

MECHANICAL SPECIFICATIONS

- 1.0 GENERAL
1 VISIT JOBSITE DURING TENDER, DRAWINGS INDICATE APPROXIMATE LOCATION OF EXISTING MECHANICAL EQUIPMENT AND SERVICES. VERIFY EXACT LOCATIONS OF EXISTING MECHANICAL EQUIPMENT AND SERVICES AND ALLOW FOR NECESSARY RELOCATING OF NOTED SERVICES (OR RECONNECTION TO EXISTING SERVICES) TO SUIT NEW CONSTRUCTION.
2 ALL WORK SHALL CONFORM TO MANITOBA BUILDING CODE AND LOCAL AUTHORITIES. APPLY FOR, OBTAIN AND PAY FOR ALL NECESSARY PERMITS.
3 COORDINATE INSTALLATION WITH ALL RELATED TRADES, INTERIOR DESIGN PLANS AND REFLECTED CEILING PLANS. VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING EQUIPMENT AND SERVICES PRIOR TO PROCEEDING WITH WORK.
4 SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT TO CONTRACT ADMINISTRATOR.
5 PROVIDE ONE YEAR GUARANTEE FOR ALL EQUIPMENT.
6 ALL CONNECTIONS TO EXISTING BUILDING MECHANICAL SERVICES SHALL BE COORDINATED WITH THE CONTRACT ADMINISTRATOR.
7 ALL NECESSARY CUTTING AND PATCHING SHALL BE PERFORMED BY CONTRACTOR. MECHANICAL SUBCONTRACTOR TO CO-ORDINATE ON SITE.
8 REFER TO INSTRUCTIONS TO BIDDERS FOR REQUIREMENTS REGARDING PROJECT PHASING, WORKING HOURS, SHUT-DOWN PROCEDURES, ACCESS, ETC.
9 PROVIDE MILCOR ACCESS DOORS IN DRYWALL CEILINGS AND WALLS FOR ACCESS TO MECHANICAL EQUIPMENT. MINIMUM SIZE 24" X 18".
10 PRIOR TO DRILLING HOLES AND/OR OPENINGS IN EXISTING STRUCTURE, CONTRACTOR SHALL RETAIN SERVICES OF NATIONAL TESTING LABORATORIES LIMITED TO LOCATE AND MARK ALL STRUCTURAL REINFORCING STEEL LOCATED IN AREA WHERE CUTTING OR DRILLING IS PROPOSED. AT NO TIME SHALL REINFORCING STEEL BE CUT WITHOUT PRIOR WRITTEN APPROVAL FROM STRUCTURAL ENGINEER QUALIFIED AND LICENSED TO PRACTICE IN PROVINCE OF MANITOBA. NO HOLES OR OPENINGS WILL BE PERMITTED WITHIN AREA OF STRUCTURAL DROP PANELS LOCATED AT COLUMNS.
11 ALL INTERIOR SPACE POWER HAMMERING, DRILLING AND OTHER NOISY WORK SHALL BE PERFORMED BETWEEN HOURS OF 6:00 P.M. AND 8:00 A.M.
12 BIDDING QUOTATIONS SHALL BE BASED ON THE USE OF SPECIFIED EQUIPMENT, UNLESS ACCEPTANCE FOR THE USE OF EQUAL MANUFACTURERS IS OBTAINED FROM THE CONTRACT ADMINISTRATOR PRIOR TO BIDDING SUBMISSION.
13 FURNISH TO THE CONTRACT ADMINISTRATOR THREE (3) COMPLETE SETS OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT REQUIRING MAINTENANCE. REVIEW INSTRUCTIONS WITH CONTRACT ADMINISTRATOR TO ENSURE A THOROUGH UNDERSTANDING OF THE EQUIPMENT AND ITS OPERATION.
