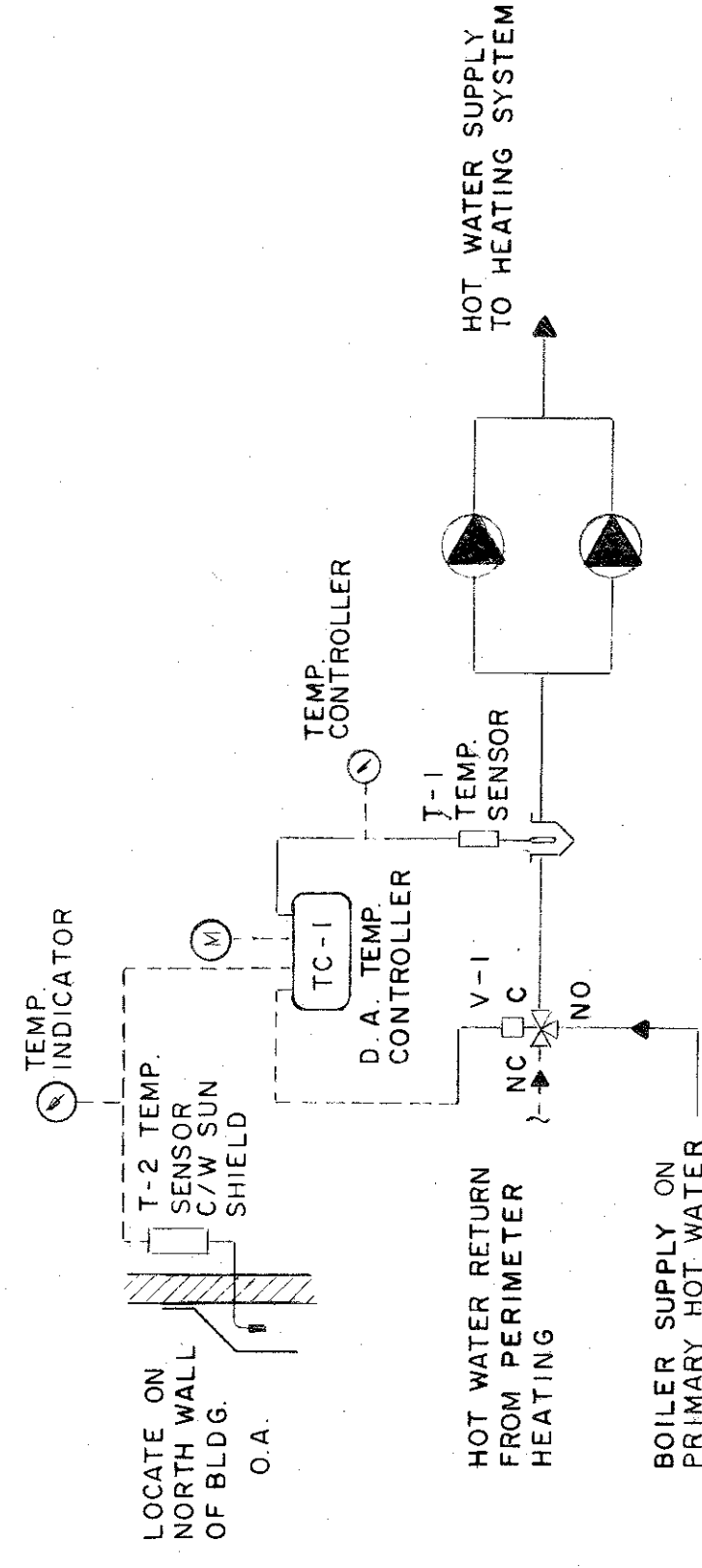
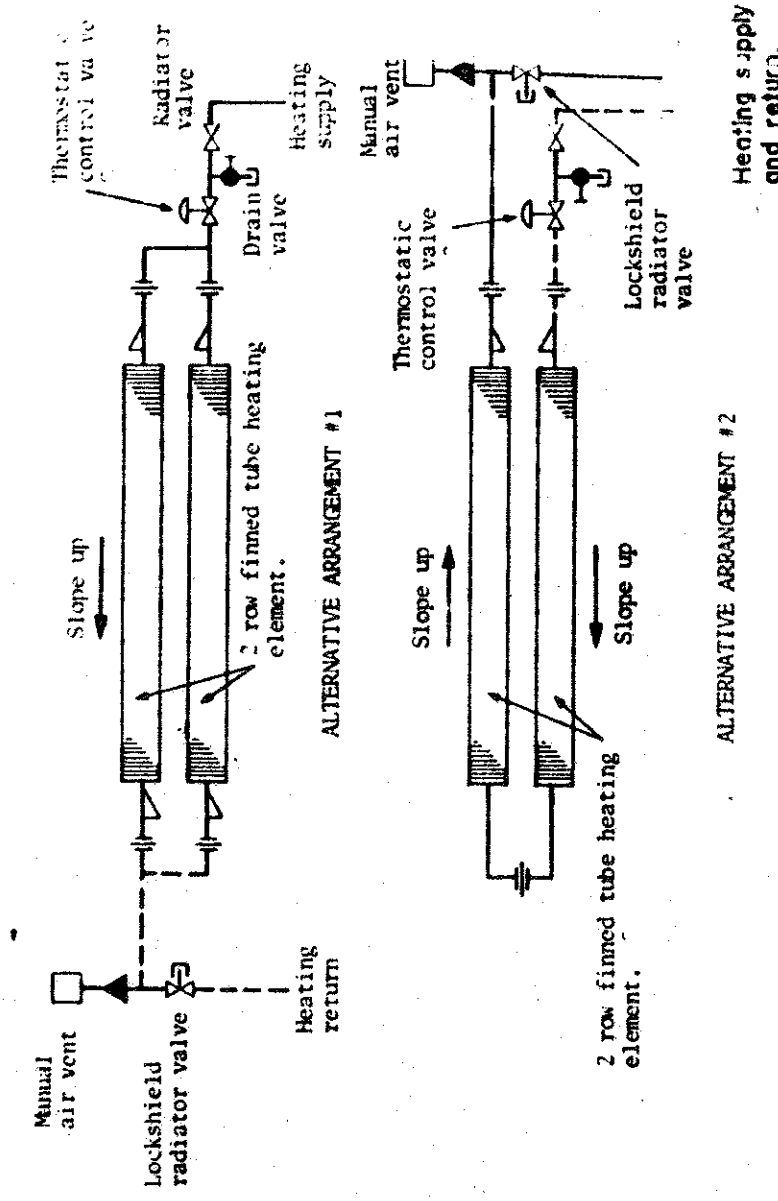


