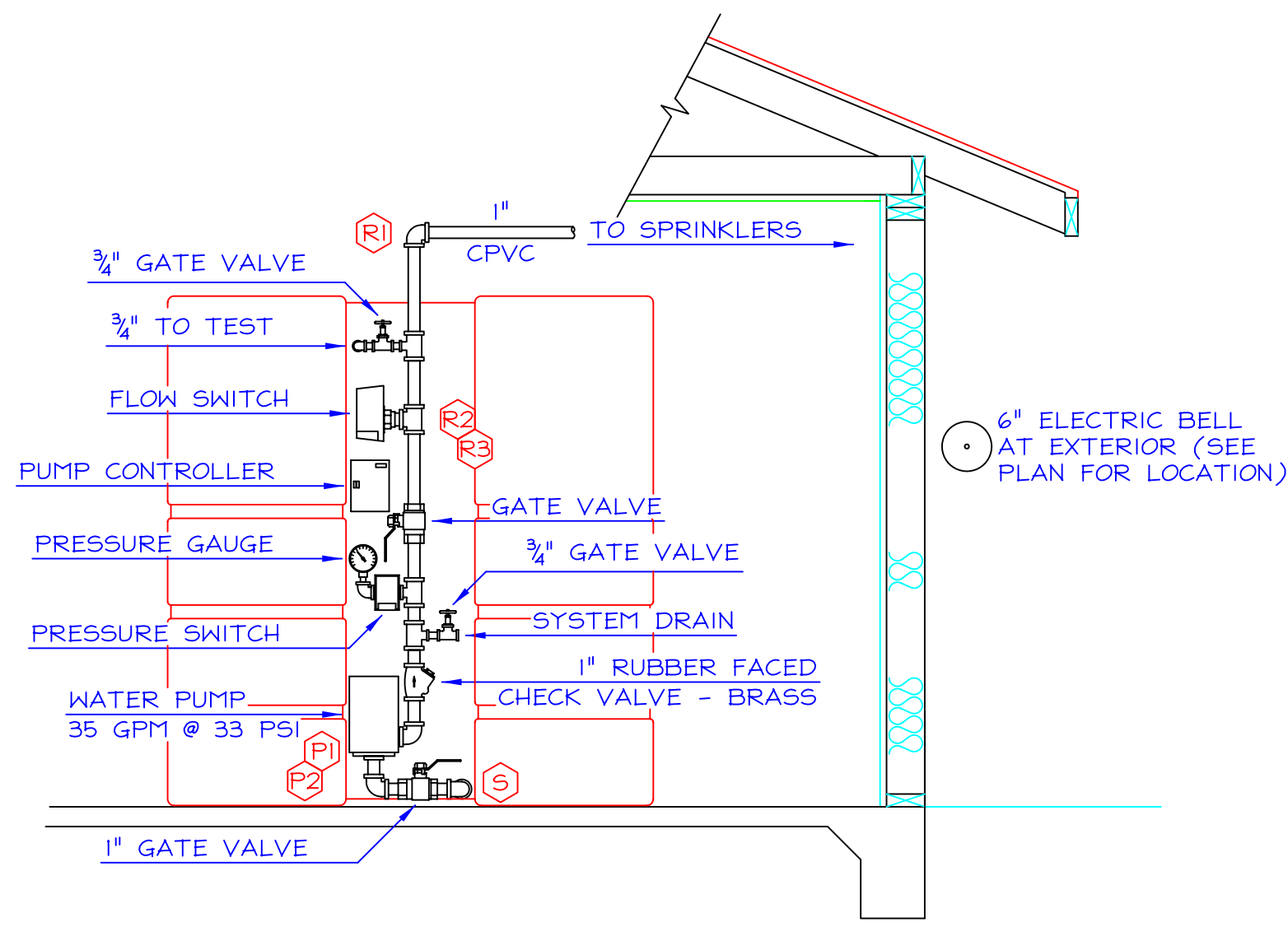


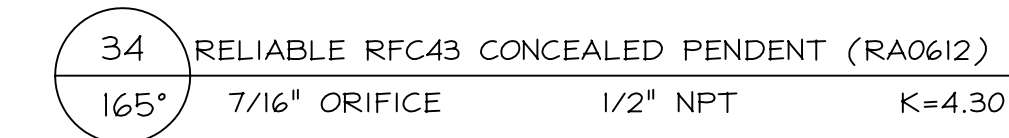
**GENERAL NOTES**

- SYSTEM DESIGN AND INSTALLATION SHALL COMPLY WITH NFPA 13D AND LOCAL APPLICABLE CODES.
- SYSTEM DESIGN BASIS:  
HYDRAULICALLY MOST DEMANDING 2 SPRINKLERS.
- WATER SUPPLY:  
300 GALLON STORAGE TANK WITH A 35 GPM @ 33 PSI PUMP
- ALL PIPE SHALL BE U.O.N. :  
RISER - COPPER  
OVERHEAD - CPVC
- MANUFACTURERS OF RESIDENTIAL SPRINKLERS PUBLISH INFORMATION REGARDING THE SPACING OF THEIR SPRINKLERS WITH RESPECT TO HEAT PRODUCING DEVICES (FIREPLACES, RANGES, OVENS, HEATING VENTS, WATER HEATERS, FURNACES, ETC.) WHETHER OR NOT ALL HEAT PRODUCING DEVICES ARE SHOWN ON THE PLAN PROPER MINIMUM DISTANCES MUST BE MAINTAINED. SEE HEAT SOURCE CHART.
- THE MINIMUM DISTANCE BETWEEN ANY 2 RESIDENTIAL SPRINKLERS SHALL NOT BE LESS THAN 8 FEET.
- THE MAXIMUM DISTANCE BETWEEN ANY 2 RESIDENTIAL SPRINKLERS ON THIS PROJECT IS HYDRAULICALLY LIMITED TO 16 FEET. SPRINKLERS SHALL NOT EXCEED 8 FEET FROM ANY WALL. THE MAXIMUM DISTANCE BETWEEN 2 SPRINKLERS ON A SLOPED CEILING IS LIMITED TO 16 FEET. SPRINKLERS SHALL NOT EXCEED 8 FEET FROM ANY WALL.
- THE MINIMUM DISTANCE A SPRINKLER CAN BE LOCATED FROM A WALL IS 4 INCHES.
- INSTALLATION OF ALL RESIDENTIAL SPRINKLERS SHALL BE IN STRICT COMPLIANCE WITH THE MANUFACTURERS INSTALLATION GUIDE.
- PRIOR TO DRILLING JOISTS CONTACT STRUCTURAL ENGINEER FOR RECOMMENDED DRILLING GUIDELINES.



