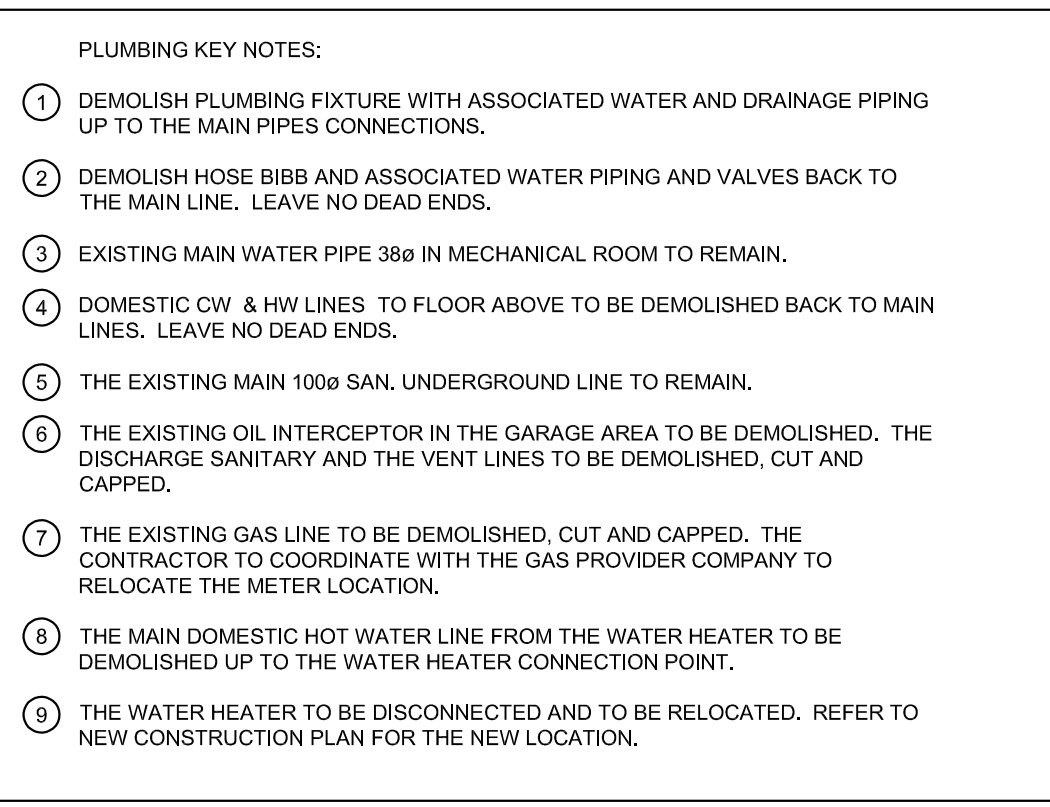






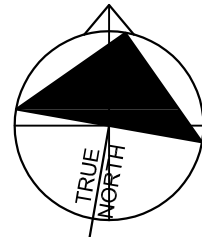
0. MECHANICAL SPECIFICATIONS:		
1. GENERAL:		
1.1. BASE BUILDING STANDARDS AND SPECIFICATIONS SHALL BE THE BASIS FOR THIS CONSTRUCTION.	1.26. CHANGE NOTICE QUOTATIONS FOR EXTRA OR DELETED WORK SHALL BE SUBMITTED COMPLETE WITH ITEMIZED COST BREAKDOWN OF LABOUR AND MATERIALS. FAILURE TO PROVIDE WILL RESULT IN REJECTION. ALL MECHANICAL CHANGE NOTICES SHALL BE PRICED IN ACCORDANCE WITH "MECHANICAL CONTRACTORS ASSOCIATION" AND "ALL PRICER". LESS 25% DISCOUNT FOR LABOUR COST. COST OF SITE SUPERINTENDENT SHALL NOT EXCEED 10% OF TOTAL HOURS OF LABOUR ESTIMATED FOR CHANGE OR REVISION. ALLOWABLE MAXIMUM PERCENTAGES FOR OVERHEAD AND PROFIT SHALL BE 7% AND 5% RESPECTIVELY.	4. INSULATION:
1.2. MEET THE REQUIREMENTS OF THE OWNERS/LANDLORDS' TENANT DESIGN CRITERIA AND CONSTRUCTION MANUAL AND TENANT LEASE AGREEMENT.	1.27. TEMPORARY 1" THICK FILTERS SHALL BE PROVIDED AT ALL BASE BUILDING RETURN AIR OPENINGS WHICH REMAIN OPERATIONAL DURING CONSTRUCTION, AND SHALL BE REPLACED WEEKLY. REMOVE UPON CONSTRUCTION COMPLETION. UPON COMPLETION OF WORK, INFORM BUILDING MAINTENANCE THAT ALL BASE BUILDING HVAC EQUIPMENT ON FLOOR SHOULD HAVE FILTERS REPLACED.	4.1. UNLESS OTHERWISE NOTED, ALL INSULATION MATERIALS MUST MEET REQUIREMENTS OF NFPA 98A AND MUST HAVE A FIRE HAZARD RATING OF NOT MORE THAN 25 FOR FLAME SPREAD AND 50 FOR SMOKE DEVELOPED WHEN TESTED IN ACCORDANCE WITH CANULC S102.
1.3. ALL WORK AND EQUIPMENT PROVIDED SHALL BE IN COMPLIANCE WITH GOVERNING AUTHORITIES AND APPLICABLE CODES, WHERE GOVERNING FEDERAL, PROVINCIAL, AND MUNICIPAL CODES AND REGULATIONS ARE AT VARIANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL APPLY.	1.28. REMOVE ALL ITEMS PLANNED FOR DEMOLITION INCLUDING ANCILLARY SUPPORTS AND COMPONENTS. REMOVE MECHANICAL COMPONENTS AND ABANDONED COMPONENTS BACK TO SOURCE, CAP ALL DUCTS AND DRAINAGE PIPING, AND CAP AND VALVE ALL PIPING AT CORE RISER.	4.2. UNLESS OTHERWISE SPECIFIED, THERMAL PERFORMANCE OF INSULATION IS TO MEET OR EXCEED VALUES GIVEN IN TABLES ENTITLED MINIMUM PIPING INSULATION THICKNESS HEATING AND HOT WATER SYSTEMS AND MINIMUM PIPING INSULATION THICKNESS COOLING SYSTEMS, AS STATED IN ANSI/ASHRAE/IES STANDARD 90.1.
1.4. COMPLY WITH THE CONSTRUCTION SCHEDULE.	1.29. PROVIDE INDEPENDENT SUPPORT FOR ALL COMPONENTS OF THE INSTALLATION.	4.3. FIBERGLASS PIPE INSULATION FOR DOMESTIC HOT WATER DOMESTIC COLD WATER AND TEMPERED DOMESTIC WATER PIPING TO 2" (50mm) DIAMETER:
1.5. CONTACT 48 HOURS BEFORE REINSTALLATION OF CEILINGS TO PERFORM A FINAL REVIEW.	1.30. PROVIDE START-UP SERVICES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION FOR THE NEW/RELOCATED EQUIPMENT SPECIFIED.	4.3.1. JOHNS-MANVILLE "MICRO LOCK", RIGID, MOULDED, SECTIONAL FIBERGLASS PIPE INSULATION WITH A FACTORY APPLIED "AP 1 PLUS" VAPOUR BARRIER JACKET WITH PRESSURE SENSITIVE, LONGITUDINAL LAP SEALING SYSTEM. SECURE THE LAP OF THE INSULATION JACKET IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. FIRMLY BUTT TOGETHER ADJOINING SECTIONS OF THE INSULATION AND COVER THE BUTT JOINTS WITH STRIPS OF VAPOUR BARRIER JACKET MATERIAL. SECURED IN PLACE WITH ADHESIVE. INSULATE ELBOWS, VALVES AND SIMILAR FITTINGS WITH FACTORY FORMED FIBERGLASS INSULATION OF A THICKNESS AND INSULATION VALUE EQUAL TO THAT OF SECTION INSULATION. LAMINATE IN PLACE WITH ADHESIVE AND SECURE WITH TWINE. APPLY A SKIM COAT OF INSULATING CEMENT. WRAP THE FITTING WITH CLOTH TAPE OVERLAPPED 50% AND SET IN ADHESIVE, AND APPLY A COAT OF FINISHING CEMENT WITH A SMOOTH FINISH OR, INSTEAD OF THE CEMENT AND CLOTH TAPE, APPLY SURE FIT SYSTEM "SMOKE LESS" 5050 RATED PVC FITTING COVERS.
1.6. DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATICAL ONLY AND DO NOT SHOW ALL THE MECHANICAL, ELECTRICAL, STRUCTURAL AND CONSTRUCTION DETAILS. CAREFULLY EXAMINE DOCUMENTS AND VISIT SITE TO DETERMINE AND REVIEW EXISTING SITE CONDITIONS THAT WILL OR MAY AFFECT WORK, AND INCLUDE FOR SUCH CONDITIONS IN BID PRICE. ALL POINTS OF DISCONNECTION AND RECONNECTION SHOWN ARE FOR GENERAL INTENT ONLY. PROVIDE OFFSETS, FITTINGS, TRANSFORMATIONS, AND SIMILAR PRODUCTS REQUIRED AS A RESULT OF OBSTRUCTIONS AND OTHER ARCHITECTURAL AND STRUCTURAL DETAILS BUT NOT SHOWN ON DRAWINGS. VERIFY ALL SPACES IN WHICH EQUIPMENT, DUCTWORK, AND PIPING ARE TO BE LOCATED. FAILURE TO DO SO WILL NOT BE GROUNDS FOR ADDITIONAL COSTS. UPON FINDING DISCREPANCIES IN, OR OMISSIONS FROM DOCUMENTS, OR HAVING DOUBT AS TO THEIR MEANING OR INTENT, IMMEDIATELY NOTIFY CONSULTANT, IN WRITING, BEFORE SUBMITTING BID.	1.31. PROVIDE ELECTRICAL DEVICES WITH WIRING, STARTERS, DISCONNECT, ETC. VERIFY AND COORDINATE VOLTAGE AND PHASE WITH THE ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT. ALL STARTERS, CONTACTORS, RELAYS, ETC. SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL POWER WIRING (LINE VOLTAGE) SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL CONTROL WIRING (LOW VOLTAGE) SHALL BE BY THE MECHANICAL CONTRACTOR.	4.3.2. AT EACH PIPE HANGER LOCATION (PIPE SUPPORTED WITHOUT ROLLER HANGER), PROVIDE A 6" (150mm) LENGTH OF PITTSBURGH CORNING "TOMOLAP" MOULDED, SECTIONAL, CELLULAR GLASS PIPE INSULATION INSTEAD SPECIFIED FIBERGLASS INSULATION, WHERE INSULATED PIPE IS "COLD PIPE". WRAP INSULATION WITH DOUBLE THICKNESS OF ADJACENT FIBERGLASS PIPE INSULATIONS VAPOUR BARRIER JACKET OVERLAPPED A MINIMUM OF 1" (25mm) ON ADJACENT INSULATION AND SECURED IN PLACE WITH ADHESIVE. PROVIDE GRINNELL CORPORATION FIG. NO. 18T, OR EQUAL, GALVANIZED CARBON STEEL INSULATION PROTECTION SHEILD TO MEET SP 60.
1.7. BEFORE ANY EQUIPMENT IS ROUGHED IN, DETERMINE ITS INTENDED LOCATION FROM THE DRAWINGS AND COORDINATE ITS FINAL LOCATION WITH NEW AND EXISTING SERVICES AND STRUCTURAL CONDITIONS. IF IT IS NOT SHOWN ON THE DRAWINGS, VERIFY FINAL LOCATION ON SITE. LOCATIONS OF NEW AND EXISTING SERVICES ARE APPROXIMATE ONLY. LOCATIONS OF EQUIPMENT AND MATERIALS SHOWN MAY BE ALTERED, WHEN REVIEWED BY CONSULTANT, TO MEET REQUIREMENTS OF EQUIPMENT AND/OR MATERIALS, OTHER EQUIPMENT OR SYSTEMS BEING INSTALLED, AND OF BUILDING, ALL AT NO ADDITIONAL COST TO CONTRACT. ENSURE THAT ALL EQUIPMENT (NEW AND EXISTING) IS FULLY ACCESSIBLE FOR MAINTENANCE - FAILURE TO DO SO WILL NOT BE GROUNDS FOR ADDITIONAL COSTS. CONCEAL ALL SERVICES IN WALLS, CEILING SPACE, AND FLOOR SPACE UNLESS OTHERWISE STATED.	1.32. FOR THE COMPLIANCE/SUBSTANTIAL COMPLETION LETTER, SUBMIT THE FOLLOWING APPLICABLE ELECTRONIC DOCUMENTS (PDF/S) AS ONE COMPLETE PACKAGE: AS-BUILT DRAWINGS, AIR AND WATER BALANCING REPORT, NFPA-13 INSTALLATION CONFORMANCE LETTER, WARRANTY, FIRE STOPPING COMPLETENESS LETTER, FIRE DAMPER TEST REPORT, GAS INSPECTOR'S CERTIFICATE, BACKFLOW DEVICE TEST REPORT, AND PERMIT NUMBER.	4.3.3. FILL PIPE SADDLE VOID WITH FIBERGLASS INSULATION.
1.8. OBTAIN PERMITS FROM THE MUNICIPALITY AND UTILITIES TO COMPLETE YOUR WORK. UPON COMPLETION OF YOUR WORK, SUPPLY AND TURN OVER TO THE MECHANICAL CONSULTANT INSPECTION CERTIFICATES FROM GOVERNING AUTHORITIES TO CERTIFY THAT THE INSTALLED WORK MEETS THE REQUIREMENTS OF THE RULES AND REGULATIONS OF GOVERNING AUTHORITIES. PAY FOR (INCLUDING ALL SALES TAXES) ALL PERMITS, FORMS, AND INSPECTIONS REQUIRED.	1.33. FOR EXCAVATION AND BACKFILLING WORK, COORDINATE DEPTH AND ROUTING OF REQUIRED WORK AND REQUIREMENTS FOR BEDDING AND BACKFILL WITH EACH TRADE. ALLOW FOR DEWATERING IF REQUIRED. ENSURE THAT BEDDING IS GRADED TO PROVIDE PROPER BASE FOR SUPPORTS. LOCATIONS IN DRAWINGS ARE DIAGRAMMATIC. INVERTS AND FINAL INSTALLATION LOCATION SHALL BE SITE VERIFIED AND SURVEYED. BEFORE BACKFILLING, ARRANGE FOR INSPECTION OF WORK BY AHJ AND CONSULTANT. FAILURE OF INSPECTION WILL REQUIRE RE-WORK AT NO ADDITIONAL COST TO OWNER, UNLESS SPECIFIED BY BB STANDARDS, BACKFILL TRENCH WITH CLEAN SHARP SAND IN INDIVIDUAL LAYERS (IF MAX) COMPACTED TO A DENSITY OF 100% STANDARD PROCTOR.	4.3.4. PROVIDE 1" (25mm) INSULATION TO 3" (75mm) AND LESS DOMESTIC COLD WATER, 1-1/4" (32mm) OR LESS DOMESTIC HOT WATER, 1-1/4" (32mm) OR LESS, ALL HORIZONTAL SANITARY AND STORM DRAINS, AND 1-1/2" (40mm) OR LESS HEAT TRACED DRAINAGE PIPE. PROVIDE 1-1/2" INSULATION TO 4" (100mm) OR LARGER HEAT TRACED DRAINAGE PIPE.
1.9. WHEN DISCREPANCY EXISTS WITHIN DRAWINGS AND/OR SPECIFICATION, INCLUDE MOST COSTLY ARRANGEMENT TO TAKE PRECEDENCE.	2. PLUMBING SYSTEMS:	4.3.5. PROVIDE ALL LABOUR, MATERIALS, PRODUCTS, EQUIPMENT, AND SERVICES TO SUPPLY AND INSTALL THERMAL INSULATION, VAPOUR BARRIERS, AND FINISHES FOR MECHANICAL WORK AS INDICATED ON THE DRAWINGS AND SPECIFIED IN THIS SECTION OF THESE SPECIFICATIONS.
1.10. SUPPLY ALL LABOUR, MATERIALS, TOOLS, SERVICES, EQUIPMENT, TRANSPORTATION, AND TESTING REQUIRED FOR THE SUPPLY AND INSTALLATION TO COMPLETE THE WORK INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.	2.1. DOMESTIC WATER PIPING SHALL BE: HARD COPPER - SOLDER JOINT TYPE 1;" HARD DRAWN SEAMLESS COPPER TO ASTM B88, COMPLETE WITH COPPER SOLDER TYPE FITTINGS TO ASME/ANSI B16.18 AND CROSS-LINKED POLYETHYLENE (PEX) TUBING/UPONOR OR APPROVED EQUAL, NON-BARRIER TYPE PEX PIPING IN ACCORDANCE WITH CANCSA B137.5, ASTM F876.	4.3.6. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURERS OF ADHESIVES, MASTICS, AND INSULATING CEMENTS.
1.11. PROVIDE ALL CUTTING, PATCHING, FLASHING WORK, AND CLEAN-UP OF FLOORS, WALLS, AND CEILINGS REQUIRED FOR THE WORK.	2.2. ALL NEW SANITARY DRAINS SHALL BE PVC DWV, ALL NEW PIPING IN CEILING PLENUMS SHALL BE PVC DWV XFR.	4.3.7. INSULATION MATERIALS MUST BE MANUFACTURED AT FACILITIES CERTIFIED AND REGISTERED WITH AN APPROVED REGISTRAR TO CONFORM TO ISO 9001 QUALITY STANDARD.
1.12. ALL MATERIALS IN CEILING SPACE SHALL CONFORM TO THE ONTARIO BUILDING CODE.	2.3. VERIFY EXISTING LOCATIONS AND INVERT ELEVATIONS FOR SANITARY DRAINS ON SITE BEFORE COMMENCEMENT OF WORK.	4.3.8. ALL INSULATION PERTAINING TO DIVISION 15 SHALL BE CARRIED OUT BY ONE FIRM SPECIALIZING IN INSULATION WORK, DO NOT MIX SIMILAR PRODUCTS OF MULTIPLE MANUFACTURERS.
1.13. IDENTIFY ALL EQUIPMENT, DUCTS, VALVES, PIPES, ETC. TO BASE BUILDING STANDARDS.	2.4. UNLESS OTHERWISE NOTED, SLOPE HORIZONTAL DRAINAGE PIPING 3/8" (75mm) AND SMALLER AT 2% SLOPE, AND PIPING LARGER THAN 3" (75mm) AT 1% SLOPE.	4.3.9. ON COLD PIPING APPLICATIONS, APPLY VAPOUR BARRIER JACKET OVER INSULATION AND SEAL LONGITUDINAL AND CIRCUMFERENTIAL LAPS WITH CHILDERS CRPS OR BAKELITE 230-30 ADHESIVE. SEAL ALL PIPE TERMINATIONS INCLUDING FITTINGS, WALL PENETRATIONS, AND PIPE SUPPORTS WITH VAPOUR BARRIER MASTIC. FOR CHILLED WATER SYSTEMS, PROVIDE VAPOUR SEAL PIPE TERMINATIONS EVERY FOUR (4) PIPE SECTIONS.
1.14. SUPPLY ALL ACCESS DOORS/PANELS IN CEILINGS OR WALLS WHERE REQUIRED FOR ACCESS TO MECHANICAL EQUIPMENT THAT REQUIRES MAINTENANCE BALANCING DAMPERS, FIRE DAMPERS, VALVES, FILTERS, FAN COILS, VAV BOX CONTROLS, ETC. FOR INSTALLATION BY GENERAL TRADES. CONTRACTOR SHALL MINIMIZE QUANTITY OF ACCESS PANELS/DOORS BY GROUPING TOGETHER BALANCING DAMPERS AND VALVES. COORDINATE WITH ALL TRADES TO MINIMIZE ACCESS DOOR/PANELS REQUIREMENTS. EQUIPMENT REQUIRING ACCESS SHALL BE CLEARLY IDENTIFIED BY GC AND BASE BUILDING OPERATOR BEFORE DRYWALL CEILING/WALL INSTALLATION. ACCESS DOORS/PANELS SHALL BE MILCOR OR LEHAGE OR EQUIVALENT, AND MUST BE COMPATIBLE WITH CEILING/WALL, TYPE AND FINISH. FINISH SHALL SUIT ARCHITECT'S/INTERIOR DESIGNER'S REQUIREMENTS. PROVIDE FIRE RATED DOOR/PANEL WHERE REQUIRED. COORDINATE ACCESS DOOR/PANEL LOCATIONS AND SIZES WITH OWNER/LANDLORD, BASE BUILDING OPERATOR, ARCHITECT/INTERIOR DESIGNER, AND MECHANICAL DESIGNER.	2.5. PROVIDE CLEANOUTS SUITABLE IN ALL RESPECTS FOR THE INTENDED APPLICATION WHERE SHOWN ON THE DRAWINGS OR WHERE REQUIRED BY CODE(S). CLEANOUTS IN PIPING 4" (100mm) AND SMALLER SHALL BE SAME SIZE AS PIPE. OTHER CLEANOUTS SHALL BE A MINIMUM 1" (25mm).	4.3.10. APPLY PIPE INSULATION OVER 1-1/2" (40mm) THICKNESS IN TWO (2) LAYERS WITH JOINTS STAGGERED.
1.15. PROVIDE FLASHING AND COUNTER FLASHING FOR EXTERIOR PENETRATIONS OR WATERPROOFED FLOORS.	2.6. PROVIDE ISOLATING GATE VALVES ON MAIN AND/OR BRANCH LINES, AND AT ALL EQUIPMENT OR FIXTURES SERVED WITH HOT AND COLD WATER LINES. ALL VALVES SHALL BE SUITABLE FOR THE OPERATING PRESSURE OF THE SYSTEM IN WHICH THEY ARE INSTALLED. MAKE AND MODEL SHALL BE IN ACCORDANCE WITH BASE BUILDING STANDARDS AND SPECIFICATIONS, UNLESS NOTED OTHERWISE.	4.3.11. INSULATE FITTINGS WITH FABRICATED MITERED OR PREFORMED SECTIONS OF SPECIFIED INSULATION.
