

MECHANICAL SPECIFICATION

MECHANICAL SUB CONTRACTOR SHALL SUBMIT PRICE FOR THE COST OF SUPPLY AND INSTALLATION OF EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE AND OPERATING MECHANICAL PACKAGE...

MECHANICAL SCOPE OF WORK

- 1. INCLUDE IN MECHANICAL SECTION, PROVISION OF LABOUR, NEW MATERIALS, TOOLS, TRANSPORTATION, SERVICES AND FACILITIES FOR A COMPLETE MECHANICAL INSTALLATION...
2. THE MECHANICAL SCOPE OF WORK INCLUDES, BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING PROVISION:
2.1. GENERAL
2.1.1. FAMILIARIZE CREW WITH SITE IN ORDER TO DETERMINE APPROPRIATE LOCATIONS, SITE CONDITIONS, ETC. THAT MAY AFFECT WORK...

GENERAL CONDITIONS

- 1. PROVIDE ALL LABOUR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN ON DRAWINGS AND AS SPECIFIED HEREIN.
2. ALL NECESSARY PERMITS SHALL BE OBTAINED AND ALL FEES SHALL BE PAID TO CARRY OUT THE SPECIFIED WORK.
3. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF COMPLETED WORK ACCEPTANCE BY THE CITY...

SHALL BE RESPONSIBLE FOR CONTRACT ADMINISTRATOR'S TIME COSTS FOR CORRECTIVE MEASURES, COURIER AND PRINTING COSTS.

- 15.6. CONTRACTOR SHALL EMPLOY CONTRACT ADMINISTRATOR (OR CAD DRAFTING SERVICE) TO PRODUCE ELECTRONIC COPY RECORD DRAWINGS. MECHANICAL SUB CONTRACTOR SHALL BEAR ALL COSTS OF PRODUCTION.
15.7. COPY OF FINAL RECORD DRAWING SHALL BE SUBMITTED TO ARCHITECT.
15.8. ALL COSTS OF RECORD DRAWINGS PRODUCTION SHALL BE BORNE BY MECHANICAL SUB CONTRACTOR.
16. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE TEMPORARY HEATING AND HOARDING AS REQUIRED FOR THE PROPER PROGRESS OF THE WORK...

INSULATION

ALL INSULATING MATERIALS, METHODS, SIZES AND TYPES OF INSULATION FOR ALL PIPING AND DUCT WORK SHALL BE INSTALLED TO THE REQUIREMENTS OF THE ASHRAE STANDARDS 90.1-2010 ENERGY STANDARD FOR BUILDING EXCEPT LOW-RISE RESIDENTIAL BUILDING...

Table with 2 columns: PIPE SIZE and INSULATION THICKNESS. Lists requirements for insulation thickness based on pipe size and material type.

SPRAYED OR WET-BRUSHED TO A SMOOTH EVEN FINISH. PROVIDE ALUMINUM JACKET THREE(3) SIDES. FINISH AS PER ARCHITECT BY GENERAL CONTRACTOR.

- 7.2. ALL ADJOINING UNINSULATED SURFACES MUST BE COMPLETELY WATER-PROOFED AND FLASHED EITHER BY EXTENDING THE VI-CRYL CP-10/11 WEATHER BARRIER COATING AND FABRIC MEMBRANE A MINIMUM OF 4" (102 MM) ONTO THE ADJOINING SURFACE...
7.3. ALL INSULATION IN EXPOSED LOCATIONS, AND ALL DUCTWORK IN FAN ROOMS, SERVICE ROOMS, GARAGES, ETC., SHALL BE COVERED WITH CANVAS WRAP. INSULATION EXPOSED TO THE MOISTURE SHALL BE COMPLETE WITH COVER PER 9.1/9.2 ABOVE.

PLUMBING

- 1. PROVIDE COMPLETE FUNCTIONAL PLUMBING SYSTEM COMPRISED OF DOMESTIC WATER PIPING, VENTS, SANITARY AND DRAINAGE PIPING, ETC.
2. PLUMBING SIZING SHOWN ON DRAWINGS IS BASED ON COPPER PIPING FOR DOMESTIC WATER, AND CAST IRON PIPING FOR SANITARY AND STORM. MECHANICAL SUB CONTRACTOR IS RESPONSIBLE FOR RESIZING PLUMBING AS REQUIRED WHEN USING ALTERNATE MATERIALS.
3. ACCEPTABLE MATERIALS SHALL BE USED AS DESCRIBED BELOW.
3.1. DRAINAGE WASTE AND VENT (DWV) MATERIALS
3.1.1. UNDERGROUND PIPING
3.1.1.1. PVC MEETING CSA B181.2
3.1.1.2. CAST IRON MEETING CSA B70
3.1.1.1.1. HUB AND SPOUT CONNECTIONS, THRUST BLOCKS AT CHANGES IN DIRECTION...