**RISER DETAIL**

**SPRINKLER TOTALS**

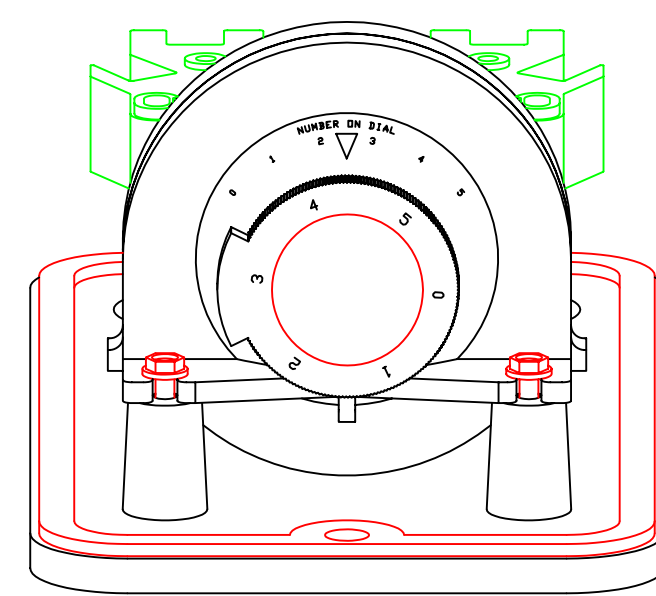


**SPRINKLER HEAT ZONES** (1999 NFPA 13D TABLE 3-5.2.3)

HEAT SOURCE	MINIMUM DISTANCE FROM EDGE OF SOURCE TO	
	ORDINARY TEMPERATURE SPRINKLER	INTERMEDIATE TEMPERATURE SPRINKLER
SIDE OF OPEN OR RECESSED FIREPLACE	3'-0"	1'-0"
FRONT OF RECESSED FIREPLACE	5'-0"	3'-0"
COAL- OR WOOD-BURNING STOVE	3'-6"	1'-0"
KITCHEN RANGE	1'-6"	0'-9"
WALL OVEN	1'-6"	0'-9"
HOT AIR FLUES	1'-6"	0'-9"
UNINSULATED HEAT DUCTS	1'-6"	0'-9"
UNINSULATED HOT WATER PIPES	1'-0"	0'-6"
SIDE OF CEILING- OR WALL-MOUNTED HOT AIR DIFFUSERS	2'-0"	1'-0"
FRONT OF WALL-MOUNTED HOT AIR DIFFUSERS	3'-0"	1'-6"
HOT WATER HEATER OR FURNACE	0'-6"	0'-3"
LIGHT FIXTURE 250W - 250W	0'-6"	0'-3"
LIGHT FIXTURE 250W - 499W	1'-0"	0'-6"

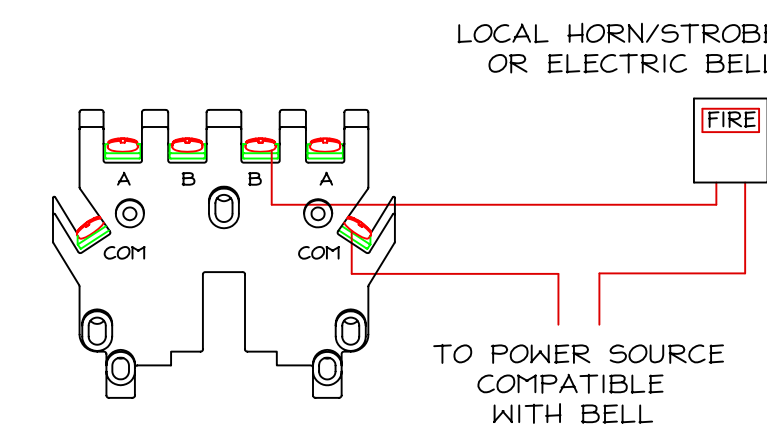
**SYMBOL LEGEND**

○ UPRIGHT SPRINKLER ON LINE	○ CHANGE IN PIPE ELEVATION
○ PENDENT SPRINKLER ON LINE	○ CHANGE IN PIPE ELEVATION (UP)
● PENDENT SPRINKLER ON DROP	○ CHANGE IN PIPE ELEVATION (DOWN)
○ UPRIGHT AND PENDENT SPRINKLER	○ SYSTEM RISER
○ UPRIGHT SPRINKLER ON SPRIG	○ HANGER LOCATION
○ HORIZONTAL SIDENALL SPRINKLER	□ LIGHT (RECESSED)
— SPRINKLER BRANCHLINE	□ LIGHT (PENDENT)
○ HYDRAULIC REFERENCE POINT	□ LIGHT (SURFACE MOUNTED)



