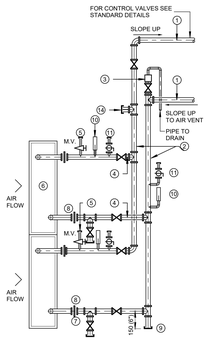
NOTES:

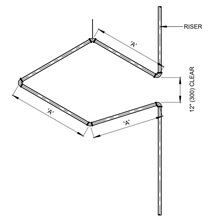
1. SUPPLY AND RETURN BRANCHES FROM MAINS. SIZE SHOWN ON DRAWINGS.
2. VERTICAL SUPPLY AND RETURN HEADERS FULL SIZE.
3. AUTOMATIC AIR ELIMINATOR.
4. BRANCH TO COIL. SAME SIZE AS COIL INLET AND OUTLET CONNECTIONS.
5. AIR VENT AND FLUSHING CONNECTION WITH 3/4" (19) HOSE END.
6. WATER COIL. PROVIDE ADEQUATE SPACE FOR COIL REMOVAL. INSTALL COIL WITH SLOPE AS RECOMMENDED BY MANUFACTURER.
7. DRAIN VALVE. 19 (3/4") HOSE END.
8. INSTALL UNIONS OR FLANGES TO PERMIT CLEAR COIL WITHDRAWIL SPACE.
9. SCALE POCKET WITH REMOVABLE CAP.
10. THERMOMETER.
11. PLUGGED 1/4" (6) PRESSURE GAUGE CONNECTION.
12. COILS MUST BE PIPED FOR COUNTERFLOW. I.E. WATER ENTERS AIR LEAVING SIDE OF COIL. COLDEST WATER COLDEST AIR AND WARMEST WATER TO WARMEST AIR.
13. FOR INDIVIDUAL ROOM REHEAT COILS, FAN COIL UNITS, CABINET UNIT HEATERS, AND OTHER SIMILAR COILS DELETE ITEM 5, 7, 10, 11 & 14.
14. AIR DRYER CONNECTION - 2" (50MM) CAPPED CONNECTION.



13 WATER COIL CONNECTION
M004 (765.02)

NOTE:

ALL JOINTS TO BE WELDED



NOTE:

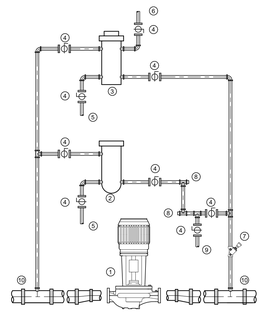
DIMENSION 'A' BASED ON APPROX. 75' (23m) BETWEEN ANCHORS.

PIPE SIZE		MIN. DIM. A	
75	(3")	2.13m	(7'-0")
65	(2-1/2")	1.83m	(6'-0")
50	(2")	1.83m	(6'-0")
38	(1-1/2")	1.52m	(5'-0")

10 RISER EXPANSION LOOPS
M004 (706.02)

NOTES:

1. PUMP(S).
2. FILTER. IF NECESSARY PROVIDE REDUCER/INCREASER AT PIPE CONNECTIONS IF NECESSARY.
3. BYPASS (POT) FEEDER. PROVIDE REDUCER/INCREASER AT PIPE CONNECTIONS IF NECESSARY.
4. SHUT-OFF/ISOLATION VALVE.
5. PIPE TO NEAREST DRAIN.
6. VENT.
7. FLOW BALANCING VALVE.
8. TEE C/W TEST COUPON.
9. TEST CONNECTION.
10. REFER TO SCHEDULE FOR FILTER AND BYPASS FEEDER PIPE SIZES.



BYPASS (POT) FEEDER PIPING SCHEMATIC FOR CHILLED AND HOT WATER CLOSED SYSTEMS.

PIPE SIZE SCHEDULE

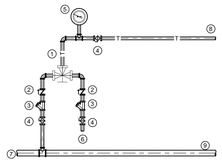
PIPE SIZE	SYSTEM CAPACITY*
12Ø (1/2")	0 - 3.1 L/s (0 - 50 USGPM)
19Ø (3/4")	3.2 - 7.2 L/s (51 - 115 USGPM)
25Ø (1")	7.3 - 13.5 L/s (116 - 215 USGPM)
32Ø (1-1/4")	13.6 - 29.3 L/s (216 - 465 USGPM)
38Ø (1-1/2")	29.4 - 41.9 L/s (466 - 665 USGPM)
50Ø (2")	42.0 - 83.9 L/s (666 - 1330 USGPM)

*PIPE SIZE SHALL BE BASED ON 1% OF SYSTEM CAPACITY FLOW AT A 3 FT./100 FT. PRESSURE DROP FOR WATER SYSTEMS GREATER THAN THOSE LISTED.