1.16. COORDINATE WITH ALL TRADES INSTALLING EQUIPMENT WHICH MAY AFFECT THE MECHANICAL WORK AND ARRANGE THE WORK IN PROPER RELATION WITH EQUIPMENT INSTALLED UNDER ALL DIVISIONS OF THE CONTRACT.	2.7. PROVIDE BACKFLOW PREVENTERS TO EQUIPMENT CONNECTIONS c/w DRAW TO NEAREST FUNNEL DRAIN. BACKFLOW PREVENTORS SHALL BE INSTALLED TO CSA B64.10 REQUIREMENTS, WITH MOUNTING HEIGHT 30" (750mm) TO 59" (1500mm) A.F.F..	4.3.12. INSULATE OVER FLANGES AND MECHANICAL COUPLINGS WITH SPECIFIED INSULATION AND THICKNESS, SIZED TO SUIT FLANGE DIAMETERS. FILL SPACES BETWEEN INSULATION AND ADJOINING PIPE INSULATION WITH SIMILAR MATERIAL.
1.17. FOR THE PRODUCTION OF AS-BUILT DOCUMENTS, OBTAIN ACAD DRAWING FILES AND WSP - TENANT 'CTB' FILE FOR PLOTTING CORRECT LINE THICKNESS, WHEN WORK BEGINS ON SITE, MAINTAIN THE 'AS-BUILT' WHITE PRINTS AT THE SITE FOR PERIODIC INSPECTION BY THE MECHANICAL CONSULTANT THROUGHOUT THE DURATION OF THE WORK. PAY PARTICULAR ATTENTION TO ACCURATELY DIMENSIONING THE LOCATION OF ALL CONCEALED SERVICES TERMINATED FOR FUTURE, ALL BURIED WORK AND SERVICES, AND CONCEALED WORK. CLEARLY AND ACCURATELY MARK-UP ALL CHANGES AND DEVIATIONS FROM THE ROUTING OF PIPING AND DUCTWORK AND LOCATIONS OF EQUIPMENT SHOWN ON THE CONTRACT DRAWINGS. CHANGES AND DEVIATIONS INCLUDE THOSE MADE BY ADDENDA, CHANGE ORDERS, AND SITE INSTRUCTIONS, BEFORE APPLYING FOR A CERTIFICATE OF COMPLETION. UPDATE AUTOCAD SET(S) IN ACCORDANCE WITH THE MARKED UP 'AS-BUILT' WHITE PRINTS. SUBMIT THE 'AS-BUILT' SITE DRAWING WHITE PRINTS, WHITE PRINTS PRODUCED FROM THE DISK SET(S), AND DRAWING DISK SET(S) USING WSP 'CTB' FILE TO THE MECHANICAL CONSULTANT FOR REVIEW. UPON COMPLETION OF THE WORK, SUBMIT THE COMPLETED 'AS-BUILT' DRAWINGS (PLOTTED WITH WSP 'CTB' FILE FOR CORRECT LINE THICKNESS), TRANSPARENCIES, AUTOCAD FILES, AND BUILDING INSPECTION DEPARTMENT'S FINAL CERTIFICATE OF APPROVAL TO THE MECHANICAL CONSULTANT AND OWNER/LANDLORD. 'AS-BUILT' DRAWINGS SHALL CONTAIN THE CONTRACTOR'S NAME AND DATE, FAILURE TO PLOT DRAWINGS WITH THE CORRECT LINE THICKNESS WILL RESULT IN REJECTION.	2.8. PROVIDE DIELECTRIC COUPLINGS/UNIONS WHERE COPPER PIPING CONNECTS TO FERROUS METAL AND PLUMBING EQUIPMENT SUCH AS STEEL STORAGE TANKS, PUMPS, AND/OR STEEL, BLACK IRON, CAST IRON, OR GALVANIZED IRON PIPING.	4.3.13. INSULATE VALVES AND INLINE COMPONENTS WITH FLEXIBLE INSULATION (34 LBS/CU-FT DENSITY) COMPRESSED NOT MORE THAN 50% OF ORIGINAL THICKNESS, BUILD UP TO SPECIFIED THICKNESS WITH APPROVED ASBESTOS FREE FINISHING CEMENT.
1.18. ENSURE MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND INSTRUCTIONS ARE FOLLOWED UNLESS OTHERWISE NOTED HEREIN OR ON THE DRAWINGS. UNLESS SUCH INSTRUCTIONS AND RECOMMENDATIONS CONTRADICT GOVERNING CODES AND REGULATIONS.	2.9. CHECK AND VERIFY LOCATION OF EXISTING MECHANICAL AND ELECTRICAL INTERFERENCES IN CEILING SPACE OF FLOOR BELOW INCLUDING STRUCTURAL FLOOR SLAB IN ALL AREAS REQUIRING CORE DRILLING AND/OR CUTTING OF FLOOR SLAB.	4.3.14. DO NOT INSULATE TERMINAL AUTOMATIC CONTROL VALVES INSTALLED IN HOT PIPING. DO NOT INSULATE TERMINAL AUTOMATIC CONTROL VALVES WHICH ARE INSTALLED IN COLD PIPING AND WHICH ARE LOCATED OVER CONDENSATE DRAIN PANS.
1.19. WHERE STANDARDS OF THE WORK ARE SPECIFIED OR IMPLIED AND THE WORK DOES NOT COMPLY WITH THE PERFORMANCE SPECIFIED OR IMPLIED, SUCH DEFICIENCY SHALL BE CORRECTED AS DIRECTED BY THE MECHANICAL CONSULTANT. ANY SUBSEQUENT TESTING TO VERIFY PERFORMANCE SHALL BE DONE AT CONTRACTOR'S EXPENSE. ANY CHARGES FOR THE OWNER'S/LANDLORDS STAFF, THE MECHANICAL CONSULTANT OR OTHER PERSONNEL RELATED TO SUCH RETESTING, SHALL ALSO BE AT THE CONTRACTOR'S EXPENSE.	2.10. FINAL LOCATION OF ALL NEW PLUMBING FIXTURES SHALL BE COORDINATED ON SITE WITH ALL TRADES. REFER TO ARCHITECTURAL DRAWINGS AND DETAILS FOR EXACT LOCATION OF PLUMBING FIXTURES. ALL PLUMBING FIXTURES SHALL BE PIPED COMPLETE WITH ALL NECESSARY APPURTENANCES, SUCH AS VENTS, SANITARY, HOT AND COLD WATER CONNECTIONS, ETC.	4.3.15. UNDER ALL HANGERS USED ON DOMESTIC COLD WATER, PROVIDE AN INSERT BETWEEN SUPPORT SHIELD AND PIPING FOR PIPING 1-1/2" (40mm) OR LARGER.
1.20. PROVIDE ELECTRONIC (PDF) COPIES OF PROPER SHOP DRAWINGS OF ALL SPECIFIED PRODUCTS AND SUBMIT FOR APPROVAL TO THE ARCHITECT/INTERIOR DESIGNER AND MECHANICAL CONSULTANT. FOLLOWING REVIEW AND APPROVAL BY CONTRACTOR (PROVIDE REVIEW STAMP), EQUIVALENT EQUIPMENT MAY BE PROPOSED BEFORE COMMENCEMENT OF WORK, PROVIDING THE QUALITY AND PERFORMANCE CHARACTERISTICS ARE EQUAL OR BETTER TO THE SPECIFIED PRODUCTS. THE USE OF EQUIVALENT EQUIPMENT IS SUBJECT TO THE APPROVAL OF THE MECHANICAL CONSULTANT AND ARCHITECT/INTERIOR DESIGNER, AND ON SATISFACTORY SUBMISSION OF DETAILED SHOP DRAWINGS. ALLOW ONE (1) WEEK FOR MECHANICAL CONSULTANT'S REVIEW. INCLUDE ONE (1) SET OF APPROVED SHOP DRAWINGS WITH OPERATION AND MAINTENANCE MANUAL (SEE BELOW). APPLICABLE MECHANICAL EQUIPMENT SHALL BE SELECTED TO MEET ENERGY EFFICIENCY REQUIREMENTS OF ANSI/ASHRAES 90.1 ENERGY STANDARDS FOR BUILDINGS. SHOP DRAWINGS/PRODUCT DATA SUBMITTALS FOR SUCH EQUIPMENT MUST INDICATE COMPLIANCE WITH THIS STANDARD OR THEY WILL BE RETURNED FOR CORRECTION AND RE-SUBMITTAL.	2.11. INSTALL ALL COMPONENTS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.	5.5. INSULATION FINISH:
1.21. FOLLOWING IS TO BE READ IN CONJUNCTION WITH WORDING ON CONSULTANT'S SHOP DRAWING REVIEW STAMP APPLIED TO EACH AND EVERY SHOP DRAWING OR PRODUCT DATA SHEET SUBMITTED. THIS REVIEW BY CONSULTANT IS FOR SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH GENERAL DESIGN CONCEPT. THIS REVIEW DOES NOT MEAN THAT CONSULTANT APPROVES DETAIL DESIGN INHERENT IN SHOP DRAWINGS, RESPONSIBILITY FOR WHICH REMAINS WITH CONTRACTOR. CONSULTANT'S REVIEW DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR OF CONTRACTOR'S RESPONSIBILITY FOR MEETING REQUIREMENTS OF CONTRACT DOCUMENTS. BE RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT JOB SITE, FOR INFORMATION THAT PERTAINS SOLELY TO FABRICATION PROCESSES OR TO TECHNIQUES OF CONSTRUCTION AND INSTALLATION, AND FOR COORDINATION OF WORK OF SUB-TRADES.	2.12. INSTALL SHOCK ARRESTORS ON HOT AND COLD WATER PIPING SERVING FIXTURES OR EQUIPMENT EQUIPPED WITH QUICK CLOSING VALVES.	5.5.1. COVER EXPOSED PIPE AND DUCTWORK INSULATION WITH 5" FATTAL UC APPROVED "THERMOX CANVAS" SECURED WITH A FULL 100% COVERING COAT OF WATERPROOF LAGGING ADHESIVE. NEATLY TRIM CANVAS JOINTS AND SHRINK TIGHT IN PLACE.
1.22. RETURN ALL REMOVED EQUIPMENT (EXHAUST FANS, DOMESTIC WATER HEATERS, ETC.) TO THE OWNER/LANDLORD OR DISPOSE OF EQUIPMENT AS REQUESTED BY THE OWNER/LANDLORD.	2.13. PLUMBING FIXTURES INCLUDING DOMESTIC HOT WATER HEATERS SHALL BE NEW, OF FIRST QUALITY, IN PERFECT CONDITION, AND INSTALLED IN BEST WORKMANLIKE MANNER. VERIFY PLUMBING FIXTURE QUANTITIES AND LOCATIONS WITH ARCHITECT'S/INTERIOR DESIGNER'S DRAWINGS.	5.5.2. PROVIDE INSULATION WITH A MINIMUM THERMAL RESISTANCE OF 0.25 BTU/(H·IN·°F) MEAN TEMPERATURE.
1.23. IN ALL AREAS REQUIRING TRENCHING OR CORE DRILLING THROUGH EXISTING FLOOR SLAB FOR PLUMBING SERVICES, ALLOW FOR ALL NECESSARY INDOOR/OUTDOOR LOCATE HIDDEN ELECTRICAL SERVICES, STRUCTURAL REINFORCING, ETC., AND INCLUDE ALL COSTS IN TENDER PRICE. COORDINATE THIS WORK WITH THE OWNER/LANDLORD AND/OR TENANT COORDINATOR REGARDING SCHEDULING, AND ADHERE TO THE OWNER'S/LANDLORD'S REQUIREMENTS. SUBMIT CORE DRILLING PLAN TO BASE BUILDING STRUCTURAL ENGINEER FOR THEIR REVIEW, OBTAIN WRITTEN APPROVAL FROM STRUCTURAL ENGINEER AND LANDLORD BEFORE COMMENCING WORK.	2.14. PROVIDE TRAP SEAL PRIMER FOR ALL NEW FLOOR DRAINS, FUNNEL FLOOR DRAINS, AND HUB DRAINS.	5.5.3. APPLY VAPOUR BARRIER OVER INSULATION ON COLD TEMPERATURE DUCTWORK.
1.24. PROVIDE THE OWNER/LANDLORD A WRITTEN WARRANTY OF MINIMUM ONE (1) YEAR FOR THE COMPLETE MECHANICAL INSTALLATION FROM DATE OF ACCEPTANCE, INCLUDING ALL LABOUR, MATERIALS, AND EQUIPMENT IN THIS CONTRACT. REPAIR AND/OR REPLACE DEFECTS WHICH APPEAR IN YOUR WORK WITHIN THE WARRANTY PERIOD, ORDINARY WEAR AND TEAR AND WILLFUL DAMAGE BY OR CARELESSNESS OF THE OWNER'S/LANDLORDS STAFF OR AGENTS EXCEPTED. WITHOUT ADDITIONAL EXPENSE TO THE OWNER/LANDLORDS, WHERE SUCH DEFECTS OCCUR, BE RESPONSIBLE FOR ALL COSTS INCURRED IN MAKING DEFECTIVE WORK GOOD, INCLUDING REPAIR OR REPLACEMENT OF BUILDING FINISHES, OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT CAUSED BY SUCH DEFECTS, OR BY SUBSEQUENT REPLACEMENT AND REPAIRS.	2.15. PROVIDE REMOVABLE, FLEXIBLE, REUSABLE, WHITE MOULDED PLASTIC INSULATION KITS FOR BARRIER-FREE LAVATORY DRAIN PIPING AND POTABLE WATER SUPPLIES EXPOSED UNDER NEW BARRIER-FREE LAVATORIES. PROVIDE THE FOLLOWING: TUBES: "Lav-Guard Z" E-Z Series, Zeston "SNAP-TRAP", McGuire Manufacturing Co., Inc. "ProTrap".	5.5.4. DUCTWORK LINED WITH ACOUSTIC INSULATION 1" (25mm) OR MORE IN THICKNESS NEED NOT BE EXTERNALLY INSULATED.
1.25. PROVIDE THREE (3) OPERATING AND MAINTENANCE MANUALS (3 HARD COPIES & 1 DIGITAL COPY) CONTAINING AS-BUILT DRAWINGS, APPROVED SHOP DRAWINGS, AIR AND WATER BALANCING REPORTS, EQUIPMENT DATA SHEETS, WRITTEN WARRANTY, MAINTENANCE PROCEDURES, FIRE STOPPING COMPLETENESS LETTER, TEST REPORTS, AND CONTACT LIST OF CONTRACTORS AND SUPPLIERS (WITH PHONE NUMBERS) TO THE LANDLORD/OWNER. MANUALS SHALL BE IN A THREE-RING BINDER SEPARATED WITH DIVIDERS IN APPROPRIATE SECTIONS. BEFORE PROVIDING LANDLORD/OWNER WITH BINDERS, SUBMIT ELECTRONIC COPY (PDF) OF COMPLETE PACKAGE TO MECHANICAL CONSULTANT FOR REVIEW. MAKE ALL CORRECTIONS REQUESTED BY MECHANICAL CONSULTANT AND RESUBMIT COMPLETE PACKAGE FOR REVIEW.	2.16. ALL PIPES, STORM PIPES, AND SANITARY PIPES LOCATED IN UNHEATED AREAS SHALL BE HEAT TRACED c/w INSULATION AS SPECIFIED. ACCEPTABLE MANUFACTURER: RAYCHEM XL HEAT-TRACING, OR EQUIVALENT.	5.5.5. PROTECT THE WORK OF THIS TRADE FROM BEING DEFAECED BY OTHER TRADES. MAKE GOOD ANY DAMAGE AND LEAVE IN PERFECT CONDITION, READY FOR FINAL PAYOUT.
	2.17. PROVIDE INDEPENDENT SUPPORTS EVERY 6'0" (1800mm) MINIMUM FOR 1" (25mm) OR LESS COPPER PIPING, AND EVERY 8'0" (2400mm) MINIMUM FOR COPPER PIPING 1-1/2" (40mm) AND LARGER.	5.5.6. APPLY INSULATION OVER CLEAN DRY SURFACES, FIRMLY BUTTING ALL SECTIONS TOGETHER.
	2.18. REMOVE ALL ABANDONED WATER SUPPLY PIPES, DRAIN LINES, AND VENT LINES BACK TO THE CORE RISER AND PROPERLY CAP AND/OR VALVE.	5.5.7. MAKE GOOD INSULATION AT NEW/EXISTING INSULATION WORK INTERFACES.
	2.19. PROVIDE WATER HAMMER ARRESTORS: JAY R. SMITH 5000 SERIES.	5.5.8. PROVIDE PVC JACKETING INSULATION FOR PIPING.
	2.20. CONDUCTING A PIPE LEAKAGE TEST.	
	3. GATE, GLOBE, & SWING TYPE CHECK VALVES:	
	3.1. VALVES SCHEDULED HEREINAFTER ARE JENKINS VALVES.	
	3.2. ALL VALVES SHALL BE, TO THE EXTENT POSSIBLE, THE PRODUCT OF A SINGLE MANUFACTURER AND SHALL HAVE THE MANUFACTURER'S NAME, PRESSURE RATING, AND SIZE CLEARLY MARKED ON THE BODY.	
	3.3. VALVES 2" (50mm) AND SMALLER SHALL BE CONSTRUCTED OF BRONZE. OTHER VALVES SHALL HAVE IRON BODIES AND BRONZE MOUNTINGS.	
	3.4. THE BODIES AND BONNETS OF VALVES SHALL CONFORM TO ASTM B62 FOR BRONZE VALVES RATED UP TO 150 PSI (1033 KPA) STEAM PRESSURE; ASTM B61 FOR BRONZE VALVES RATED AT 200 PSI (1380 KPA) AND 300 PSI (2070 KPA) STEAM PRESSURE; ASTM A128 CLASS B FOR IRON VALVES.	
	3.5. VALVES 2" (50mm) AND SMALLER SHALL BE c/w SCREWED ENDS, EXCEPT FOR BRONZE VALVES INSTALLED IN COPPER PIPING WHICH SHALL BE COMPLETE WITH SOLDERING ENDS. VALVES LARGER THAN 2" (50mm) SHALL BE COMPLETE WITH FLANGED ENDS, AND PROPER FLANGED ADAPTERS TO COPPER SHALL BE PROVIDED WHERE FLANGED VALVES ARE INSTALLED IN COPPER PIPING.	
	3.6. VALVES FOR INSTALLATION IN DOMESTIC WATER PIPING WITH PRESSURES LESS THAN 150 PSI (1033 KPA), UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE FOLLOWING SCHEDULE:	
	VALVE TYPE      PRESSURE RATING      W.O.G. ENDS JENKINS FIG. NO.	
	BRONZE GATE      300 PSI (2070 KPA)      SOLDERING      813J	
	BRONZE GATE      200 PSI (2070 KPA)      SCREWED      810J	
	BRONZE GLOBE      300 PSI (2070 KPA)      SCREWED      108 8J	
	BRONZE GLOBE      300 PSI (2070 KPA)      SOLDERING      108 8PJ	
	BRONZE GLOBE      400 PSI (2760 KPA)      SCREWED      205GJ	
	BRONZE CHECK      200 PSI (1380 KPA)      SCREWED      4092J	
	BRONZE CHECK      300 PSI (2125 KPA)      SOLDERING      4093J	
	IRON GATE      200 PSI (1380 KPA)      SCREWED      455J	
	IRON GATE      200 PSI (1380 KPA)      FLANGED      454J	
	IRON GLOBE      200 PSI (1380 KPA)      FLANGED      2342J	
	IRON CHECK      200 PSI (1380 KPA)      SCREWED      586J	
	IRON CHECK      200 PSI (1380 KPA)      FLANGED      587J	
	3.7. WHEELS ON BRONZE GATE AND GLOBE VALVES, UNLESS OTHERWISE NOTED, SHALL BE NON HEATING MALLEABLE IRON FINISHED IN BAKED ENAMEL. WHEELS ON IRON BODY VALVES SHALL BE CAST IRON WHEELS SUITABLE.	