- 17.1. PLUMBING FIXTURES ARE TO BE PROVIDED WITH BACKFLOW PREVENTION BASED ON THE FIXTURE HAZARD TYPE DEFINED IN CSA B64. BACKFLOW PREVENTION SHALL BE A VACUUM BREAKER (HCVB) FOR MINOR HAZARD, DOUBLE CHECK VALVE BACKFLOW PREVENTER (DCVA) FOR MEDIUM HAZARD OR REDUCED PRESSURE BACKFLOW PREVENTER (RP) FOR HIGH HAZARD FIXTURES.
17.2. PROVIDE BACKFLOW PREVENTION FOR THE FLOWING FIXTURES (OR GROUP OF FIXTURES) AS DEFINED ABOVE.
17.2.1. BASIN DCVA
17.2.2. FLUSH TANK DCVA
17.2.3. FLUSHING EQUIPMENT DEVICE RP
17.2.4. HOSE CONNECTION (NON-RESIDENTIAL) DCVA/RP
17.2.5. HOT WATER SYSTEMS CONNECTION HCVB
17.2.6. LAVATORY DCVA
17.2.7. TRAP PRIMER RP

PLUMBING FIXTURES AND EQUIPMENT

- WC-1 WATER CLOSET - WALL HUNG - BARRIER FREE
ACORN DURA-WARE 2100-W-1-HPS-BCN, BLOWOUT JET TOILET - OFF FLOOR, WALL THICKNESS 190MM BLOCK, WALL (CONCEALED), OFF-FLOOR, WALL OUTLET, 1.6 GPF, HIGH POLISH INTEGRAL SEAT, BLIND CAP NUTS (3). SLOAN REGAL XL OPTIMA #153-1.6 ES-S, CONCEALED FLUSHOMETER FOR TOP SPUD TOILET, 6 L (1.6 US GAL) FACTORY SET FLOW, QUIET ACTION DIAPHRAGM TYPE, INFRARED SENSOR, SOLENOID OPERATED FLUSH CONTROLLER CIRCUITRY, COURTESY FLUSH ELECTRONIC OVER-RIDE BUTTON, BAK-CHEK ANGLE STOP (WHEEL HANDLE OPERATED), EXPOSED CP ELBOW FOR TOP SPUD CONNECTION, VACUUM BREAKER, SENSOR LOCATED ABOVE THE TOILET, 5 VA POWER REQUIRED PER UNIT. OFFSET P-TRAP WITH INSULATION COVERING. WAITS FLOW STOPPER, PROVIDE 4" (102 MM) SQUARE ELECTRICAL BOX FOR MOUNTING SENSOR PLATE. SLOAN #L-342, BOX MOUNT HARD WIRE TRANSFORMER, 240 / 24 50 VA. WALL OPERATE UP TO 10 'OPTIMA' FLUSH VALVE. WAITS #15A-101-M11 SINGLE HORIZONTAL ADJUSTABLE TOILET CARRIER, MOUNTED ON CONCRETE FLOOR, ALL EPOXY COATED CAST IRON FITTING, ADJUSTABLE ABS SUE NIPPLE WITH INTEGRAL TEST CAP AND NEOPRENE BOWL GASKET, WASTED PLATED HARDWARE, CHROME CAP NUTS, TILING FRAME, 102 MM (4") NO HUB WASTE, 51 MM (2") NO HUB VENT, 158.8 KG (350 LBS) STATIC LOAD, 305 MM (12") FINISHED METAL STUD WALL TO BACK OF PIPE SPACE. CHAMPION M-TR SERIES #M-HUB TR-440 DRAIN COUPLING, COUPLING, NO-HUB, TYPE 300 AISI STAINLESS STEEL BAND, TYPE 300 AISI STAINLESS STEEL EYELETS, ELASTOMERIC COMPOUND GASKET MEETING THE REQUIREMENTS OF ASTM C-564, TYPE 300 AISI STAINLESS STEEL SHIELD, TESTED TO MAINTAIN 4.3 PSI OF WATER PRESSURE AT 60 INCH LB MIN/MAX TORQUE BOLT TIGHTNESS, TESTED AND CERTIFIED TO ASTM STANDARD 1460-2012 AND CSA STANDAD B602-2010 AND LISTED WITH IAPMO. ALL MODELS ARE LISTED TO THE NATIONAL PLUMBING CODE OF CANADA AND RELEVANT CANADIAN STANDARD (S) AND BEAR THE CUPC MARK OF CONFORMITY. NON CONSTANT TEMPERATURE RATING IS 140F.
