

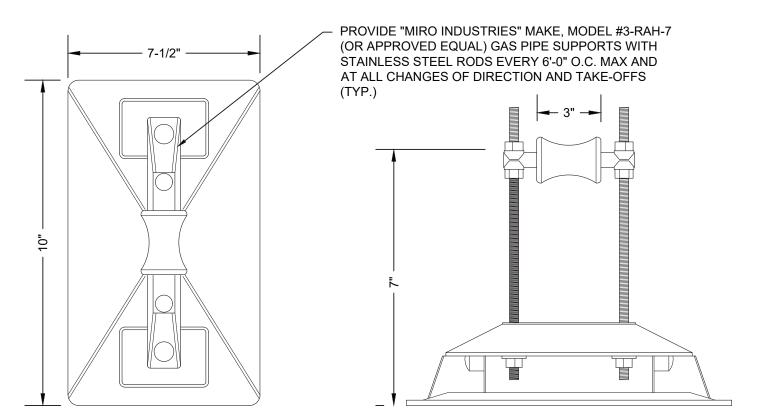
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ABBREVIATIONS		GENERAL CONSTRUCTION NOTES	PLUMBING SYSTEM MATERIALS	
& = DIAMETER OR ROUND ADD'L = ADDITIONAL AFF = ABOVE FINISHED FLOOR ALT = ALTERNATE ARCH. = ARCHITECTURAL CD = CONDENSATE DRAIN CLG = CEILING CO = CLEANOUT CODP = CLEANOUT DECK PLATE COWP = CLEANOUT WALL PLATE CRD = CANOPY ROOF DRAIN DCW = DOMESTIC COLD WATER DDC = DIRECT DIGITAL CONTROL DHW = DOMESTIC HOT WATER DHWR = DOMESTIC HOT WATER RETURN DN = DOWN DWG = DRAWING EA = EACH EXIST = EXISTING FD = FLOOR DRAIN GPH = GALLON PER HOUR HWH = DOMESTIC HOT WATER HEATER	ID = INSIDE DIAMETER (DIM) IN = INCH INFO = INFORMATION MAX = MAXIMUM MECH = MECHANICAL MIN = MINIMUM NTS = NOT TO SCALE OD = OUTSIDE DIAMETER RD = ROOF DRAIN RPZ = REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER SPEC = SPECIFICATION SS = STAINLESS STEEL STD = STANDARD T&P = TEMPERATURE & PRESSURE TMV = THERMOSTATIC MIXING VALVE TYP = TYPICAL VTR = VENT THROUGH ROOF	 CONTRACTOR IS RESPONSIBLE FOR CUTTING OF ALL WALLS, FLOORS, CEILING ETC. FOR ALL PLUMBING PIPE WALL & FLOOR PENETRATIONS. CONTRACTOR IS REQUIRED TO PATCH (TO MATCH EXISTING), IMMEDIATELY AFTER REMOVAL, ALL WALL, FLOOR & CL.G. OPENINGS WHERE EXISTING PIPE, ETC. ARE BEING REMOVED. SEAL OPENING WITH 2 HR RATED FIRE BARRIER CAULK. SEE GENERAL LOCATIONS ON PLUMBING DEMOLITION PLANS. CONTRACTOR SHALL PROVIDE TIE-IN FOR ALL NEW CONDUIT THAT PENETRATES EXISTING ROOF. G.C. TO PROVIDE ROOFING PATCH WORK. WHERE A FIREPROOFING MATERIAL THAT IS INTEGRAL TO THE RATING OF AN EXISTING FIRE-RATED ASSEMBLY IS REMOVED OR DISTURBED, CONTRACTOR IS REQUIRED TO REPLACE THE MATERIAL TO PRESERVE THE RATING. 	PIPING: WASTE & VENT PIPING BELOW GRADE SHALL BE SERVICE WEIGHT CAST IRON PIPE WITH GASKETS, ABOVE GRADE SHALL BE NO-HUB SERVICE WEIGHT CAST IRON PIPE WITH STAINLESS STEEL SHIELDED COUPLINGS. DOMESTIC HOT AND COLD WATER PIPING ABOVE GRADE SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER SOLDER FITTINGS (LEAD-FREE SOLDER), BELOW GRADE SHALL BE TYPE "K" COPPER WITHOUT FITTINGS. GAS PIPING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON SCREWED FITTINGS (UP TO 2" PIPE SIZE) AND WELDED FITTINGS (PIPE SIZE 2-1/2" & LARGER). CONDENSATE DRAIN PIPING ABOVE GRADE SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER SOLDER FITTINGS INSULATION: ALL DOMESTIC HOT AND COLD WATER PIPING SHALL BE INSULATED WITH FIBERGLASS PIPE INSULATION WITH ASJ JACKET: 1-1/2" THICK INSULATION FOR PIPE SIZES 3" & SMALLER, 2" THICK. INSULATION FOR PIPE SIZES 4" & LARGER. ALL CONDENSATE DRAIN PIPING SHALL BE INSULATED WITH 1" THICK FLEXIBLE ELASTOMERIC INSULATION (AP ARMAFLEX BLACK LAPSEAL OR APPROVED EQUAL). CLEANOUTS: FLOOR: J R. SMITH #4023S W/ ROUND NICKEL-BRONZE TOP. WALL: J.R. SMITH #4532S W/ ROUND STAINLESS STEEL TOP. PIPE INSULATION/COVERS: PROVIDE TRUEBRO "LAV GUARD 2" WASTE & SUPPLY PIPING COVERS FOR ALL LAVATORIES. VALVES & FITTINGS: ALL VALVES & FITTINGS: ALL VALVES & FITTINGS FOR DOMESTIC WASTER SYSTEM SHALL BE LEAD FREE TYPE IN COMPLIANCE W/ REQUIREMENTS OF NSF/ANSI STANDARD 61. ALL BALL VALVES SHALL BE FULL-PORT TYPE. PENETRATION FIRESTOPPING: ALL PIPE PENETRATIONS (AT WALL, FLOOR, CHASE, ETC.) SHALL BE SEALED & CAULKED W/ 2 HR RATED FIRESTOPPING MATERIALS.	

