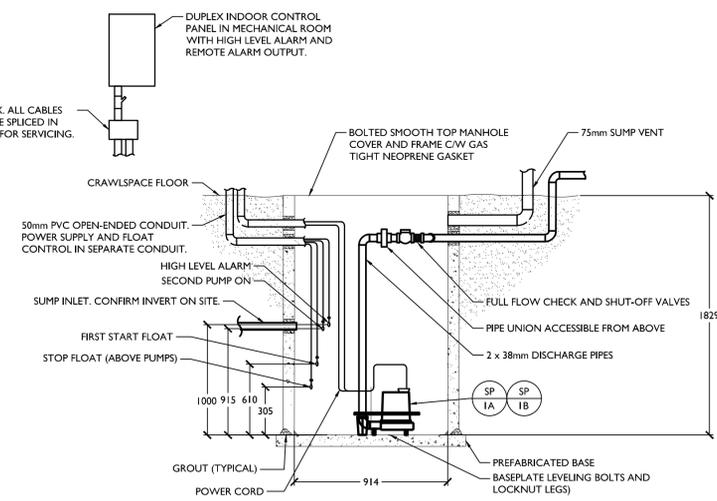


**1 CRAWLSPACE PLAN - PLUMBING**  
 M-102 SCALE: 1/8"=1'-0"



**2 DUPLEX SUMP PUMP DETAIL**  
 M-102 SCALE: N.T.S.

**DRAWING NOTES - CRAWL SPACE**

- 1 APPROXIMATE LOCATION OF SANITARY BUILDING DRAIN. CONNECT TO STORM SEWER BY OUTSIDE SERVICES. COORDINATE EXACT INVERT AND LOCATION WITH CIVIL DRAWINGS AND ON SITE.
- 2 APPROXIMATE LOCATION OF STORM BUILDING DRAIN. CONNECT TO STORM SEWER BY OUTSIDE SERVICES. COORDINATE EXACT INVERT AND LOCATION WITH CIVIL DRAWINGS AND ON SITE.
- 3 APPROXIMATE LOCATION OF INCOMING WATER SERVICE. COORDINATE EXACT INVERT AND LOCATION ON SITE AND WITH LANDLORD'S CIVIL DRAWINGS. SERVICE TO ENTER SPACE THROUGH FROST BOX.
- 4 EXTEND NATURAL GAS PIPING TO/FROM PROGRAM ROOM STORAGE ABOVE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION.
- 5 EXTEND NATURAL GAS PIPING FROM CRAWLSPACE INTO MECHANICAL ROOM ABOVE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION.
- 6 DUPLEX SUMP PUMPS WITHIN CONCRETE SUMP PITS. SUMP PITS TO BE SUPPLIED AND INSTALLED BY STRUCTURAL. EXTEND VENTS FROM SUMP PIT THROUGH MAIN FLOOR AND CONNECT TO VENTING SYSTEM AT HIGH LEVEL. MOUNT DUPLEX PUMP CONTROLLER IN MECHANICAL ROOM. CONNECT HIGH LEVEL ALARM TO BUILDING CONTROL SYSTEM.
- 7 RAIN WATER LEADER FROM OVERFLOW ROOF DRAIN(S) ABOVE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION. CONFIRM EXACT LOCATION ON SITE. PROVIDE CLEANOUT AT BASE C/W RETAINING STRAP ON CLEANOUT COVER EXCEPT FOR SOUTH WEST RAIN WATER LEADER DROP.
- 8 RAIN WATER LEADER FROM CONTROL FLOW ROOF DRAIN ABOVE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION. CONFIRM EXACT LOCATION ON SITE. PROVIDE CLEANOUT AT BASE C/W RETAINING STRAP ON CLEANOUT COVER.
- 9 EXTEND DCW/DHW UP WITHIN WALL TO FIXTURE CONNECTION C/W ISOLATION VALVE FOR EACH FIXTURE CONNECTION ON MAIN FLOOR. PROVIDE ISOLATION VALVE WITHIN CRAWLSPACE TO ISOLATE EACH FIXTURE GROUP BY ROOM.

