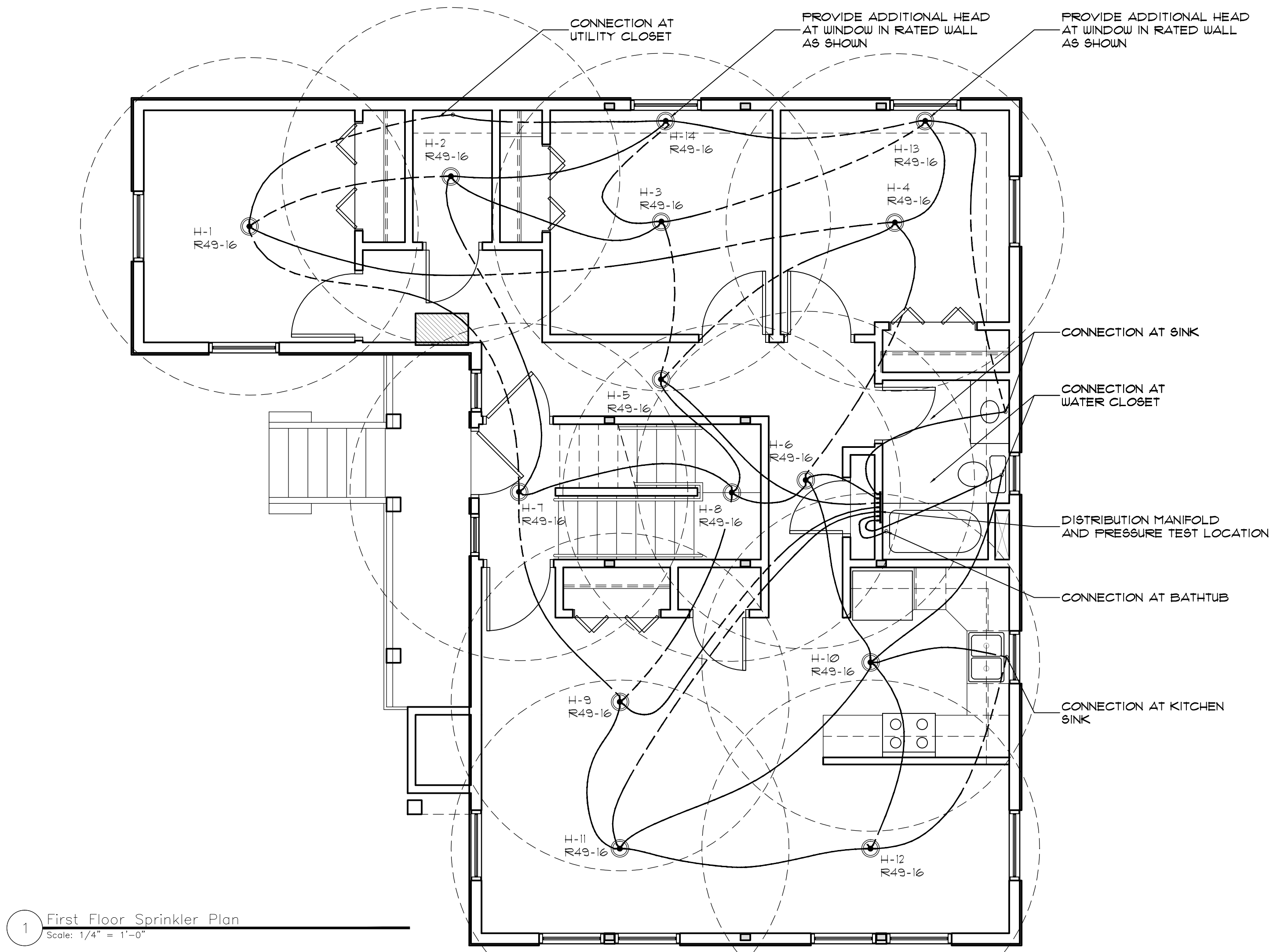