DRAIN CONNECTION (1"ø)

COUPLING MINIMUM

BELOW LEVEL OF

CLEANOUT PLUG



GAS PIPE ROOF SUPPORT DETAIL

- PROVIDE A SECTION OF HIGH COMPRESSION STRENGTH

INSULATION AT EACH HANGER

HALF ROUND OR FULL ROUND & EXTENDED 2" BEYOND

GALVANIZED SHIELD EACH WAY.

- INSULATION WHERE REQUIRED

POINT. INSULATION MAY BE



MANUALLY, PRIME FILL TRAP BEFORE STSRT —UP TO FORM INITIAL DRAIN SEAL. 4. SUPPORT LENGHTY DRAIN LINES TO PREVENT SAG AND CONDENSATE OVERFLOW.

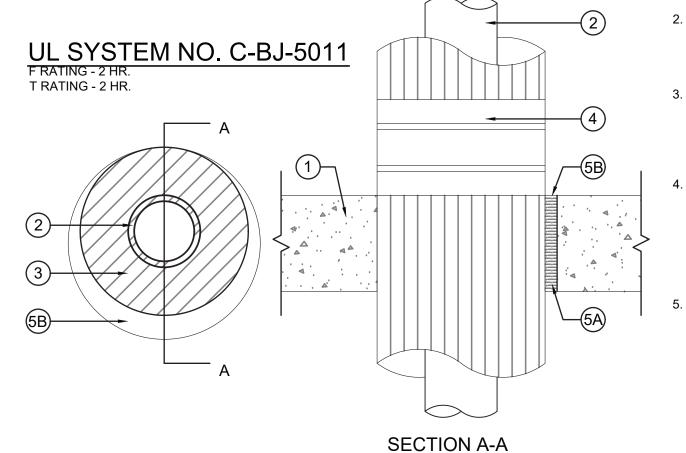
CONDENSATE DRAIN TRAP DETAIL

X = NEGATIVE INTERNAL STATIC PRESSURE AT FAN INLET.

1. ALLOW SUFFICIENT SPACE BELOW DRAIN PAN FOR TRAP

PITCH DRAIN FOR PROPER RUN - OFF.

X"=MIN. DROP



1. Floor or Wall Assembly - Min 5-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max daim. of opening is 14 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of

PIPE RISER CLAMP

- FASTENER PER MANUFACTURER

- RISER CLAMP BY "CARPENTER & PATERSON" OR EQUAL.

FIRE SAFING - PACK SOLID

BETWEEN PIPE & FLOOR

OPENING TO FULL DEPTH

REQUIREMENTS

manufacturers. Through Penetrants - One metallic pipe or tubing to be installed either concentrically or eccentrecally 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, conduits or tubing may be used: B. Iron Pipe - Nom 6in. diam. (or smaller) cast or ductile iron pipe.

Pipe Covering* - Cellular Glass Insulation - Max 3 in. thick cellular glass units sized to the outside diam. of the steel pipe and supplied in nom 24 in. long half sections or nom 18 in. long segments. The annular space shall be min 0 in. (point contact) to max 2 in. Pipe insulation installed on pipe in accordance with the manufacturer's instructions.

PITTSBURGH CORING CORP - FOAMGLAS

OPENING

Metal Jacket - Min. 12 in. long jacket formed on min. 0.010 in. thick steel or aluminum sheet cut to wrap tightly around the pipe insulation with a min. 2 in. lap. Jacket secured with min. $\frac{\mathcal{V}}{2}$ in. wide stainless steel hose clamps or bands located within 2 in. of each end of the jacket and spaced a max. of 10 in. O.C.

