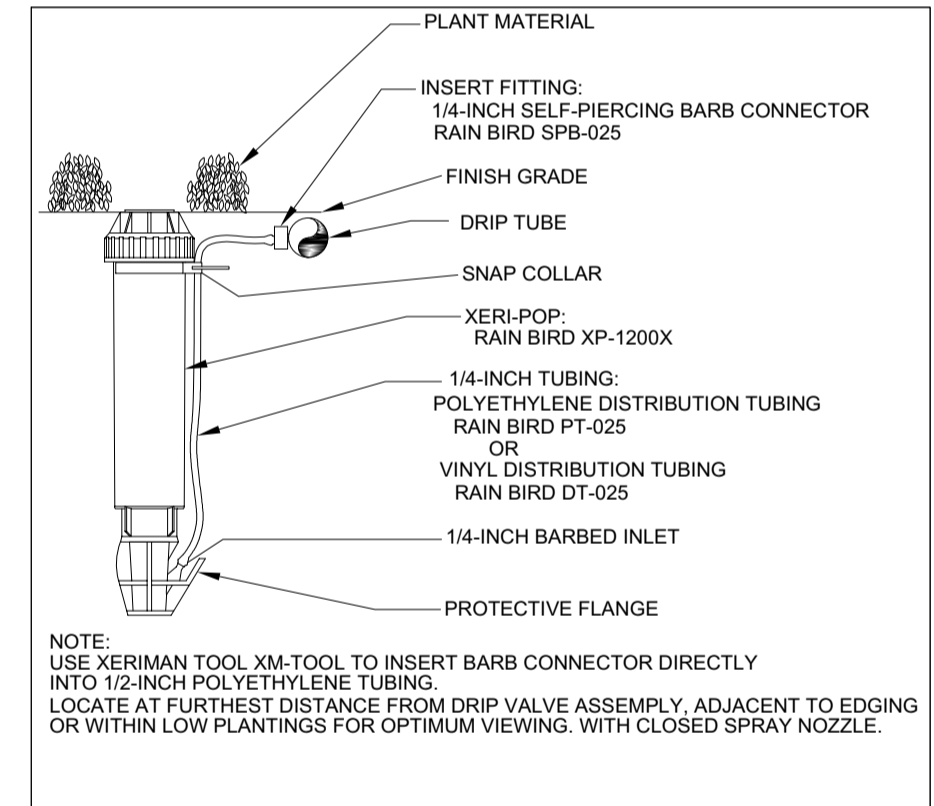
DRIIP SLOPE FEED LAYOUT N.T.S.



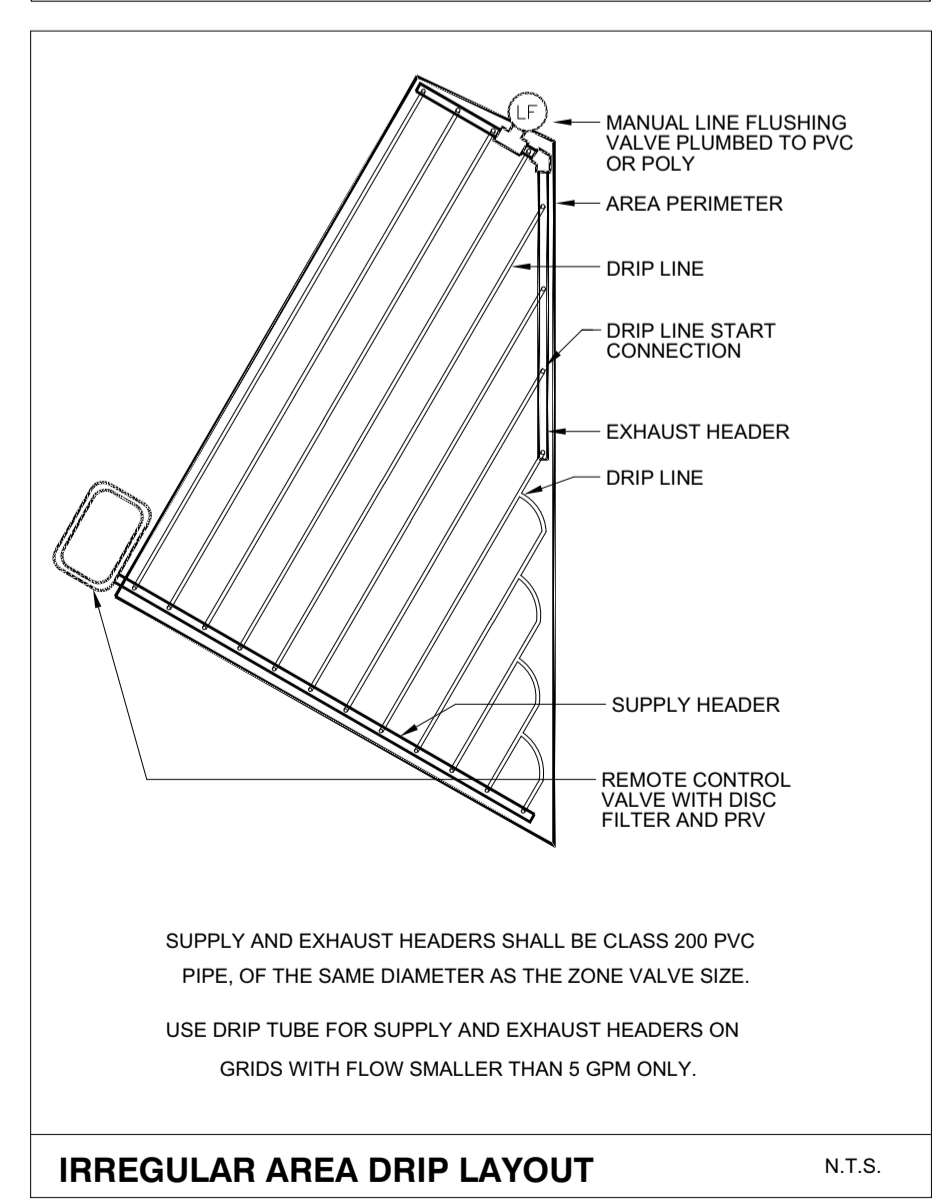
TREE BUBBLER N.T.S.