14 PIPE HANGERS SHALL BE GRINNELL FIG. 65 FOR STEEL PIPE AND FIG. C765 FOR COPPER PIPE, ALL WITH FIG. 140 THREADED ROD ATTACHED TO FIG. 117 EXPANSION CASE SET IN HOLES DRILLED IN CONCRETE, OR ATTACHED TO FIG. 225 OR 227 CLAMP ATTACHED TO JOISTS OR BEAMS.
15 ALL EXTRANEOUS MATERIAL IN CEILING SPACE UNRELATED TO NEW AND REVISED WORK SHOWN, INCLUDING PIPING, CONTROL TUBING, DUCTWORK, ETC. SHALL BE REMOVED.
16 PROVIDE FIRESTOPPING FOR ALL OPENINGS IN FIRE SEPARATIONS FOR PASSAGE OF PIPES, DUCTS, ETC. TO MAINTAIN INTEGRITY OF FIRE SEPARATIONS AS PER MANUFACTURER'S PUBLISHED RECOMMENDATIONS.
17 INSTALLATION OF WORK SHALL BE COORDINATED WITH THE PRIME CONTRACTOR AND SHALL BE SCHEDULED SO AS NOT TO ENDANGER OR DISTURB THE USERS OF THE BUILDING. SHUTDOWN OF EXISTING BUILDING SYSTEMS SHALL BE COORDINATED WITH THE CONTRACT ADMINISTRATOR.
18 ALL WIRING FOR EQUIPMENT SPECIFIED HEREIN SHALL BE BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
19 CONTRACTOR SHALL REVIEW ALL EQUIPMENT REQUIRING ELECTRICAL HOOK-UP WITH ELECTRICAL CONTRACTOR AND ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT. ENSURE PROPER ELECTRICAL CHARACTERISTICS ARE DETERMINED FOR ALL AFFECTED AND RELATED WORK.
20 PRIOR TO INSTALLATION OF THE CEILING, NOTIFY THE CONTRACT ADMINISTRATOR AND ARRANGE FOR A FINAL REVIEW OF THE WORK. FOR UNDERTAKING THIS REVIEW, THE FOLLOWING SHALL BE COMPLETED:
1 ALL SYSTEMS TO BE FULLY OPERATIONAL, AS-BUILT DRAWINGS SUPPLIED AND OPERATING AND MAINTENANCE MANUALS SUBMITTED. TWO (2) DAYS NOTIFICATION (IN WRITING) IS REQUIRED TO BE GIVEN TO THE CONTRACT ADMINISTRATOR PRIOR TO REVIEWS BEING UNDERTAKEN.
2 ALL DEFICIENCIES SHALL BE COMPLETED WITHIN TWO (2) WEEKS OF AN AGREED PERIOD OF TIME AFTER FINAL REVIEW AND A LETTER SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR WITHIN THAT TIME ADVISING OF SUCH. FAILURE TO COMPLETE WORK MAY RESULT IN WORK BEING DONE BY THE OWNER AND THE COSTS DEDUCTED FROM FINAL PAYMENT.
21 WHERE MECHANICAL SERVICES ARE CONCEALED WITHIN WALLS, FLOORS OR CEILINGS AND CANNOT BE VISUALLY IDENTIFIED, PROVIDE ELECTRONIC SCANNING DEVICES OR OTHER APPROVED MEANS TO LOCATE AND IDENTIFY CONCEALED SERVICES PRIOR TO WORK START. MAKE GOOD ANY DAMAGE TO EXISTING MECHANICAL SERVICES AT NO COST TO THE CONTRACT.
22 SILICONE ALL FIXTURES TO ADJACENT WALLS, FLOORS OR COUNTERTOPS