Jacket to be installed with edges abutting surface of caulk fill material (Item 5) on both surfaces of wall. Metal jacket to be used in addition to any other jacketing material which may be required to or desired on the pipe insulation.

Firestop System - The firestop system shall consist of the following: A Packaging Material - Min 5 in. thickness of min. 4 pcf mineral woll 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. ½ in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. At point contact location between penetrant and periphery of opening, a min. $\frac{1}{2}$ in. diam. bead of fill material shall be applied at the periphery of opening/pipe covering interface on top surface of floor assembly or both surfaces of wall assembly.

JOHNS MANVILLE INTERNATIONAL INC - Firetemp *Bearing the UL Classification Mark

PIPE SUPPORT HANGERS

. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM STRUCTURES OR TO THE TOP

3. PROVIDE PIPE SADDLE SUPPORTS FOR LARGE DIAMETER PIPES OR PIPE HEADERS.

IRON SHEET SHIELD

(12" LONG)

2. PROVIDE COPPER CLAMP HANGER SUPPORTS FOR COPPER PIPING.

CORD OF BAR JOISTS OR BEAMS.

GALVANIZED —

HANGER ROD

GALVANIZED-

INSULATION -

WHERE REQUIRED

UNISTRUT CHANNEL-

SUPPORT

CLEVIS HANGER

TYPICAL PIPE PENETRATION (ALL LOCATIONS)

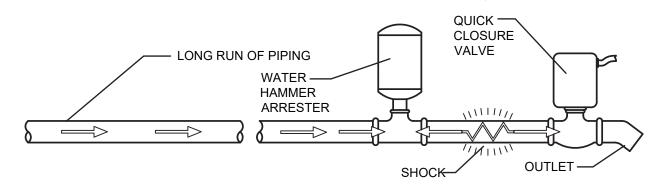
2-HOUR RATED

PLUMBING GENERAL NOTES

- ALL WORK SHALL CONFORM TO LATEST EDITION OF NEW YORK STATE ENERGY CODE & PLUMBING CODE, AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND LOCAL AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL VISIT JOB SITE AND NOTE ALL EXISTING CONDITIONS TO BE MET BEFORE SUBMITTING
- BID. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHOW THE INTENT OF WORK. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE EXTENT AND SCOPE OF THE WORK PRIOR TO
- SUBMITTING BIDS OR COMMENCING WORK. CONTRACTOR TO PROCURE AND PAY FOR ALL NECESSARY PERMITS AND LICENSES REQUIRED TO CARRY OUT WORK, OBTAIN AND PAY FOR ALL NECESSARY CERTIFICATES OF APPROVAL FOR WORK, AND PAY FOR ANY
- INSTALLATION TO COMPLY WITH ALL FEDERAL, STATE, MUNICIPAL LAWS, AND ALL CODES, RULES,
- ORDINANCES, AND REGULATIONS OF HEALTH, PUBLIC OR OTHER AUTHORITIES CONTROLLING OR LIMITING THE METHODS, MATERIALS TO BE USED OR ACTIONS OF THOSE EMPLOYED IN THE WORK.
- CONTRACTOR SHALL REVIEW DRAWINGS AND FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL REPORT ANY DISCREPANCIES, AND ADDRESS ALL QUESTIONS TO ARCHITECT/ENGINEER PRIOR TO COMMENCING WORK.
- PIPE INSTALLATION AS FOLLOWS:
- a) RUN ALL PIPING CONCEALED IN CEILINGS, WALLS AND PARTITIONS.
- b) ALL PIPING TO BE PITCHED TO LOW POINTS WITH DRAIN VALVES. STORM AND WASTE PIPING SHALL BE SLOPED PER LATEST PLUMBING CODE.
- c) SLEEVE PIPING THAT PASSES THROUGH WALLS.
- d) INSTALL PITCH POCKETS & FLASH ALL PIPING THAT PASSES THROUGH ROOF.
- e) PROVIDE ROD HANGERS WITH CLEVIS PIPE SUPPORT PER SPECIFICATION.
- f) PROVIDE VALVES REQUIRED FOR COMPLETE CONTROL OF ALL SYSTEMS. STOP VALVES FOR SUPPLY TO ALL FIXTURES TO BE CHROME PLATED WHERE EXPOSED.
- g) PROVIDE ACCESS DOORS FOR ALL CONCEALED VALVES AND CLEANOUTS.
- h) CORE-DRILL FLOOR SLABS & PROVIDE 2-HR RATED FIRE STOPPING MATERIALS FOR ALL PIPE PENENTRATION THROUGH FLOOR SLABS.
- CONTRACTOR TO PERFORM ALL TESTING OF THE PLUMBING WORK IN THE PRESENCE OF THE OWNER. PROVIDE ALL APPARATUS, TEMPORARY CONNECTIONS, AND OTHER REQUIREMENTS TO DO SUCH TESTS, ANY DEFECTS, LEAKS, ETC. WILL BE REPLACED AND TEST REPEATED UNTIL TEST REQUIREMENTS ARE MET.
- 9. SUBMIT SHOP DRAWINGS OF ALL WORK TO BE DONE, EQUIPMENT, AND FIXTURES FURNISHED.
- 10. PLUMBING CONTRACTOR TO CARRY OUT PERIODIC CLEANING TO REMOVE RUBBISH ETC., TO LEAVE PREMISES FREE FROM DEBRIS, AND DISCARDED MATERIALS. AFTER INSTALLATION, CLEAN FIXTURES, FITTINGS, ETC.
- 11. CONTRACTOR SHALL BE RESPONSIBLE TO DISPOSE OF ALL DEMOLISHED MATERIAL OF SITE IN AN APPROVED
- 12. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP WORK AREAS UPON COMPLETION OF WORK.
- 13. SEE SPECIFICATION <u>SECTION</u> <u>011200</u> <u>SPECIAL PROVISIONS AND 010101</u> <u>MULTIPLE PRIME CONTRACT SUMMARY</u> FOR INFORMATION REGARDING RESPONSIBILITY OF EACH PRIME CONTRACTOR AND REQUIRED
- 14. ALL PRIME CONTRACTORS ARE RESPONSIBLE FOR REVIEWING ARCHITECTURAL DEMOLITION NOTES ON DRAWING A1.01 AS WELL AS ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND ELEVATOR DRAWINGS AND NOTES.