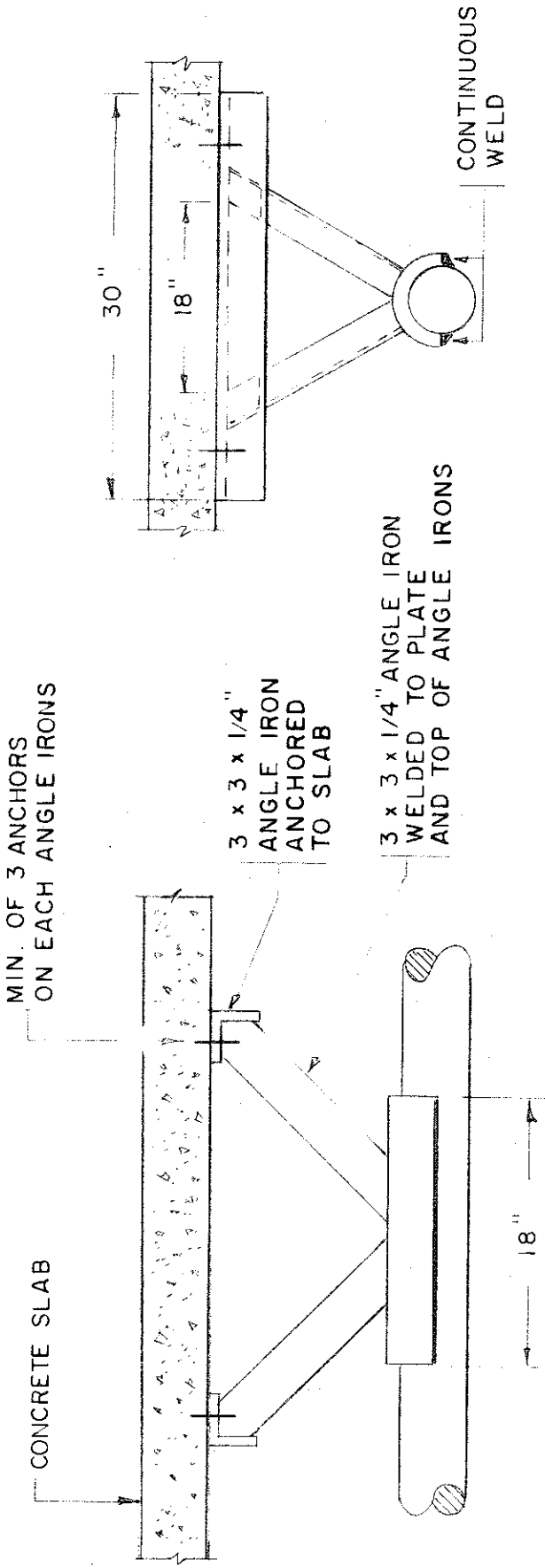
1 CONTROL AIR SUPPLY SCHEMATIC (N.I.C.)
N.T.S. THIS SYSTEM WILL BE SUPPLIED BY CONTROLS CONTRACTOR.



