

THIS DRAWING MUST NOT BE SCALED.  
 THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DURINGS, AND LEVELS PRIOR TO COMMENCEMENT OF WORK. ALL ERRORS AND OMISSIONS TO BE REPORTED TO NUMBER TEN ARCHITECTURAL GROUP BEFORE PROCEEDING.  
 VARIATIONS AND MODIFICATIONS TO WORK SHOWN ON THESE DRAWINGS SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION OF NUMBER TEN ARCHITECTURAL GROUP.  
 THIS DRAWING IS THE EXCLUSIVE PROPERTY OF NUMBER TEN ARCHITECTURAL GROUP AND THE COPYRIGHT IN THE SAME BEING RESERVED TO THEM. IT MAY BE REPRODUCED ONLY WITH THE PERMISSION OF NUMBER TEN ARCHITECTURAL GROUP, IN WHICH CASE THE REPRODUCTION MUST BEAR THEIR NAME.

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- 22 00 00 GENERAL REQUIREMENTS
1. THE SPECIFICATION COVERING THE GENERAL CONDITIONS OF THE CONTRACT, SUPPLEMENTARY CONDITIONS, GENERAL AND SAFETY REQUIREMENTS, INSTRUCTIONS TO CONTRACTORS, AND ALL SECTIONS FORM AN INTEGRAL PART OF THIS SPECIFICATION AND SHALL BE READ IN CONJUNCTION HEREWITH.
- 1.1 SCOPE
1. PROVIDE ALL MATERIALS, LABOUR, PLANT AND EQUIPMENT REQUIRED FOR A COMPLETE AND WORKING INSTALLATION AS HEREIN SPECIFIED AND AS SHOWN ON THE DRAWINGS.
  2. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE PROVINCIAL AND MUNICIPAL CODES AND REGULATIONS.
  3. ARRANGE FOR, AND COORDINATE, ROUGH-IN AND FINAL INSPECTIONS WITH INSPECTION AUTHORITY AND CONTRACT ADMINISTRATOR.
  4. IN THE EVENT OF CONFLICT BETWEEN CONTRACT DOCUMENTS AND CODES, THE MORE STRINGENT REQUIREMENT SHALL BE ADHERED TO AT NO ADDITIONAL COST.
  5. ENGINEERING SITE REVIEWS: CONTRACTOR'S WORK SHALL BE PERIODICALLY REVIEWED BY THE CONTRACT ADMINISTRATOR FOR DETERMINING GENERAL QUALITY OF INSTALLATION. GUIDANCE WILL BE OFFERED AS TO INTERPRETATION OF CONTRACT DOCUMENTS AND TO ASSIST IN PERFORMING THE INSTALLATION, INSPECTIONS, REVIEWS AND DIRECTIVES ISSUED IN NO WAY RELIEVE THE CONTRACTOR, HIS AGENTS, EMPLOYEES OR SUBTRADES FROM CONTRACTUAL OBLIGATIONS, CONFORMANCE TO CODES OR SAFE AND RECOGNIZED PRACTICES.
  6. APPLY FOR AND PAY FOR ALL REQUIRED PERMITS.
  7. INDICATE ALL PERMIT NUMBERS ON ALL PROGRESS DRAWS.
  8. WHERE NO PERMIT WAS APPLIED FOR INDICATE SAME ON PROGRESS DRAW.
- 1.2 DEFINITIONS
- THE FOLLOWING ARE DEFINITIONS OF TERMS AND EXPRESSIONS USED IN THE ELECTRICAL AND MECHANICAL SPECIFICATION:
1. INSPECTION AUTHORITY MEANS AGENT OF ANY AUTHORITY HAVING JURISDICTION OVER CONSTRUCTION STANDARDS ASSOCIATED WITH ANY PART OF WORK ON SITE.
  2. PROVIDE MEANS TO SUPPLY, INSTALL AND LEAVE IN WORKING ORDER ALL MATERIALS AND NECESSARY DEVICES TO ENSURE A FULLY FUNCTIONAL SYSTEM, TESTED AND COMPLETE IN EVERY WAY, UNLESS OTHERWISE NOTED.
  3. THE TERM "DRAWINGS" AND "SPECIFICATIONS" ARE COMPLEMENTARY TO EACH OTHER. WHAT IS CALLED FOR BY ONE SHALL BE BINDING TO BOTH.
  4. THE TERM "CONTRACT DOCUMENTS" REFERS TO BOTH DRAWINGS AND SPECIFICATIONS.
  5. STANDARDS, REGULATIONS AND BYLAWS, HEREAFTER REFERRED TO AS CODES.
- 1.3 ACCURACY OF DATA
1. DRAWINGS ARE SCHEMATIC; EXACT LOCATIONS, DISTANCES, LEVELS AND OTHER DIMENSIONS SHALL BE GOVERNED BY THE ARCHITECTURAL AND/OR INTERIOR DESIGN DRAWINGS.
