

GENERAL SPECIFICATIONS:

1. REVIEW WORK AREA AND READ DRAWINGS IN CONJUNCTION WITH ALL DISCIPLINES BEFORE COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND POTENTIAL ISSUES ON WORK-SITE. NO ADDITIONAL PAYMENTS WILL BE MADE RELATED TO CLAIMS FOR ITEMS THAT WOULD HAVE BEEN APPARENT IF THE WORK AREA AND ALL PLANS WERE REVIEWED PRIOR TO PRICING THE WORKS.

2. THE GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR NECESSARY PERMITS PERTAINING TO THE INSTALLATION OF THEIR WORK AND PROVIDE ANY CERTIFICATES AND SIGN-OFFS AS CIRCUMSTANCES REQUIRE.

3. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM TO THE OWNER SUPPLIED BY THE GENERAL CONTRACTOR AND SUB-CONTRACTORS.

4. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE, ONTARIO FIRE CODE, OCCUPATIONAL HEALTH AND SAFETY ACT, AND AUTHORITIES HAVING JURISDICTION. MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE CANADIAN STANDARDS ASSOCIATION, AND AUTHORITIES HAVING JURISDICTION. STANDARDS SET OUT IN DESIGN DRAWINGS SHALL NOT BE REDUCED BY CONFORMANCE TO APPLICABLE CODES AND STANDARDS. MAKE ALL MINOR MODIFICATIONS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION AT NO COST TO THE OWNER.

5. SUBMIT ELECTRONIC SHOP DRAWINGS FOR EQUIPMENT LISTED ON THE SCHEDULES FOR REVIEW PRIOR TO ORDERING. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES TO PROVIDE A COMPLETE WORKING SYSTEM CONSISTENT WITH THE INTENT OF THE DESIGN DRAWINGS. CONTRACTOR SHALL REVIEW DESIGN DRAWINGS, EQUIPMENT SCHEDULES AND SHOP DRAWINGS FOR ERRORS AND OMISSIONS AND ELEMENTS RELATING TO WORKS/ASSEMBLY ON-SITE.

6. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL PROVIDE MARKED UP RECORD DRAWINGS AND OPERATION AND MAINTENANCE MANUALS. THE FIRST PAGE OF THE OPERATION AND MAINTENANCE MANUAL SHALL BE A TYPE WRITTEN DOCUMENT EXPLAINING THE DETAILED MAINTENANCE REQUIREMENTS AND SCHEDULE FOR THE SYSTEM AND ANY OTHER INFORMATION THAT IS SPECIFIC TO THIS PROJECT. GENERIC OPERATIONS AND MAINTENANCE MANUALS WITH NO PROJECT SPECIFIC INFORMATION WILL NOT BE ACCEPTED.

7. PROVIDE TRAINING FOR THE OPERATOR OR OWNER'S REPRESENTATIVE. PROVIDE COMMISSIONING SERVICES AS REQUIRED.

8. LABEL ALL EQUIPMENT, PIPING, CONDUIT ETC.

9. THE CONTRACTOR IS RESPONSIBLE FOR STORAGE AND SECURITY OF MATERIALS AND EQUIPMENT ON THE JOB SITE.

10. THE OWNER'S PROPERTY MUST BE KEPT IN TIDY CONDITION. PROMPTLY REMOVE GARBAGE FROM THE SITE. CLEAN WORK AREA PRIOR TO ALL INSPECTIONS AND KEEP SITE IN A SAFE CONDITION.

11. DESIGN DRAWINGS ILLUSTRATE THE GENERAL LAYOUT OF THE WORK ONLY. COORDINATE THE INSTALLATION OF WORK WITH OTHER TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LAYOUT OF EQUIPMENT AND MATERIALS AND ENSURING THERE ARE NO INTERFERENCES WITH OTHER SYSTEMS.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THEIR WORK.

13. EQUIPMENT SHALL BE INSTALLED, STARTED, TESTED, AND ADJUSTED AS PER THE MANUFACTURERS' INSTRUCTIONS, AND AS NECESSARY TO ENSURE OPTIMUM PERFORMANCE. EQUIPMENT SHALL BE INSTALLED TO ALLOW FOR EASY ACCESS AND MAINTENANCE.

14. THE CONTRACTOR SHALL GUARANTEE WORK PERFORMED UNDER THIS CONTRACT FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. ENSURE THAT ALL EQUIPMENT IS WARRANTED BY THE MANUFACTURER FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

15. MATERIALS AND EQUIPMENT SHALL BE NEW, TOP QUALITY AND SPECIFICATION GRADE, EXCEPT WHERE NOTED OTHERWISE.

16. THIS SPECIFICATION SHALL BE CONSIDERED TO BE THE BASE BID SPECIFICATION AND CONTRACTORS MUST CARRY THE BASE BID MANUFACTURERS IN THEIR QUOTATION. ALTERNATE MANUFACTURERS OF EQUIPMENT CAN ONLY BE OFFERED AS PROPOSED ALTERNATES WITH THE CORRESPONDING PRICE REDUCTIONS PASSED ALONG TO OWNER.

17. THE CONTRACTOR SHALL NOT WELD TO OR MAKE A HOLE IN A STRUCTURAL MEMBER WITHOUT REVIEW FROM THE STRUCTURAL ENGINEER. ATTACHMENTS TO STRUCTURAL MEMBERS SHALL BE MADE WITH SUITABLE CLAMPS OR CLIPS.