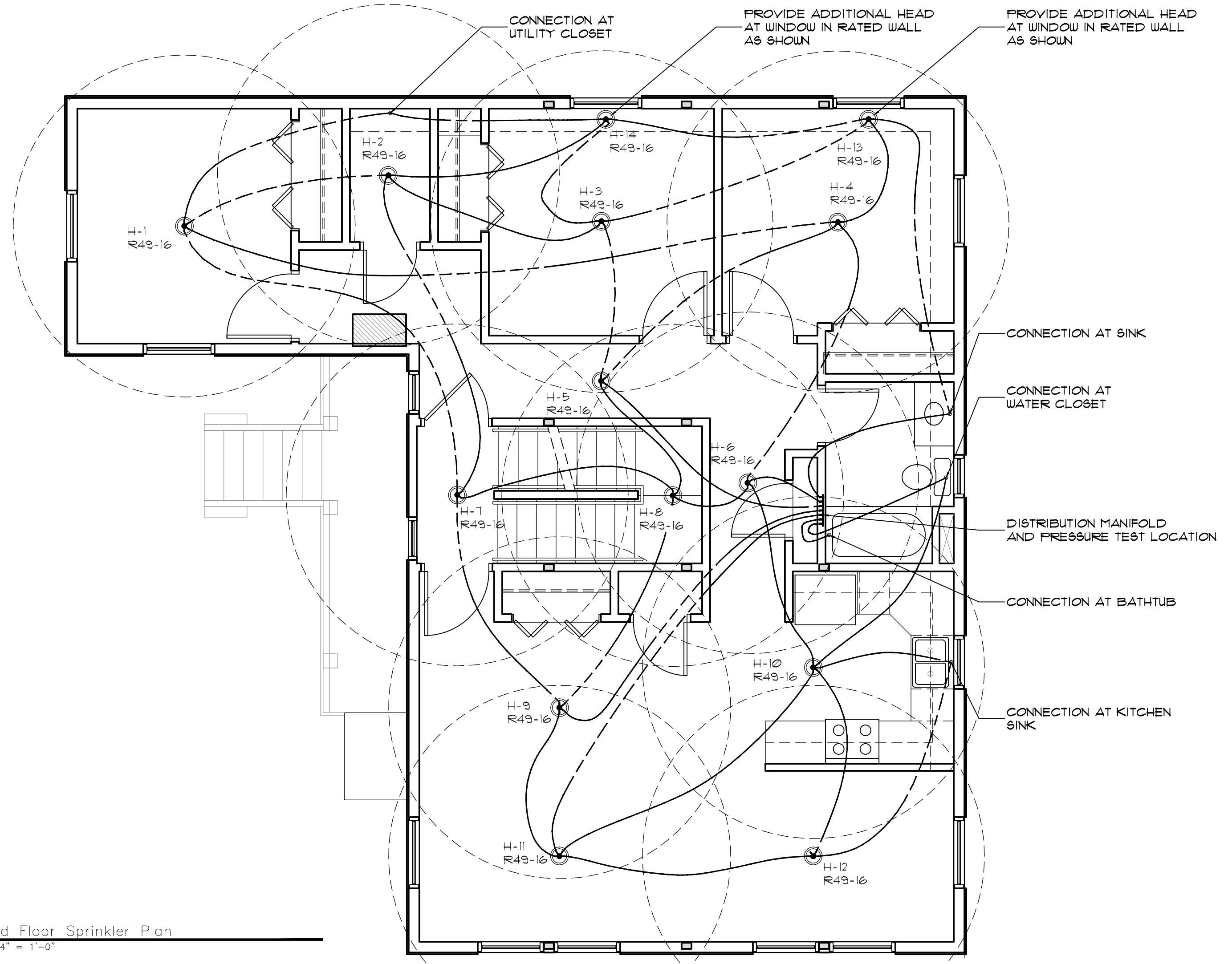


