

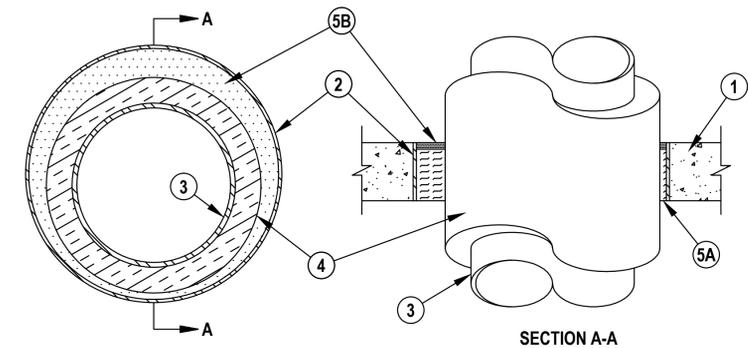


SOUTHEASTERN EMS
NEW SOUTHEASTERN EMS
FOR
RUTHERFORD COUNTY

ISSUE DATE: 10-7-14
REVISION 1: _____
REVISION 2: _____
REVISION 3: _____
REVISION 4: _____
PROJECT #: 14-190-000
CONTENT: _____
PROJECT ENGINEER: JCC
DRAWN BY: AE
CADD FILE NAME: _____
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System No. C-AJ-5091

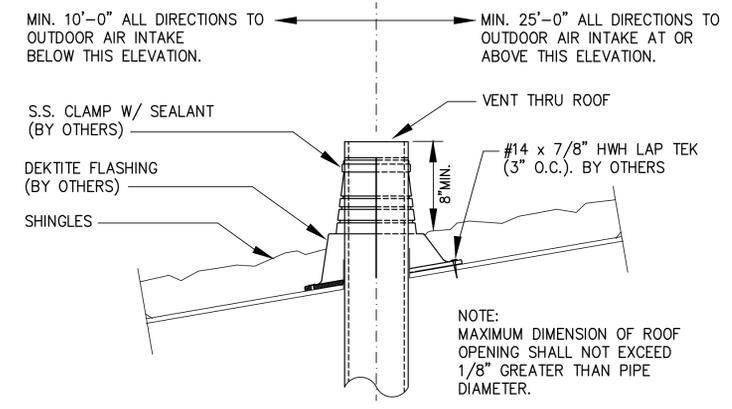
F Rating - 2 Hr
T Rating - 1 Hr
L Rating At Ambient - 4 CFM/Sq Ft
L Rating At 400 F - Less Than 1 CFM/Sq Ft



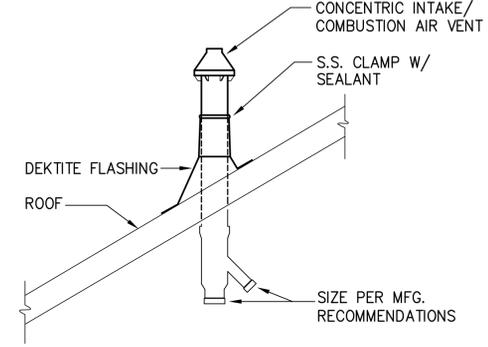
- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 19-1/2 in. See Concrete Blocks (CAZT) category in the Fire Resistance directory for names of manufacturers.
- Metallic Sleeve - (Optional) - Nom 20 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
- Through Penetrants - One metallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - A. Steel Pipe - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
 - C. Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
- Pipe Covering - Nom 2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all-service jacket. Longitudinal joints sealed with metal fasteners or factory-applied, self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe and the edge of the periphery of the opening shall be min 1/2 in. to a max 2-1/4 in.
 - See Pipe Equipment Covering - Materials - (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
 - 4A. Pipe Covering - (Not Shown) - As an alternate to Item 4, max 2 in. thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 8 AWG stainless steel wire spaced max 12 in. OC. The annular space shall be min 1/2 in. to max 2-1/4 in.
- Firestop System - The firestop system shall consist of the following:
 - A. Packing Material - Min 4 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
 - B. Fill, Void or Cavity Material* - Sealant - Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-One Sealant
 - *Bearing the UL Classification Mark