18. THE GENERAL CONTRACTOR SHALL PROVIDE ALL OPENINGS AND REINFORCEMENT FRAMING AS REQUIRED.

19. ALL MATERIALS IN CEILING SPACE USED FOR RETURN AIR PLENUM MUST BE PLENUM RATED.

20. CONFIRM FIRE SEPARATIONS WITH ARCHITECTURAL DRAWINGS AND GENERAL CONTRACTOR. ALL PENETRATIONS THROUGH FIRE SEPARATIONS SHALL BE FITTED WITH EXPANSION SLEEVES AND ULC CERTIFIED FIRE STOPPING. ACCEPTABLE MATERIAL: HILTI OR APPROVED EQUIVALENT.

21. THE OWNER RESERVES THE RIGHT TO MAKE MINOR ALTERATIONS TO THE LOCATION OF EQUIPMENT ETC AT NO ADDITION TO THE CONTRACT AMOUNT.

22. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND INTENDED TO SERVE AS A GUIDE SHOWING QUANTITIES AND GENERAL ARRANGEMENTS AND ARE NOT NECESSARILY WORKING DRAWINGS FROM WHICH MEASUREMENTS CAN BE TAKEN, EXCEPT WHERE DIMENSION FIGURES ARE SPECIFICALLY SHOWN. INFORMATION INVOLVING ACCURATE MEASUREMENTS OF BUILDING SHALL BE TAKEN FROM ARCHITECTURAL BUILDING DRAWINGS OR FROM THE SITE.

23. MAINTAIN ADEQUATE LIABILITY INSURANCE TO PROTECT OWNER AND ALL CONTRACTORS.

24. TEMPORARY LIGHTING AND POWER FOR CONSTRUCTION BY GENERAL CONTRACTOR.

25. ALL EQUIPMENT, PIPING, CONDUIT, WIRING, JUNCTION BOXES, HARDWARE, ETC. INSTALLED IN OPEN CEILING SPACES SHALL BE INSTALLED IN AN INCONSPICUOUS AND AESTHETICALLY PLEASING MANNER UP TO THE SOLE DISCRETION OF THE OWNER AND ENGINEER. ALL EQUIPMENT, PIPING, CONDUIT, WIRING, JUNCTION BOXES, HARDWARE SHALL BE INSTALLED IN CHASES, ABOVE ADJACENT CEILINGS WHERE POSSIBLE.

26. PAINT ALL EXPOSED DUCTWORK, PIPING, CONDUIT, CABLE TRAYS, JUNCTION BOXES, HANGERS, HARDWARE ETC. REFER TO ARCHITECT OR INTERIOR DESIGNER'S DRAWINGS.

27. SUITABLE ACCESS DOORS MUST BE PROVIDED WHERE NECESSARY TO ACCESS VALVES, JUNCTION BOXES, CLEAN OUTS, FIRE DAMPERS, AND OTHER EQUIPMENT AND APPURTENANCES. ALL ITEMS REQUIRING ACCESS PANELS ARE NOT NECESSARILY SHOWN, CARRY A REASONABLE COST ALLOWANCE. COORDINATE EXACT LOCATION OF COMPONENTS REQUIRING ACCESS AND SELECT SIZES WHICH ARE SUITABLE FOR MAINTENANCE.

27.1. FOR GYPSUM WALLS AND CEILINGS IN OCCUPIED AREAS, PROVIDE CONCEALED DOORS WITH 5/8" RECESS TO RECEIVE DRYWALL, ACCEPTABLE MATERIAL: FOR STANDARD CEILINGS AND WALLS ACUDOR DW-5015 OR EQUIVALENT, FOR 90 MINUTE FIRE RATING ACUDOR FW(C)-5015 OR EQUIVALENT, FOR GREATER RATING, CONTACT ENGINEER AND ARCHITECT.

27.2. FOR GYPSUM, PLASTER, MASONRY OR TILE WALLS AND CEILINGS IN UTILITY AND STORAGE AREAS, PROVIDE UNIVERSAL FLUSH ACCESS DOOR, ACCEPTABLE MATERIAL: FOR STANDARD CEILINGS AND WALLS ACUDOR UF-5000 OR EQUIVALENT, FOR 90 MINUTE FIRE RATING ACUDOR FW-5050, FOR GREATER RATING, CONTACT ENGINEER AND ARCHITECT.

28. PAY FOR AND COORDINATE ALL UTILITY LOCATES AS REQUIRED.

29. PROVIDE WATER-PROOFING OF BUILDING OPENINGS RELATED TO THE WORK OF ALL TRADES.
- HVAC SPECIFICATIONS
1. DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE, ONTARIO FIRE CODE, AND THE ASHRAE AND SMACNA STANDARDS.

2. AIR DISTRIBUTION SYSTEMS MUST BE BALANCED TO WITHIN 5% OF THE SPECIFIED VALUES SHOWN ON THE DRAWINGS. BALANCE AIR HANDLING UNITS PROVIDING VENTILATION TO THE VENTILATION LEVELS SHOWN. THE BALANCING MUST BE PERFORMED BY AN INDEPENDENT, NEBB CERTIFIED FIRM, SPECIALIZING IN THIS WORK. THE MECHANICAL CONTRACTOR SHALL TURN OVER THE BALANCING REPORT PRIOR TO SUBSTANTIAL COMPLETION BEING AWARDED AND A GENERAL CONFORMANCE LETTER BEING ISSUED.

3. BALANCING DAMPERS MUST BE INSTALLED IN THE AIR DISTRIBUTION SYSTEMS AS SHOWN ON THE DRAWINGS AND AS NECESSARY TO ALLOW PROPER BALANCING.