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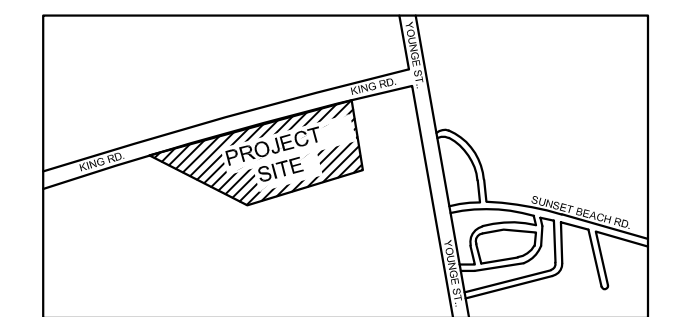
NORTH ARROW:



DIGITAL REFERENCE:

PROJECT NO.: CAD010351.0022 CONTRACT NO.  
DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD

KEYPLAN:



3	2025-04-01	ISSUED FOR TENDER
2	2025-03-17	ISSUED FOR SPA 3rd SUBMISSION
1	2025-01-10	ISSUED FOR BUILDING PERMIT
NO.	DATE	ISSUED

PROJECT

**CONNOR BUILDING  
RENOVATIONS**

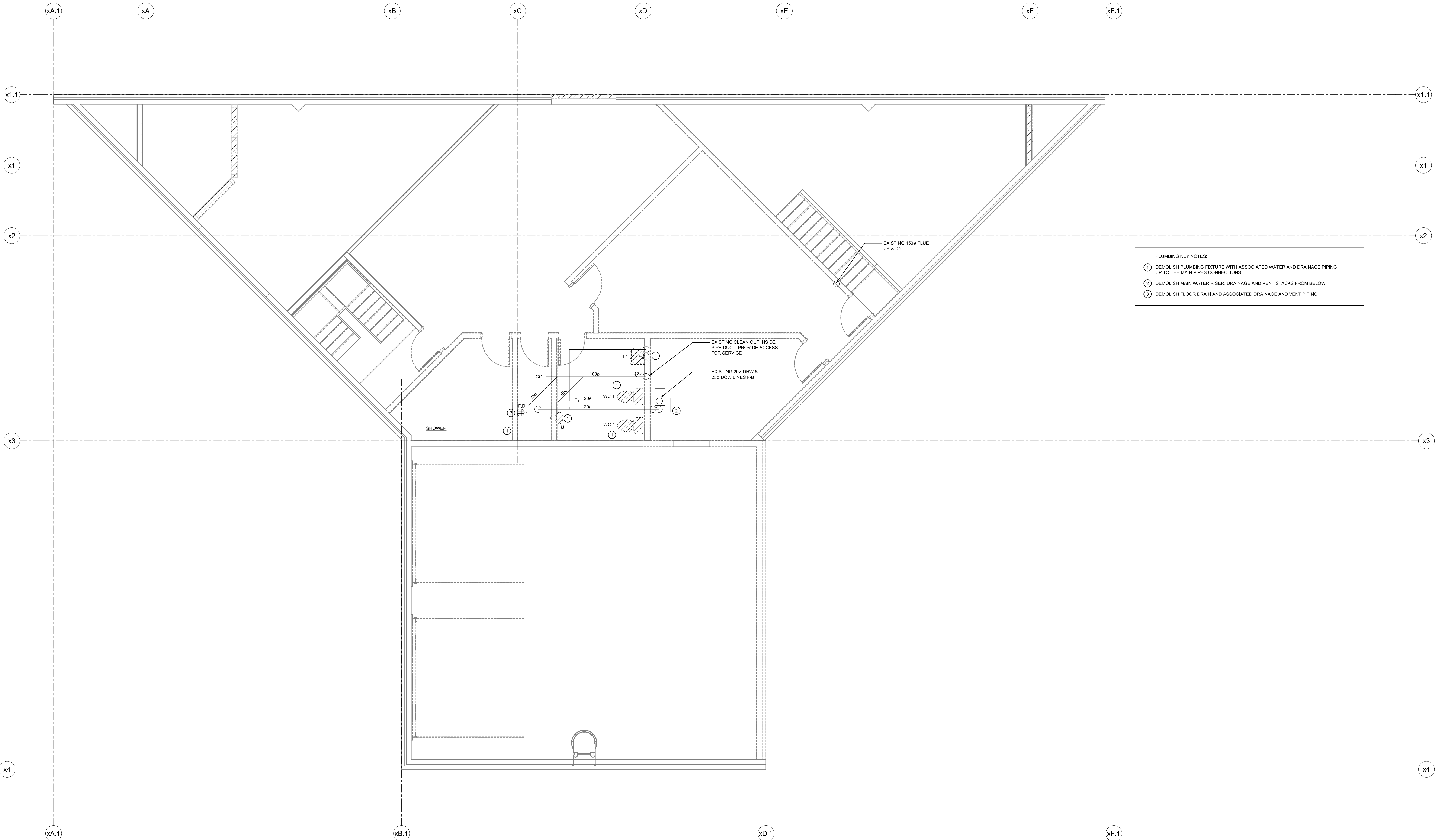
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**SECOND FLOOR PLAN -  
PLUMBING - DEMO WORK**

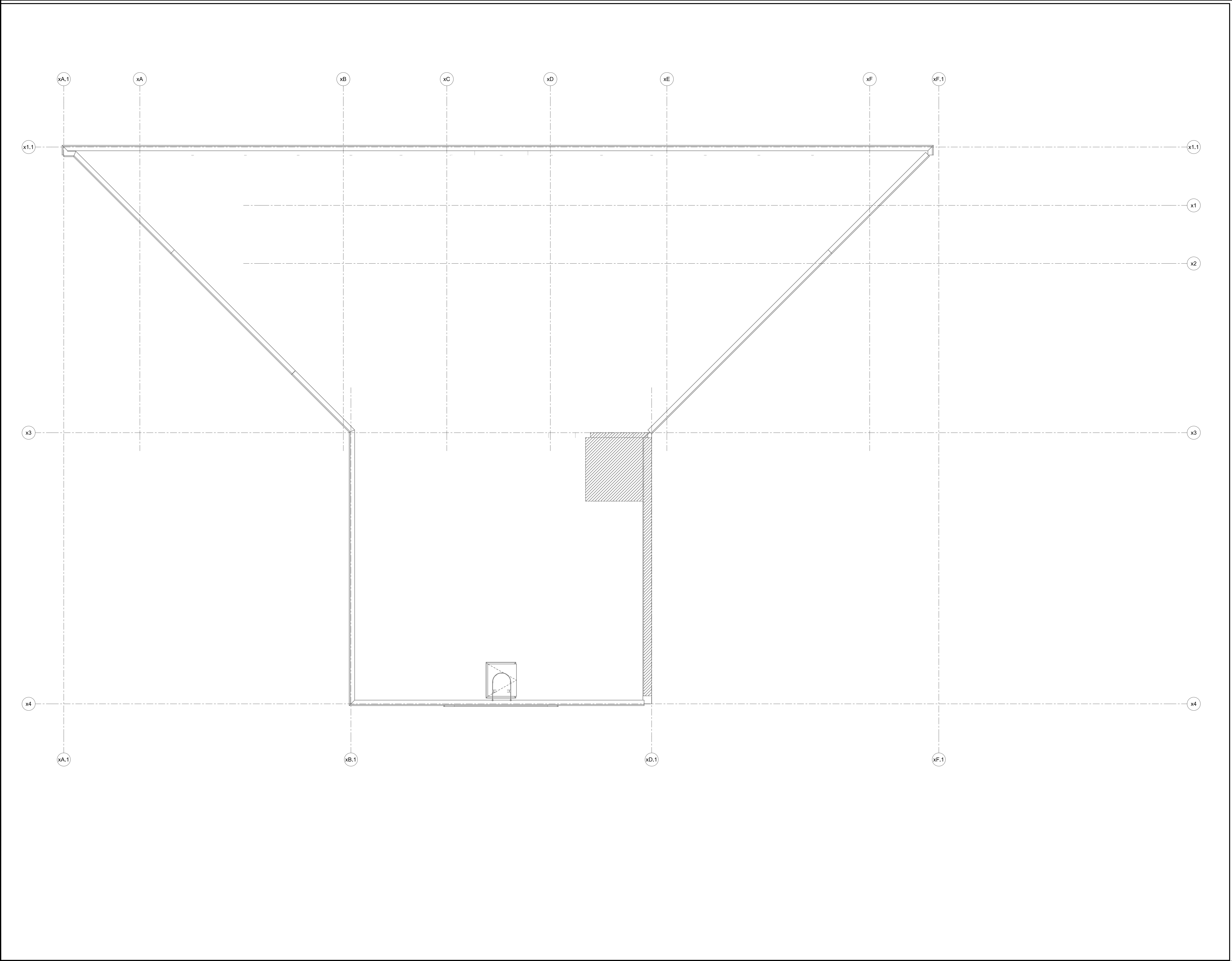
DRAWING NO.