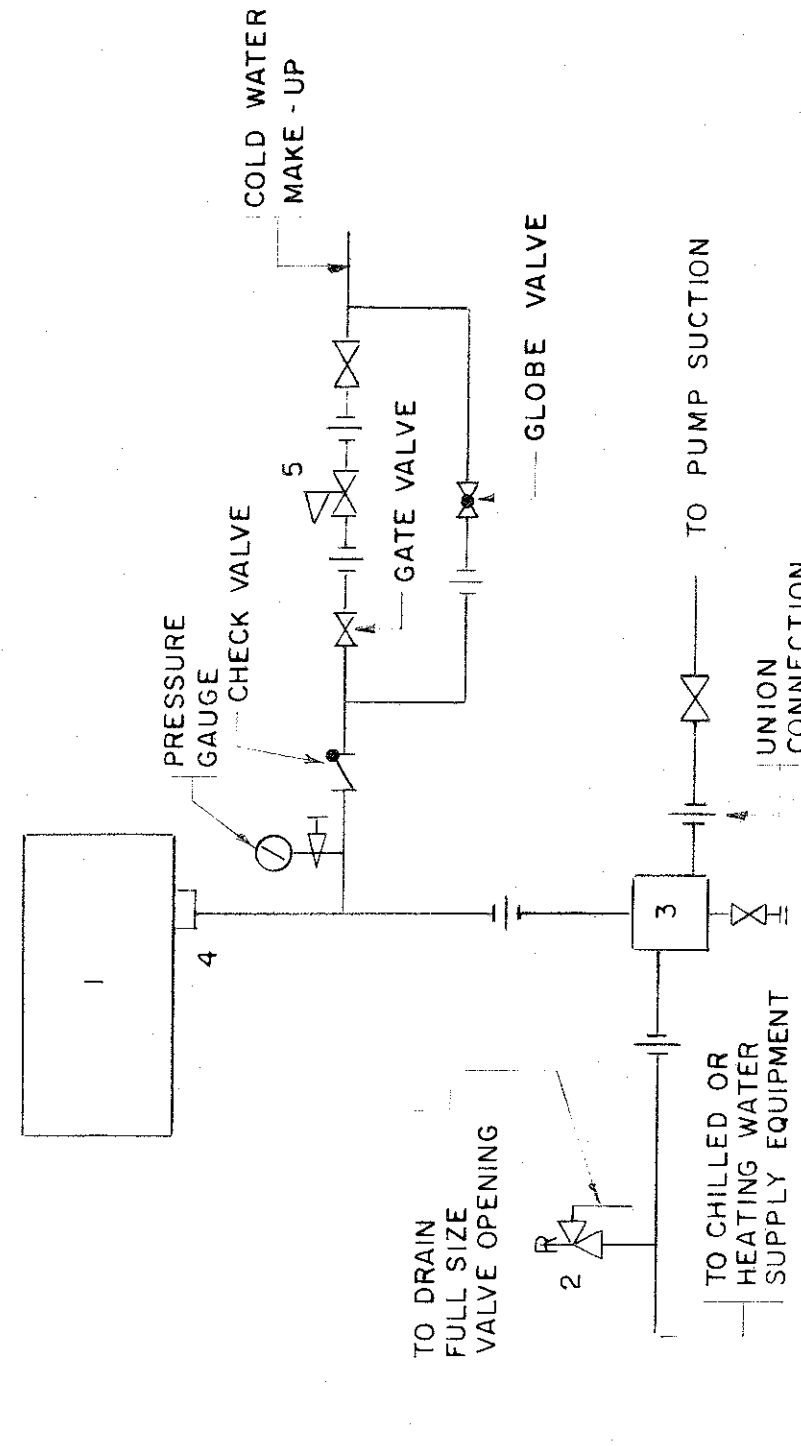
2 PROGRAMMED WATER CONTROL SCHEMATIC
N.T.S. HEATING CONTRACTOR IS TO INSTALL THERMAL WELL IN PIPING.