4. DUCTS MUST BE SEALED TO PREVENT AIR LEAKAGE. SEAL TO SMACNA AND ASHRAE 90.1 STANDARDS. FOR UNPAINTED DUCTS INSTALLED IN VISIBLE SPACES, THE DUCT MASTIC IS TO BE APPLIED TO THE INTERIOR OF DUCT JOINTS AND PENETRATIONS AND SHALL NOT BE VISIBLE FROM THE EXTERIOR. MASTIC MAY BE APPLIED TO THE EXTERIOR OF DUCTS ONLY IN AREAS WHERE IT IS NOT VISIBLE TO OCCUPANTS. EXPOSED MASTIC SHALL BE PAINTABLE AND IS TO BE APPLIED NEATLY WITH THE EXCESS REMOVED. REFER TO ARCHITECT'S DRAWINGS TO CONFIRM WHETHER OR NOT DUCTS ARE TO BE PAINTED.

5. FLEXIBLE DUCT CONNECTIONS SHALL BE USED TO CONNECT FANS OR AIR HANDLERS TO RIGID DUCT TO REDUCE THE TRANSFER OF NOISE VIBRATION.

6. DUCT SIZES ARE SHOWN IN INCHES AND DO NOT INCLUDE FOR INTERNAL INSULATION.

7. EQUIPMENT SHALL BE ASHRAE 90.1 COMPLIANT.

8. LINE VOLTAGE STARTERS, CONTROLS AND EQUIPMENT SAFETY SWITCHES SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED ON DESIGN DRAWINGS. LOW VOLTAGE STARTERS AND CONTROLS SHALL BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR.

9. ELECTRICAL WIRING, CONDUIT, JUNCTION BOXES, BACK BOXES, MOUNTING HARDWARE ETC. ABOVE 24V TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. CONTROLS WIRING, CONDUIT, JUNCTION BOXES, BACK BOXES, MOUNTING HARDWARE ETC. 24V AND BELOW TO BE INSTALLED BY MECHANICAL CONTRACTOR (MECHANICAL CONTRACTOR MAY SUB-CONTRACT THIS WORK TO ELECTRICAL CONTRACTOR).

10. ALL EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER THAT MANUFACTURER'S RECOMMENDED CLEARANCES ARE MAINTAINED. THE CONTRACTOR SHALL LAY OUT THE WORK BASED ON THE MANUFACTURER'S RECOMMENDED CLEARANCES AND ADVISE ENGINEER IMMEDIATELY IF ANY SITE CONDITIONS NEGATIVELY AFFECT THE PROPER INSTALLATION OF ALL EQUIPMENT.

11. THIS CONTRACTOR SHALL REVIEW AND CONFIRM ALL EXISTING INDOOR METALLIC PIPING SYSTEMS ARE BONDED. PROVIDE BONDING FOR ALL NEW INDOOR METALLIC PIPING SYSTEMS AND EXISTING SYSTEMS WITHOUT PROPER BOND. BONDING SHALL BE INSTALLED TO THE REQUIREMENTS OF OESC 10-406. THE GENERAL CONTRACTOR SHALL DETERMINE IF BONDING IS BY MECHANICAL OR ELECTRICAL.
- PLUMBING SPECIFICATIONS:
1. DRAIN LINES ARE TO BE SUBJECT TO A WATER TEST AND WATER LINES ARE TO BE TESTED TO THE SATISFACTION OF THE LOCAL PLUMBING INSPECTOR.

2. PROVIDE TRAP SEAL PRIMER FOR ALL FLOOR DRAINS AND HUB DRAINS TO THE SATISFACTION OF THE AHJ.

3. ALL CLEANOUTS ARE NOT SHOWN. CLEANOUTS ARE TO BE PROVIDED IN ACCORDANCE WITH THE ONTARIO PLUMBING CODE AND REQUIREMENTS INCLUDING AT THE BOTTOM OF STACKS AND ALONG HORIZONTAL RUNS. ENSURE THAT CLEANOUTS ARE INCLUDED AT INTERVALS NECESSARY.

4. WATER HAMMER ARRESTORS ARE TO BE INSTALLED WHERE NECESSARY TO PREVENT WATER HAMMER IN WATER LINES.

5. CONNECT WATER LINES AT POINTS OF DISTRIBUTION TO NEARBY EQUIPMENT. SIZE WATER LINES TO EACH PIECE OF EQUIPMENT AS SHOWN BY THE PLUMBING EQUIPMENT SCHEDULE.
6. GRADE HORIZONTAL WATER LINES TO ENSURE PROPER DRAINAGE. INSTALL DRAIN VALVES IN ACCESSIBLE LOCATIONS AT LOW POINTS.

7. GRADE HORIZONTAL SANITARY PIPING AS SHOWN ON DESIGN DRAWINGS AND PER OBC. GRADE HORIZONTAL VENT PIPING TO DRAIN BACK TO SANITARY PIPES BY GRAVITY.

8. DOMESTIC COLD WATER LINES SHALL BE INSULATED WITH 1" THICK PREFORMED FIBERGLASS INSULATION AND DOMESTIC HOT WATER LINES SHALL BE INSULATED WITH 1.5" THICK PREFORMED FIBERGLASS INSULATION WITH AN ASJ VAPOUR BARRIER. JOINTS AND SEAMS MUST BE SEALED, WHEREVER EXPOSED TO VIEW THIS INSULATION SHALL HAVE A BRUSH COAT OF FIRE RETARDANT MASTIC WITH A LAYER OF 6 OUNCE CANVAS WRAP OR PVC JACKET. JACKET TO BE PAINTED AS PER ARCHITECTURAL DRAWINGS.

9. HANGERS FOR HORIZONTAL PIPING SHALL BE BLACK OR COPPER, AS APPROPRIATE, CLEVIS HANGERS MANUFACTURED BY ANVIL OR MYATT.