- 2.0 INSULATION
1 INSULATE ALL DOMESTIC WATER PIPING WITH 1/2" FIBERGLAS 7 LB. DENSITY, PIPE INSULATION WITH ASJ AS PER MFG. RECOMMENDATIONS. SEAL ALL BREAKS, JOINTS WITH ASJ TAPE.
2 ALL COLD PIPING INSULATION SHALL BE CW WITH VAPOUR BARRIER.
3 INSULATION ON PIPING IN FINISHED AREAS TO BE RE-CANVASSED OR COVERED WITH WHITE P.V.C. INSULATION COVER.

- 3.0 PLUMBING
1 PROVIDE LABOUR, MATERIAL, EQUIPMENT AND SERVICES NECESSARY FOR AND INCIDENTAL TO SUPPLY AND INSTALLATION OF SYSTEMS SHOWN ON DRAWINGS. GENERALLY THIS SHALL INCLUDE:
1 DRAINAGE SYSTEM
2 WATER SUPPLY SYSTEM
3 VENT SYSTEM
2 DRAINAGE SYSTEMS
1 PROVIDE COMPLETE SYSTEMS OF DRAINAGE AND VENTING TO SERVE ALL FIXTURES, EQUIPMENT, ETC. AS NOTED ON DRAWINGS AND IN ACCORDANCE WITH LOCAL CODES.
2 ALL DRAINAGE PIPING TO W.C.'S SHALL BE 4"Ø MIN.
3 CLEANOUTS:
1 INSTALL CLEANOUTS AT ALL CHANGES OF DIRECTION, AT INTERVALS OF NOT OVER FIFTY FEET (50) IN HORIZONTAL RUNS, AT ALL POINTS WHERE OBSTRUCTIONS MIGHT BE FORMED AND AT ALL POINTS REQUIRED BY PLUMBING REGULATIONS OR SHOWN ON DRAWINGS.
3 WATER SUPPLY
1 PROVIDE COMPLETE SYSTEM OF WATER SUPPLY PIPING AS NOTED ON DRAWINGS.
2 GRADE HORIZONTAL RUNS OF PIPING TO DRAIN THROUGH RISERS.
3 INSTALL DRAIN VALVES IN MAINS FOR COMPLETE DRAINAGE.
4 INSTALL DIELECTRIC INSULATING COUPLINGS BETWEEN ALL PIPES CONSTRUCTED OF DISSIMILAR METALS.
5 PROVIDE SHOCK ABSORBER UPSTREAM OF EVERY SOLENOID VALVE OR QUICK CLOSING VALVE. THIS APPLIES ALSO TO NIC EQUIPMENT HAVING SOLENOID VALVES SUPPLIED BY OTHER DIVISIONS, SUCH AS WASHING MACHINES, DISHWASHERS, ETC. REVIEW PROPOSED LOCATION AND TYPE OF SHOCK ABSORBERS WITH CONTRACT ADMINISTRATOR PRIOR TO INSTALLATION.
4 INSTALL BACKFLOW PREVENTION DEVICES IN ACCORDANCE WITH CITY OF WINNIPEG BACKFLOW PREVENTION BY-LAW. INCLUDE COSTS OF ALL TESTING.

MECHANICAL SPEC'S CONTINUED:

- 5 DRAIN AND VENT PIPING
1 PIPE AND FITTINGS SHALL CONFORM TO STANDARDS LISTED IN APPLICABLE BUILDING CODE (LATEST REVISION).
2 ALL CAST IRON SOIL PIPE SHALL BE CLASS 4000.
3 NO PLASTIC, ASBESTOS OR ALUMINUM PIPE WILL BE ACCEPTED UNLESS SPECIFICALLY CALLED FOR.
6 WATER PIPING
1 PIPE - TYPE 'L' THIRD PARTY CERTIFIED HARD COPPER TUBE.
2 FITTINGS - WROT OR CAST SOLDER JOINT.
7 BALL VALVES
1 TOYO FIG. 5049A.
8 CLEANOUTS
1 CLEANOUTS IN CAST IRON SOIL PIPE SHALL CONSIST OF CAST IRON FERRULE WITH BRASS PLUG HAVING RAISED HEAD.
2 CLEANOUTS IN COPPER DRAINAGE TUBE SHALL BE BRASS SCREWED PLUGS WITH RAISED HEAD.
9 CLEANOUT ACCESS COVER
1 ZURN ZANB-1460-13-7" DIAM. POLISHED NICKEL BRONZE FRAME AND COVER. CLEANOUT ACCESS COVERS IN AREAS HAVING FLOOR FINISH SUCH AS V.A. TILE, TERRAZZO, OR CARPET, SHALL BE SELECTED TO SUIT FINISH. COOPERATE WITH APPROPRIATE TRADES TO APPLY FINISH TO CLEANOUT COVERS SO THAT THEY WILL BE FLUSH WITH FLOOR, INCONSPICUOUS, AND ACCESSIBLE.
2 CLEANOUTS IN WALLS SHALL BE LOCATED ADJACENT TO AN ACCESS DOOR, OR SHALL HAVE SUITABLY FINISHED ACCESS COVER FLUSH WITH WALL SO AS TO PRESENT NEAT FINISHED APPEARANCE AND LEAVE CLEANOUT EASILY ACCESSIBLE.
10 JOINTING
1 MAKE ALL JOINTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2 BRACE FITTINGS NECESSARY TO PREVENT JOINTS FROM COMING APART UNDER PRESSURE.
3 MAKE JOINTS IN DOMESTIC WATER AND DRAINAGE SYSTEMS WITH SOLDER CONTAINING NO LEAD. SOLDER MATERIAL SHALL BE SILVERBRITE 100 OR EQUAL CONSISTING OF COMBINATION OF TIN, COPPER AND SILVER.
11 CLEANING AND FLUSHING
1 ON COMPLETION, FLUSH OUT PIPING SYSTEM TO REMOVE ANY FOREIGN MATERIAL IN PIPING.
12 TESTING
1 PRESSURE TEST ALL PIPING SYSTEMS AS FOLLOWS:
1 PLUMBING SYSTEM - IN ACCORDANCE WITH LOCAL REGULATIONS.
2 WATER SUPPLY PIPING - TEST WITH WATER TO 100 PSIG AT HIGHEST POINT OF SYSTEM. MAINTAIN PRESSURE WITHOUT LOSS FOR 4 HOURS.
3 CONTRACT ADMINISTRATOR'S REPRESENTATIVE SHALL WITNESS TESTS. GIVE 48 HOURS NOTICE IN ADVANCE OF TESTS.