BY	JJO				
NO	REMARKS				
DATE	12-22-09				
	A	ISSUED FOR PERMITTING			
CODE:	IRC 2003				
TOWN:	Portland				
DATE:	12-18-09				
SCALE:	AS NOTED				
DRAWN:	JJO				
TITLE:	Sprinkler Plans				
FILE:	015-017-09				
SHEET:	A2.5				



1 First Floor Sprinkler Plan
 Scale: 1/4" = 1'-0"



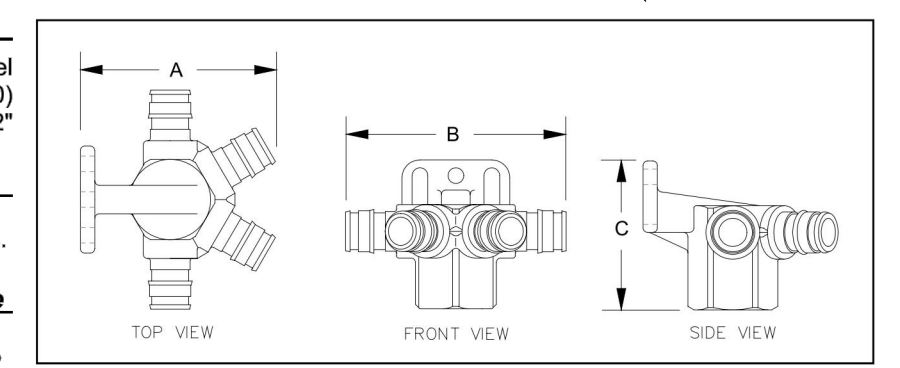
2 Second Floor Sprinkler Plan
 Scale: 1/4" = 1'-0"

Technical Data
 Material.....300 Series Stainless Steel
 Fitting type.....Wirubo ProPEX® (ASTM F1960)
 PEX tubing connection size.....1/2"

Dimensional Information

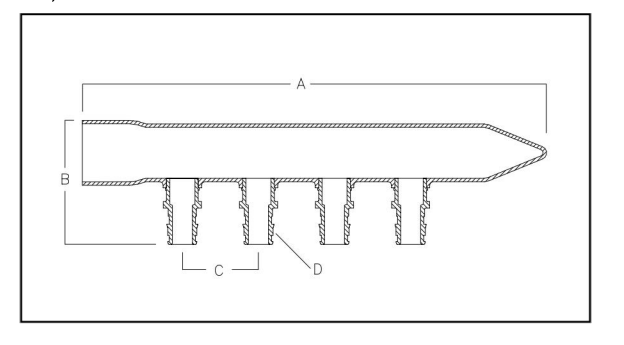
A	B	C	Weight
2.72"	3.09"	2.06"	0.56 lbs.

Product Information and Application Use
 The AQUASAFE's patented four-port fitting is used in conjunction with the respective Reliable® sprinkler head to provide a multi-purpose fire sprinkler system. AQUASAFE system is installed with the cold side of the Wirubo AQUAPEX® plumbing system for residential applications. The four-port design eliminates any stagnant loops within the domestic potable water system and provides guaranteed flow to the sprinkler head upon activation. The connections on the four-port fitting are made with the durable Wirubo ProPEX fitting. The four-port fitting is designed for use only with 1/2" Wirubo AQUAPEX tubing.



Technical Data
 Material.....Type L Copper
 Max Temp (no pressure).....320°F
 Max Use Temp/Pressure.....210°F @ 150 psi
 Max Manifold Flow @ 5 fps.....12.8 gpm
 Max Manifold Flow @ 8 fps.....20.5 gpm

Product Information and Application Use
 The Wirubo Copper Valved Manifold is used for hot and cold domestic potable water distribution systems. The manifold has a 1" copper sweat fitting adapter supply connection. All outlets are configured with 1/2" brass ProPEX connections.



Ordering Information

Description	Part Number	A	B	C	D	E	Weight
1" Copper Manifold, 4 outlets (1/2")	Q2801050	8.95"	2.40"	1.50"	1/2"	N/A	0.80 lbs
1" Copper Manifold, 6 outlets (1/2")	Q2811050	11.95"	2.40"	1.50"	1/2"	N/A	1.10 lbs
1" Copper Manifold, 8 outlets (1/2")	Q2821050	14.95"	2.40"	1.50"	1/2"	N/A	1.40 lbs
1" Copper Manifold, 10 outlets (1/2")	Q2831050	17.95"	2.40"	1.50"	1/2"	N/A	1.70 lbs
1" Copper Manifold, 12 outlets (1/2")	Q2841050	20.95"	2.40"	1.50"	1/2"	N/A	1.90 lbs

Code Approvals/Standards
 ANSIN/NSF 14 and 61 certified
 ASTM F 877
 ASTM F 1960
 CAN/CSA B137.5
 ICBO ER 5142
 IPC
 NSPC
 SBCCI (PST and ESI Report No. 9661)
 UL 1821

Installation
 • Any product designed to mount one (1) inch copper pipe may be used as a mounting bracket.
 • Any bend within six (6) inches of the ProPEX connection to the manifold requires the use of a tube talon or bend support.
 • Refer to the Wirubo AQUAPEX Installation Handbook for additional information.