CONTROLS CONTRACTOR IS TO SUPPLY AND INSTALL TC-1, T-1, T-2



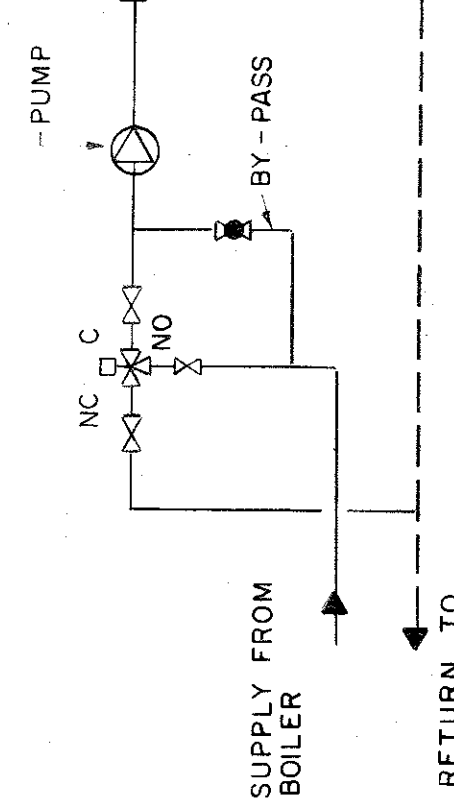
3 RADIATION PIPING DIAGRAM
2 ROW N.T.S.
Notes:
- Install valves, control valves, and drain valves inside enclosure.
- Removable riser pieces or 150 x 150 mm binged access door in enclosure at all valves.