DIAL SETTING	0	1	2	3	4	5
DELAY (SECONDS)	0	15	30	45	55	70

**FLOW SWITCH DIAL SETTINGS**



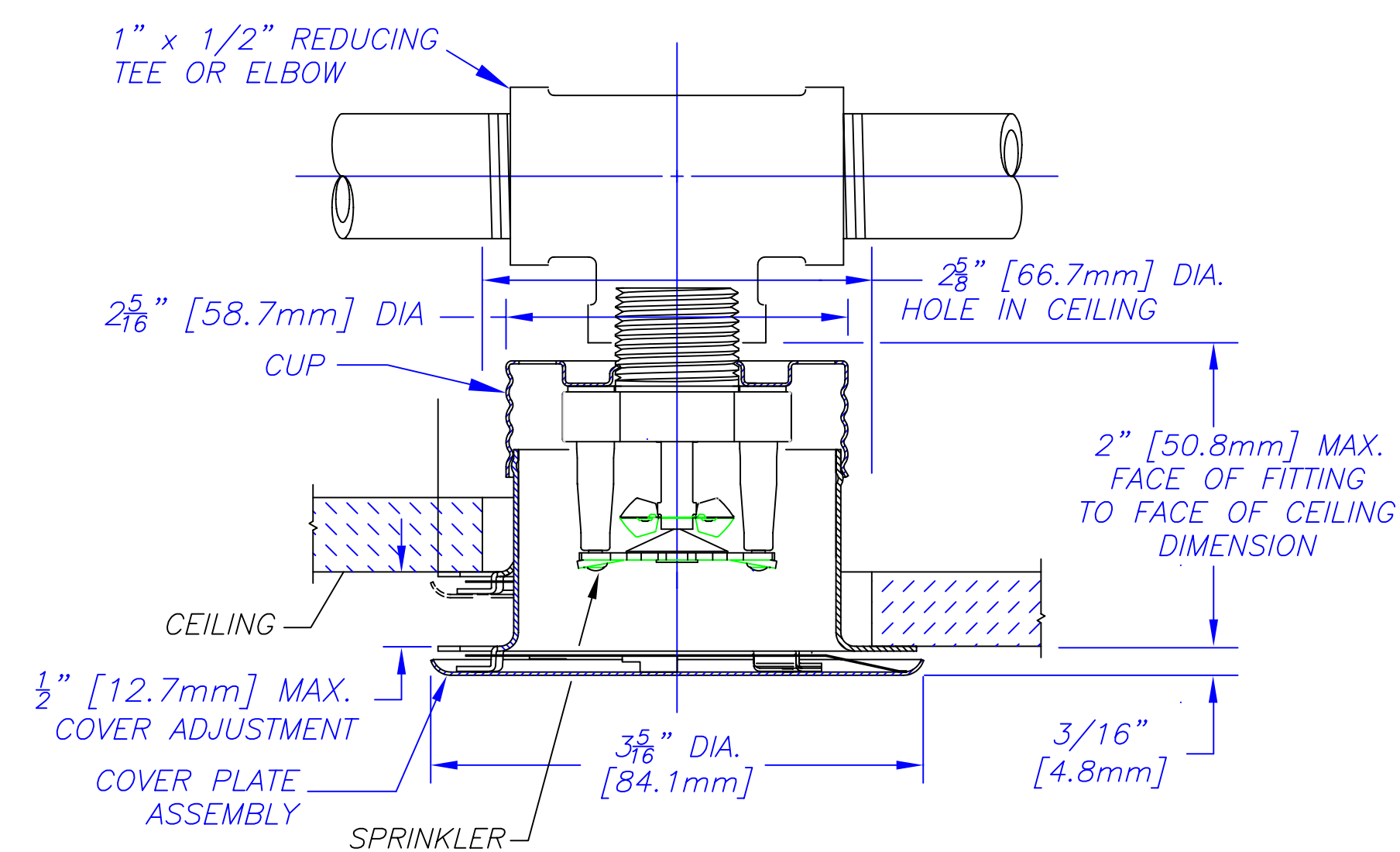
**FLOW SWITCH WIRING DIAGRAM**

**HANGER SPACING**

PIPING MATERIAL	PIPE SIZE						
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
COPPER	6	8	8	10	10	10	12
CPVC	73"	5.5	6	6.5	7	8	9
	100"	5	5.5	6.5	7	7.5	8.5
	120"	4.5	5	5.5	6	7	7.5
SCHEDULE 40 # 10 STEEL	*	12	12	15	15	15	15
THREADABLE THINWALL	*	12	12	12	12	12	12

**NOTES**

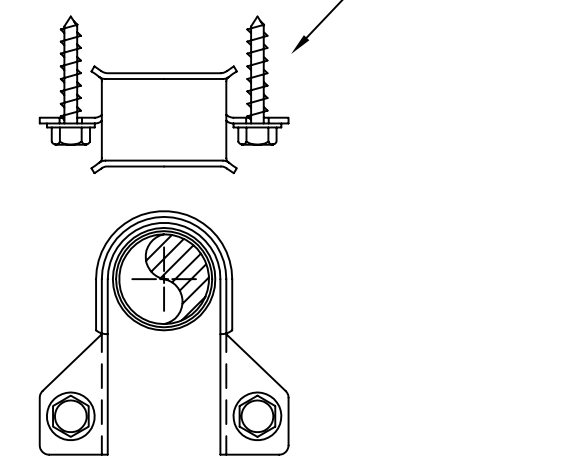
- All lengths shown are the maximum recommended distance between hangers expressed in feet.
- Provide a hanger within 6 inches of all drops to sprinkler heads when using CPVC pipe.
- \* Steel pipe is not allowed in sizes less than 1 inch.
- \*\* Indicate information that is not available.
- CTS = Copper Tube Size.
- IPS = Iron Pipe Size.