4 NATURAL GAS SYSTEM - IN ACCORDANCE WITH LOCAL REGULATIONS.
13 HANGERS
1 WATER - GRINNELL CT65 PLATED CLEVIS.
2 DRAINAGE - GRINNELL 260 CLEVIS.
3 INSTALL HANGERS 6 FT. ON CENTRE FOR PIPES UP TO 1", 8 FT. ON CENTRE FOR PIPES 1 1/4" AND LARGER.
14 FIXTURES
1 SH-1 SHOWER AND TRIM
1 REUSE THE EXISTING SHOWER HEADS.
2 SHOWER ROUGH IN VALVE SHALL BE GROHE GROHSAFE MODEL#35110000, 1/2" UNIVERSAL INLETS, 1/2" UNIVERSAL OUTLETS, HANDLE LIMIT STOP, INCLUDE PLUG FOR 3-PORT INSTALLATION, UNIVERSAL CONNECTION IS 1/2" MALE THREADS BY COPPER SWEAT, SERVICE STOP, MAX. FLOW RATE (BOTTOM PORT) 0.0 GPM AT 45 PSI, AND (TOP PORT) 5.2 GPM AT 45 PSI. GROHE EUROSMART PRESSURE BALANCE VALVE TRIM WITH CARTRIDGE, MODEL# 14462000.
3 SHOWER DRAIN SHALL BE OF BRASS CONSTRUCTION. PRODUCT IS INTENDED FOR INSTALLATIONS WITH 2" CAULK CONNECTION. DRAIN SHALL BE LESS STOPPER, BODY, AND TAILPIECE. PRODUCT SHALL INCLUDE HOUSING, CONNECTION GASKET, AND PERFORATED STRAINER. DRAIN SHALL BE KOHLER MODEL K-9132-CP.
2 SH-2 SHOWER AND TRIM
1 SINGLE-FUNCTION WALL-MOUNT SHOWERHEAD SHALL BE KOHLER MODEL K-10282-AK. MINIMIZES WASTEFUL OVERSPRAY AND INCREASES CLEANING AND HAIR-RINSING PERFORMANCE. 2.5 GPM (9.5 LPM) MAXIMUM FLOW RATE. SINGLE FUNCTION SHOWERHEAD WITH 66 NOZZLE 5-1/2" (140 MM) DIAMETER SPRAY FACE. KATALYST® AIR-INDUCTION TECHNOLOGY MAXIMIZES THE AIR/WATER MIX FOR A POWERFUL, EVEN FLOW. OPTIMIZED SPRAYFACE FOR MAXIMUM PERFORMANCE. MASTERCLEAN® SPRAY NOZZLES TO PROHIBIT MINERAL BUILD-UP FOR EASY CLEANING. 1/2" NPT CONNECTION. KOHLER FORTE RITE-TEMP® SHOWER VALVE TRIM K-TLS10276-4. INCLUDES FACE PLATE WITH HANDLE, SHOWER ARM AND FLANGE. SINGLE HANDLE CONTROLS BOTH ON/OFF ACTIVATION AND TEMPERATURE SETTINGS. SUPPLIED WITH METAL SCULPTED HANDLE. KOHLER RITE-TEMP VALVE BODY AND CARTRIDGE KIT COMPLETE K-8304-K. INCLUDES VALVE BODY, PRESSURE BALANCE CARTRIDGE, ROUGH-IN GUIDE, AND MUDGUARD. 1/2" UNIVERSAL NPT & DIRECT SWEAT INLETS & OUTLETS. 5.0 GPM (18.9 L/MIN) MAXIMUM FLOW RATE AT 45 PSI. SINGLE LEVER DESIGN CYCLES FROM OFF THROUGH COLD TO HOT. PROVIDES TEMPERATURE REGULATION AND AUTOMATIC ANTI-SCALD PROTECTION. ONE PIECE CARTRIDGE DESIGN SIMPLIFIES INSTALLATION AND MAINTENANCE. ADJUSTABLE HIGH TEMPERATURE LIMIT STOP TO CONTROL MAXIMUM WATER TEMPERATURE. DRAIN SHALL BE KOHLER MODEL K-9132-CP.