- Spacing between heating elements to be as required.
- Thermostatic control valves supplied by controls contractor. Installed by heating contractor.



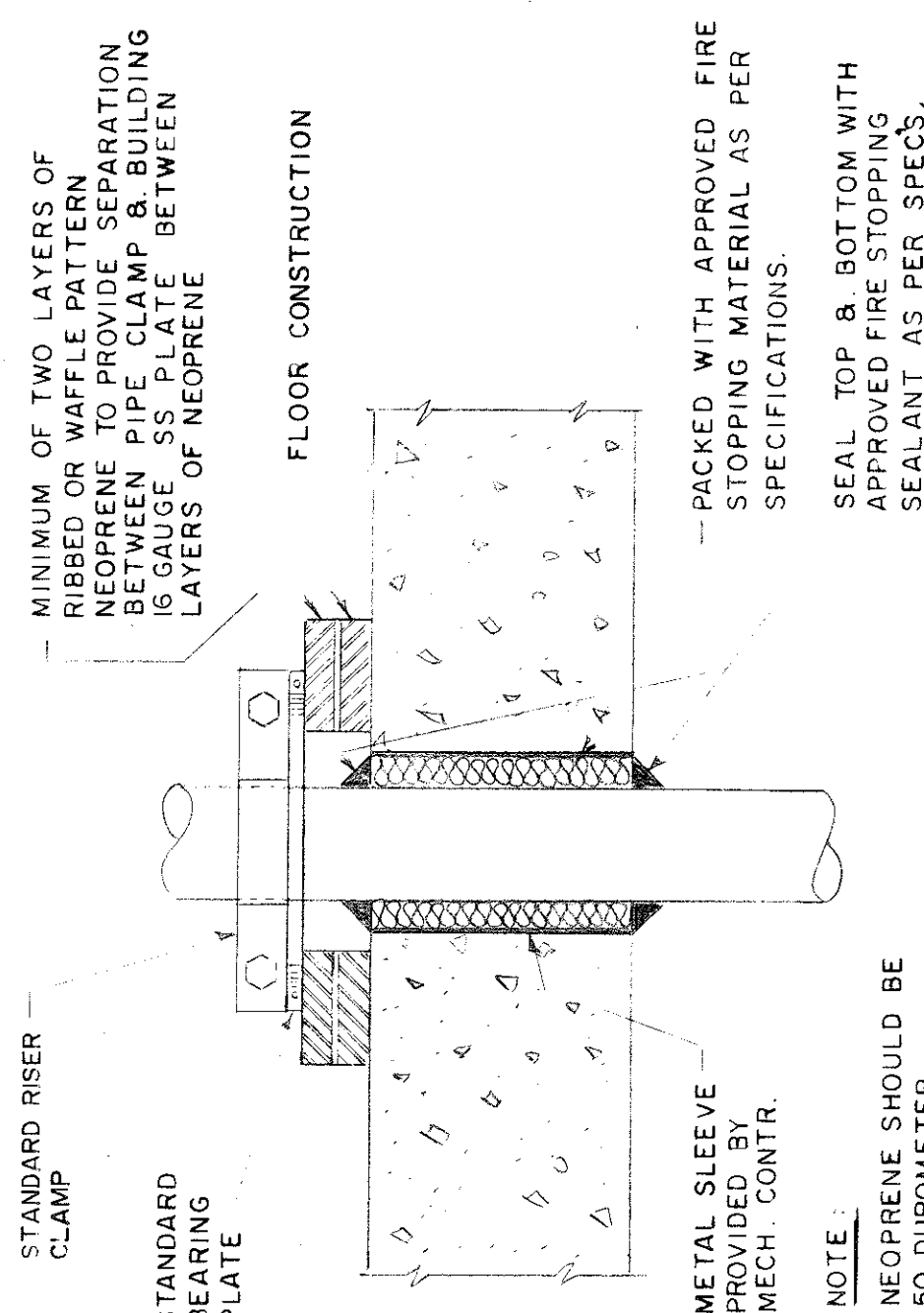
4 PIPE ANCHOR DETAIL
N.T.S.



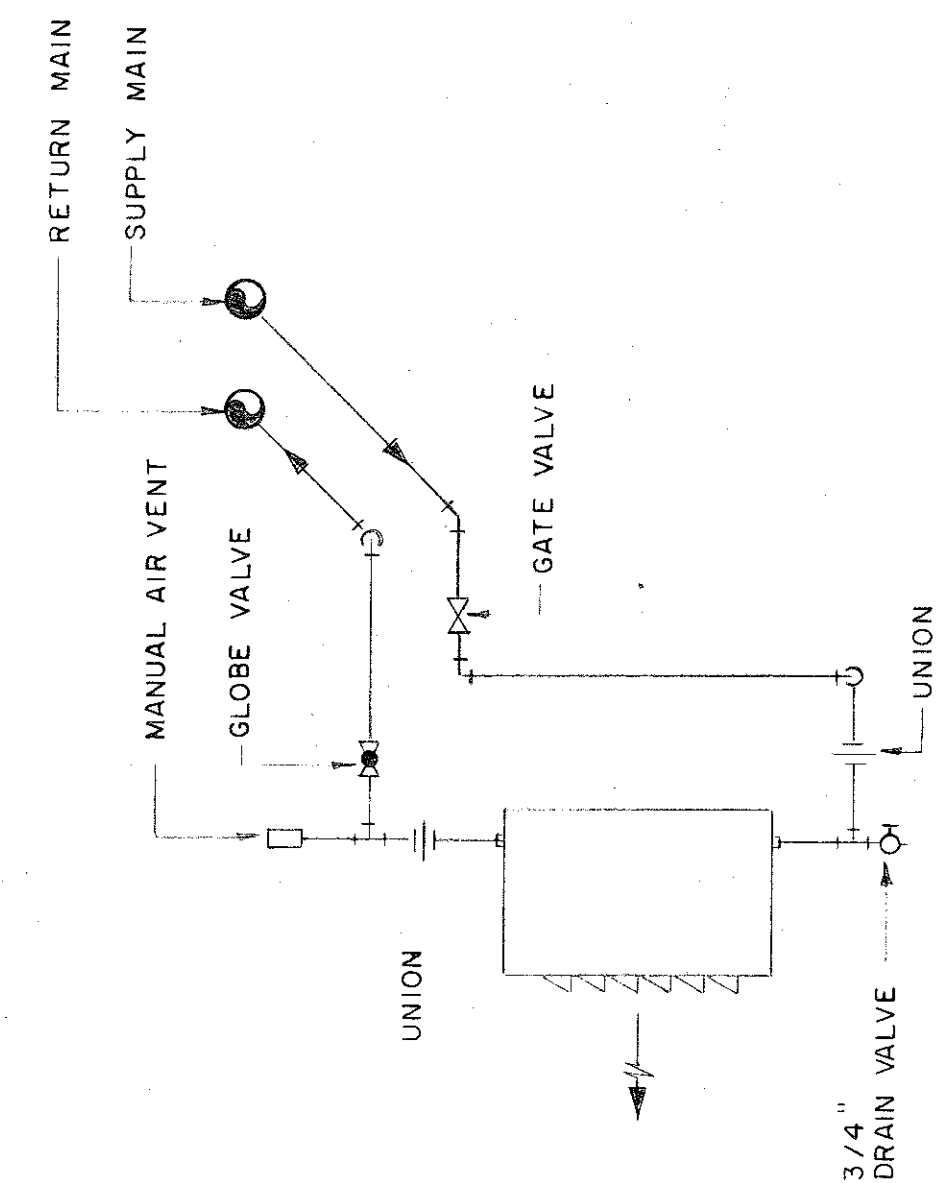
5 EXPANSION TANK & AIR SEPARATOR PIPING DIAGRAM
N.T.S.