**M-302**

PRINT DATE: 2025-01-09 3:08:45 PM







ARCH E1 (30' x 42' | 762mm x 1067mm)

CONSULTANT - STRUCTURAL



150 COMMERCE VALLEY DRIVE WEST  
THORNHILL, ONTARIO  
L3T 0A1  
T: 905-882-1100  
[www.wsp.com](http://www.wsp.com)

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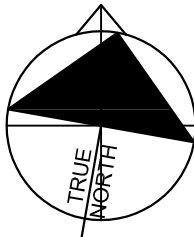
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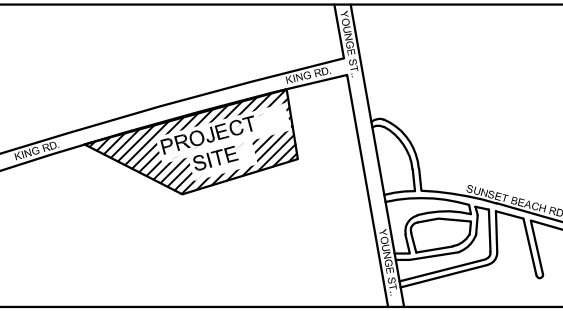
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PROJECT NO.: CA0010351.0022 CONTRACT NO.  
DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD

KEYPLAN:



3	2025-04-01	ISSUED FOR TENDER
2	2025-03-17	ISSUED FOR SPA 3rd SUBMISSION
1	2025-01-10	ISSUED FOR BUILDING PERMIT
NO.	DATE	ISSUED

PROJECT

**CONNOR BUILDING  
RENOVATIONS**

DRAWING TITLE

**ROOF PLAN -  
PLUMBING - DEMO WORK**

DRAWING NO.

**M-303**

PRINT DATE: 2025-01-09 3:08:45 PM



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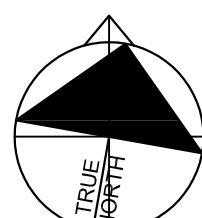
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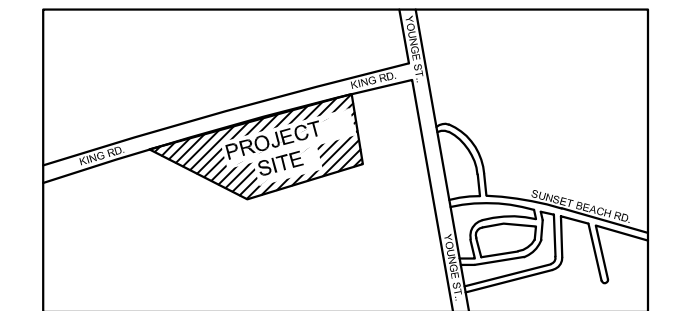


DIGITAL REFERENCE:

PROJECT NO.: CA001031.0022 CONTRACT NO.

DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD

KEYPLAN:



3	2025-04-01	ISSUED FOR TENDER
2	2025-03-17	ISSUED FOR SPA 3rd SUBMISSION
1	2025-01-10	ISSUED FOR BUILDING PERMIT
NO.	DATE	ISSUED

PROJECT

**CONNOR BUILDING  
RENOVATIONS**

DRAWING TITLE

**UNDERGROUND  
DRAINAGE FLOOR PLAN -  
PLUMBING - NEW WORK**

DRAWING NO.

**M-304**

PRINT DATE: 2025-01-09 3:06:45 PM



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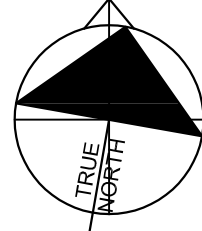
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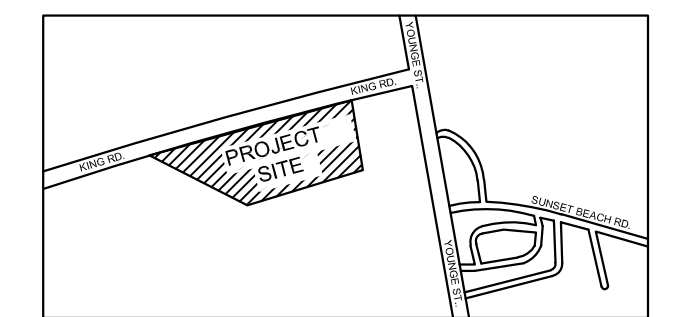
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PROJECT NO.: C40010351.0022 CONTRACT NO.  
DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD

KEYPLAN:



3	2025-04-01	ISSUED FOR TENDER
2	2025-03-17	ISSUED FOR SPA 3rd SUBMISSION
1	2025-01-10	ISSUED FOR BUILDING PERMIT
NO.	DATE	ISSUED

PROJECT

**CONNOR BUILDING  
RENOVATIONS**

DRAWING TITLE

**GROUND FLOOR PLAN -  
PLUMBING - NEW WORK**

DRAWING NO.

**M-305**

PRINT DATE: 2025-01-09 3:06:45 PM

- PLUMBING KEY NOTES:
- 75a DOMESTIC CW FROM BELOW. REFER TO DETAIL 7 ON DRAWING No. M-502.
  - CONNECT DHW & DCW LINES TO EACH PLUMBING FIXTURE IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE.
  - REFER TO FLOOR ABOVE FOR THE CONTINUATION OF THE PIPES.
  - EXISTING WATER HEATER TO BE RELOCATED. ENCLOSURE TO BE PROVIDED.
  - HOSE BIBBS SHALL HAVE VACUUM BREAKERS/BACKFLOW PREVENTER AND ISOLATING VALVES.



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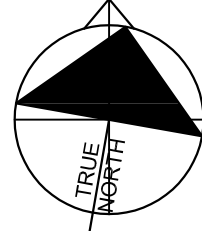
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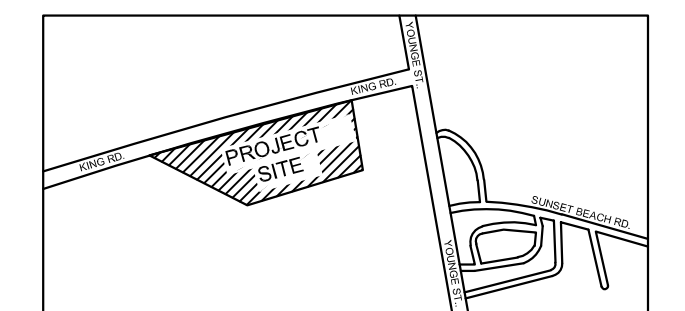
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PROJECT NO.: CA0010351.0022 CONTRACT NO.  
DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD

KEYPLAN:



3	2025-04-01	ISSUED FOR TENDER
2	2025-03-17	ISSUED FOR SPA 3rd SUBMISSION
1	2025-01-10	ISSUED FOR BUILDING PERMIT
NO.	DATE	ISSUED

PROJECT

**CONNOR BUILDING  
RENOVATIONS**

DRAWING TITLE

**SECOND FLOOR PLAN -  
PLUMBING - NEW WORK**

DRAWING NO.

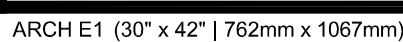
**M-306**

PRINT DATE: 2025-01-09 3:06:45 PM

PLUMBING KEY NOTES:

- CONNECT DHW & DCW LINES TO EACH PLUMBING FIXTURE IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE.
- REFER TO FLOOR BELOW FOR THE CONTINUATION OF THE PIPES.



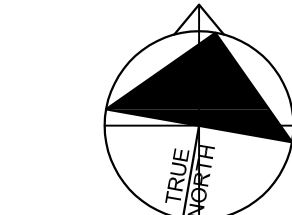
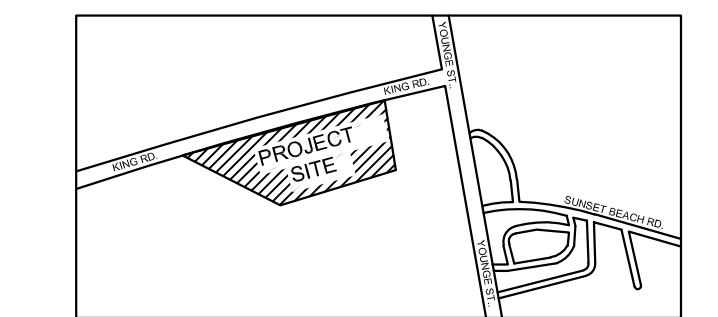




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PROJECT NO.: CAD010351/0022 CONTRACT NO.  
DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD  
KEYPLAN:

4	2025-04-01	ISSUED FOR TENDER
3	2025-04-01	RE-ISSUED FOR BUILDING PERMIT
2	2025-03-17	ISSUED FOR SPA 3rd SUBMISSION
1	2025-01-10	ISSUED FOR BUILDING PERMIT

NO.	DATE	ISSUED
PROJECT		

**CONNOR BUILDING  
RENOVATIONS**

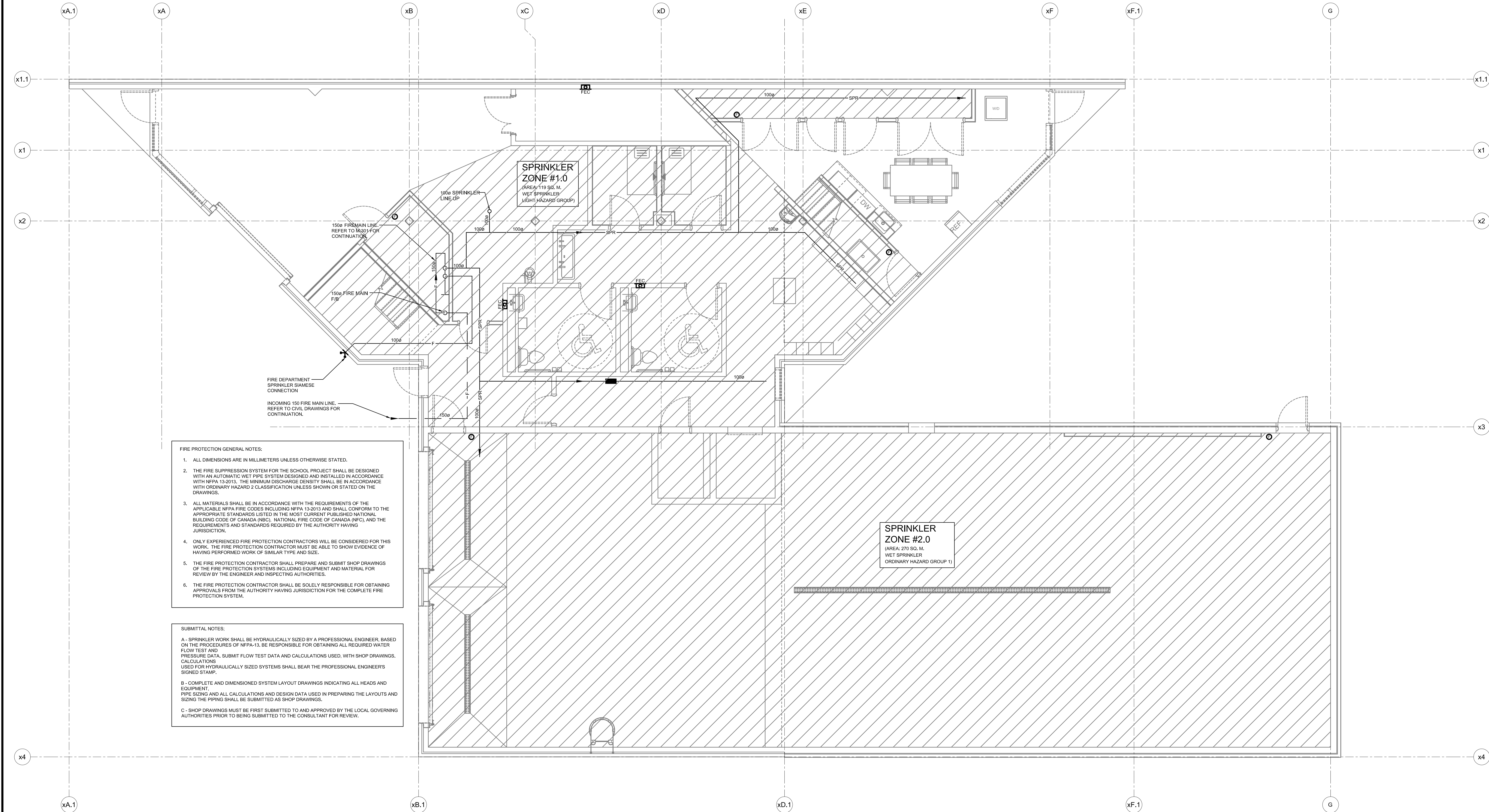
DRAWING TITLE

**GROUND FLOOR PLAN -  
FIRE PROTECTION -  
NEW WORK**

DRAWING NO.

**M-401**

PRINT DATE: 2025-01-09 3:08:45 PM

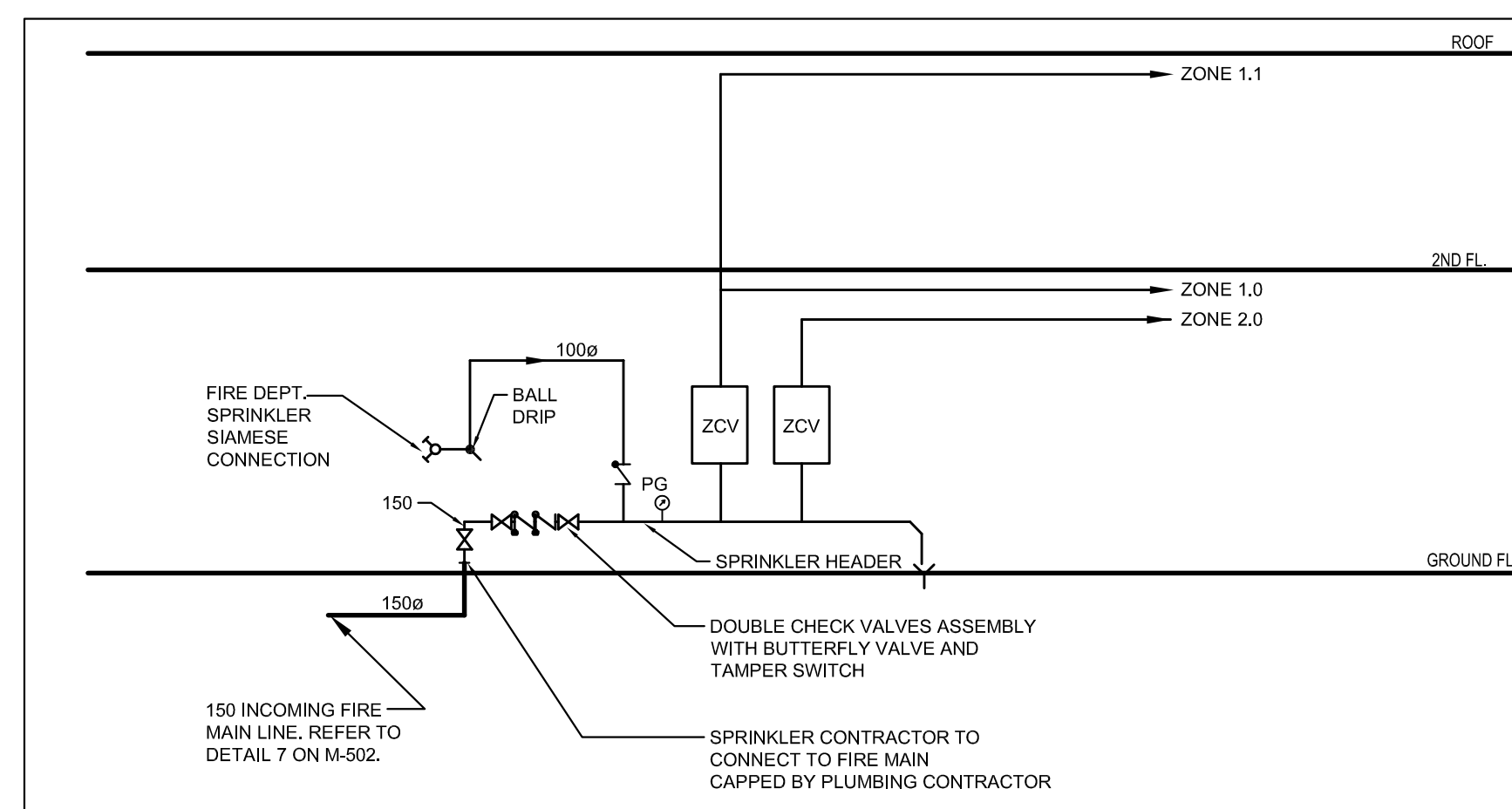


## FIRE PROTECTION GENERAL NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
- THE FIRE SUPPRESSION SYSTEM FOR THE SCHOOL PROJECT SHALL BE DESIGNED WITH AN AUTOMATIC WET PIPE SYSTEM DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13-2013. THE MINIMUM DISCHARGE DENSITY SHALL BE IN ACCORDANCE WITH ORDINARY HAZARD 2 CLASSIFICATION UNLESS SHOWN OR STATED ON THE DRAWINGS.
- ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE NFPA FIRE CODES INCLUDING NFPA 13-2013 AND SHALL CONFORM TO THE APPROPRIATE STANDARDS LISTED IN THE MOST CURRENT PUBLISHED NATIONAL BUILDING CODE OF CANADA (NBC), NATIONAL FIRE CODE OF CANADA (NFC) AND THE REQUIREMENTS AND STANDARDS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- ONLY EXPERIENCED FIRE PROTECTION CONTRACTORS WILL BE CONSIDERED FOR THIS WORK. THE FIRE PROTECTION CONTRACTOR MUST BE ABLE TO SHOW EVIDENCE OF HAVING PERFORMED WORK OF SIMILAR TYPE AND SIZE.
- THE FIRE PROTECTION CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS OF THE FIRE PROTECTION SYSTEMS INCLUDING EQUIPMENT AND MATERIAL FOR REVIEW BY THE ENGINEER AND INSPECTING AUTHORITIES.
- THE FIRE PROTECTION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING APPROVALS FROM THE AUTHORITY HAVING JURISDICTION FOR THE COMPLETE FIRE PROTECTION SYSTEM.