Related Applications
 AQUAPEX — Hot and Cold Potable Water

Accessories

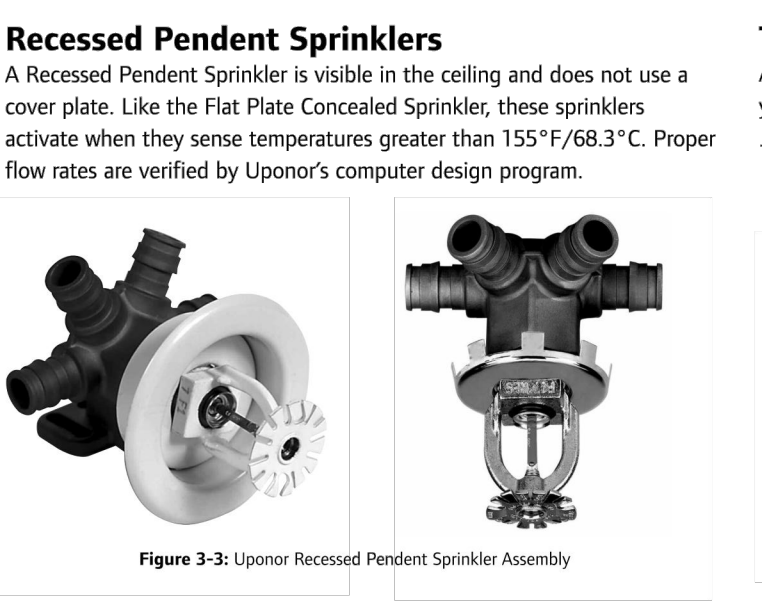
- Q71600 and Q71800 series sprinkler heads with 0.04 gpm/ft² densities
- Q74000 and Q74900 series sprinkler heads with 0.05 gpm/ft² densities
- F1120500: 1/2" AQUAPEX tubing
- Q4690502: 1/2" ProPEX rings

Codes and Standards

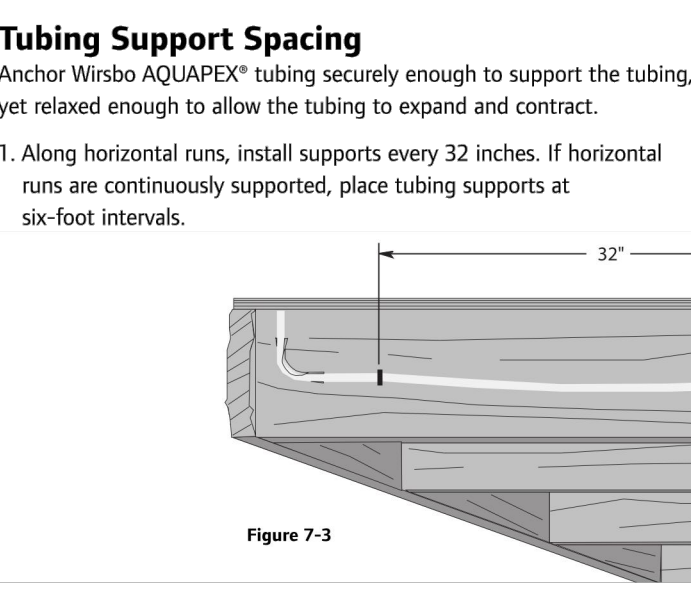
- ASTM F1960
- UL Standard 1821
- ANSIN/NSF Standard 14
- ANSIN/NSF Standard 61
- NFPA 13D
- International Plumbing Code (IPC)
- Uniform Plumbing Code (UPC)

Installation

- The four-port fitting comes from the manufacturer with the appropriate sprinkler head installed.
- If sprinkler head replacement is required in the field, ensure the proper tools, sealant and instructions are utilized.
- Refer to the AQUASAFE Installation Handbook for additional information.