3 MS-1 MOP SINK
1 MOP SERVICE BASIN SHALL BE FIAT MODEL MSB2424. WHITE MOLDED -STONE MOP SERVICE BASIN, SERVICE FAUCET 830-AA; HOSE AND HOSE BRACKET 832-AA; MOP HANGER 889-CC; STAINLESS STEEL BUMPERGUARD; STAINLESS STEEL WALL GUARD.
4 UR-1 FLUSH VALVE URINAL
1 REUSE EXISTING URINALS.
2 ELECTRONIC, SENSOR ACTIVATED URINAL FLUSH VALVE SHALL FEATURE SELF-CLEANING PISTON VALVE WITH INTEGRAL WIPER SPRING IN REFILL ORIFICE TO PREVENT CLOGGING. INCLUDES A LONG-LIFE BATTERY PACK (WITH 10 YEAR LIFE) AND FULLY MECHANICAL MANUAL OVERRIDE THAT CAN FLUSH THE VALVE WITHOUT POWER. INCLUDES DEZINCIFICATION-RESISTANT BRASS VALVE BODY AND METAL COVER WITH CHROME FINISH. INCLUDES ANGLE STOP WITH BACK-FLOW PROTECTION & VANDAL-RESISTANT CAP. SWEAT SOLDER KIT AND HIGH BACK PRESSURE VACUUM BREAKER ALSO INCLUDED. 1.0 GPF / 3.8 LPF FLUSH VALVE SHALL BE AMERICAN STANDARD MODEL # 6064.101.002.
5 WC-1 WATER CLOSET
1 AMERICAN STANDARD MADERA™ FLOWISE® 16-1/2" HEIGHT ELONGATED FLUSHOMETER TOILET. FLOOR MOUNT FLUSHOMETER VALVE TOILET, VITREOUS CHINA, HIGH EFFICIENCY, LOW CONSUMPTION. OPERATES IN THE RANGE OF 1.1 GPF TO 1.6 GPF (4.2 LPF TO 6.0 LPF), MEETS DEFINITION OF HET (HIGH EFFICIENCY TOILET) WHEN USED WITH A HIGH EFFICIENCY FLUSH VALVE (1.28 GPF OR 1.6 / 1.1 GPF DUAL FLUSH), PERMANENT EVERCLEAN® SURFACE INHIBITS THE GROWTH OF STAIN AND ODOR-CAUSING BACTERIA, MOLD, AND MILDEW ON THE SURFACE. FULLY GLAZED 2-1/8" TRAPWAY, ELONGATED BOWL, 10" OR 12" ROUGHING-IN, 16-1/2" RIM HEIGHT FOR ACCESSIBLE APPLICATION. CONDENSATION CHANNEL. POWERFUL DIRECT-FED SIPHON JET ACTION, 10" X 12" WATER SURFACE AREA, 1-1/2" INLET SPUD, 2 BOLT CAPS, COLOR: WHITE. SEAT: AMERICAN STANDARD #5905.100 EXTRA HEAVY DUTY OPEN FRONT LESS COVER.