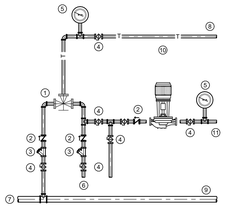
7 BYPASS (POT) FEEDER AND FILTER PIPING
M004 (705.05)

NOTES:

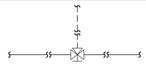
1. THERMOSTATIC MIXING VALVE. REFER TO SPECIFICATION FOR DETAILS.
2. CHECK VALVE.
3. STRAINER.
4. SHUT-OFF VALVE.
5. THERMOMETER.
6. DOMESTIC COLD WATER BRANCH LINE TO VALVE. PIPE SIZE AS SHOWN ON DRAWINGS.
7. DOMESTIC HOT WATER MAIN AND BRANCH LINE TO VALVE. PIPE SIZE AS SHOWN ON DRAWINGS.
8. TEMPERED WATER TO FIXTURES. PIPE SIZE AS SHOWN ON DRAWINGS.
9. HIGH TEMPERATURE HOT WATER TO LAUNDRY, DISHWASHER, ETC. PIPE SIZE AS SHOWN ON DRAWINGS.
10. TEMPERED WATER RECIR. PUMP. REFER TO PUMP SCHEDULE FOR DETAILS.
11. TEMPERED WATER RECIR. REFER TO PUMP SCHEDULE FOR DETAILS.
12. TEMPERED WATER RECIR. BACK TO COLD INLET OF DOMESTIC HOT WATER HEATER(S). PIPE SIZE AS SHOWN ON DRAWINGS.



1. THERMOSTATIC MIXING VALVE (POINT OF USE)

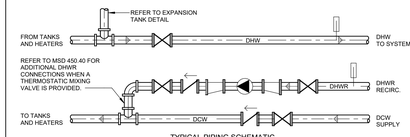


2. THERMOSTATIC MIXING VALVE WITH TEMPERED WATER RECIRC. (CENTRAL SYSTEM)

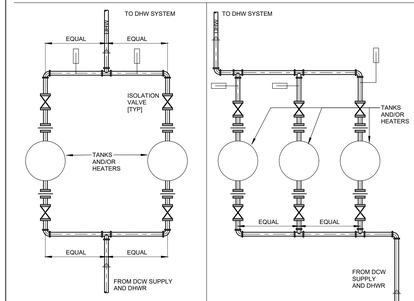


DRAWING SYMBOL

4 THERMOSTATIC MIXING VALVES
M004 (450.40)

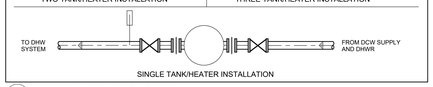


TYPICAL PIPING SCHEMATIC



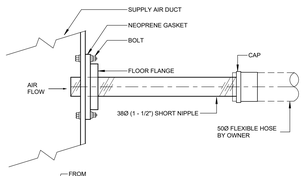
TWO TANK/HEATER INSTALLATION

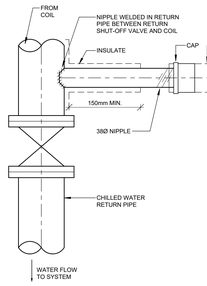
THREE TANK/HEATER INSTALLATION



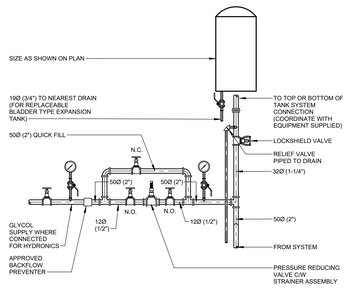
SINGLE TANK/HEATER INSTALLATION

1 DOMESTIC HOT WATER HEATERS
M004 (425.01)

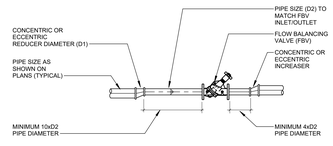




14 COOLING COIL WINTERIZATION
M004 (765.03)

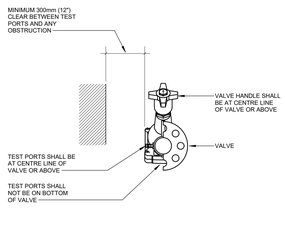


11 EXPANSION TANK PIPING SCHEMATIC
M004 (708.01)



GENERAL NOTE:

SIZE IN ACCORDANCE WITH THE WATER FLOW RATE (LPM/GPM) AT 3kPa (0.432psi) DIFFERENTIAL PRESSURE AT 100% FULL OPEN POSITION.