1. EXPANSION TANK ASME STAMPED
2. PRESSURE RELIEF VALVE ASME STAMPED
3. AIR SEPARATOR TANGENTIAL TYPE
4. AIR CONTROL TANK FITTING W/ MANUAL VENT AIR TUBE
5. PRESSURE REDUCING VALVE



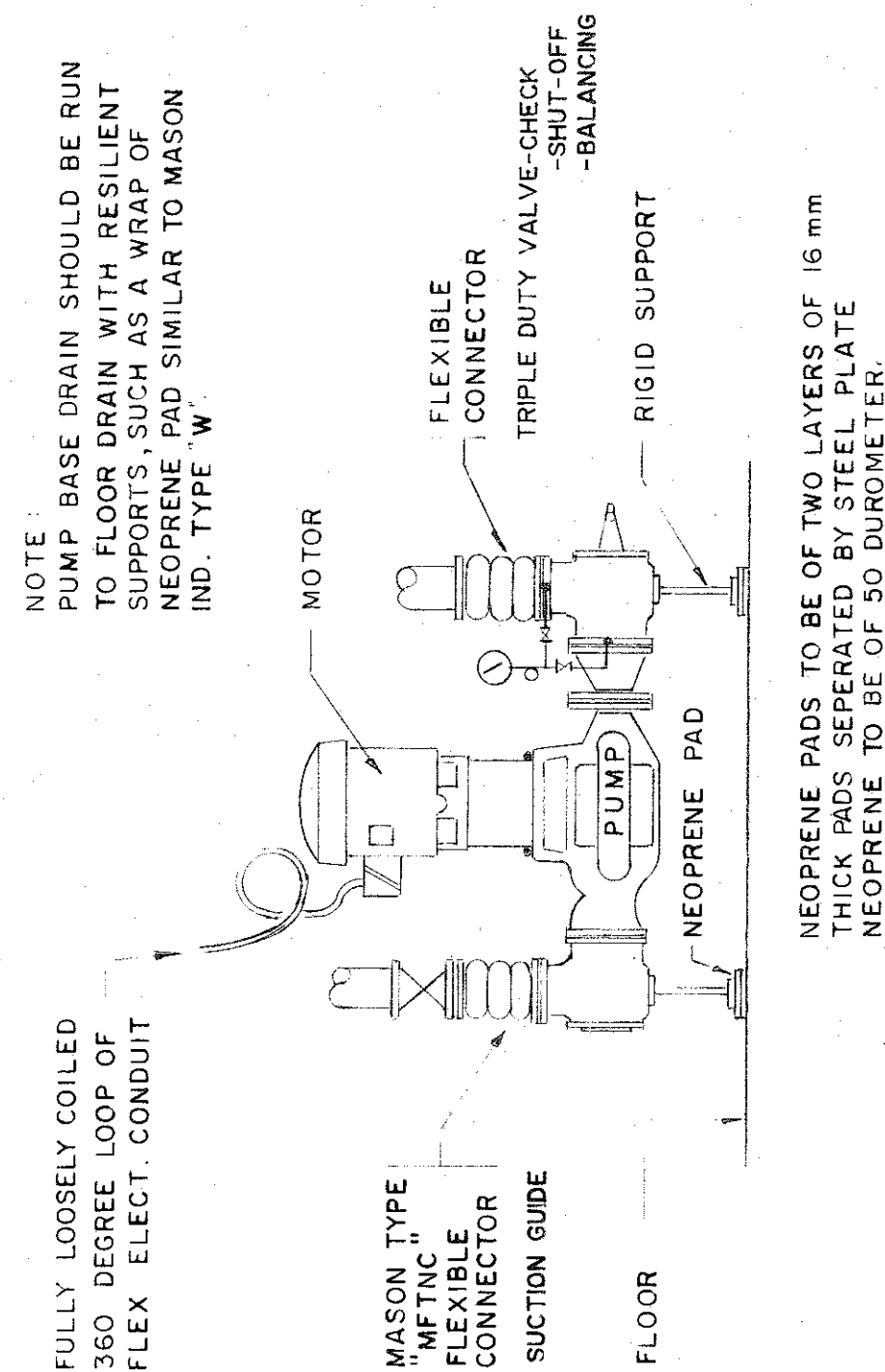
6 3-WAY MIXING VALVE PIPING DETAIL
N.T.S. NOTE: MIXING VALVE AND ACTUATOR SUPPLIED BY CONTROLS CONTRACTOR. INSTALLED BY HEATING CONTRACTOR