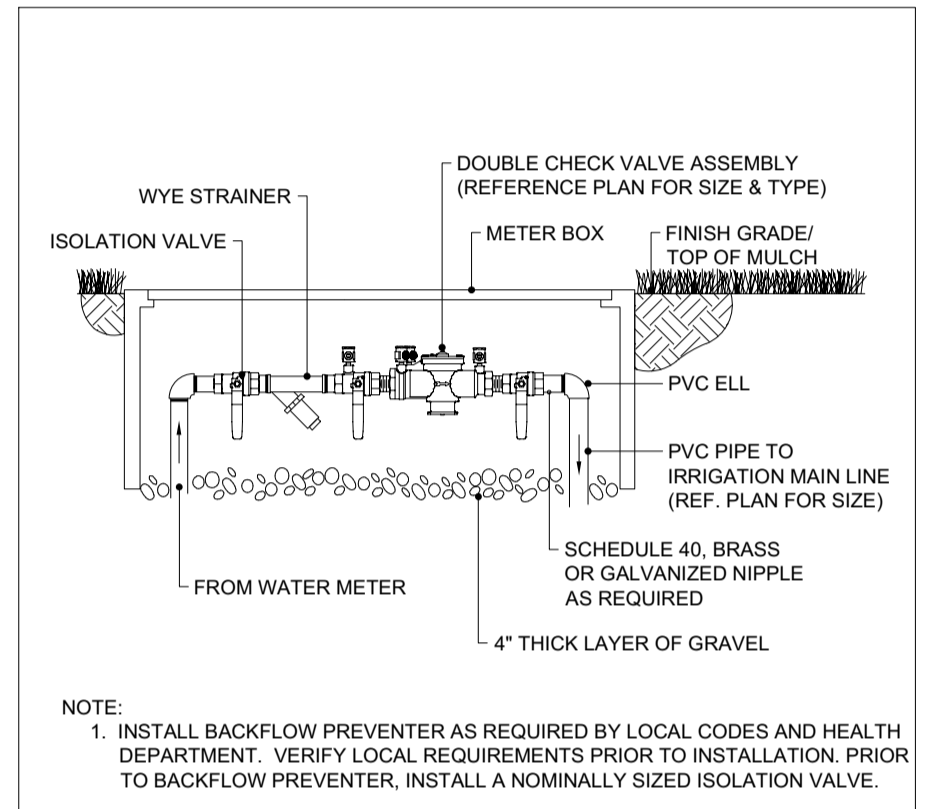
QUICK COUPLER VALVE W/ PVC BALL VALVE N.T.S.



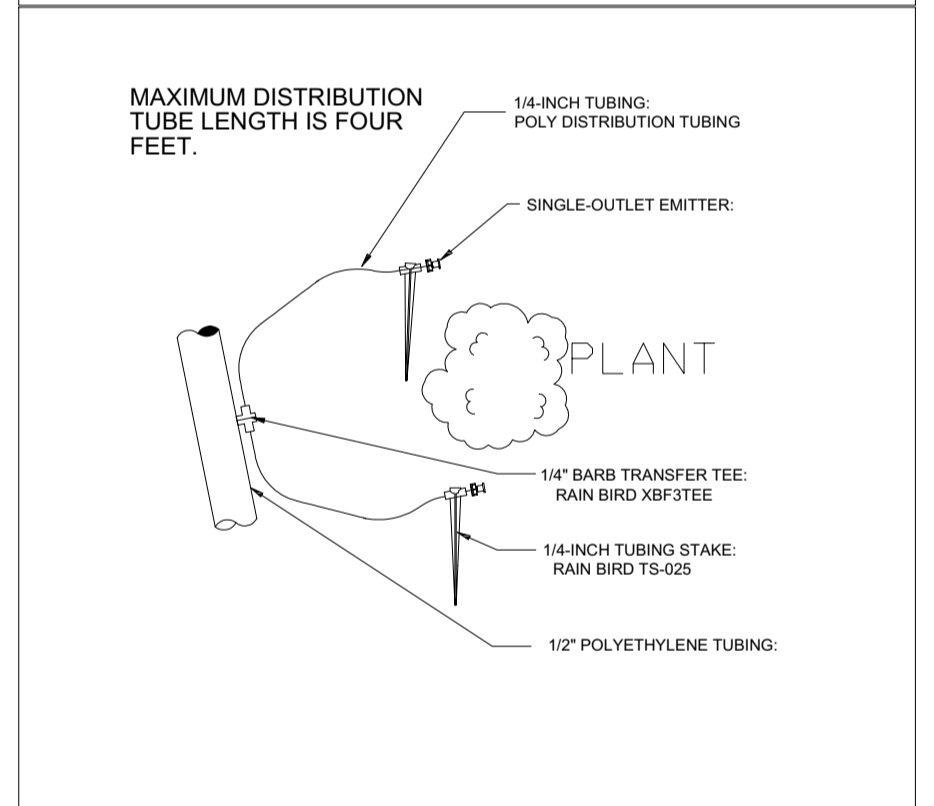
DRIIP ZONE INDICATOR N.T.S.