Recessed Pendant Sprinklers
 A Recessed Pendant Sprinkler is visible in the ceiling and does not use a cover plate. Like the Flat Plate Concealed Sprinkler, these sprinklers activate when they sense temperatures greater than 155°F/68.3°C. Proper flow rates are verified by Uponor's computer design program.



Tubing Support Spacing
 Anchor Wirubo AQUAPEX® tubing securely enough to support the tubing, yet relaxed enough to allow the tubing to expand and contract.

1. Along horizontal runs, install supports every 32 inches. If horizontal runs are continuously supported, place tubing supports at six-foot intervals.
2. Along vertical runs, install supports every four to five feet, at each floor and at a mid-story guide.

Pressure Testing Uponor AQUASAFE Network System
 Pressure-test Uponor AQUASAFE Network System in accordance with NFPA 13D Standard, which specifies testing at normal operating water pressure. If local plumbing code requirements are more stringent, follow local code. Wait 30 minutes after making all ProPEX connections before pressure testing.

If leaky connections are found during pressure tests in cold weather, use a heat gun to gently warm up connections around the circumference of the tubing for 15 seconds. Do not overheat the tubing. When using the heat gun, protect sprinklers and cover plates from excessive heat. Temperatures greater than 155°F/68.3°C will cause the sprinkler's glass bulb to burst, activating discharge.

Note: Any 450-watt electric heat gun will work for this purpose.