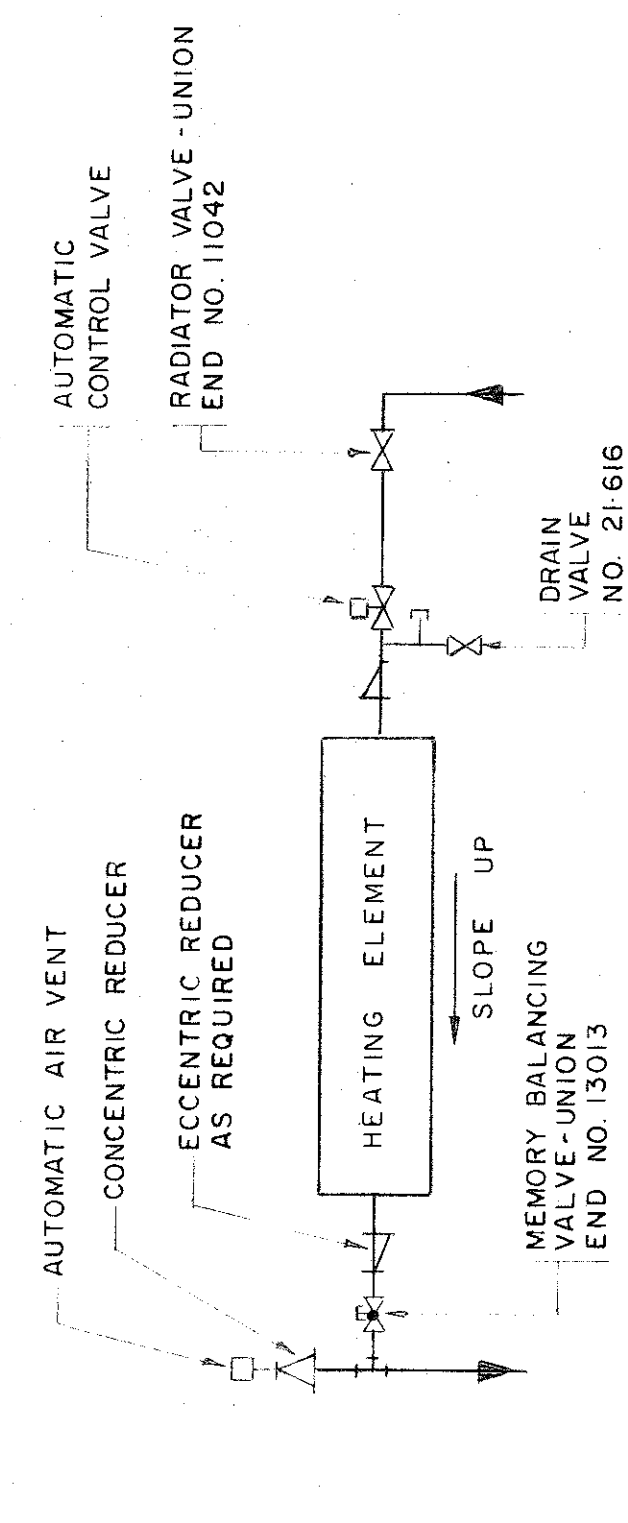
7 TYPICAL FLOOR PENETRATION FOR PIPES
N.T.S.
PICKED WITH APPROVED FIRE STOPPING MATERIAL AS PER SPECIFICATIONS.
SEAL TOP & BOTTOM WITH APPROVED FIRE STOPPING SEALANT AS PER SPECS.
NOTE:
NEOPRENE SHOULD BE 50 DUROMETER



8 HORIZONTAL UNIT HEATER PIPING DETAIL
N.T.S.