## SUBMITTAL NOTES:

- A - SPRINKLER WORK SHALL BE HYDRAULICALLY SIZED BY A PROFESSIONAL ENGINEER, BASED ON THE PROCEDURES OF NFPA-13. BE RESPONSIBLE FOR OBTAINING ALL REQUIRED WATER FLOW TEST AND PRESSURE DATA. SUBMIT FLOW TEST DATA AND CALCULATIONS USED, WITH SHOP DRAWINGS, CALCULATIONS USED FOR HYDRAULICALLY SIZED SYSTEMS SHALL BEAR THE PROFESSIONAL ENGINEER'S SIGNED STAMP.
- B - COMPLETE AND DIMENSIONED SYSTEM LAYOUT DRAWINGS INDICATING ALL HEADS AND EQUIPMENT. PIPE SIZING AND ALL CALCULATIONS AND DESIGN DATA USED IN PREPARING THE LAYOUTS AND SIZING THE PIPING SHALL BE SUBMITTED AS SHOP DRAWINGS.
- C - SHOP DRAWINGS MUST BE FIRST SUBMITTED TO AND APPROVED BY THE LOCAL GOVERNING AUTHORITIES PRIOR TO BEING SUBMITTED TO THE CONSULTANT FOR REVIEW.

**1 SPRINKLER FLOW DIAGRAM**  
M-401 N.T.S.

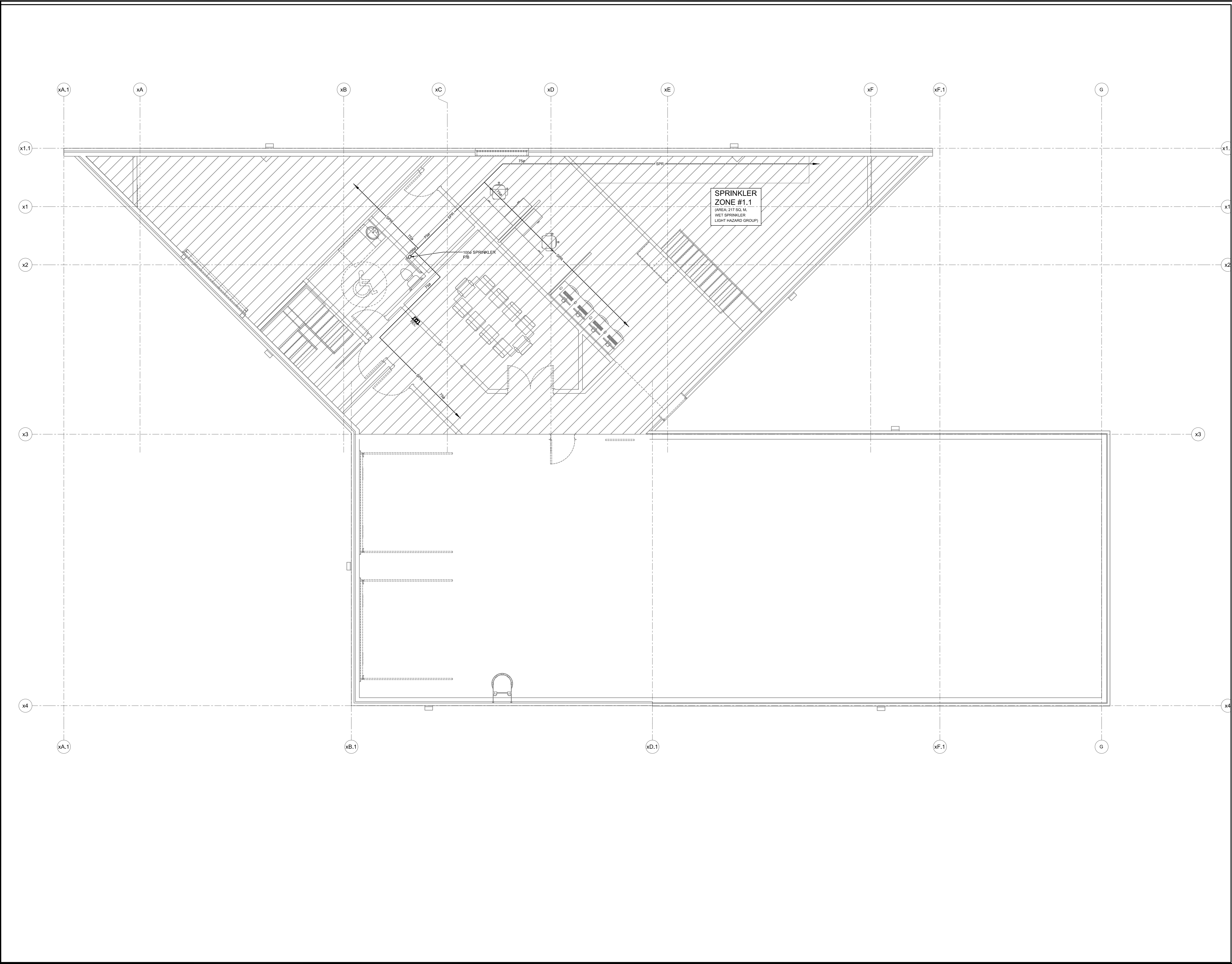
## SPRINKLER HEAD USAGE SCHEDULE

HEAD TYPE	AREA SERVED	REMARKS
UPRIGHT BRASS	MECHANICAL RMS, ELECTRICAL RMS, UNFINISHED STORAGE RMS, GENERAL PURPOSE ROOM	PROVIDE GUARDS WHERE REQUIRED
SEMI-RECESSED PENDENT - WHITE	AS PER ARCHITECTURAL CEILING LAYOUT	
FULLY RECESSED PENDENT WITH WHITE FACE PLATE	FINISHED CORRIDOR'S CEILINGS	
DRY TYPE	WHERE IT'S REQUIRED BY CODE AND IN NON HEATED AREAS	
SIDE WALL	ELEVATOR SHAFT	

## SPRINKLER HAZARD CLASSIFICATIONS

LIGHT HAZARD 0.10 gpm/ SQ. ft. OVER 1500 SQ. ft.	- OFFICE'S - CLASSROOMS
ORDINARY HAZARD GROUP 1 0.15 gpm/ SQ. ft. OVER 1500 SQ. ft.	- MECHANICAL EQUIPMENT RMS - ELECTRICAL ROOMS - ELEVATOR MACHINE RMS - STORAGE ROOMS
ORDINARY HAZARD GROUP 1 0.15 gpm/ SQ. ft. OVER 2500 SQ. ft.	- GENERAL PURPOSE ROOM
EXTRA ORDINARY HAZARD GROUP 1	N/A





ARCH E1 (30' x 42' | 762mm x 1067mm)

CONSULTANT - STRUCTURAL



150 COMMERCE VALLEY DRIVE WEST  
THORNHILL, ONTARIO  
L3T 0A1  
T: 905-882-1100  
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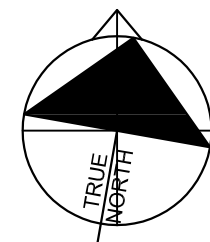
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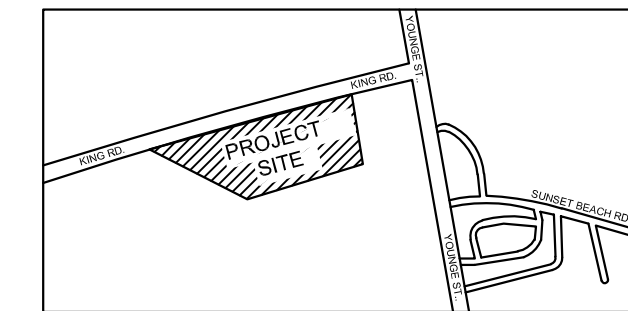


DIGITAL REFERENCE:

PROJECT NO.: CA0010351.0022 CONTRACT NO.

DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD

KEYPLAN:



3 2025-04-01 ISSUED FOR TENDER  
2 2025-03-17 ISSUED FOR SPA 3rd SUBMISSION  
1 2025-01-10 ISSUED FOR BUILDING PERMIT  
NO. DATE ISSUED

PROJECT

**CONNOR BUILDING  
RENOVATIONS**

DRAWING TITLE

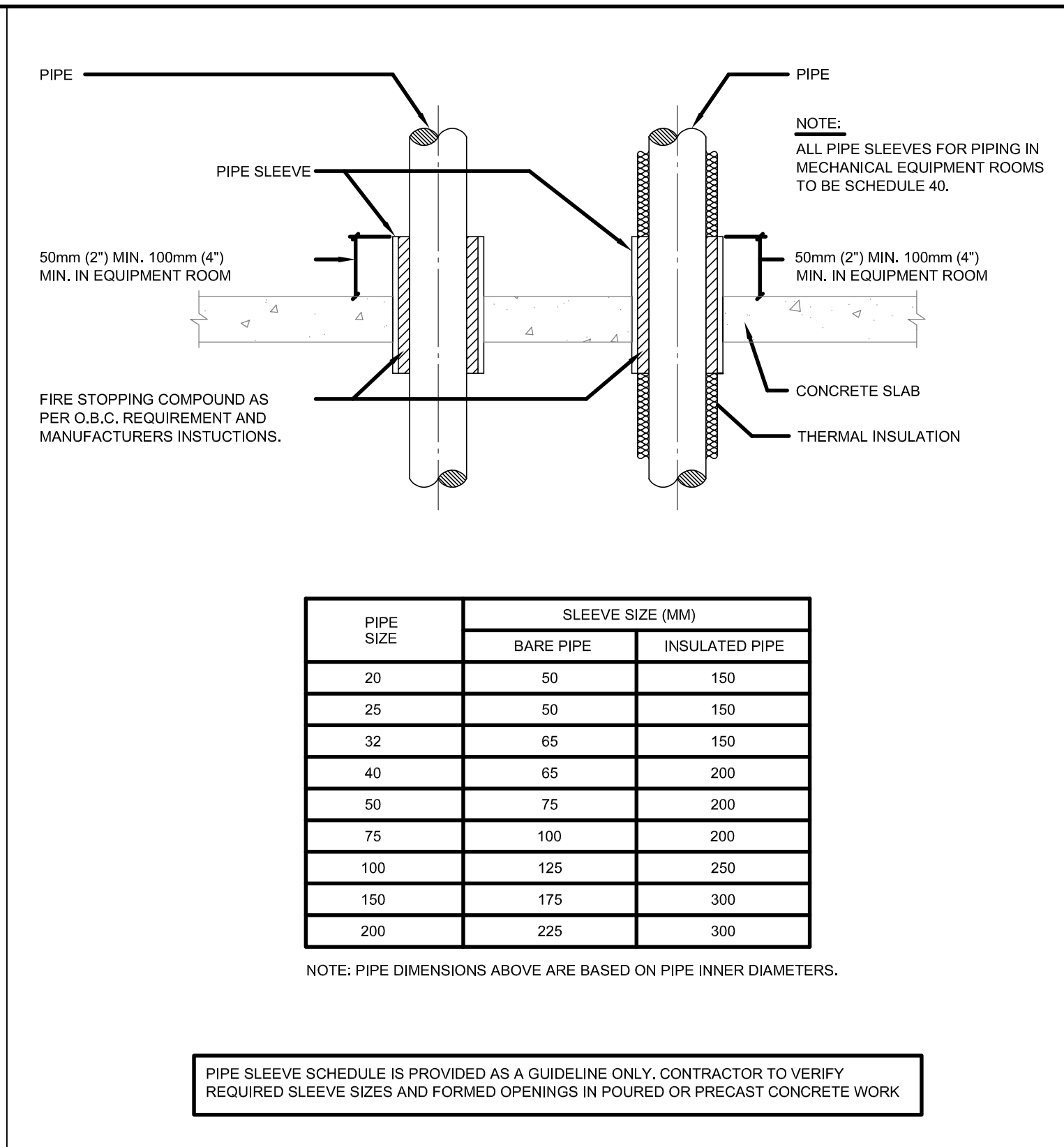
**SECOND FLOOR PLAN -  
FIRE PROTECTION -  
NEW WORK**

DRAWING NO.