L-1 LAVATORY - WALL HUNG - BARRIER FREE
ACORN MERIDIAN 3701-1-50-DMJ-PDM STAINLESS STEEL CURVED FRONT UNI-BASIN LAVATORY, OFF-FLOOR, WALL OUTLET, SENSOR OPERATION, DECK MOUNTED SPOUTS, DECK MOUNTED J SPOUT, METERING LIQUID SOAP DISPENSER, LANLER #7M-1070, BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 F (48.8 C), INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 C (114.8 F), PROVIDE TEE, ADEPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. MCQUIRE #155A OPEN GRID DRAIN, CAST BRASS ONE PIECE TOP, 17 GA. (1.5 MM) TUBULAR 32 MM (1-1/4") TAILPIECE. MCQUIRE #LFH16SLKN3 FAUCET SUPPLIES, CHROME PLATED FINISH POLISHED BRASS, HEAVY DUTY ANGLE STOPS, 10 MM (3/8") I.P.S. INLET X 76 MM (3") LONG RIGID HORIZONTAL NIPPLES, V.P. LOOSE KEYS, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCQUIRE #8972C P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLP NUT, 32 MM (1-1/4") SIZE, SHALLOW WALL FLANGE AND SEAMLESS TUBULAR WALL. WAITS #24-321 FIXTURE CARRIER, MOUNTED ON CONCRETE FLOOR, EPOXY COATED TOP AND BOTTOM UNIVERSAL STEEL HANGER PLATES, HEAVY GAUGE EPOXY COATED STEEL OFFSET UPRIGHTS WITH WELDED FET SUPPORTS. FOR ONE UNIT: 102 MM (4") FOR TWO TO SIX UNITS IN A ROW: 152 MM (6") FINISHED METAL STUD WALL TO BACK OF PIPE SPACE.
MS-1 SERVICE / MOP SINK - TWO HANDLE FAUCET
STERN WILLIAMS #MTB-2424 SQUARE SERVICE / MOP SINK, 610 MM (24") X 610 MM (24") X 254 MM (10") DEEP, FLOOR MOUNTED, TERRAZZO COMPOSED OF PEARL GRAY MARBLE CHIPS AND PORTLAND CEMENT GROUND SMOOTH, SEALED TO RESIST STAIN, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER, 3"(75MM) OUTLET, AMERICAN STANDARD #8350.243 WALL MOUNTED TWO HANDLE FAUCET, CHROME PLATED, 8" (203MM) CENTERSET, CAST BRASS BODY, LOW COMPRESSION, UNRESTRICTED HOSE END OUTLET, SPOUT WITH ATMOSPHERIC VACUUM BREAKER AND BUCKET HOOK 173 MM (7-1/4") FROM WALL TO OUTLET REACH, LEVER HANDLES. STERN WILLIAMS T-35 HOSE AND WALL HOOK HOSE 36" (914MM) LONG WITH 3/4" (19MM) CHROME COUPLING, STAINLESS STEEL WALL BRACKET. STERN WILLIAMS T-40 MOP HANGER STAINLESS STEEL #4 FINISH, 24" (610MM) LONG WITH 3 RUBBER SPRING LOADED CLIPS. STERN WILLIAMS BP BACK SPLASH PANEL 20 GAUGE TYPE 304 STAINLESS STEEL. PROVIDE P-TRAP, SAME MATERIAL AS THE CONNECTING PIPE DRAIN.
WP-1 WELL PUMP
GRUNDFOS 'SP' SERIES SUBMERSIBLE PUMP, MODEL 25S10-7 COMPLETE WITH STAINLESS STEEL CONSTRUCTION, INTEGRAL DISCHARGE CHECK VALVE, 4" NOMINAL PUMP SIZE, 1 HP, 230/1/60 SUBMERSIBLE MOTOR, 1-1/2" NPT DISCHARGE, 20 GPM @ 143 FT HEAD, 3450 RPM. PROVIDE COMPLETE WITH PRESSURE SWITCH/CONTACT AND PRESSURE GAUGE. WIRING TO PUMP BY ELECTRICAL CONTRACTOR.