**COVER PLATE: 1/2" [12.7mm] ADJUSTMENT**

**RELIABLE RFC43 CONCEALED PENDENT**

HARDENED HEX HEAD SELF THREADING SCREW IS FURNISHED WITH THE HANGER AND IS THE MINIMUM FASTENER SIZE ACCEPTABLE TYPE. USE 'TEK' TYPE SCREWS TO STEEL JOISTS.



CPVC DOUBLE FASTENER STRAP TYPE HANGER

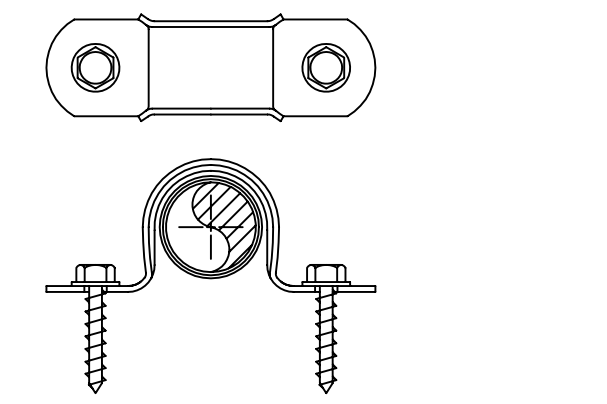
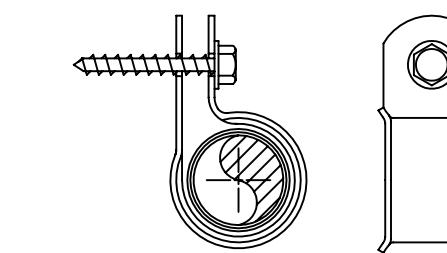
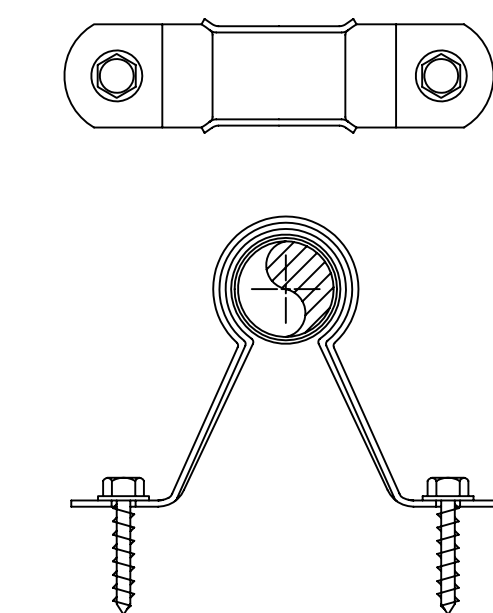


FIGURE 23 - CPVC HANGER



CPVC SINGLE FASTENER STRAP TYPE HANGER



NO BLOCK - HANGER

FIGURE 24 - CPVC HANGER

FIGURE 22 - CPVC HANGER

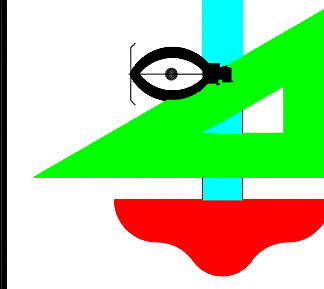
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ENGINEERED FIRE SYSTEMS, INC.  
AUTOMATIC SPRINKLER "SPECIALISTS"  
13457 COLIFAX HWY. GRASS VALLEY, CA 95945 (530) 274-9400