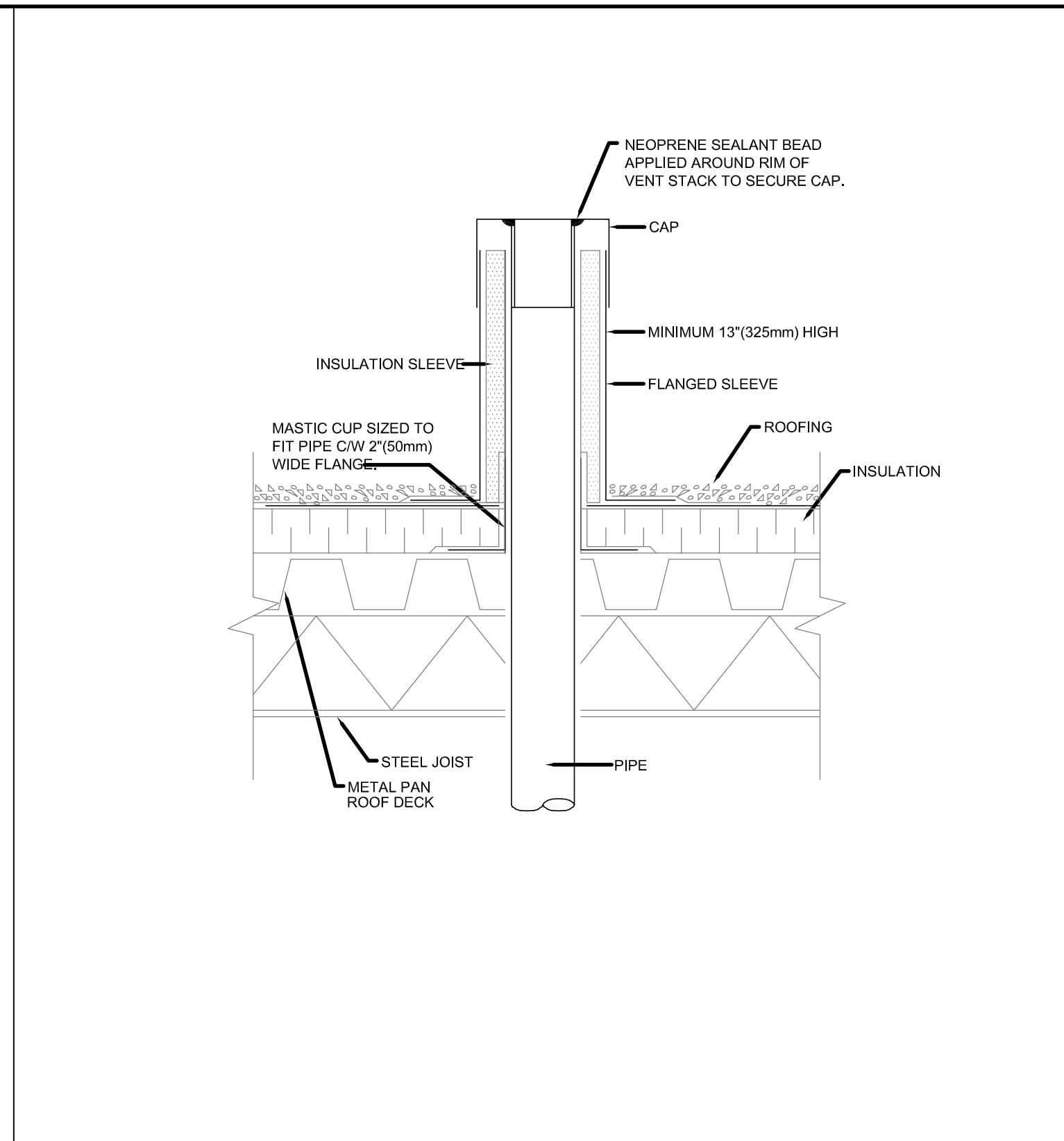
**M-402**

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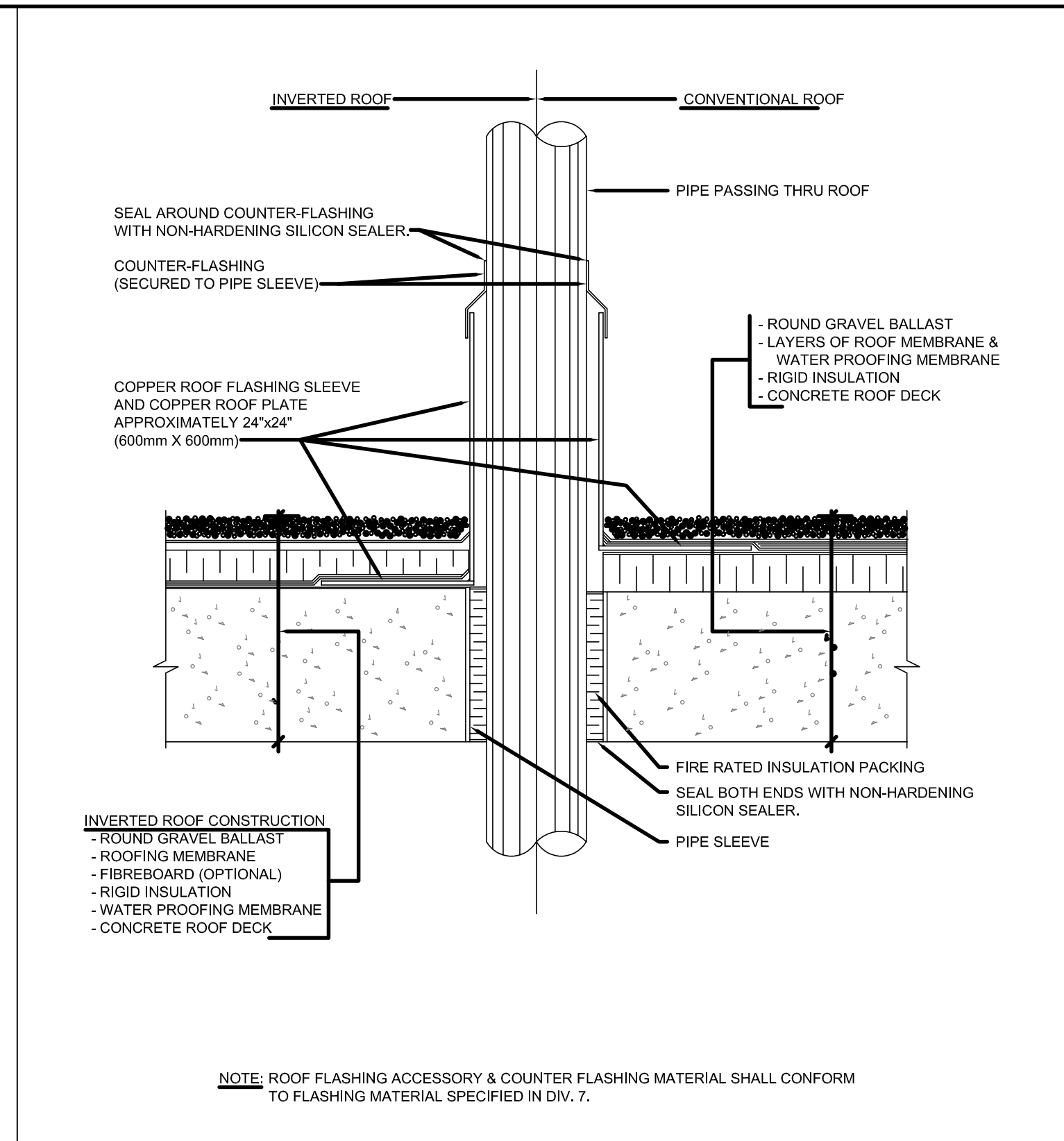




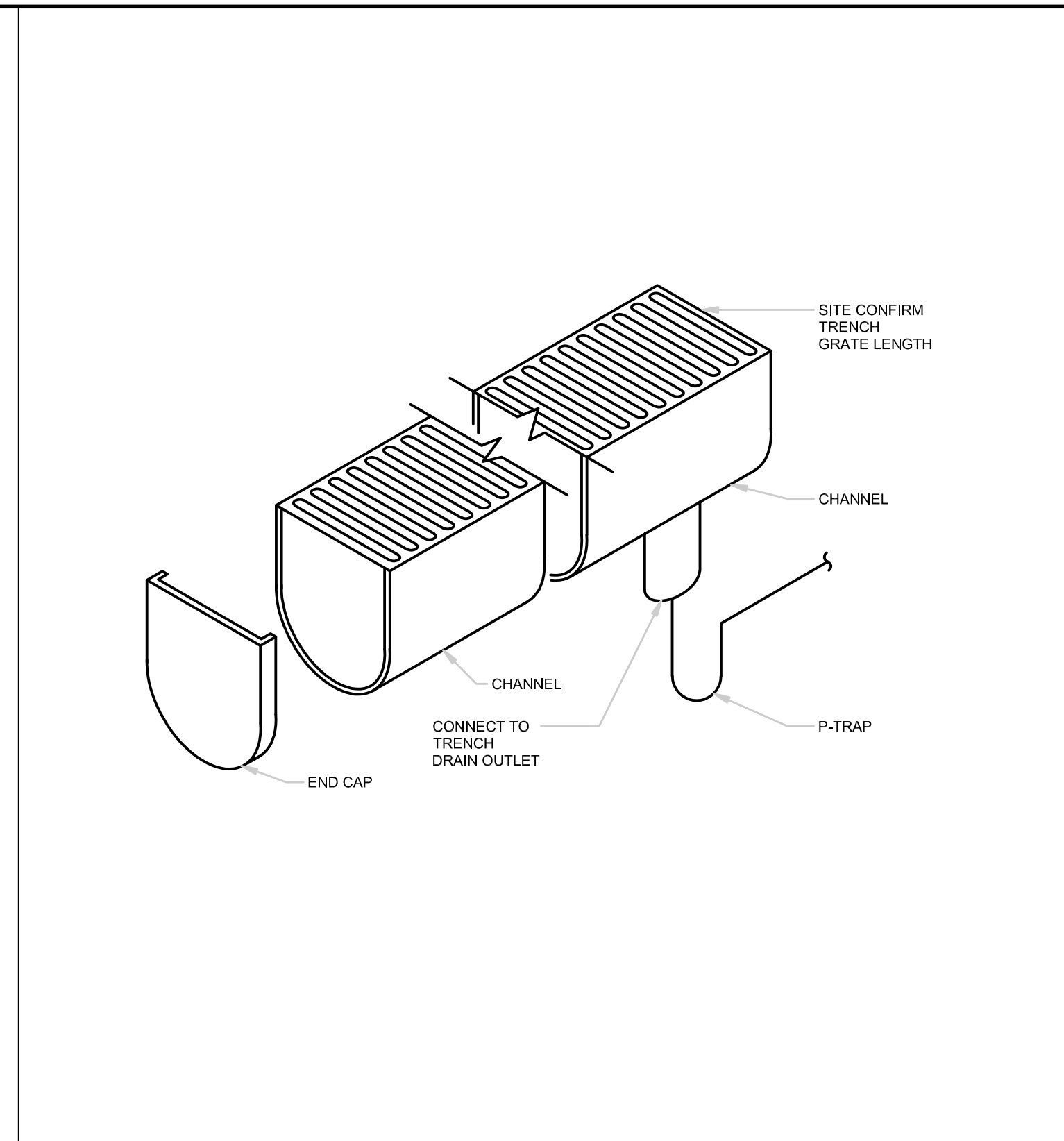
1 DETAIL OF PIPE SLEEVES  
M-501 / N.T.S.



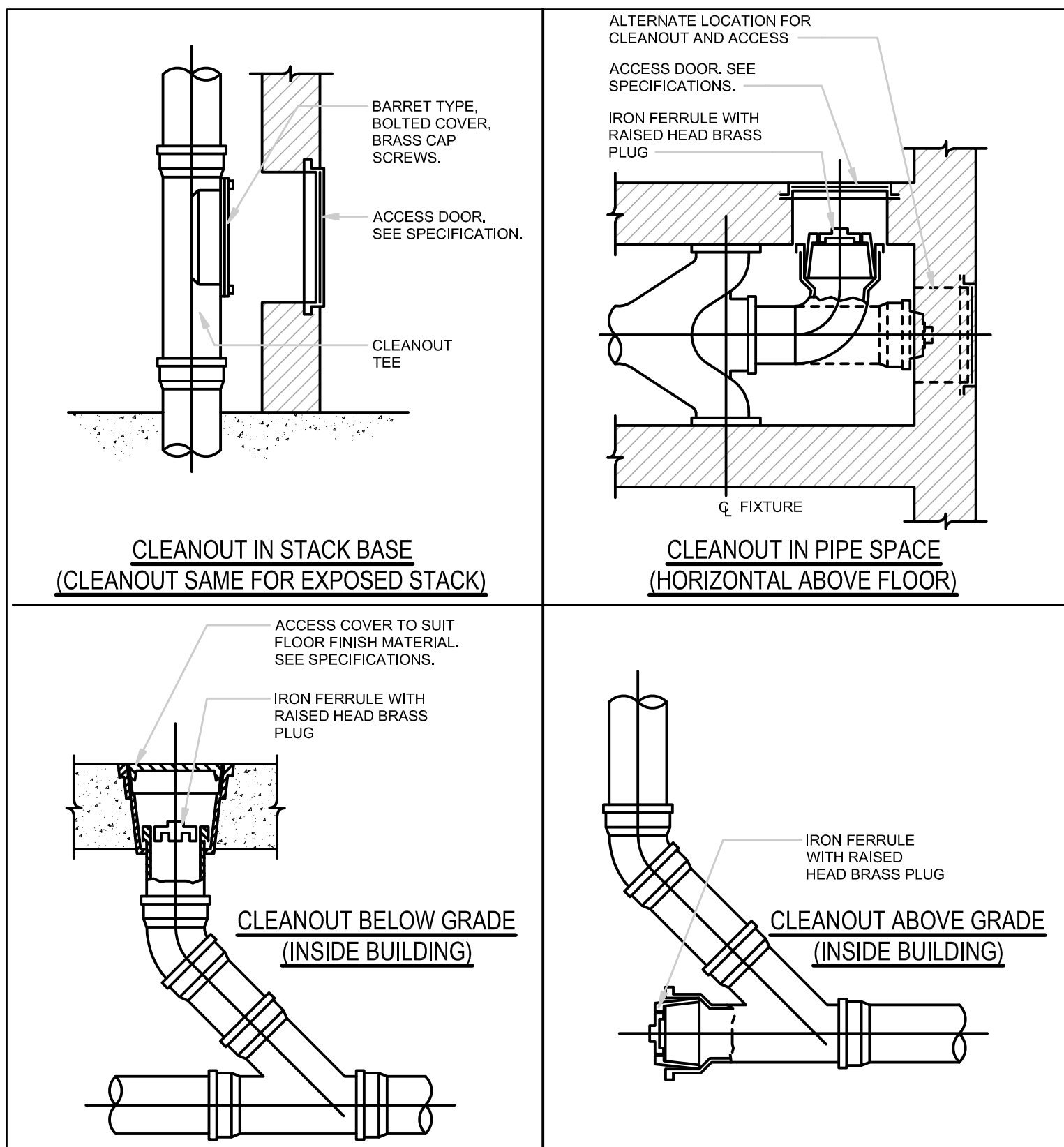
2 DETAIL OF VENT STACK COVER  
M-501 / N.T.S.



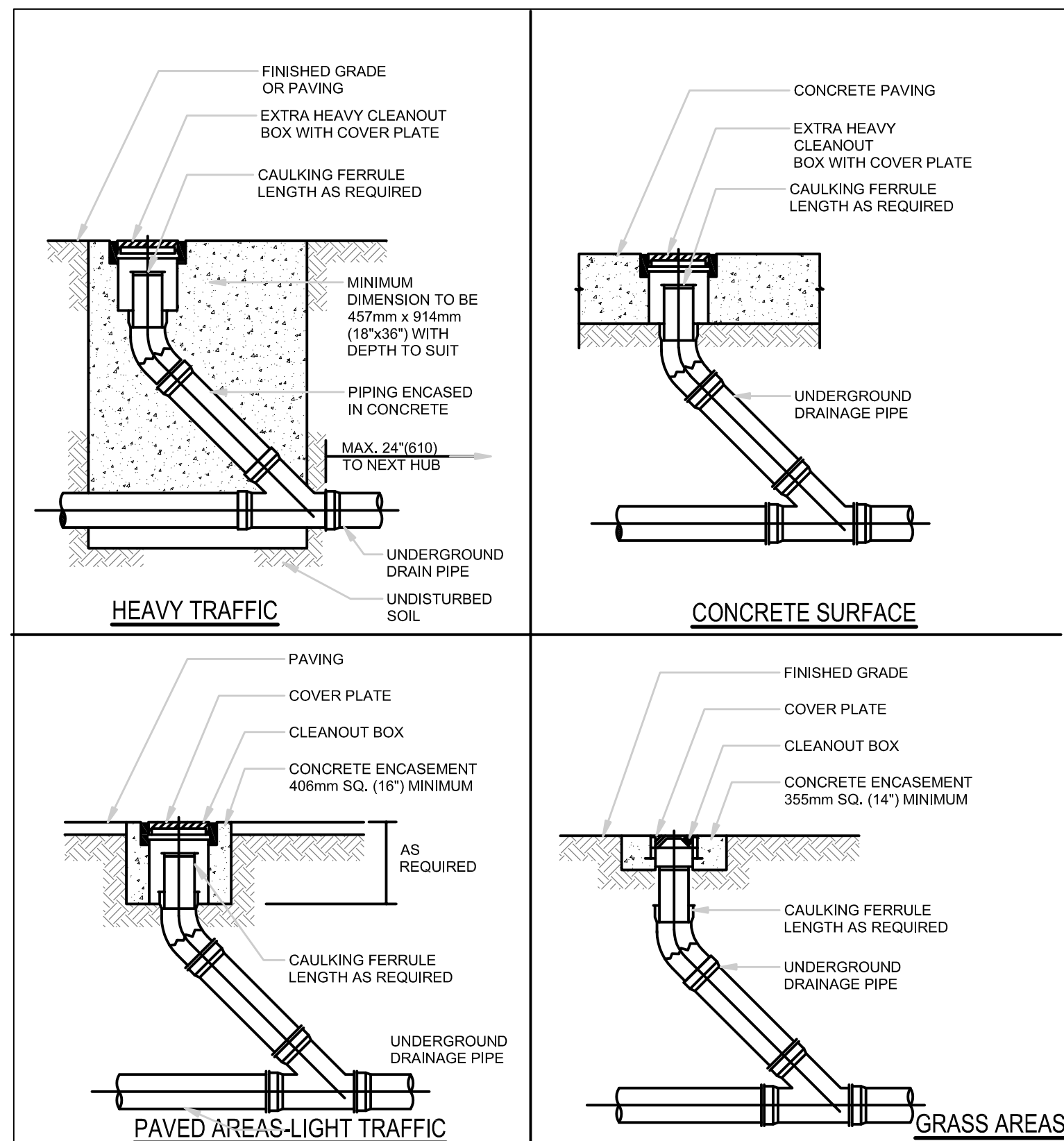
3 DETAIL OF SLEEVE & FLASHING OF PIPES THROUGH ROOF  
M-501 / N.T.S.