WS-1 WATER SOFTENER
AQUA SURE WATER SOFTENER MODEL ASI-HUF30, 1" MALE CONNECTION, 20 GPM @ 10 PSI SERVICE FLOW RATE, 120V CONNECTION.
FD-1 FLOOR DRAINS - FIN. AREAS - MED. DUTY STRAINER
SMITH SERIES 2005A FLOOR DRAIN, ALL DUCCO COATED CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH SEEPAGE OPENINGS AND ADJUSTABLE 5" (127MM) DIAMETER NICKEL BRONZE 1/4" (6.35MM) THICK STRAINER, SECURED WITH S.S. SCREWS, 4" (100MM) THROAT ON STRAINER. (WHERE REQUIRED BY LOCAL CODE PROVIDE TRAP SEAL).
CO-1 FLOOR CLEANOUT (UNFINISHED AND OUTSIDE AREAS)
SMITH 'TWS-TO-FLOOR' SERIES 4220 FLOOR CLEANOUT, DUCCO COATED CAST IRON BODY AND REMOVABLE POSITIVE GASKET SEAL CLOSURE PLUG AND HEAVY DUTY 6" (150MM) ROUND ADJUSTABLE SCORIATED CAST IRON COVER SECURED WITH STAINLESS STEEL SCREWS, C.O. CAST IN COVER. (FOR WATER-PROOFED AREAS PROVIDE 'FC' FLANGE WITH FLASHING CLAMP).
CO-2 FLOOR CLEANOUT (TILED AREAS)
SMITH SERIES 4140 FLOOR CLEANOUT, DUCCO COATED CAST IRON BODY AND REMOVABLE POSITIVE GASKET SEAL CLOSURE PLUG AND HEAVY DUTY 6" (150MM) ROUND NICKEL BRONZE COVER AND FRAME WITH 1/8" (3MM) TILE RECESS. (FOR MEDIUM LOAD TRAFFIC) COVER CAN BE ADJUSTED TO SUIT FLOOR LINES WHEN INSTALLING FINISHED FLOOR. (MOSAIC TILE PROVIDE SERIES 4160 WITH SQUARE COVER.)
CO-3 FLOOR CLEANOUT (TERRAZZO AREAS)
SMITH SERIES 4180 FLOOR CLEANOUT, DUCCO COATED CAST IRON BODY AND REMOVABLE POSITIVE GASKET SEAL CLOSURE PLUG, HEAVY DUTY 6" (150MM) ROUND NICKEL BRONZE COVER AND FRAME WITH 1/2" (12MM) TERRAZZO RECESS (FOR MEDIUM LOAD TRAFFIC). COVER CAN BE ADJUSTED TO SUIT FLOOR LINES WHEN INSTALLING FINISHED FLOOR.
CO-4 STACK CLEANOUT
SMITH SERIES 4510 STACK CLEANOUT, IN BASE OF CAST IRON STACKS WITH NEOPRENE GASKETED PLUG. WHERE CLEANOUTS ARE CONCEALED BEHIND FINISHED WALLS ACCESS SHALL BE MADE BY SMITH 4530 ROUND STAINLESS STEEL PLATE AND SLOTTED FLAT HEAD STAINLESS STEEL SCREW.
TS-1 TRAP SEAL DEVICE
WADE MODEL #4405 TRAP SEAL DEVICE (OR EQUAL), REGULARLY FURNISHED: ELASTOMERIC TRAP SEAL DEVICE WITH FITTING.

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Revisions

Table with 2 columns: Date and Issued for Construction Revision

Northern Sky Architecture Inc.

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APEGM Certificate of Authorization
Nova 3 Engineering Ltd.
No.962 Date: 2018/05/24

Stamp: PROFESSIONAL ENGINEER
CORTENS
Member 3151
2018/05/24

Project

New La Barriere Park Washroom Project

La Barriere Park, Manitoba

Table with 4 columns: drawing title, scale, date, project no., bid opp. no., as noted, designed by, drawn by, reviewed by, sheet, REV.

ISSUED FOR CONSTRUCTION