  2. DEVICES OR EQUIPMENT SHALL BE MOVED TO ANY POINT WITHIN A 3M (10'-0") RADIUS FOR COORDINATION PURPOSES OR WHEN THE CONTRACT ADMINISTRATOR REQUESTS RELOCATION BEFORE THE WORK HAS BEEN SUBSTANTIALLY COMPLETED, WITHOUT ADDITIONAL COST.
  3. DRAWINGS AND SPECIFICATIONS ESTABLISH SCOPE OF WORK ONLY AND ARE NOT DETAILED INSTALLATION INSTRUCTIONS. FOLLOW MANUFACTURER'S RECOMMENDATIONS AND ADHERE TO ALL CURRENT AND APPLICABLE CODES.
  4. THE CONTRACT ADMINISTRATOR SHALL HAVE THE FINAL SAY IN MATTERS OF INTERPRETATION.
- 1.4 EXAMINATION
1. EXAMINE ENTIRE CONTRACT DOCUMENT PACKAGE TO ENSURE THAT THE WORK UNDER THIS CONTRACT CAN BE SATISFACTORILY CARRIED OUT. REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR PRIOR TO SUBMISSION OF BID.
  2. EXAMINE THE SITE, LOCAL CONDITIONS AND ALL EXISTING APPARATUS IF ANY TO BE RE-USED AND VERIFY THAT THE CONDITION OF THIS EQUIPMENT IS SUITABLE FOR ITS INTENDED USE IN THE NEW CONSTRUCTION.
- 1.5 WORKMANSHIP
1. INSTALL EQUIPMENT IN A WORKMANLIKE MANNER TO PRESENT A NEAT APPEARANCE TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR. INSTALL EQUIPMENT PARALLEL AND PERPENDICULAR TO BUILDING LINES. INSTALL NEATLY AND GROUP TO PRESENT A TIDY APPEARANCE.
  2. INSTALL EQUIPMENT AND APPARATUS INCLUDING BUT NOT LIMITED TO JUNCTION BOXES, VALVES AND BALANCING DAMPERS REQUIRING MAINTENANCE, ADJUSTMENT OR EVENTUAL REPLACEMENT WITH ADEQUATE CLEARANCES AND ACCESSIBILITY FOR SAME. ACCESSIBILITY IS DEEMED TO BE WITHIN 600MM (24") OF ACCESSIBLE DRYWALL CEILING OPENING AND NO MORE THAN 1M (39") ABOVE ACT.
  3. INCLUDE IN THE WORK, ALL REQUIREMENTS SHOWN ON THE SHOP DRAWINGS OR MANUFACTURERS' INSTALLATION INSTRUCTIONS.
  4. REPLACE WORK UNSATISFACTORY TO THE CONTRACT ADMINISTRATOR WITHOUT EXTRA COST.
  5. EQUIPMENT EXPOSED TO EXTERIOR WEATHER AND / OR MOISTURE SHALL BE CORROSION AND UV PROTECTED.
  6. ONLY SKILLED AND QUALIFIED LICENSED TRADESPERSON SHALL PERFORM THE WORK. TRADESPERSON SHALL PROVIDE PROOF OF REGISTERED STATUS WHEN REQUESTED.
  7. CONTRACTOR IS RESPONSIBLE TO CAREFULLY EXAMINE CONDITIONS AT THE INTENDED PLACE OF WORK. VERIFY ALL SERVICES, CONNECTION POINTS, AND ALL ACCESS OPENINGS TO PERMIT INSTALLATION OF NEW EQUIPMENT.
- 1.6 SUPERVISION
1. SUPERVISE THE WORK AT ALL TIMES THROUGH A RESPONSIBLE AND COMPETENT QUALIFIED TRADESPERSON.
  2. FULL CO-OPERATION SHALL BE SHOWN WITH OTHER TRADES TO FACILITATE INSTALLATIONS AND TO AVOID DELAYS IN CARRYING OUT THE WORK.
  3. REPLACE SITE SUPERVISOR AND/OR FOREMAN WHEN REQUESTED BY CONTRACT ADMINISTRATOR.
- 1.7 CHANGE TO CONTRACT
1. CONTRACTOR CHANGE PRICING SHALL INCLUDE A COMPLETE BREAKDOWN OF ITEMS OF MATERIAL, LABOUR HOURS, LABOUR RATES AND MARKUPS. THIS REVIEW PERIOD WILL START WHEN ALL INFORMATION INDICATED ABOVE IS RECEIVED.