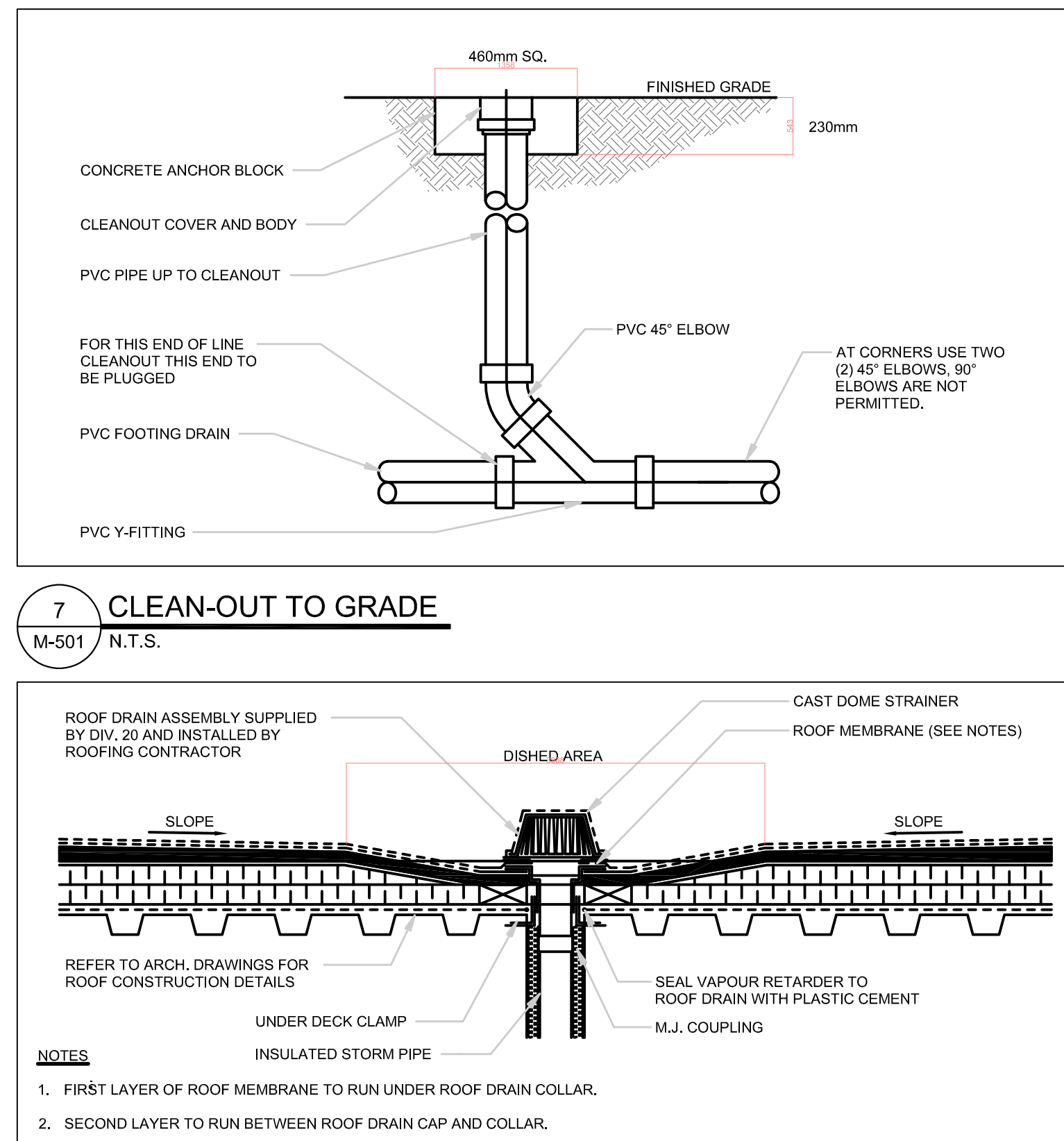
4 TRENCH DRAIN - DETAIL 1  
M-501 / N.T.S.



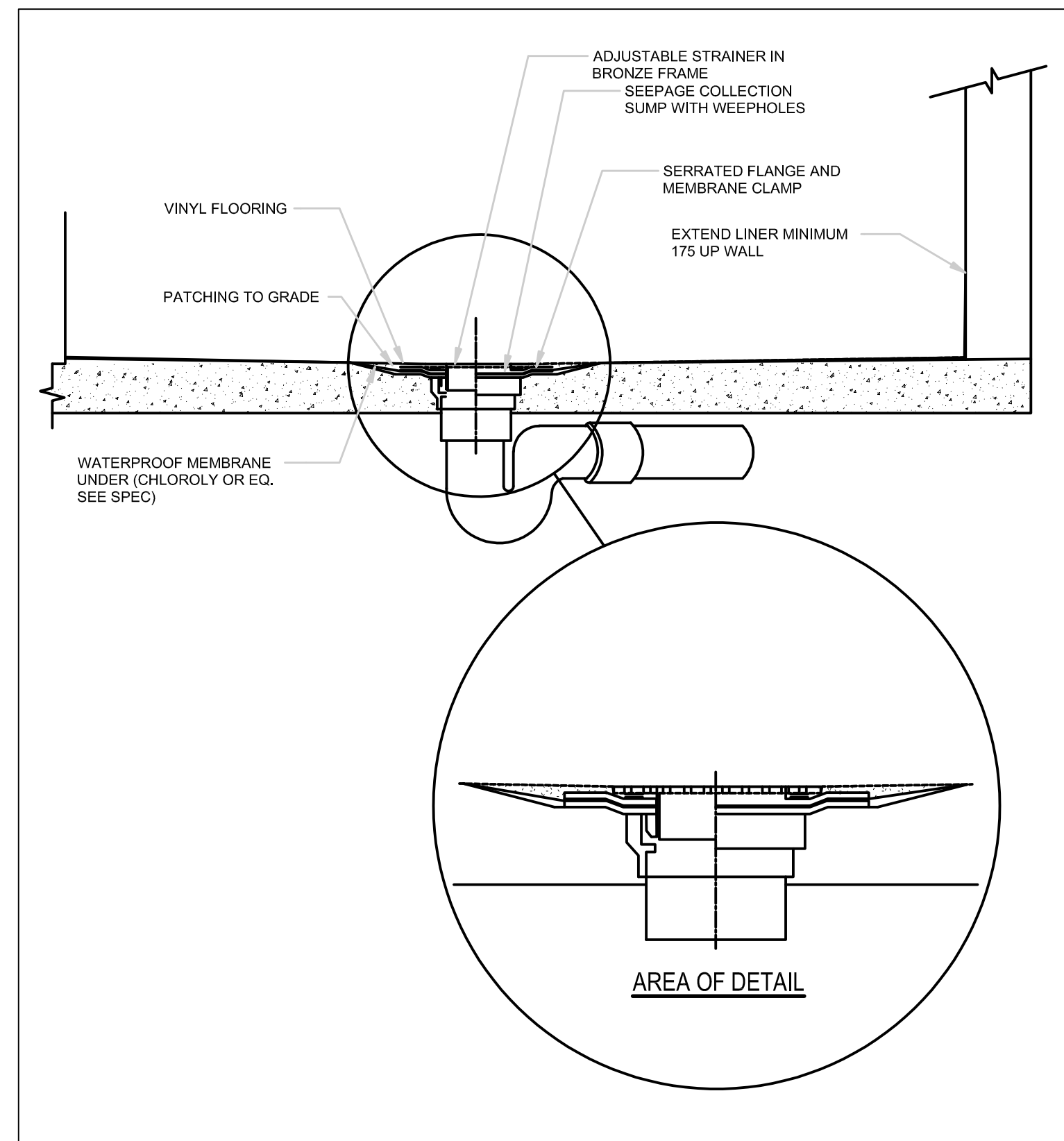
5 DRAINAGE CLEAN-OUT - BELL & SPIGOT PIPING  
M-501 / N.T.S.



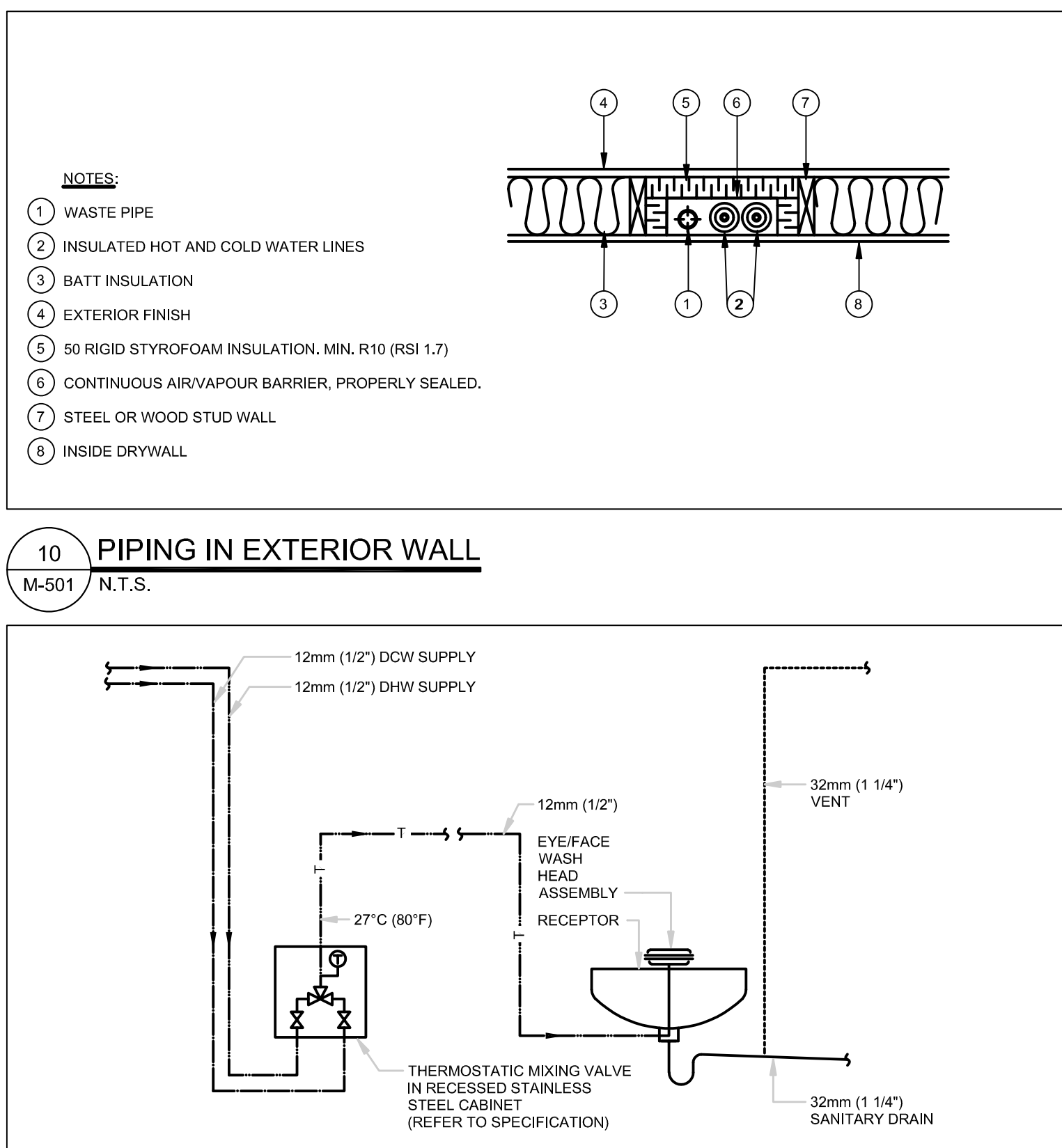
6 EXTERIOR CLEAN-OUT - BELL & SPIGOT PIPING  
M-501 / N.T.S.



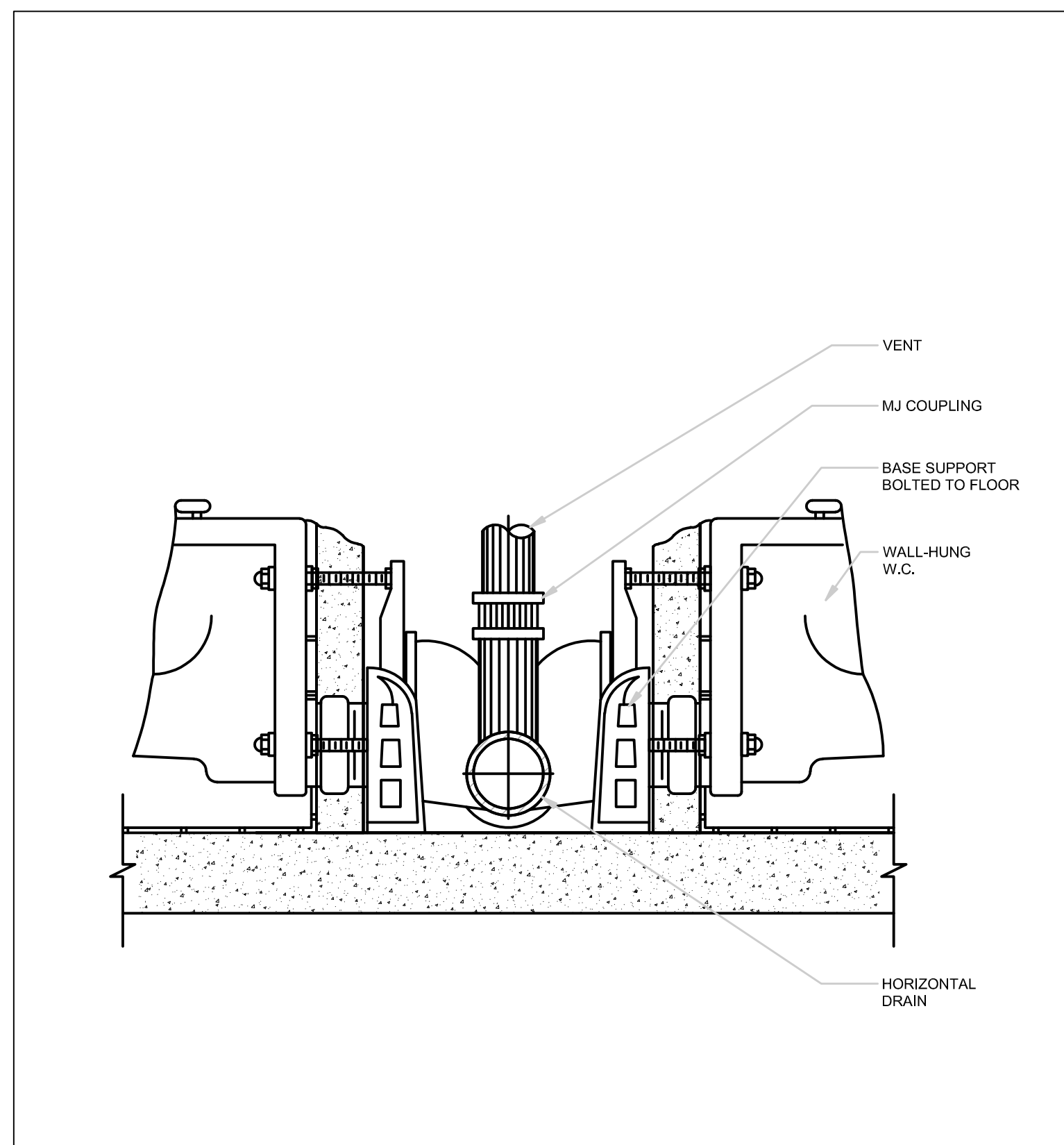
8 ROOF DRAIN - DETAIL 1  
M-501 / N.T.S.