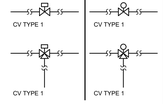


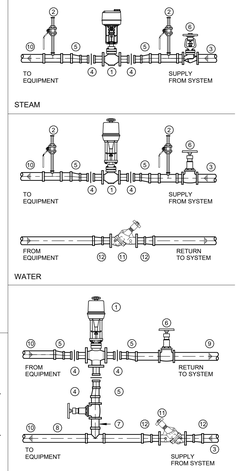
8 TYPICAL FLOW BALANCING VALVE INSTALLATION
M004 (705.08)

NOTES:

1. CONTROL VALVE (ELECTRIC OR PNEUMATIC REFER TO DRAWING SYMBOLS)
2. PLUGGED 6mm (1/4 in.) PRESSURE GAUGE CONNECTION WITH VALVE.
3. SUPPLY PIPE SIZE AS SHOWN ON PLANS.
4. UNION OR FLANGE.
5. ECCENTRIC FITTINGS.
6. SHUT-OFF VALVE.
7. BY-PASS FULL SIZE OF SUPPLY PIPE.
8. GLOBE OR FLOW BALANCING VALVE. REFER TO SPECIFICATION FOR DETAILS.
9. RETURN PIPE SIZE AS SHOWN ON PLANS.
10. PIPING TO EQUIPMENT SAME SIZE AS SUPPLY AND/OR RETURN PIPE.
11. FLOW BALANCING VALVE. REFER TO MSD-FOR INSTALLATION DETAILS. SUBSTITUTE SHUT-OFF VALVE WHERE PRESSURE INDEPENDANT CONTROL VALVE USED. VALVE SHALL BE FULL OF RETURN PIPE.
12. CONCENTRIC FITTINGS

DRAWING SYMBOL



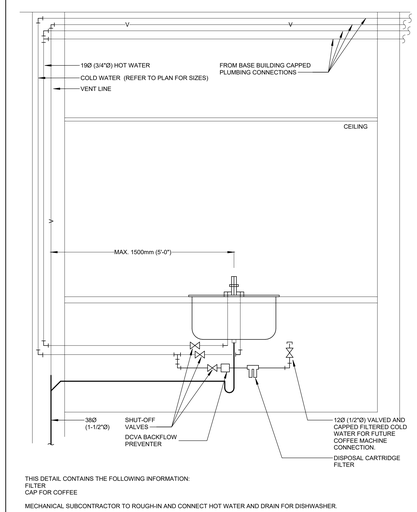


STEAM

WATER

WATER

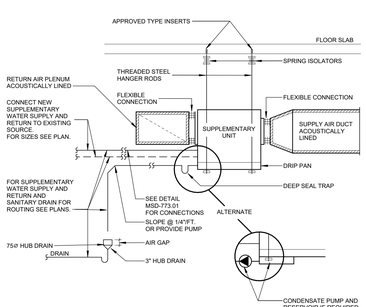
5 CONTROL VALVE TYPE 1
M004 (705.01)



THIS DETAIL CONTAINS THE FOLLOWING INFORMATION:
FILTER
CAP FOR COFFEE
DISHWASHER

MECHANICAL SUBCONTRACTOR TO ROUGH-IN AND CONNECT HOT WATER AND DRAIN FOR DISHWASHER.

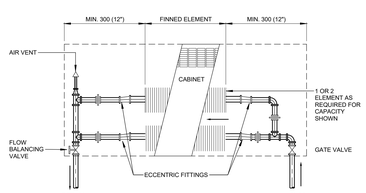
2 REC CENTRE AND CHILD CARE SINK DETAIL
M004 (450.30)

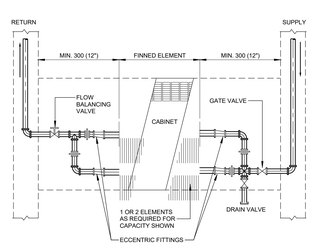


A/C UNIT PIPING SCHEMATIC

1. PROVIDE UNIONS AT ALL PIPING CONNECTIONS TO UNIT.
2. FINAL A/C UNITS LOCATION SHALL BE COORDINATED WITH EXISTING SERVICES ON SITE WITH APPROVAL OF MECHANICAL ENGINEER.
3. SUPPLEMENTARY WATER REFERS TO CHILLED WATER FOR FAN COIL UNITS AND SUPPLEMENTARY CONDENSER WATER FOR HEAT PUMPS AND A/C UNITS.