10. HANGERS FOR VERTICAL PIPING SHALL BE BLACK OR COPPER, AS APPROPRIATE, RISER CLAMPS MANUFACTURED BY ANVIL OR MYATT.

11. BALL VALVES SHALL BE FULL PORT AND SOLID BALL.

12. SET FIXTURES LEVEL, SQUARE, AND CENTERED WITH RELATION TO FLOORS, WALLS, AND PARTITIONS.

13. SET FIXTURES AT STANDARD HEIGHT FROM FLOOR TO RIM UNLESS DIRECTED OTHERWISE.

14. INSTALL SHUT OFF VALVES ON EACH WATER SUPPLY TO EQUIPMENT.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION AND BACK FILL REQUIRED FOR THE INSTALLATION OF UNDERGROUND WORK. BACK FILL MATERIAL MUST BE CLEAN AND PROPERLY COMPACTED.

16. PIPES AND EQUIPMENT MUST BE INSTALLED SO AS TO MINIMIZE THE TRANSFER OF VIBRATION TO THE BUILDING AND ALSO TO ALLOW FOR EXPANSION AND CONTRACTION AS NECESSARY.

17. EQUIPMENT SHALL BE ASHRAE 90.1 COMPLIANT.

18. THE MECHANICAL CONTRACTOR SHALL INSTALL PIPE WITH SLEEVES IN ORDER TO PREVENT CONTACT WITH CONCRETE, MASONRY OR SIMILAR MATERIALS.

19. ROOF CONES AND FLASHINGS ARE TO BE SUPPLIED BY THE MECHANICAL CONTRACTOR, INSTALLED BY THE GENERAL CONTRACTOR/ROOFER.

20. THE MECHANICAL CONTRACTOR SHALL PROVIDE RESTRAINT SYSTEMS FOR MECHANICAL EQUIPMENT AND PIPING AS REQUIRED BY APPLICABLE LOCAL BUILDING CODES.

21. ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE HARD DRAWN TYPE 'L' COPPER PIPE WITH SOLDER JOINT PRESSURE FITTINGS AND LEAD FREE SOLDER;

22. ALL SANITARY, STORM AND VENT PIPING ABOVE GRADE SHALL BE TO CSA B181.2. ACCEPTABLE MATERIAL:

22.1. ANY SIZE: IPEX SYSTEM 15 PVC OR APPROVED EQUIVALENT. IPEX SYSTEM XFR OR APPROVED EQUIVALENT SHALL BE USED IN PLENUMS AS REQUIRED.

23. ALL SANITARY, STORM AND VENT PIPING BELOW GRADE SHALL BE TO CSA B181.2. ACCEPTABLE MATERIAL:

23.1. IPEX SCH 40 PVC OR SDR35 OR APPROVED EQUIVALENT.

24. COORDINATE REQUIREMENTS FOR CHASES WITH GENERAL CONTRACTOR.

20. PROVIDE TRAPS/DRAINS AND VENTS FROM INDIVIDUAL FIXTURES SIZED PER OBC. PROVIDE TRAPS/DRAINS AND VENTS FOR MULTIPLE FIXTURES PER DESIGN DRAWINGS. DO NOT REDUCE THE STANDARDS SET BY THE OBC IN ANY CASE.

21. THIS CONTRACTOR SHALL REVIEW AND CONFIRM ALL EXISTING INDOOR METALLIC PIPING SYSTEMS ARE BONDED. PROVIDE BONDING FOR ALL NEW INDOOR METALLIC PIPING SYSTEMS AND EXISTING SYSTEMS WITHOUT PROPER BOND. BONDING SHALL BE INSTALLED TO THE REQUIREMENTS OF OESC 10-406. GC SHALL DETERMINE IF BONDING IS BY MECHANICAL OR ELECTRICAL.

22. NO EXPOSED PIPING SHALL BE PERMITTED ON WALLS/PARTITIONS UNLESS OTHERWISE NOTED.

23. BACKFLOW PREVENTER AND METER ASSEMBLIES SHALL BE INSTALLED ACCORDING TO LOCAL CODES. THE FOLLOWING TYPICAL CLEARANCES HAVE BEEN PROVIDED, HOWEVER, LOCAL CODES TAKE PRECEDENT.

23.1. BACKFLOW PREVENTER CLEARANCES:

23.1.1. CENTRELINE HEIGHT ABOVE FLOOR – MIN 750mm, MAX 1500mm

23.1.2. BEHIND – MIN 20mm

23.1.3. IN FRONT – 750mm

23.1.4. ABOVE – 300mm

23.2. TYPICAL WATER METER CLEARANCES: CONFIRM WITH LOCAL AUTHORITY HAVING JURISDICTION BEFORE INSTALLATION.
- WINTERIZATION
1. THE FOLLOWING METHOD OF WINTERIZATION IS REQUIRED TO BE USED FOR ADEQUATE PROTECTION AS WILL BE DETERMINED BY COMBINED CLIMATIC AND PROCESS CONDITION FOR SEASONAL OPERATION AND HEAT CONSERVATION:

1.1. VENT / DRAIN ON LINES AND EQUIPMENT

1.1.1. WINTERIZING BY DRAINING REQUIRE PARTICULAR ATTENTION WHICH MUST BE GIVEN TO VENTS AND DRAINS ON UTILITY LINES AND EQUIPMENT FOR ELIMINATING LOW SPOTS OR DEAD ENDS IN WHICH WATER AND OTHER LIQUIDS CAN COLLECT AND FREEZE. DURING SHUT-DOWN AND NON-OPERATING PERIOD THESE LINES MAY COMPLETELY BE DRAINED.

2. PIPING FOR WATER SERVICES:

2.1. WHEN DAILY MEAN TEMPERATURE IS BELOW 0°C, UNDERGROUND WATER SYSTEMS (INCLUDING SEWERS) SHALL BE INSTALLED AT A MINIMUM OF 300 MM BELOW THE FROST LINE. ABOVE GROUND PORTION OF WATER SYSTEMS SHALL BE WINTERIZED BY SUCH MEANS AS HEAT TRACING OR DRAINING COMPONENT, OF THE SYSTEM AFTER EACH USE.