MECHANICAL SPEC'S CONTINUED:

- 2 ELECTRONIC, SENSOR ACTIVATED TOILET FLUSH VALVE SHALL FEATURE SELF-CLEANING PISTON VALVE WITH INTEGRAL WIPER SPRING IN REFILL ORIFICE TO PREVENT CLOGGING. INCLUDES A LONG-LIFE BATTERY PACK (WITH 10 YEAR LIFE) AND FULLY MECHANICAL MANUAL OVERRIDE THAT CAN FLUSH THE VALVE WITHOUT POWER. INCLUDES DEZINCIFICATION-RESISTANT BRASS VALVE BODY AND METAL COVER WITH CHROME FINISH. INCLUDES ANGLE STOP WITH BACK-FLOW PROTECTION & VANDAL-RESISTANT CAP. SWEAT SOLDER KIT AND HIGH BACK PRESSURE VACUUM BREAKER ALSO INCLUDED. 1.28 GPF / 4.8 LPF FLUSH VALVE SHALL BE AMERICAN STANDARD MODEL #6066.121.002.
6 LAV-1 BATHROOM SINK
1 FRANK VANITY SINK-WITH LEDGE, MODEL RANGE: COMMERCIAL SINK, V1619-6-3. SINGLE COMPARTMENT SELF RIMMING VANITY BASIN WITH FAUCET LEDGE. 18 GAUGE (1.2 MM), TYPE 304 (CNS 18/10) STAINLESS STEEL, MIRROR FINISHED RIM, #4 SATIN FINISHED BOWL. UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE. INCLUDES FACTORY APPLIED RIM SEAL, CUTOUT TEMPLATE, AND INSTALLATION HARDWARE. CERTIFIED TO ASME A112.19.3-2008 / CSA B45.4-08. CENTRE BACK WASTE LOCATION, ACCEPTS 1 1/4" (32 MM) WASTE ASSEMBLY, 3 FAUCET HOLES 1 1/8" (28 MM) DIAMETER, 4" (102 MM) CENTRE SET. 16 3/8 X 18 1/2" OVERALL, 11 X 15 3/16 X 6" BOWL, (FB X LR X D), 416 X 470 MM OVERALL, 279 X 386 X 152 MM BOWL, (FB X LR X D).
2 THE LAV-1 FAUCET SHALL BE DELTA (TECK COMMERCIAL) LAVATORY FAUCET MODEL 59111250. SUPPLIED AS COMPLETE PRODUCT, H2OPICT® TECHNOLOGY - NO EXTERNAL ADJUSTMENTS REQUIRED, CHROME-PLATED CAST 102 MM (4") SPOUT WITH INTEGRAL SENSOR, BATTERY (4 "C" CELL) INFRARED ELECTRONIC HANDWASH SYSTEM, ADJUSTABLE SENSING RANGE AND TIMEOUT, SURFACE MOUNT HOUSING, SERVICEABLE FILTER SCREEN UPSTREAM OF THE SOLENOID VALVE, 0.5GPM.
3 THERMOSTATIC MIXING VALVE SHALL BE DELTA (TECK COMMERCIAL) MODEL R3070-MIXLF. POINT OF USE THERMOSTATIC MIXING VALVE, THERMOSTATIC ELEMENT SENSES THE OUTLET WATER TEMPERATURE AND REACTS TO MAINTAIN A CONSTANT DELIVERY TEMPERATURE EVEN UNDER CHANGING FLOWS OR VARIATIONS IN SUPPLY TEMPERATURES OR PRESSURES, INTEGRAL CHECK VALVES IN HOT AND COLD INLETS TO PREVENT CROSSFLOW, FORGED BRASS BODY CONSTRUCTION, OUTLET TEMPERATURE RANGE 95 - 120°F (35 - 49°C), MAXIMUM FLOW RATE 5.8 GPM (22 L/MIN) @ 45 PSI PRESSURE LOSS, MINIMUM FLOW RATE 0.35 GPM (1.3 L/MIN), MAXIMUM WORKING PRESSURE 230 PSI (1600 KPA), PRESSURE DIFFERENCE BETWEEN HOT AND COLD SHALL BE LESS THAN 20%, MAXIMUM HOT WATER SUPPLY TEMPERATURE 195°F (90°C), MINIMUM 15°F GREATER THAN OUTLET TEMPERATURE, INLETS/OUTLETS: 3/8" COMPRESSION, SNAP-ON COVER OVER A SPINDLE MECHANISM THAT REQUIRES A SPECIAL TOOL TO ADJUST TEMPERATURE. THIS SPECIAL TOOL IS PROVIDED WITH EACH VALVE, REGULATING PISTON MADE FROM ENGINEERED POLYMER, OUTLET FLOW REDUCED TO A TRICKLE IN THE EVENT OF A COLD WATER SUPPLY FAILURE.
4 THE LAV-1 DRAINAGE/SUPPLIES SHALL BE DELTA MODEL 33T311, 1-1/4" P TRAP, 14-1/2" FROM CENTERLINE OF INLET TO OUTLET, WITH CLEANOUT PLUG, POLISHED CHROME PLATED, CAST BRASS BODY, ADJUSTABLE.