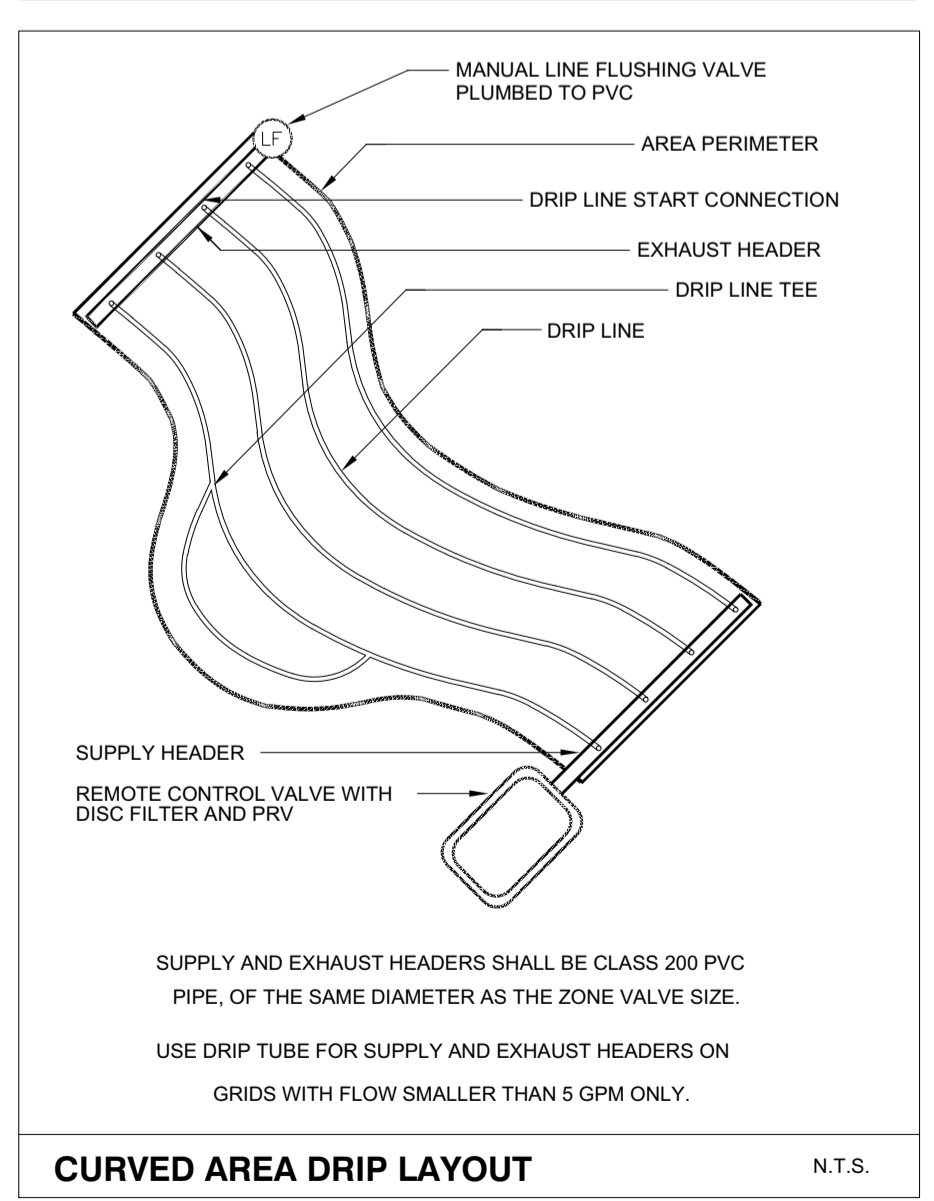
IRRREGULAR AREA DRIIP LAYOUT N.T.S.



DOUBLE CHECK ASSEMBLY N.T.S.



XERI-BUG EMITTER N.T.S.



CURVED AREA DRIIP LAYOUT N.T.S.