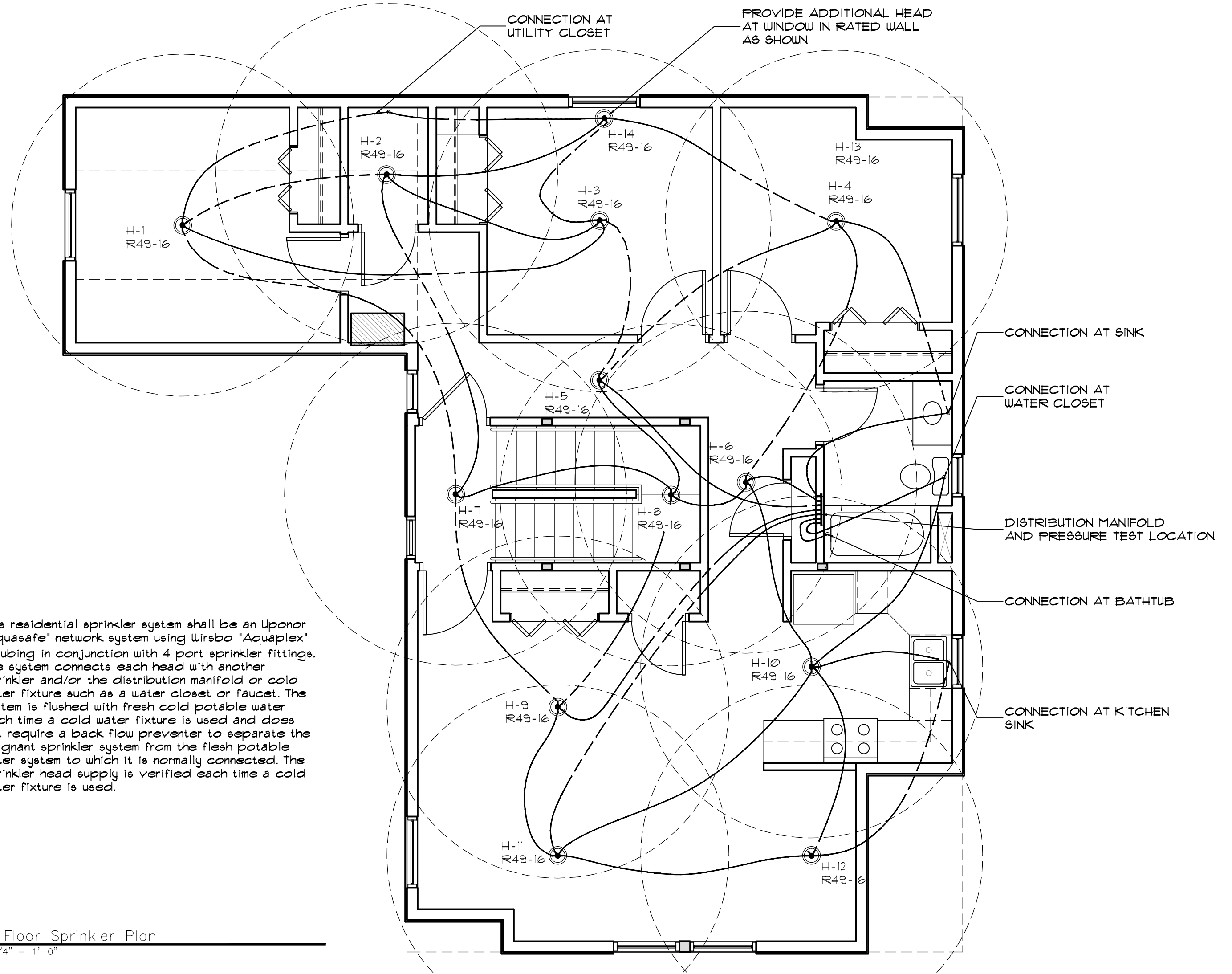
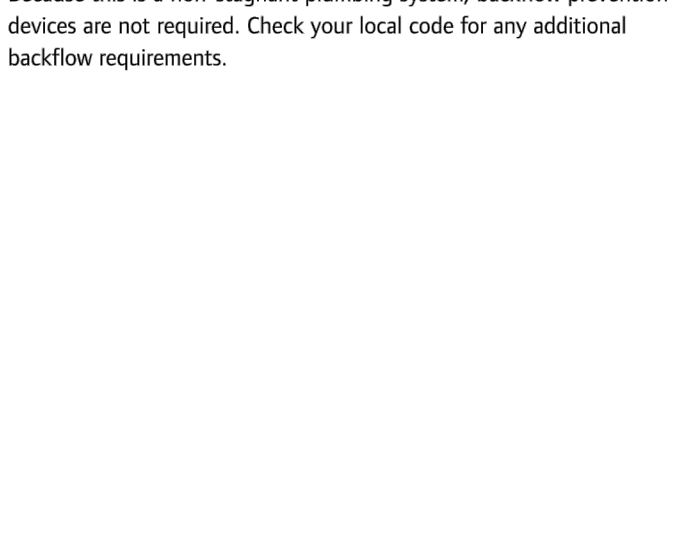
Caution: To protect the sprinkler from damage due to finishing work, cover the head with the plastic cover provided with the sprinkler. Paint and sheetrock can damage a sprinkler if it is not properly protected.

After all finishing work is complete and sheetrock is in place and painted, attach the Flat Cover Plate of the Concealed Sprinkler or the Recessed Escutcheon Plate of the Recessed Sprinkler. The Flat Cover Plate and Recessed Escutcheon Plate easily slide over the sprinkler using a twisting motion.



Bypass Instructions
 Flow-restricting devices can have a negative effect on the operation of this system. If any potential flow-restricting devices (such as water softeners, water conditioners, etc.) are part of the plumbing system, notify the system designer prior to initial system design. System design can easily be modified to accommodate any flow-restricting devices. Consult the manufacturer for bypass instructions.

Backflow Prevention Requirements
 Because this is a non-stagnant plumbing system, backflow prevention devices are not required. Check your local code for any additional backflow requirements.



3 Third Floor Sprinkler Plan
 Scale: 1/4" = 1'-0"

This residential sprinkler system shall be an Uponor 'Aquasafe' network system using Wirubo 'AquaPEX' 1/2" tubing in conjunction with 4 port sprinkler fittings. The system connects each head with another sprinkler and/or the distribution manifold or cold water fixture such as a water closet or faucet. The system is flushed with fresh cold potable water each time a cold water fixture is used and does not require a back flow preventer to separate the stagnant sprinkler system from the fresh potable water system to which it is normally connected. The sprinkler head supply is verified each time a cold water fixture is used.