

PLUMBING REQUIREMENTS:

1. GENERAL
 - A. CONTRACTOR SHALL SUPPLY ALL LABOUR AND MATERIAL FOR A COMPLETE PLUMBING PIPING INSTALLATION AS INDICATED ON THE MECHANICAL DRAWINGS.
 - B. THE APPLICABLE CODES ARE CONSIDERED TO BE MINIMUM STANDARD REQUIREMENTS. IT IS NOTED IN SOME CASES, THE CODE REQUIREMENTS ARE EXCEEDED, AS SHOWN ON DRAWINGS.
2. PRODUCTS
 - A. GENERAL
 - A.1. EQUIPMENT AND MATERIALS ARE TO BE NEW AND CSA CERTIFIED, WHERE APPLICABLE.
 - A.2. EQUIPMENT SCHEDULES ARE SHOWN ON THE MECHANICAL DRAWINGS.
 - B. SHOP DRAWINGS
 - B.1. SUBMIT FIVE (5) COPIES OF MANUFACTURERS' SHOP DRAWINGS FOR ALL NEW EQUIPMENT.
 - B.2. SUBMIT SHOP DRAWINGS FOR CONTRACT ADMINISTRATOR'S APPROVAL PRIOR TO PLACING ANY ORDER.
 - C. COLD, HOT WASTE AND VENT PIPING AND FITTINGS

PIPE APPLICATION	PIPE MATERIAL	FITTING MATERIAL
COLD, HOT AND HOT WATER REIRC. ABOVE GROUND	TYPE 'L' HARD COPPER TUBING	'STREAMLINE' OR EQUAL SOLDER JOINT CAST BRASS C/W SILVER SOLDERED JOINT
COLD WATER, BURIED	TYPE 'K' SOFT COPPER TUBING	FLARED TUBE UIG SERVICE
SOIL, WASTE AND VENT ABOVE GROUND OR NOT MORE THAN 2' BELOW	CAST IRON OR PVC SCH. 40	M.J. STAINLESS STEEL COUPLINGS
BURIED BELOW 2'	DWV COPPER	SOLDER JOINT
SOIL AND WASTE, BURIED	PVC SCHED. 40	PVC - DWV SCHED. 40

D. VALVES (BASED ON CRANE NO.)

SIZE	JOINT	GATE	GLOBE	CHECK	VERT. CHECK
UP TO 2"	SOLDER	1324	1310	1342	
OVER 2"	SCREW	428	7	37	WATTS 600

- E. HANGERS
 - E.1. COPPER PIPING HANGERS, GRINNELL.
 - E.2. DRAINAGE PIPING HANGER, GRINNELL.
 - E.3. GALVANIZED HANGER ROD SIZE 1/4".
 - E.4. PIPE SUPPORT SPACING AS FOLLOWS:

SIZE (INCH DIAMETER)	COPPER	C.I.
3/8", 1/2"	5 FEET	
3/4", 1"	6 FEET	
1 1/4" TO 2" AND UP	8 FEET	6 FEET
- F. SOLDER MATERIAL FOR COPPER SHALL BE LEAD FREE, SILVABRITE 100.
- G. WATER HAMMER ARRESTORS SHALL BE ZURN #1700

3. EXECUTION
 - A. INSTALLATION
 - A.1. THE LATEST EDITION OF ALL CODES AND STANDARDS SHALL APPLY. OBTAIN ALL WORK PERMITS, APPROVALS AND THE LIKE TO COMPLETE THE WORK READY FOR OPERATION.
 - A.2. CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOUR AND PLANT NECESSARY TO COMPLETE THE WORK AS SHOWN ON DRAWINGS OR HEREIN.
 - A.3. ALL WORKMANSHIP AND FABRICATION SHALL MEET THE STANDARDS SET FOR THIS TRADE. ALL WORK TO BE DONE BY COMPETENT AND EXPERIENCED WORKMEN.
 - A.4. IN THE CASE OF THE CONTRACTOR USING PRODUCTS OTHER THAN SPECIFIED, THIS WILL INCLUDE ALTERNATE AND/OR APPROVED EQUAL ITEMS THAT MAY INCUR ADDITIONAL COSTS DUE TO DIMENSION DIFFERENCE, MODIFICATION TO EXISTING STRUCTURES, POWER AND CONTROL REQUIREMENTS; CONTRACTOR MUST BEAD ALL ADDITIONAL COSTS TO MAKE SYSTEMS FUNCTIONAL.
 - A.5. ALL EQUIPMENT AND PIPING REQUIRING SUPPORT SHALL BE SECURED TO THE BUILDING STRUCTURE.
 - A.6. WIRE HANGERS OR PERFORATED STRAPS WILL NOT BE PERMITTED.
 - A.7. HANGERS AND SUPPORTS SHALL NOT DAMAGE OR PIERCE INSULATION.
 - A.8. ALL HORIZONTAL PIPING SHALL BE SUPPORTED WITH GALV. HANGER ROD, 'CANSTRUT' OR PAINTED IRON ANGLE MEMBERS, CLAMPS AND SADDLES.
 - A.9. PIPE LINES SHALL RUN PARALLEL AND GROUP CLOSELY TO EACH OTHER. VERTICAL AND HORIZONTAL PIPE RUNS SHALL BE PARALLEL ALONG BUILDING LINES.
 - A.10. ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS.
 - A.11. ALL PIPES SHALL BE CUT ACCURATELY TO MEASUREMENTS TAKEN ON SITE.
 - A.12. GRADE ALL WATER PIPE FOR PROPER DRAINAGE AND INSTALL 1/2" DRAIN VALVE WITH 1/2" THREADED HOSE END AT LOW POINT IN MECHANICAL ROOM.
 - A.13. UNIONS AND FLANGES SHALL BE PROVIDED AT ALL EQUIPMENT REQUIRING DISCONNECTION FOR REPAIRS OR REPLACEMENT, LOCATED BETWEEN SHUT OFF VALVES AND EQUIPMENT. ALL UNIONS SHALL BE ACCESSIBLE.
 - A.14. INSTALL WATER HAMMER ARRESTOR AT PLUMBING RISERS, FIXTURE GROUPS, AND QUICK SHUTOFF VALVE OUTLETS. AT COMPLETION OF WORK, WATER SYSTEM MUST BE WATER HAMMER FREE UNDER NORMAL OPERATION.
 - A.15. SHUTOFF VALVES SHALL BE PROVIDED WHERE INDICATED AND SPECIFIED. IF NOT INDICATED, OR SPECIFIED DIRECTLY, VALVES SHALL BE INSTALLED ON MAIN BRANCHES AT POINT OF TAKEOFF FROM SUPPLY MAIN, ON EACH INDIVIDUAL PIECE OF EQUIPMENT INLET AND OUTLET TO PERMIT UNIT REMOVAL WITHOUT AFFECTING OPERATION OF THE SYSTEM. LOCATE VALVES FOR ACCESS AND OPERATION. DO NOT LOCATE VALVE STEMS BELOW HORIZONTAL.