2.2. WHERE BRANCH SINGLE SERVICE LINES RISES FROM BELOW GROUND, BLOCK VALVES SHALL BE PROVIDED IN THE RISERS JUST ABOVE THE GROUND. THE FOLLOWING ARRANGEMENT WILL PROVIDE PROTECTION AGAINST FREEZING:

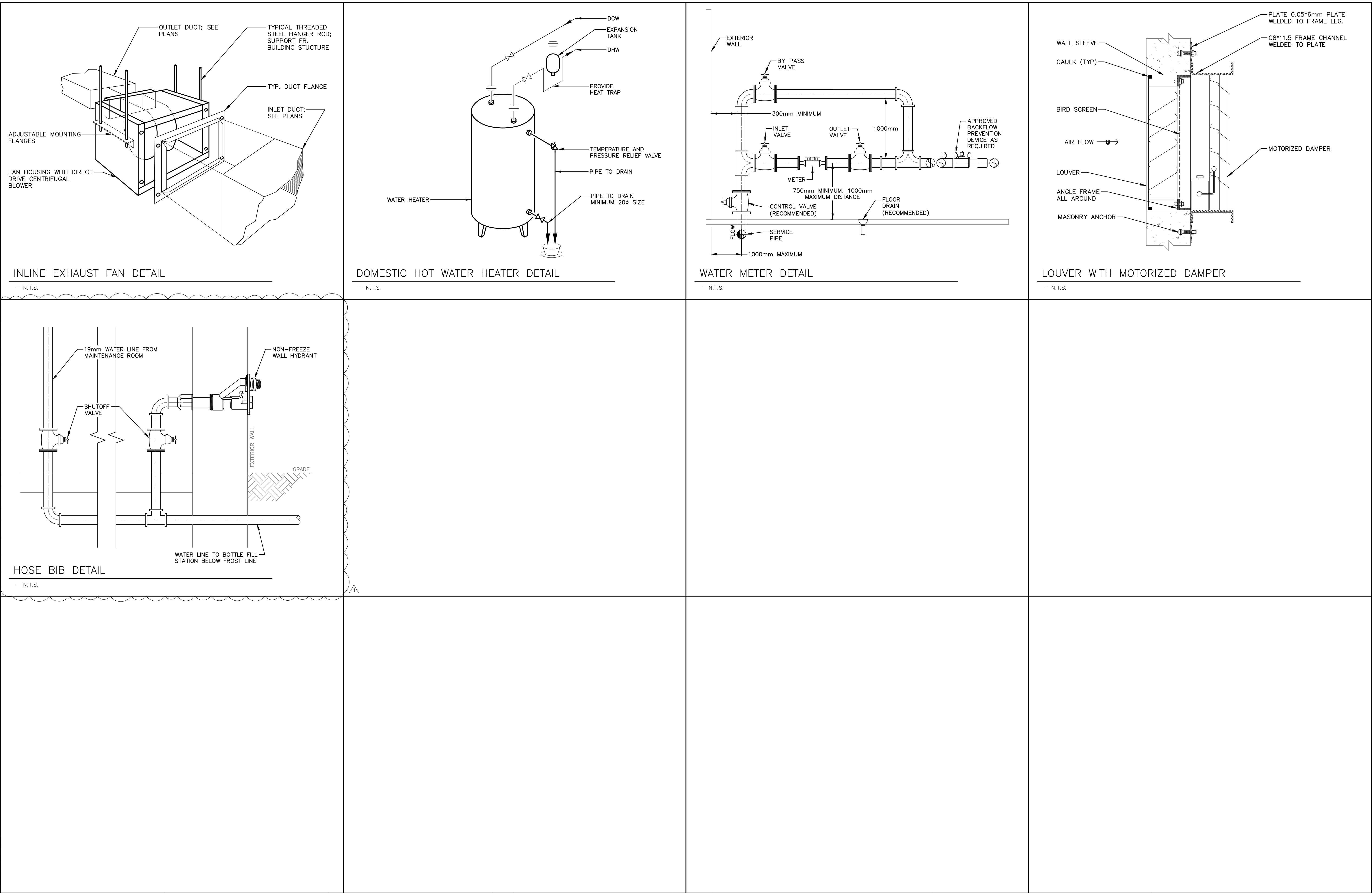
2.2.1. A DRAIN SHALL BE PROVIDED IN THE LINE AT A MINIMUM DISTANCE ABOVE THE BLOCK VALVE, EXCEPT THAT FOR 150 MM AND LARGER SIZE VALVES A DRAIN SHALL BE PROVIDED IN THE VALVE BODY ABOVE THE SEAT.

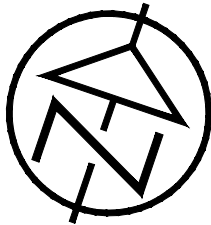


2.2.2. 25 MM OF INSULATION SHALL BE PROVIDED AROUND THE PIPING, FROM THE GROUND UP TO AND INCLUDING THE BLOCK VALVES IN THE WATER RISERS.
- SEQUENCE OF OPERATIONS:
1. EXHAUST FAN EF-1 SHALL OPERATE BASED ON AN ADJUSTABLE TIMER. ON: 8 AM – 8 PM, OFF: 8 PM – 8 AM.