SIZING & PLACEMENT OF WATER HAMMER ARRESTER (WHA)

THE FOLLOWING CHART INDICATES THE SIZE OF THE WATER ARRESTER REQUIRED FOR LONG RUNS OF PIPING WHICH FEED A SINGLE REMOTE FIXTURE OR APPLIANCE. THE WATER ARRESTER UNIT SHALL BE

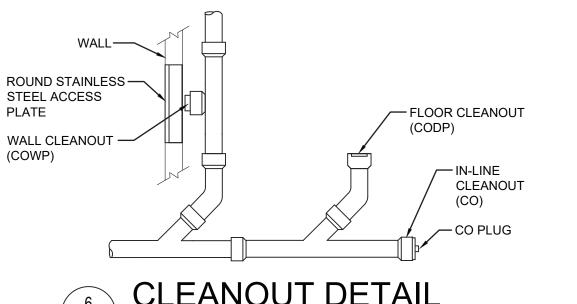


WATER HAMMER ARRESTER SELECTION CHART

LENGTH OF PIPE	NOMINAL PIPE SIZE						
	1/2"	3/4"	1"	1-1/4"	1-1/12"	2"	
25'	5005	5005	5010	5020	5030	5040	
50'	5005	5010	5020	5030	5040	5050	
75'	5010	5020	5030	1-5005 1-5040	5050	1-5040 1-5050	
100'	5020	5030	5040	5050	1-5020 1-5050	2-5050	
125'	5020	5030	5050	1-5005 1-5050	1-5040 1-5050	1-5040 2-5050	
150'	5030	5040	5050	1-5030 1-5050	2-5050	3-5050	

NOTE: THE ABOVE CHART SHOWS LENGTHS OF RUN OF BRANCH PIPING. THE LENGTH OF RUN USED SHALL BE THE LENGTH OF PIPE FROM POINT OF VALVE CLOSURE TO A POINT OF RELIEF, SUCH AS LARGE PIPE RISER TWICE THE SIZE OF THE BRANCH LINE, MAIN LINE OR WATER TANK.

ALL SIZING RECOMMENDATIONS SHOWN ON THE ABOVE CHART ARE BASED ON AN OPERATING WATER PRESSURE OF 65 PSI OR UNDER AN AVERAGE VELOCITY BETWEEN 5 AND 10 FEET PER SECOND. IF OPERATING PRESSURE IS OVER 65 PSI USE THE NEXT LARGER WATER HAMMER ARRESTER UNIT. WHEN PRESSURE IS ANTICIPATED ABOVE 80 PSI A PRESSURE REDUCING VALVE IS REQUIRED.



CLEANOUT DETAIL

Revisions:

ISSUE FOR RE-BID

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VIOLATION OF SECTION 7209 (THE NEW YORK STATE EDUCATION AW. THESE DOCUMENTS REMAIL ENGINEER, AND MAY NOT BE US FOR ANY PURPOSE WHATSOEVE WITHOUT THE WRITTEN CONSEN OF THE ENGINEER.

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