4.0 VENTILATION

- 1 DUCTWORK
1 GALVANIZED IRON SCHEDULE:
MAX. SIDE GAUGES (USSG) BRACING
UP TO 24" 24 NONE
25 TO 30" 24 1" X 1" X 1/8" ANGLE, 4" FROM JOINT.
31 TO 40" 22 1" X 1" X 1/8" ANGLE, 4" FROM JOINT.
ROUND DUCT UP TO 19" 26 NONE
2 WHERE DUCT WIDTH EXCEEDS 18" IN LARGEST DIMENSION, STIFFEN BY BREAKING SHEETS DIAGONALLY.
3 DUCT SIZES SHOWN ARE INSIDE DIMENSIONS. IF DUCTS ARE ACOUSTICALLY LINED, OUTSIDE DUCT SIZE TO BE INCREASED TO SUIT.
4 DUCTWORK SHALL BE CONSTRUCTED AS RECOMMENDED IN ASHRAE GUIDE.
5 SEAL ALL JOINTS (NEW AND EXISTING) AIRTIGHT WITH DURO-DYNE S-2 DUCT SEALER OR EQUAL, IN STRICT ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDATIONS. PRIOR TO APPLICATION, DUCTWORK TO BE DRY AND FREE OF GREASE, ETC. USE 1/4" BEAD OF MATERIAL ALONG JOINTS. MATERIAL, WHEN DRY, TO HAVE 1/8" DEPTH EXTENDING 1" ON EACH SIDE OF JOINT OR SEAM.
6 SIZE ROUND DUCTS, INSTALLED IN PLACE OF RECTANGULAR DUCTS, FROM ASHRAE TABLE OF EQUIVALENT RECTANGULAR AND ROUND DUCTS.
7 PRIOR TO FABRICATION OF DUCTWORK, CHECK ALL CEILING SPACES AND HEIGHTS FOR CONFLICTION WITH OTHER TRADES.
8 DUCT AND EQUIPMENT SUPPORTS, HANGERS AND INSERTS
1 SUPPORT HORIZONTAL DUCTS ON MAXIMUM 8'-0" CENTRES BY NON-PERFORATED GALV. STEEL, RIVETTED STRAP FOR DUCTWORK 36" (EITHER DIMENSION) OR LESS, AND MINIMUM 1" X 1" X 1/8" GALV. IRON PASSING UNDER DUCTS 37" OR OVER (EITHER DIMENSION) WITH 3/8" DIAM. THREADED RODS SUSPENDING ANGLES FROM STRUCTURE.
2 FOR INSERTS IN EXISTING CONCRETE, USE HILTI H.K.D. STEEL ANCHORS.
9 MANUAL VOLUME DAMPERS TO BE #16 GA. GALV. STEEL, STIFFENED. DAMPERS HARDWARE TO BE DURO-DYNE KS-145, KS-385 OR KS-12 AS RECOMMENDED BY MANUFACTURER.
10 FIRE DAMPERS SHALL CONFORM TO MANITOBA FIRE CODE AND LOCAL AUTHORITIES. ALL FIRE DAMPERS TO BE TYPE 'B', I.E. BLADES OUT OF AIR STREAM.
11 PROVIDE INSULATED ACCESS DOORS AT ALL FIRE DAMPERS, COILS, AIR VALVES AND WHERE NOTED.
12 DIFFUSERS, GRILLES AND REGISTERS
1 REFER TO SCHEDULE.
13 PROVIDE FOR TEMPORARY FILTERS AT EXISTING MAIN RETURN AIR DUCTS DURING CONSTRUCTION ON EACH FLOOR BEING RENOVATED. REPLACE FILTERS REGULARLY DURING THE CONSTRUCTION PERIOD. REMOVE TEMPORARY FILTERS AT END OF CONSTRUCTION AND PRIOR TO AIR BALANCING. FLEXIBLE AIR DUCTS SHALL CONFORM TO UL-181, NFPA 90A AND SHALL HAVE A FIRE RATING TO SUIT WALL RATING. USE MAXIMUM OF 18" LENGTH STRAIGHT RUN TO EACH BOOT CONNECTION.

NOTES:

Table with 4 columns: No., REVISION/DESCRIPTION, BY, DATE. Row 1: 1 ISSUED FOR ADDENDUM #2, EAG, JULY 20 2020. Row 2: 0 ISSUED FOR CONSTRUCTION, EAG, JUNE 22 2020.

SEAL

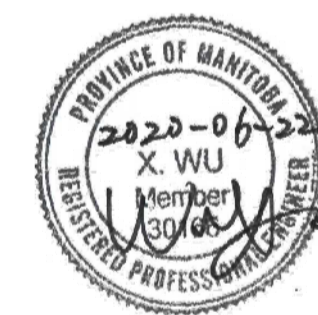


Table with 5 columns: DRAWN, EAG, CHECKED, DESIGNED, XTW, APPROVED. DATE: 2020.06.22, USER APPROVAL.

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

PROJECT WINNIPEG FIRE PARAMEDIC SERVICES FIRE STATION #23 RENOVATIONS TO WASHROOMS AND SECOND FLOOR 880 DALHOUSIE DRIVE TENDER NO. 349-2020

SHEET TITLE MECHANICAL SPECIFICATIONS

Table with 3 columns: SCALE AS SHOWN, PROJECT No: 2019-147, SHEET No: M3-R1