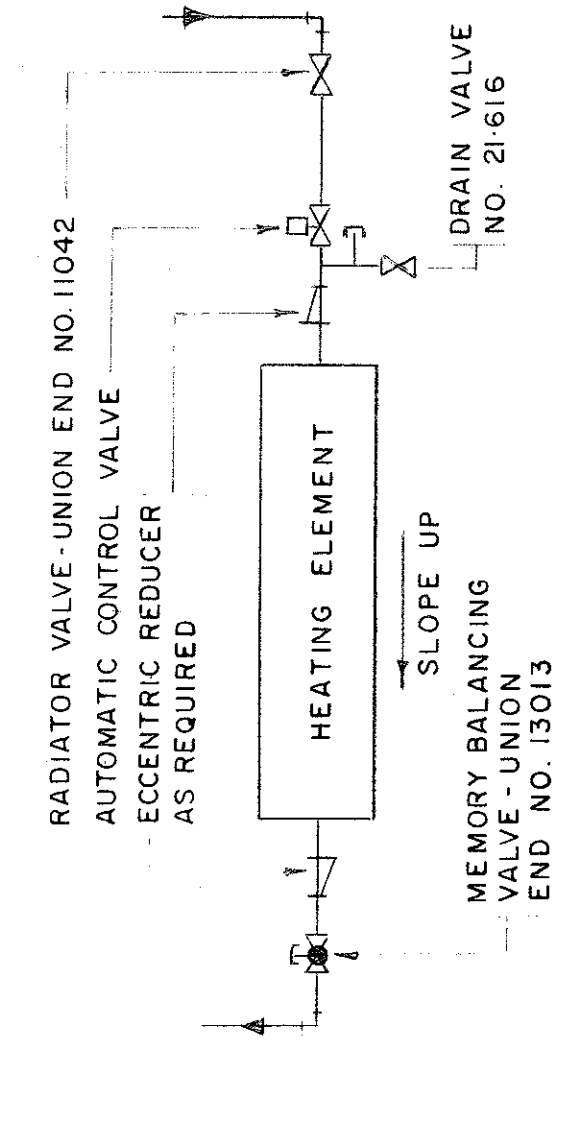


9 TYPICAL VIBRATION ISOLATION DETAIL FOR VERTICAL CENTRIFUGAL PUMPS
N.T.S.
NOTE:
PUMP BASE DRAIN SHOULD BE RUN TO FLOOR DRAIN WITH RESILIENT SUPPORTS SUCH AS A WRAP OF NEOPRENE PAD SIMILAR TO MASON INS. TYPE 'W'
FULLY LOOSELY COILED 360 DEGREE LOOP OF FLEX. ELECT. CONDUIT
MASON TYPE 'W' FLEXIBLE CONNECTOR
FLOOR
FLEXIBLE CONNECTOR
TRIPLE DUTY VALVE CHECK - SHUT-OFF - BALANCING
RIGID SUPPORT
NEOPRENE PAD
NEOPRENE PADS TO BE OF TWO LAYERS OF 16 mm THICKNESS SEPARATED BY STEEL PLATE
NEOPRENE TO BE OF 50 DUROMETER



10 UP FEED RADIATION PIPING DIAGRAM
N.T.S.
NOTE: AUTOMATIC CONTROL VALVE SUPPLIED BY CONTROLS CONTRACTOR. INSTALLED BY HEATING CONTRACTOR
PROVIDE 6 x 6 ACCESS DOORS IN WALL FIN CABINETS AT ALL VALVES
AUTOMATIC CONTROL VALVE
ECCENTRIC REDUCER AS REQUIRED
HEATING ELEMENT
SLOPE UP
MEMORY BALANCING VALVE - END NO. 13013
DRAIN VALVE - END NO. 21616
AUTOMATIC AIR VENT
CONCENTRIC REDUCER
RADIATOR VALVE - UNION
END NO. 11042
AUTOMATIC CONTROL VALVE
END NO. 11042

RUN - OUT SIZE SCHEDULE FOR WALL FIN RADIATION		
HEATING CAP.	PIPE SIZE	
0 - 9.0 K.W.	3/4"	
9.0 - 15.9 K.W.	1"	
16 - 35.5 K.W.	1 1/4"	



11 DOWN FEED RADIATION PIPING DIAGRAM
N.T.S.
PROVIDE 6 x 6 ACCESS DOORS IN WALL FIN CABINETS AT ALL VALVES.
AUTOMATIC CONTROL VALVE SUPPLIED BY CONTROLS CONTRACTOR. INSTALLED BY HEATING CONTRACTOR.