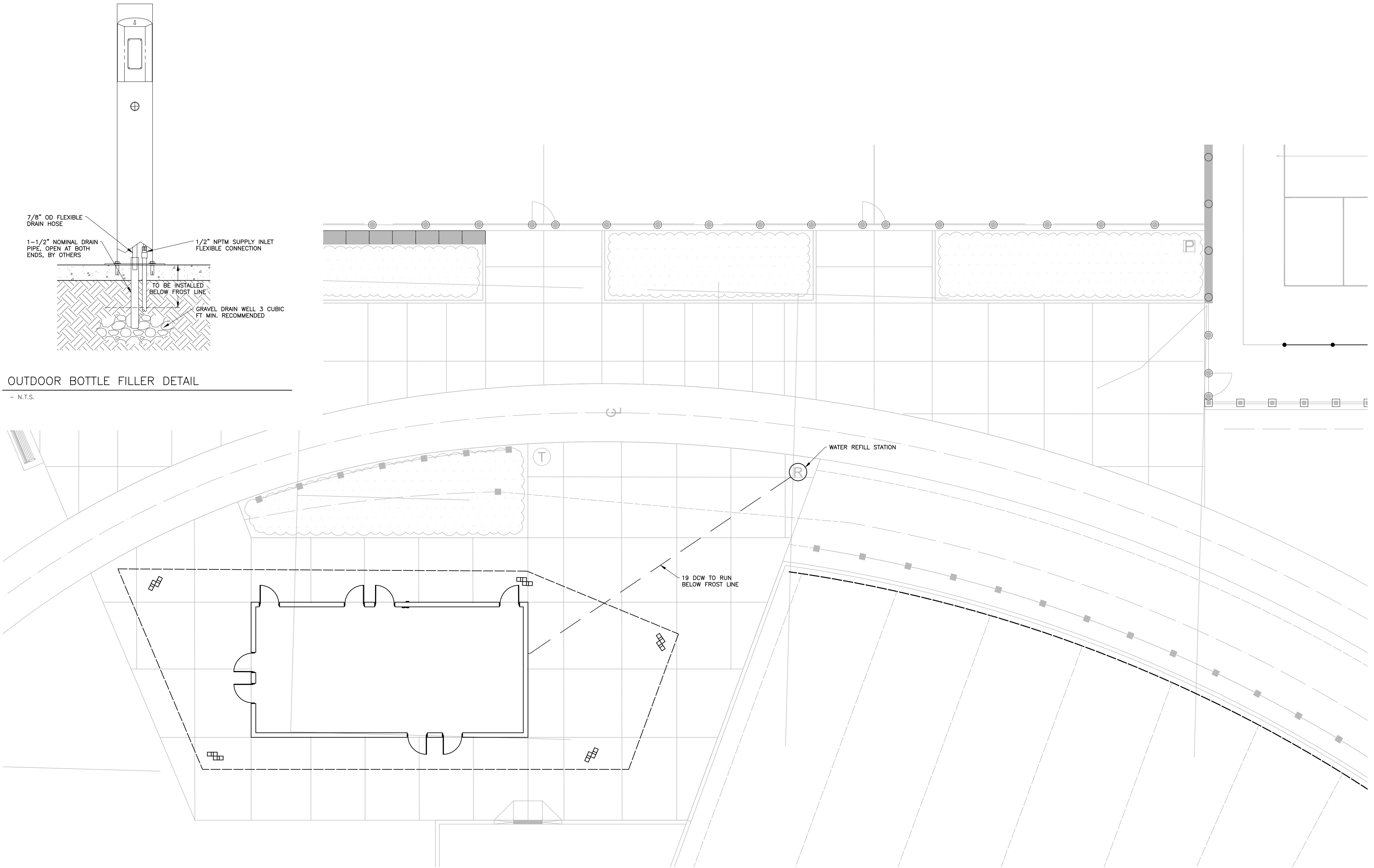
2. EF-1 SHALL BE INTERLOCKED WITH MOTORIZED DAMPER MD-1 WHEN EF-1 IS SEQUENCED ON, MD-1 SHALL OPEN AND THE RESPECTIVE END SWITCH WILL START AND OPERATE EF-1 FOR THE DURATION OF THE TIMED SCHEDULE. WITH EF-1 OFF, DAMPER MD-1 ASSUME A NORMALLY CLOSED POSITION.

3. PROVIDE HAND-OFF-AUTO CONTROL PANEL.

4. SEE ELECTRICAL DRAWINGS FOR CONTROL WIRING DETAILS.
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| <div>DISCLAIMER AND COPYRIGHT</div> <div>CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.</div> <div>TATHAM ENGINEERING LIMITED CLAIMS COPYRIGHT TO THIS DRAWING WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENGINEER WITHOUT THE EXPRESS CONSENT OF TATHAM ENGINEERING LIMITED.</div> |  | NOTES | NOTES | No. | REVISION DESCRIPTION | DATE | ENGINEER STAMP | <div>WILSON-SHEFFIELD PARK</div> <div>TOWN OF COLLINGWOOD</div> |  | DESIGN: K.J.L. | FILE: 123308 | DWG: M1.1 | | | | | | | | |
| | | | | 1 | ISSUED FOR REVIEW | OCT/24 | | | | | | | | | | | | | | |
| | | | | 2 | ISSUED FOR SPA | APR/25 | | | | | | | | | | | | | | |
| | | | | 3 | ISSUED FOR TENDER | APR/25 | | | | | | | | | | | | | | |
| | | | | 4 | ISSUED FOR ADDENDUM #1 △ | MAY/25 | | | | | | | | | | | | | | |
| MECHANICAL SPECIFICATIONS | | | | | | | | | | | | | | | | | | | | |
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DISCLAIMER AND COPYRIGHT CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED. TATHAM ENGINEERING LIMITED CLAIMS COPYRIGHT TO THIS DRAWING WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENGINEER WITHOUT THE EXPRESS CONSENT OF TATHAM ENGINEERING LIMITED.		NOTES NOTES	No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP	WILSON-SHEFFIELD PARK TOWN OF COLLINGWOOD			
			1	ISSUED FOR REVIEW	OCT/24					
			2	ISSUED FOR SPA	APR/25					
			3	ISSUED FOR TENDER	APR/25					
			4	ISSUED FOR ADDENDUM #1 	MAY/25		MECHANICAL DETAILS	DESIGN: K.J.L.	FILE: 123308	DWG: M1.2
								DRAWN: K.J.L.	DATE: OCT 2024	
								CHECK: N.W.	SCALE: AS NOTED	



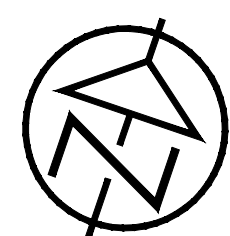
OUTDOOR BOTTLE FILLER DETAIL

- N.T.S.