- A.16. ALL FLOOR DRAINS SHALL HAVE AN 18" X 18" CHLORINATED POLYETHYLENE (CPE) WATERPROOF MEMBRANE INSTALLED AROUND BODY OF DRAIN AND BURIED IN THE CONCRETE TO FORM A WATERTIGHT BARRIER. THE MEMBRANE MUST FORM A WATER TIGHT SEAL WITH DRAIN BODY.
- A.17. PROVIDE CLEAN OUTS IN ALL DRAINS, AND SOIL PIPE WHERE OBSTRUCTIONS MIGHT OCCUR, AT THE BASE OF EACH STACK, AT CHANGE OF DIRECTION MORE THAN 45 DEGREES, AT THE END OF ALL HORIZONTAL PIPES, AND AT 50'-0" INTERVALS ALONG STRAIGHT RUNS AS SHOWN ON DRAWINGS.
- A.18. ALL WATER PIPING SHALL BE DEGREASED, FLUSHED, CLEANED AND PRESSURE TESTED BEFORE CONCEALING AND FILLING.
- A.19. PROVIDE CHROME PLATED ESCUTCHEON PLATES FOR ALL EXPOSED PIPING THROUGH FINISHED WALLS AND FLOORS.
- A.20. WHERE OPENINGS ARE MADE IN BUILDING STRUCTURE, SEAL OPENINGS TO PROVIDED WEATHER TIGHT WATER PROOF SEAL.
- A.21. PROVIDE 3M BRAND FIRE BARRIER CP-25WB CAULK FOR ALL PIPING THROUGH FIRE RATED WALLS AND FLOOR ASSEMBLIES.
- A.22. BEFORE START OF WORK ON INSTALLATION OF PIPING AND SEWERS, CHECK ALL LEVELS TO ENSURE ADEQUATE FALL ON THE VARIOUS SEWERS AND PIPES. IN THE EVENT THE CONTRACTOR FAILS TO DO THESE CHECKS AND THEN NOTIFIES CONTRACT ADMINISTRATOR OF DISCREPANCIES, ANY SUBSEQUENT EXPENSE SHALL BE BORNE BY THE CONTRACTOR.
- A.23. THE PLANS ARE CONSIDERED DIAGRAMMATIC ONLY AND THE CONTRACT ADMINISTRATOR RESERVES THE RIGHT TO CHANGE LOCATION OF EQUIPMENT OR PIPING WITHIN 10 FEET OF WHERE SHOWN ON PLANS, PROVIDED SUCH CHANGE IS MADE BEFORE INSTALLATION.
- A.24. IF, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE PIPING AND EQUIPMENT IS NOT ADEQUATELY BRACED OR SUPPORTED, ADDITIONAL BRACING OR SUPPORT MUST BE PROVIDED AT NO EXTRA COST TO THE CITY.
- A.25. SYSTEM SCHEMATICS SHOWN ON THE DRAWINGS ARE MINIMUM REQUIREMENT. EQUIPMENT INSTALLATION, INCLUDING ALL CONTROLS, FITTINGS, AND ACCESSORIES SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION. THE CONTRACTOR SHALL BEAR AND INCLUDE ALL COSTS FOR SUCH INSTALLATIONS.

NOTES:

ORIGINAL SEALED BY:
D.A. Paley P. Eng.
Date: JULY 16, 2014

No.	REVISION/DESCRIPTION	BY	DATE
SEAL			

DRAWN	CHECKED	DESIGNED	APPROVED
JAW/RCP			
DATE 2014.07.14	USER APPROVAL		

Winnipeg THE CITY OF WINNIPEG
PLANNING, PROPERTY AND
DEVELOPMENT DEPARTMENT
MUNICIPAL ACCOMMODATIONS DIVISION
3-65 GARRY STREET, R3C 4K4

PROJECT
AMBULANCE STATION # 3
STRUCTURAL & OCCUPANCY UPGRADES
DESIGN OF STRUCTURAL UPGRADES
598 ST. MARY'S ROAD

SHEET TITLE
MECHANICAL SPECIFICATIONS

SCALE	PROJECT No:	SHEET No:
AS SHOWN	2013-047	M5