15 SUPPLEMENTARY COOLING UNIT
M004 (773.04)

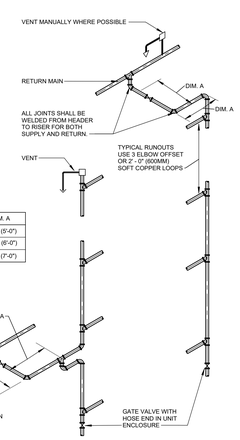




GENERAL NOTE:

1. SUPPLY AND RETURN PIPE SIZE AS SHOWN ON DWGS. [MINIMUM 19Ø (3/4")]

12 WALL FIN RADIATION
M004 (753.01)

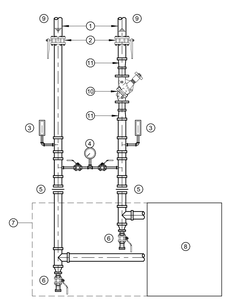


PIPE SIZE		MIN. DIM. A	
50	(2")	1.52m	(5'-0")
65	(2-1/2")	1.38m	(6'-0")
75	(3")	2.13m	(7'-0")

NOTES:

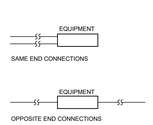
BASED ON MAXIMUM STRAIGHT RUN OF MAIN OF 30m (100 FT.)

9 PIPE EXPANSION OFFSETS
M004 (706.01)



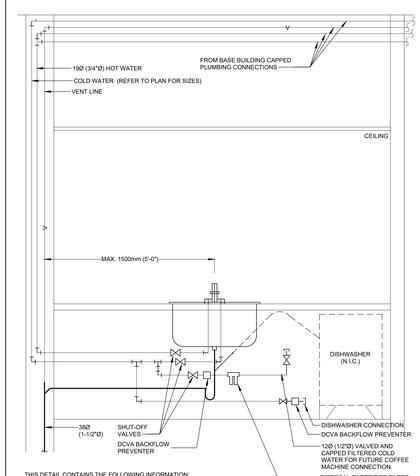
NOTES:

1. PIPE SIZES AS SHOWN ON PLANS.
2. SHUT-OFF VALVES.
3. THERMOMETER.
4. PRESSURE GAUGE.
5. UNIONS OR FLANGES LOCATED CLEAR OF SERVICEW SPACE AND TUBE REMOVAL.
6. DRAIN LEG AND VALVE.
7. TUBE REMOVAL AND SERVICE SPACE WHERE REQUIRED.
8. MECHANICAL EQUIPMENT REQUIRING SERVICE.
9. REFER TO SEPARATE MSD FOR CONTROL VALVE INSTALLATION DETAILS WHERE APPLICABLE.
10. FLOW BALANCING VALVEEF PRESSURE INDEPENDENT CONTROL VALVES ARE NOT BEING USED. REFER TO MSD-705.08 FOR INSTALLATION DETAILS.
11. CONCENTRIC FITTINGS.
12. COOLING COIL WINTERIZATION TAP-IN REFER TO MSD-763.05 FOR INSTALLATION DETAILS



DRAWING SYMBOL

6 EQUIPMENT INTSTALLATION
M004 (705.04)



THIS DETAIL CONTAINS THE FOLLOWING INFORMATION:
FILTER
CAP FOR COFFE
DISHWASHER

MECHANICAL SUBCONTRACTOR TO ROUGH-IN AND CONNECT HOT WATER AND DRAIN FOR DISHWASHER.

MECHANICAL SUBCONTRACTOR TO INSTALL WATER HAMMER ARRESTOR TO DISHWASHER AS REQUIRED BY MANUFACTURER

3 REC CENTRE AND CHILD CARE SINK W/ DISHWASHER DETAIL
M004 (450.31)

diamond schmitt
BrookMcIlroy

APEGM
Certificate of Authorization
Smith + Andersen
No. 5990 Date: 2026/01/15

PROFESSIONAL ENGINEER
MANITOBA
SHAPLEY
MEMBER
40048
2026/01/15

Smith + Andersen
700 - 161 Portage Avenue East, Winnipeg MB, R3B 0Y4
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Winnipeg
THE CITY OF WINNIPEG
ASSETS & PROJECT MANAGEMENT DEPARTMENT
MUNICIPAL ACCOMMODATIONS DIVISION
3-65 GARRY STREET, R3C 4K4

Manitoba
Manitoba Public Service Delivery
200 - 400 Ellice Avenue,
Winnipeg, Manitoba
R3B 3M3

Issued

No.	Date	Description
1	2025.12.11	Contract Documents
2	2026.01.15	Addendum 3

Contractor Must Check & Verify all Dimensions on the Job.

Do Not Scale Drawings.

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South Winnipeg Recreation Campus Phase 1
Address: 15 Ruth Crossing & 25 Ruth Crossing
Winnipeg, MB
Consultant Project No: 220007
City of Winnipeg Project No: 2020-127
City of Winnipeg Tender No: 63-20258

REC & CC MECHANICAL STANDARD DETAILS
N.T.S.
M004

Autodesk Docs://22522_000_SWRC_R2024/22522-MECH-SA-R24.rvt

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