NEW RESIDENCE WITH TANK AND PUMP

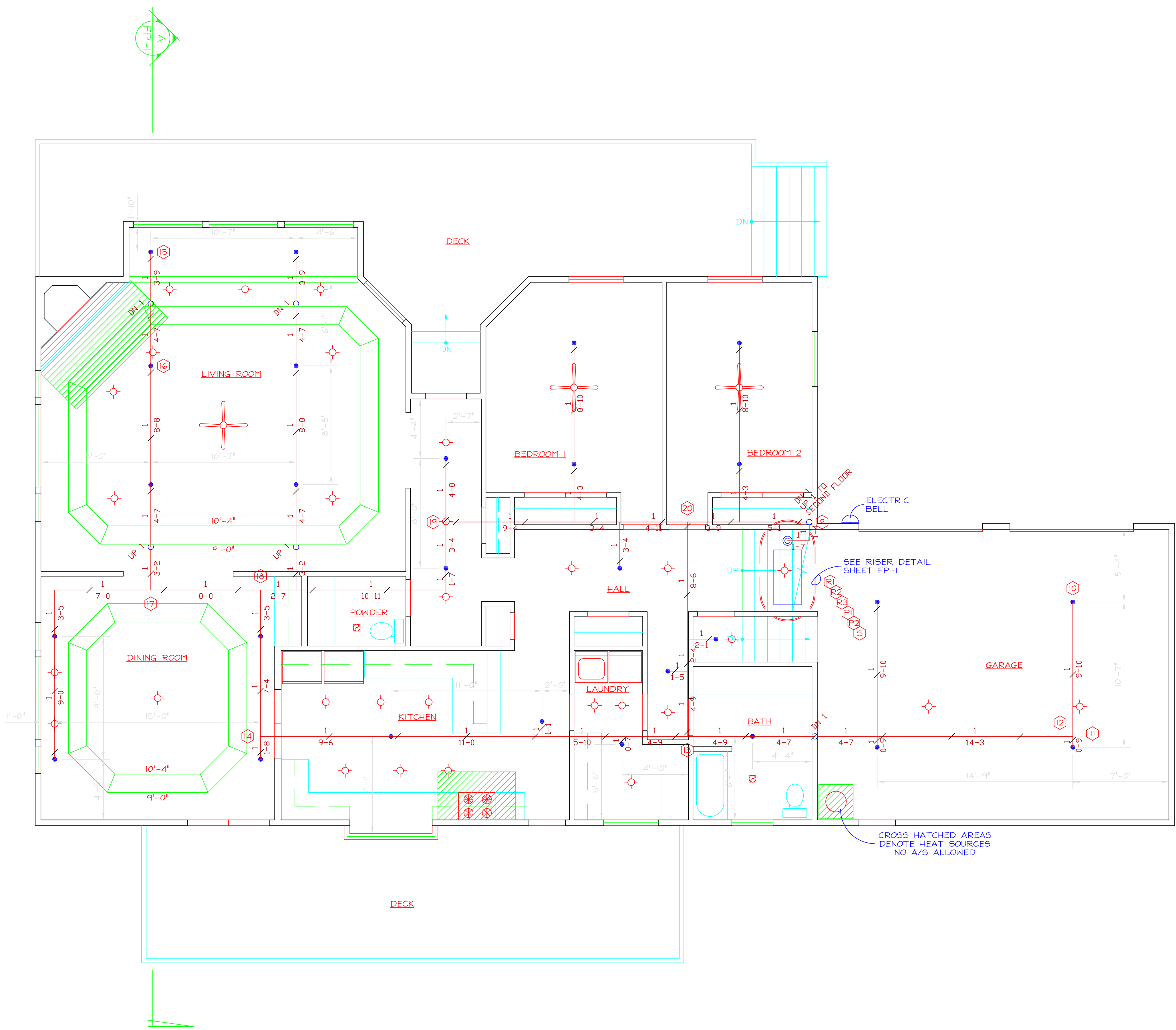
DRAWN	
T. RAY	DATE
05-03-05	SCALE
1/4" = 1'-0"	FILE NUMBER
10112	SHEET
FP-1	1 OF 2 SHEETS