DISCLAIMER AND COPYRIGHT

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.

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NOTES

NOTES

No.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REVIEW	OCT/24
2	ISSUED FOR SPA	APR/25
3	ISSUED FOR TENDER	APR/25
4	ISSUED FOR ADDENDUM #1	MAY/25

ENGINEER STAMP

WILSON-SHEFFIELD PARK
TOWN OF COLLINGWOOD

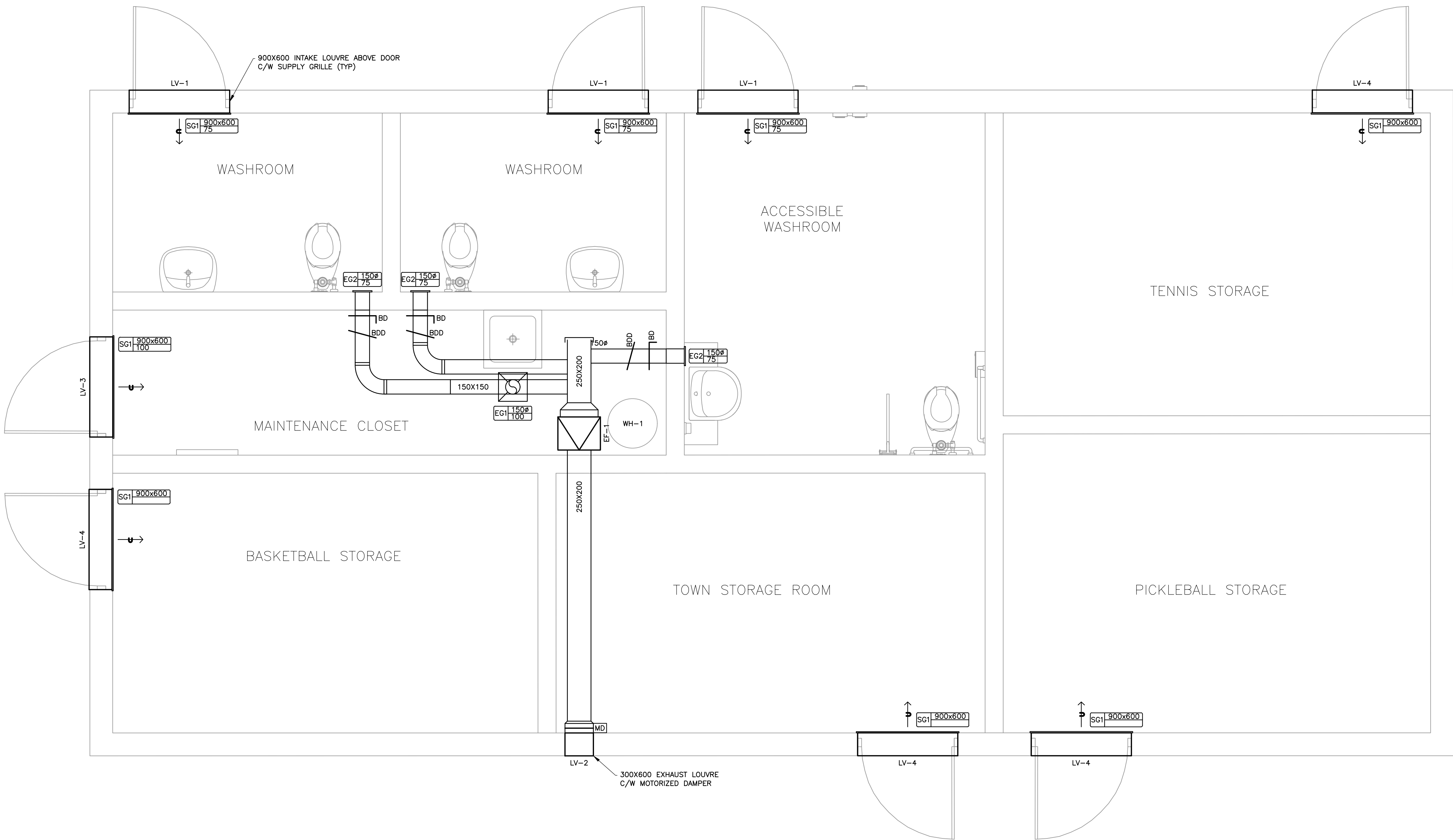
MECHANICAL DETAILS



DESIGN: K.J.L.	FILE: 123308	DWG: M1.3
DRAWN: K.J.L.	DATE: OCT 2024	
CHECK: N.W.	SCALE: AS NOTED	

GENERAL NOTES

1. BACKDRAFT DAMPERS SHALL BE GREENHECK BD SERIES OR EQUIVALENT.

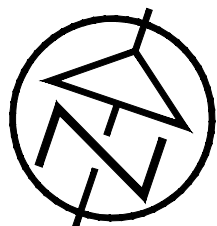


1 HVAC LAYOUT
M1.4 SCALE: 1:25

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WILSON-SHEFFIELD PARK
TOWN OF COLLINGWOOD



HVAC LAYOUT

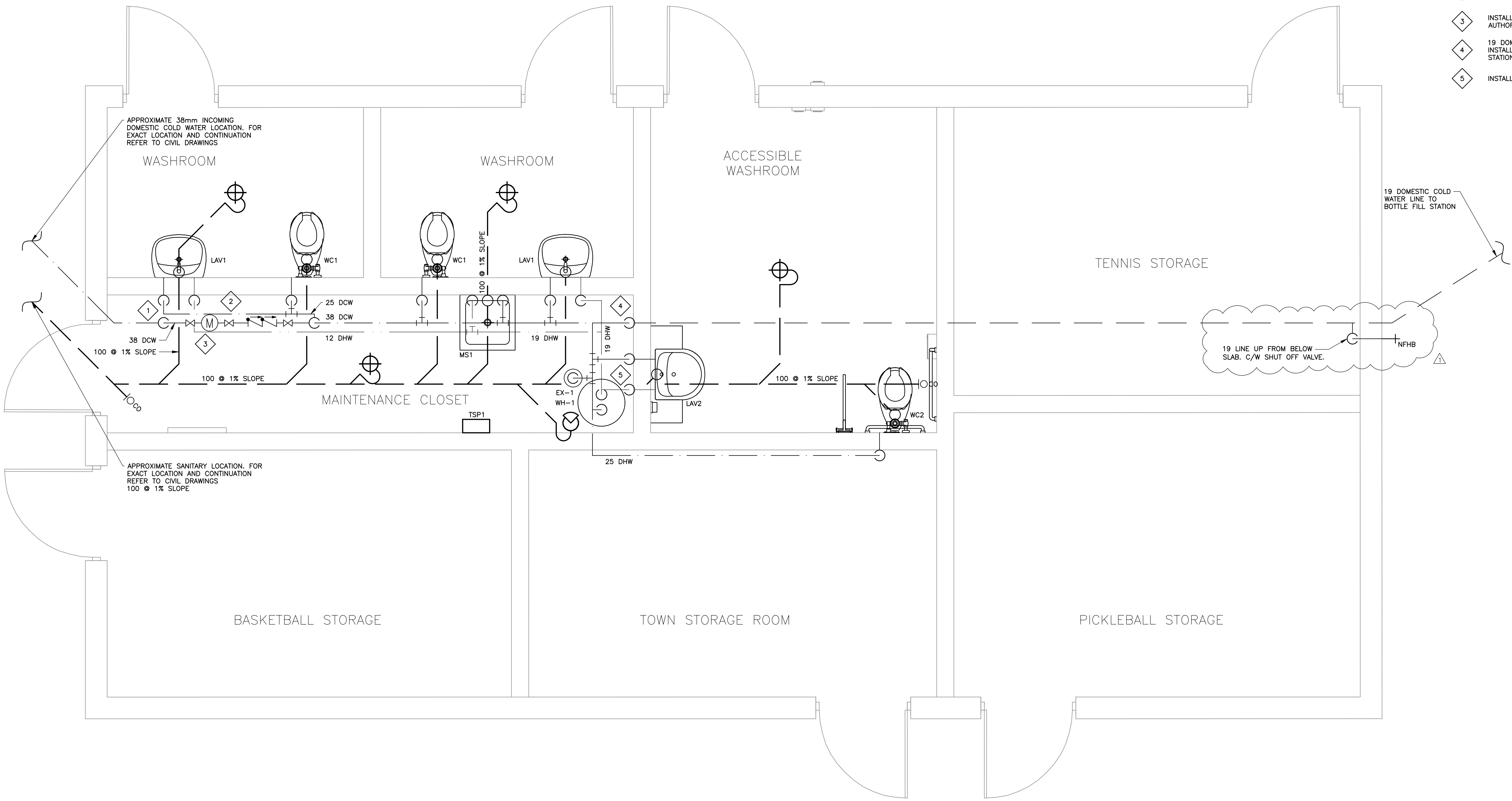
DESIGN: K.J.L.	FILE: 123308	DWG:
DRAWN: K.J.L.	DATE: OCT 2024	M1.4
CHECK: N.W.	SCALE: AS NOTED	

GENERAL NOTES

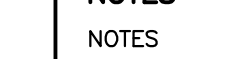