  2. GENERAL CONTRACTOR SHALL REVIEW AND APPROVE ALL CONTRACTOR CHANGE PRICING AND CREDITS PRIOR TO SUBMITTING TO CONTRACT ADMINISTRATOR. SUBMISSION TO THE CONTRACT ADMINISTRATOR INDICATES GENERAL CONTRACTOR BELIEVES THE PRICING IS FAIR AND REASONABLE.
- 1.8 PROGRESS CLAIMS
1. CONTRACTOR PROGRESS CLAIMS WILL ONLY BE REVIEWED IF THEY PROVIDE A COMPLETE BREAKDOWN BY TRADE AND SUB TRADE AND LIST ALL MAJOR EQUIPMENT AND LABOUR COMPLETE WITH COSTS.
- 1.9 WORK IN EXISTING BUILDING
1. WHERE EXISTING SERVICES SUCH AS POWER, FIRE ALARM, HVAC, PLUMBING OR FIRE PROTECTION ARE REQUIRED TO BE DISRUPTED AND/OR SHUTDOWN COORDINATE THE SHUT-DOWNS WITH THE CITY AND CARRY OUT THE WORK AT A TIME AND IN A MANNER ACCEPTABLE TO THEM. CAREFULLY SCHEDULE ALL DISRUPTIONS AND/OR SHUTDOWNS AND ENSURE THAT THE DURATION OF SAME IS KEPT TO A MINIMUM. SUBMIT FOR APPROVAL, A WRITTEN SCHEDULE OF EACH DISRUPTION AT LEAST 72 HOURS IN ADVANCE OF PERFORMING WORK AND OBTAIN CITY'S WRITTEN CONSENT PRIOR TO IMPLEMENTING.
  2. SHOULD ANY CONNECTIONS BE REQUIRED TO MAINTAIN SERVICES DURING WORK IN THE EXISTING BUILDING, SUPPLY AND INSTALL ALL NECESSARY MATERIAL AND EQUIPMENT AND PROVIDE ALL LABOUR AT NO EXTRA COST. SHOULD ANY EXISTING SYSTEM BE DAMAGED, MAKE FULL REPAIRS WITHOUT EXTRA COST, AND TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
- 22 00 20 PIPING AND FITTINGS
- 1.1 PIPING SYSTEMS:
1. DOMESTIC HOT & COLD WATER:  
TYPE L COPPER WITH WROUGHT COPPER FITTINGS AND LEAD FREE SOLDER; CPVC DR11 PIPE AND FITTINGS AS PERMITTED BY THE 2010 NPC. PEX AS PERMITTED BY THE 2010 NPC.2.
  2. NATURAL GAS OR PROPANE  
ASTM-A53 SCHEDULE  
SCHEDULE 40 STEEL TO CODE, BELOW GRADE ONLY. CPVC WITH HEAT FUSION JOINTS.
- 1.2 HANGERS AND SUPPORTS:
1. ALL HANGERS SHALL BE OF SAME MATERIAL AS PIPING SYSTEM, OR SHALL BE ISOLATED FROM THE PIPE.
  2. PROVIDE ADJUSTABLE CLEVIS HANGERS EQUAL TO PIPE SIZE AND OF SAME MATERIAL AS PIPING SYSTEM.
  3. PROVIDE OVERSIZED HANGERS ON ALL COLD WATER PIPING CONVEYING LIQUID LESS THAN 21°C (70°F).
  4. USE ONLY FACTORY MADE INSERTS, COACH SCREW RODS, C-CLAMPS, BEAM CLAMPS, AND EXPANSION SHIELDS RATED FOR THE INTENDED LOAD.
  5. "CADDY" CLIP OR TENSION CLIP ROD SUPPORTS ARE NOT ALLOWED ON THIS PROJECT.
  6. DUCT HANGERS SHALL BE ROD OR STRAP 2 GAUGE HEAVIER THAN DUCT.
- 1.3 ACCEPTABLE JOINING SYSTEMS INCLUDE MECHANICAL JOINTS (SANITARY) SOLDERING, SILVER SOLDERING, THREADED JOINTS, WELDING, GROOVED VICTAULIC (BLACK) AND GROOVED COPPER VICTAULIC. NOTE: TEE DRILLING AND PRESS-FIT SYSTEMS ARE NOT ACCEPTABLE ON THIS PROJECT.
- 1.4 METAL TO PVC THREAD CONNECTIONS SHALL BE STAINLESS STEEL REINFORCED SCH 80, PVC FEMALE ADAPTORS.

END OF SECTION



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