REVISIONS	BY
△	
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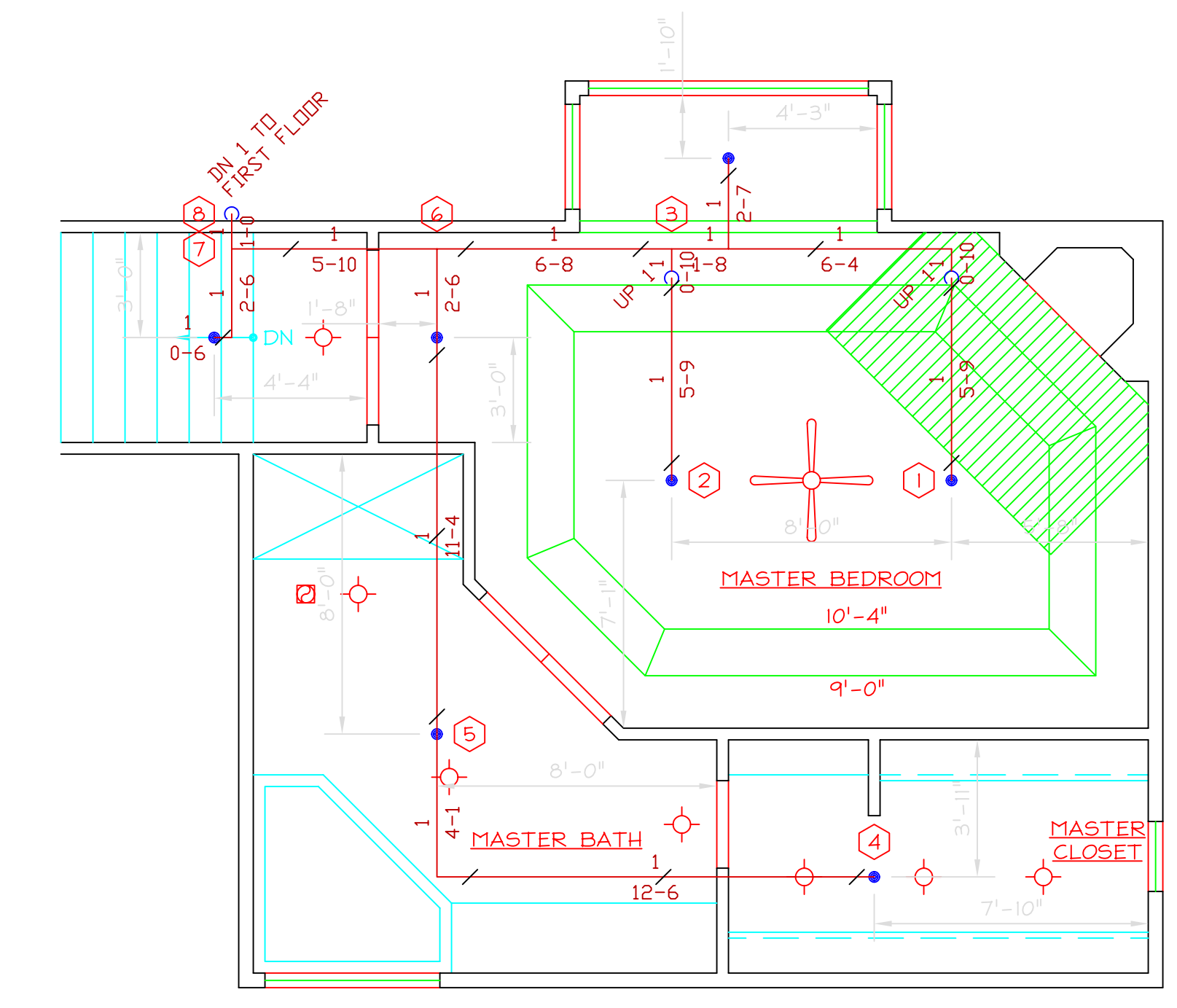
NEW RESIDENCE  
WITH TANK AND PUMP

DRAWN	T. RAY
DATE	05-03-05
SCALE	1/4" = 1'-0"
FILE NUMBER	10112
SHEET	FP-2
2 OF 2 SHEETS	



FIRST FLOOR PIPING PLAN

1/4" = 1'-0"



SECOND FLOOR PIPING PLAN

1/4" = 1'-0"