

1. SCOPE OF WORK: The Contractor shall furnish all labor, machinery, tools, supplies, and equipment as necessary to construct and provide an operating system, as indicated in the Plans. The work shall include, but not be limited to, furnishing materials (pipe, valves, sprinkler heads, fittings, controllers, electrical, wire and fittings, primer, glue, etc.), layout, protection to the public, excavation, assembly, installation, backfilling, compaction, repair of road or pavement surfaces, controller and low voltage feed to the valves, clean-up, maintenance and guarantee, and as-built plans.

3. **GUARANTEE:** The irrigation system shall be guaranteed for a minimum of one calendar year from the time of final acceptance.

5. **AS-BUILT DRAWINGS:** Prints of the plans will be supplied to the Contractor for recording "as-built" information. Immediately upon installation of any work which deviates from what is shown on the Plans, the Contractor shall clearly indicate such changes in red pencil on the prints. Such changes shall include, but not be limited to, changes in (1) materials; (2) sizes of material; (3) location; and (4) quantities.

6. The entire installation shall fully comply with all applicable local and state codes and ordinances. The Contractor shall take out all required plumbing and electrical applications and permits, arrange for all necessary inspections and shall pay all fees and expenses in connection with same as part of work under the contract.

8. MAINTENANCE PERIOD: The irrigation system shall be maintained for a period of 90 days after final acceptance of installation. Maintenance shall include checking of the system 2 times per week. Contractor shall be responsible to replace/repair any broken or malfunctioning parts of the system including those damaged by accidents or vandalism. Repairs shall be made immediately at the time of inspection or when notified by the Landscape Architect.

10. The system is design to provide sprinkler precipitation rates that are nearly equal in each zone. Mixing of sprinklers with widely varying precipitation rates in a zone will not be accepted.

12. Keep pop-up sprinkler heads a minimum of 8" from edges of pavement and curbing, and heads on risers a minimum of 18", or as indicated in the plans.

13. All heads located in shrub or groundcover beds shall be installed on a riser as per details in the plans. All other heads shall be installed on a swing joint as per details in the plans.

15. Valve locations are schematic and shall be adjusted in the field. Each valve shall be in a separate valve box (10' x 16' min.). When grouping valve boxes in grass or groundcover areas, set boxes a minimum of 12' apart to allow grass or groundcover to grow between them. When possible, hide valve boxes in shrub beds, a minimum of 12' from edge of beds. Set all valve boxes, concrete or plastic, in ground with cover flush with finish grade, and level, with a minimum of 6" of pea gravel at the bottom of the box, with at least 2' of clearance from the bottom of the valve to the top of the gravel.

16. TESTING: Notify the Landscape Architect in writing when testing will be conducted. Conduct test in the presence of the Landscape Architect. After all PWC assembly is completed the lines shall be flushed to insure that no rocks, sand, or other foreign debris remains in the lines. The mains shall be filled with water and all outlets shall be capped and plugged. The main shall be pressurized to 100 PSI for a minimum of one hour. No section of the main will be approved if the pressure drops more than 5 PSI at the end of the one hour period. Leaks shall be repaired immediately and the system shall be re-tested until found satisfactory by the Landscape Architect.



TYPICAL SOLENOID VALVE ASSEMBLY

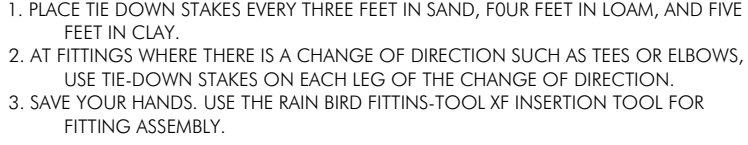
FLEXIBLE SWING JOINT DETAIL

1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

XFS SUBSURFACE DRIPLINE ADAPTER FOR PVC

XFS AIR/VACUUM RELIEF

- 1 TURF GRASS
- 2 SUBTERRANEAN EMITTER BOX:
RAIN BIRD SEB 7X8
- 3 FINISH GRADE
- 4 AIR RELIEF VALVE:
RAIN BIRD ARI500
TO BE INSTALLED AT HIGH POINTS IN
DRAIN ZONE
- 5 X 1/2" PVC REDUCER BUSHING
- 6 BIRD X FEMALE THREAD CONNECTOR:
RAIN BIRD XFD-TFA FITTING
- 7 BLANK DRIPLINE TUBING:
RAIN BIRD XF SERIES
- 8 BIRD X MALE THREAD CONNECTOR:
RAIN BIRD XFF-MA FITTING
- 9 PVC TEE CONNECTED TO PVC HEADER
PIPE
- 10 3" MINIMUM DEPTH OF
1/2" WASHED GRAVEL
- 11 BRICK (1 OF 2)



XFS SUBSURFACE DRIPLINE RISER ASSEMBLY

NOTES:

1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

FS SUBSURFACE DRIPLINE BURIAL

NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO
DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

XFS DRIPLINE FLUSHPOINT WITH COMPRESSION FITTINGS

RAIN SENSOR DETAIL

CONNECTION TO METER DETAIL

1. DISTANCE BETWEEN LATERAL RUNS AND EMITTER SPACINGS TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XPS DRILLPIE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.

2. LENGTH OF LONGEST DRILLPIE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.

3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.

4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

XFS SUBSURFACE DRIPLINE END FEED LAYOUT

1. DISTANCE BETWEEN LATHEIN ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD X-FI-SDI INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

XFS SUBSURFACE DRIPLINE CENTERFEED LAYOUT

Inlet Pressure psi	12" Spacing	18" Spacing		24" Spacing	
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
	0.6	0.9	0.6	0.9	0.6
15	273	155	314	250	424
20	318	169	353	294	508
30	360	230	413	350	586
40	395	255	465	402	652
50	417	285	528	420	720
60	460	290	596	455	780

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