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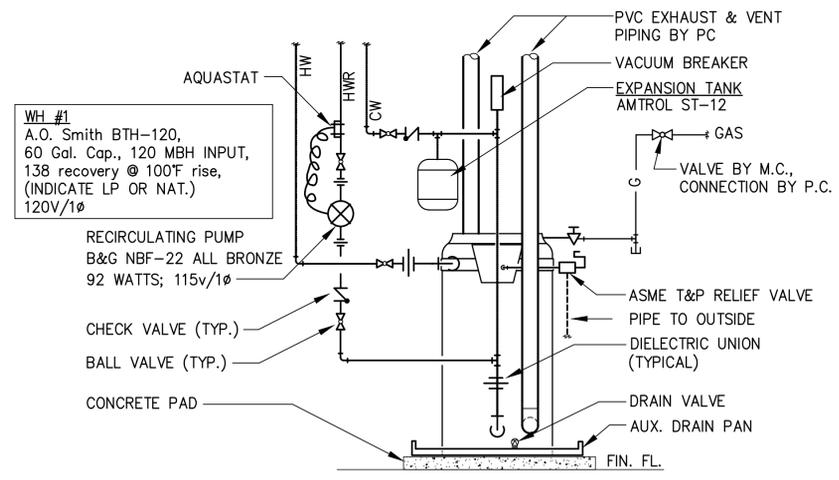


5 VENT THRU ROOF DETAIL
P-2.1 NTS

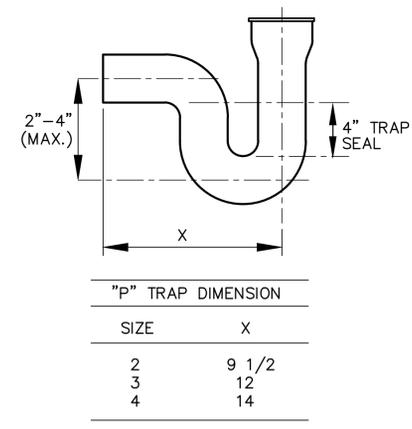


6 CONCENTRIC VENT THRU ROOF DETAIL
P-2.1 NTS

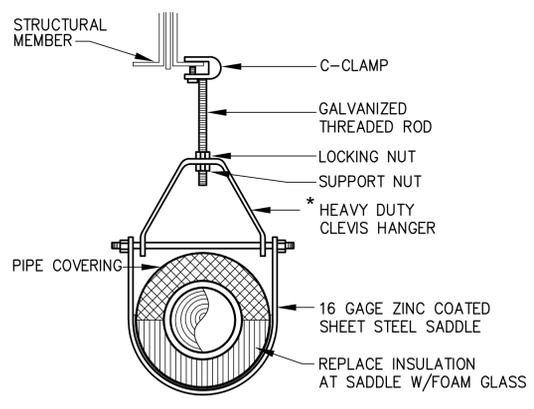
- NOTES:
1. VENT SHALL BE U.L. LISTED
2. VENT SHALL BE SIMILAR IN APPEARANCE TO DETAIL.



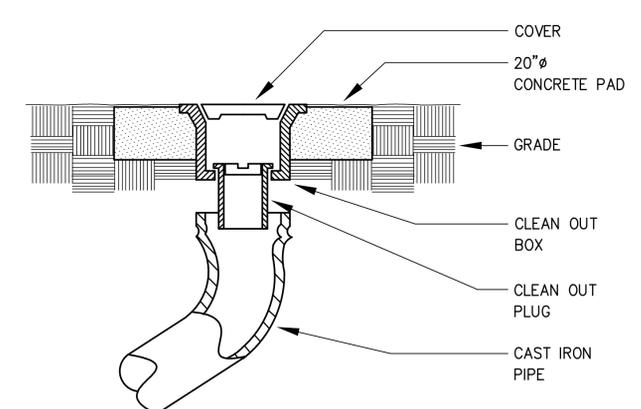
1 WATER HEATER DETAIL
P-2.1 NTS



2 MINIMUM TRAP DIMENSIONS
P-2.1 NTS



3 PIPE HANGER DETAIL
P-2.1 NTS
CONTRACTOR OPTION: MICHIGAN HANGER #403



4 YARD CLEANOUT DETAIL
P-2.1 NTS