1. PROVIDE SHUT OFF VALVES ON ALL DOMESTIC WATER PIPING SERVING FIXTURES.
2. SANITARY VENT PIPING NOT SHOWN FOR SANITARY ROUTING CLARITY. PROVIDE VENTING PER OBC AND TERMINATE UP THROUGH ROOF.
3. ALL SANITARY PIPING TO BE TRAPPED AND VENTED PER OBC.

DRAWING NOTES

- 1 DOMESTIC WATER LINE UP THROUGH SLAB FROM INCOMING SITE SERVICE
- 2 DOMESTIC WATER LINE ROUTING ABOVE METER AND BACKFLOW PREVENTER TO FIXTURES.
- 3 INSTALL WATER METER PROVIDED BY LOCAL WATER AUTHORITY.
- 4 19 DOMESTIC WATER LINE DOWN TO BELOW GRADE. TO BE INSTALLED BELOW FROST LINE AND ROUTED TO BOTTLE FILL STATION ON SITE.
- 5 INSTALL THERMOSTATIC MIXING VALVE



1 PLUMBING LAYOUT
SCALE: 1:25

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			1	ISSUED FOR REVIEW	OCT/24							
			2	ISSUED FOR SPA	APR/25		<div>PLUMBING LAYOUT</div>			DESIGN: K.J.L.	FILE: 123308	DWG: <div>M1.5</div>
			3	ISSUED FOR TENDER	APR/25							
			4	ISSUED FOR ADDENDUM #1 	MAY/25							
							CHECK: N.W.	SCALE: AS NOTED				