**GENERAL NOTES - PLUMBING**

1. CONTRACTOR SHALL BE FAMILIAR WITH REFER TO, AND COMPLY WITH ALL LOCAL CODES. ALL MECHANICAL WORK SHALL COMPLY IN EVERY RESPECT WITH RELEVANT EDITIONS OF THE NATIONAL AND PROVINCIAL BUILDING CODES, NFPA, ASHRAE, AND ANY ADDITIONAL REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
2. DRAWINGS ARE DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. THEY ESTABLISH DESIGN INTENT AND ARE NOT INTENDED TO BE DETAILED INSTALLATION DOCUMENTS. MECHANICAL SUBCONTRACTOR SHALL ALLOW IN THEIR CONTRACT PRICE ALL COMPONENTS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL, CODE-COMPLIANT MECHANICAL INSTALLATION.
3. ANY OMISSIONS OR DISCREPANCIES IN THE DRAWINGS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACT ADMINISTRATOR IN ACCORDANCE WITH B3 ENQUIRIES.
4. INSPECT JOB SITE PRIOR TO COMMENCEMENT OF WORK AND MAKE APPROPRIATE PROVISIONS FOR ALL SITE CONDITIONS. EXACT SIZING/ROUTING OF MECHANICAL SYSTEMS SHALL BE SITE CONFIRMED AND COORDINATED WITH AVAILABLE ARCHITECTURAL, ELECTRICAL, CIVIL AND STRUCTURAL DRAWINGS AND TRADES. REROUTE/RESIZE PIPING AND RELOCATE EQUIPMENT AND COMPONENTS AS REQUIRED.
5. CAREFULLY EXAMINE THE DRAWINGS OF OTHER TRADES. COORDINATE THE ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH THE ELECTRICAL SUBCONTRACTOR. AN APPROVED FIRE STOP SYSTEM SHALL BE APPLIED AT ALL PENETRATIONS OF WALLS OR FLOORS DENOTED TO BE FIRE SEPARATIONS ON THE ARCHITECTURAL DRAWINGS. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS OF FIXTURES. COORDINATE THE EXACT SIZES, LOCATIONS AND INVERTS OF ALL SEWERS WITH CIVIL DRAWINGS AND ON SITE.
6. INSTALL EQUIPMENT AND RELATED ACCESSORIES OR COMPONENTS AS PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
7. ACCESS DOORS SHALL BE PROVIDED AS REQUIRED TO SERVICE VALVES AND MECHANICAL EQUIPMENT.
8. ALL PIPING AND EQUIPMENT SHALL BE INSULATED TO THE REQUIREMENTS OF THE LATEST EDITION OF ASHRAE 90.1 AND TO THE REQUIREMENTS OF THE MANITOBA ENERGY CODE FOR BUILDINGS. ALL VENT PIPES WITHIN 10' (3M) OF THERMAL ENVELOPE PENETRATION SHALL BE THERMALLY INSULATED.
9. ALL CUTTING AND/OR PATCHING OF ROOFS, WALLS OR FLOORS SHALL BE BY THE CONTRACTOR UNLESS SPECIFICALLY INDICATED OTHERWISE.
10. ALL DRAINAGE SYSTEMS AND TRAPS SHALL BE VENTED. ALL VENTING SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL AND PROVINCIAL PLUMBING CODES AND ANY ADDITIONAL REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION. SYSTEM SHALL BE INSTALLED SUCH THAT ABOVE-GRADE VENTS ARE LOCATED IN INCONSPICUOUS LOCATIONS WHERE POSSIBLE.
11. DWV PIPING AND ELECTRICAL/CONTROL WIRING INSTALLED WITHIN H.V.A.C. PLENUMS SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84 (UL 723).
12. PROVIDE DIELECTRIC COUPLINGS WHERE COMPONENTS OF DISSIMILAR METAL ARE JOINED.
13. ENSURE THAT ALL TRAPS SERVING FLOOR DRAINS ARE PRIMED OR FITTED WITH WADE TRAPS GUARDS.
14. GAS PIPING SHALL BE BLACK STEEL TO ASTM A-53 SCHEDULE 40, 150 LB. STANDARD BLACK MALLEABLE IRON SCREW FITTING FOR SIZES BELOW 2". ALL MATERIALS AND INSTALLATION SHALL CONFIRM TO ALL REQUIREMENTS OF THE LATEST EDITION OF CSA B149.1 NATURAL GAS AND PROPANE INSTALLATION CODE AND ALL LOCAL GAS NOTICES.
15. PROVIDE APPROVED FIRE STOP SYSTEM AT ALL FLOOR AND WALL PENETRATIONS. LABEL EACH PIPE PENETRATING FLOOR INDICATING FIXTURE/SERVICE.

PLUMBING LEGEND	
—	DOMESTIC COLD WATER
—	DOMESTIC HOT WATER
—	NATURAL GAS
—	SANITARY ABOVE GRADE
—	SANITARY BELOW GRADE
—	STORM ABOVE GRADE
—	STORM BELOW GRADE
—	SUMP PUMP DISCHARGE
+	PIPE CONNECTION
-	PIPE ELBOW DROP
o	PIPE ELBOW RISE
o	PIPE TEE RISE
o	ISOLATION VALVE
⊕	PUMP
⊕	CLEANOUT
⊕	BREAK
⊕	DRAWING NOTE
⊕	EQUIPMENT TAG

No.	DATE	REVISION / ISSUE
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