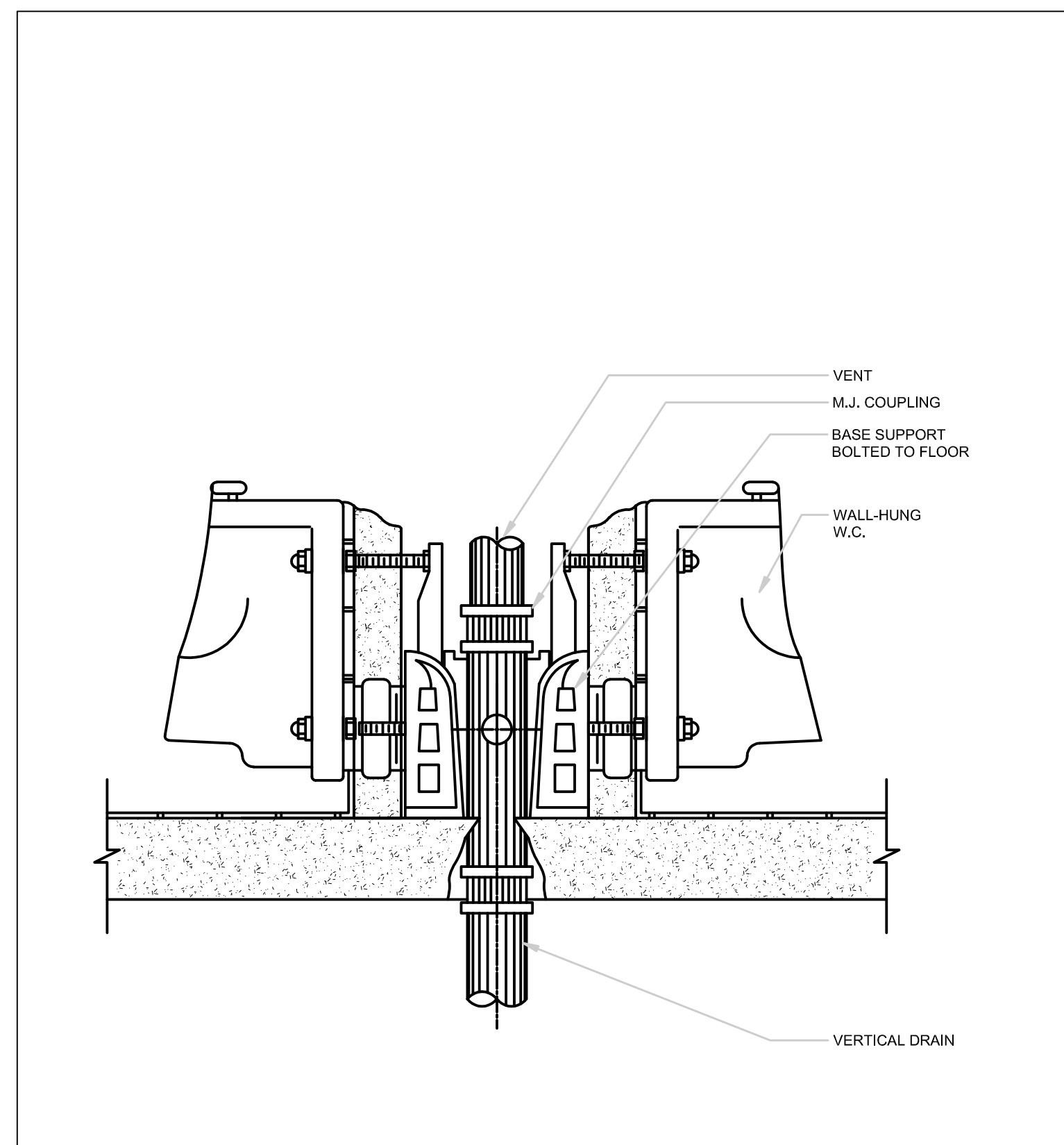
9 SHOWER DRAIN C/W MEMBRANE  
M-501 / N.T.S.



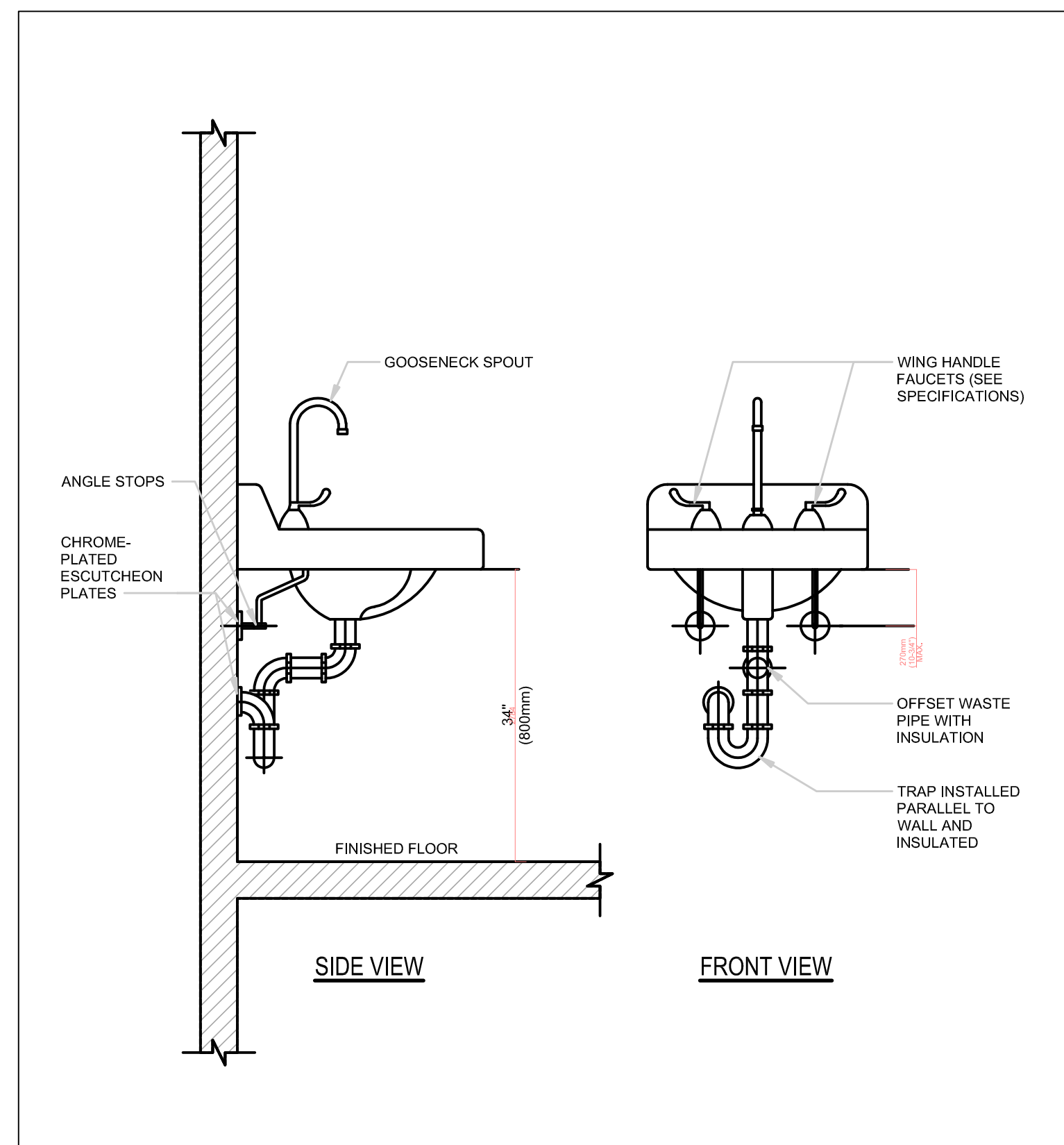
11 PIPING ARRANGEMENT FOR WALL MOUNTED EYEWASH  
M-501 / N.T.S.



12 BACK TO BACK WALL HUNG WCs - HORIZONTAL DRAIN  
M-501 / N.T.S.



13 BACK TO BACK WALL HUNG WCs - VERTICAL RUN  
M-501 / N.T.S.

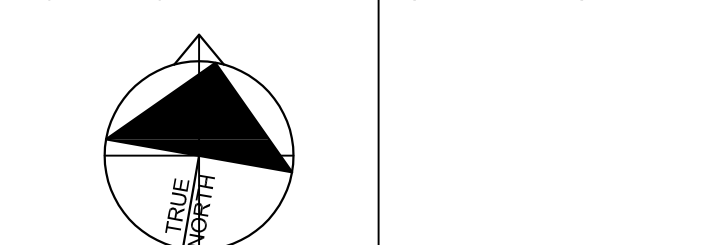


14 WALL MOUNTED SINK PIPING  
M-501 / N.T.S.

NOT FOR CONSTRUCTION

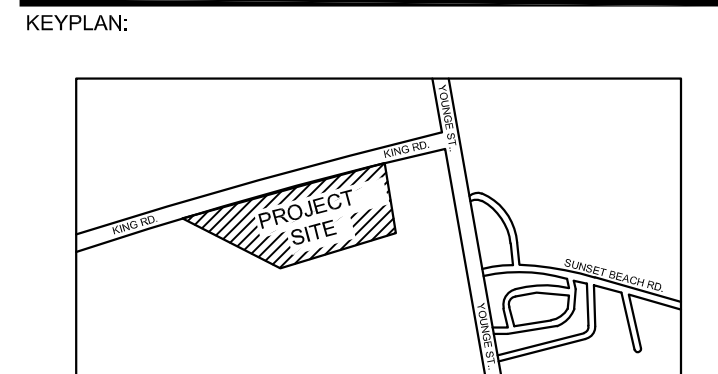
THIS BAR IS 25mm LONG WHEN PLOTTED AT CORRECT SCALE. DO NOT SCALE DRAWINGS.

25mm



PROJECT NO.: CAD010351/0022 CONTRACT NO.

DRAWN BY: JS CHECKED BY: RD APPROVED BY: RD



KEYPLAN:

3 2025-04-01 ISSUED FOR TENDER

2 2025-03-17 ISSUED FOR SPA 3rd SUBMISSION

1 2025-01-10 ISSUED FOR BUILDING PERMIT

NO. DATE ISSUED

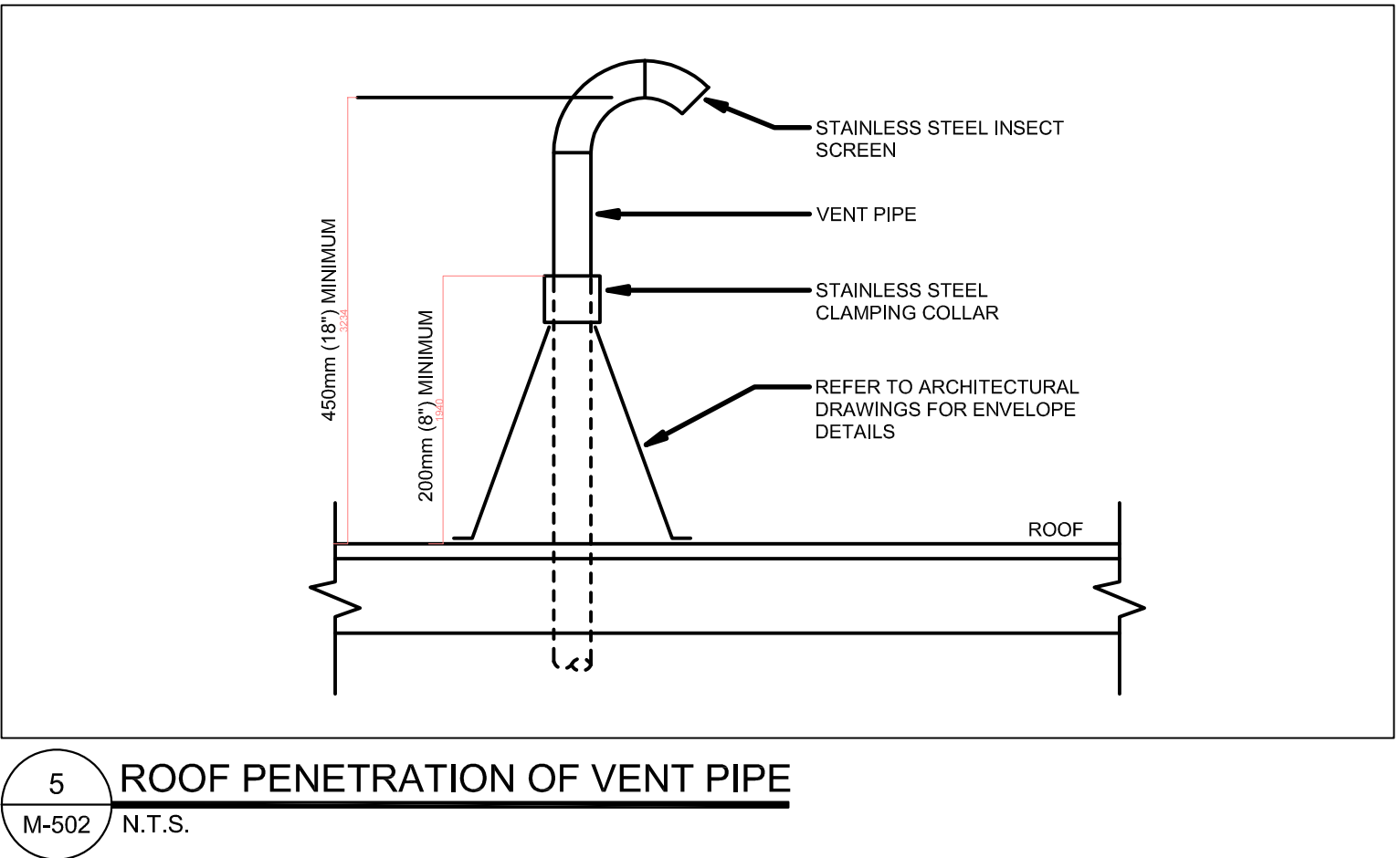
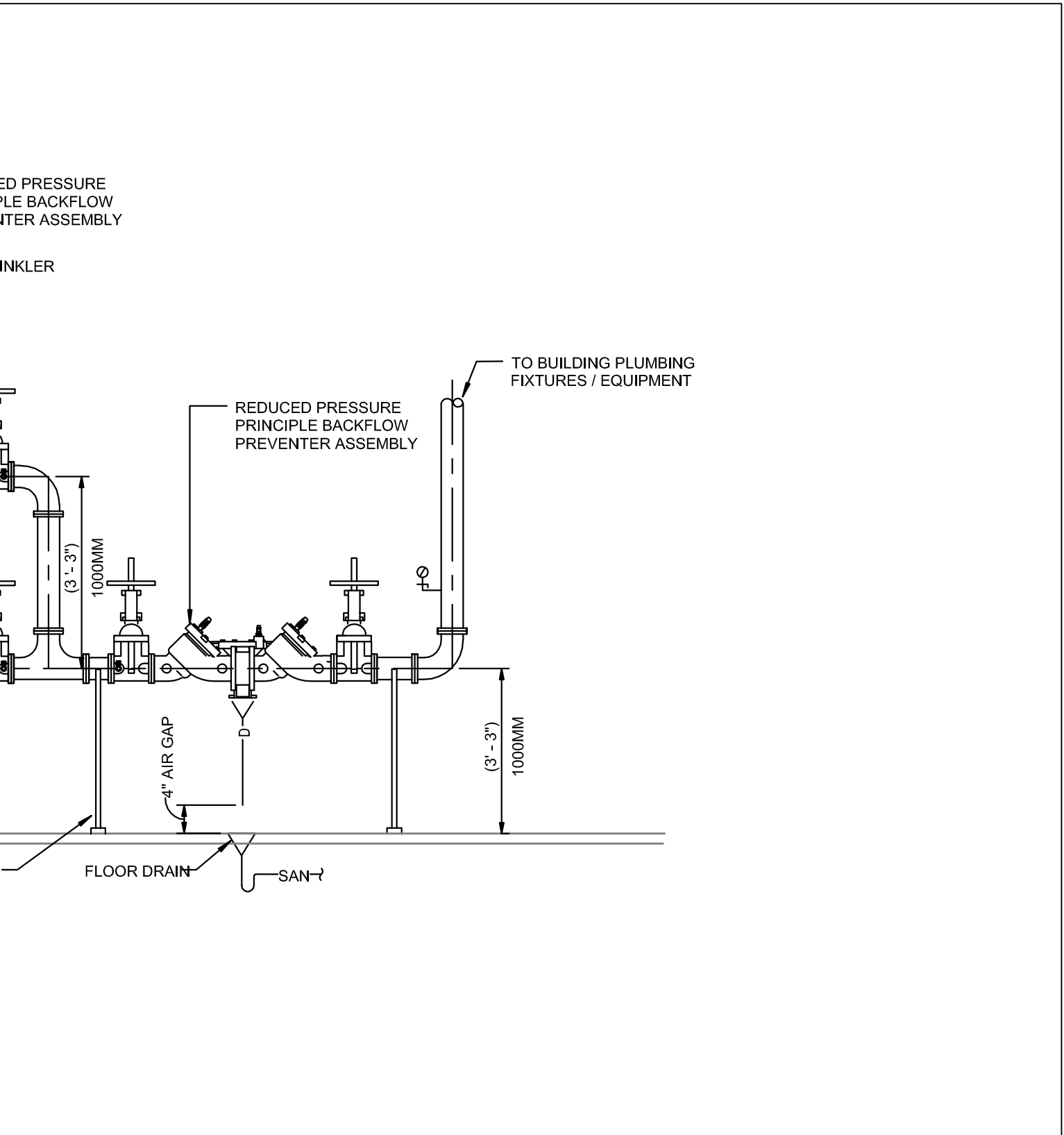
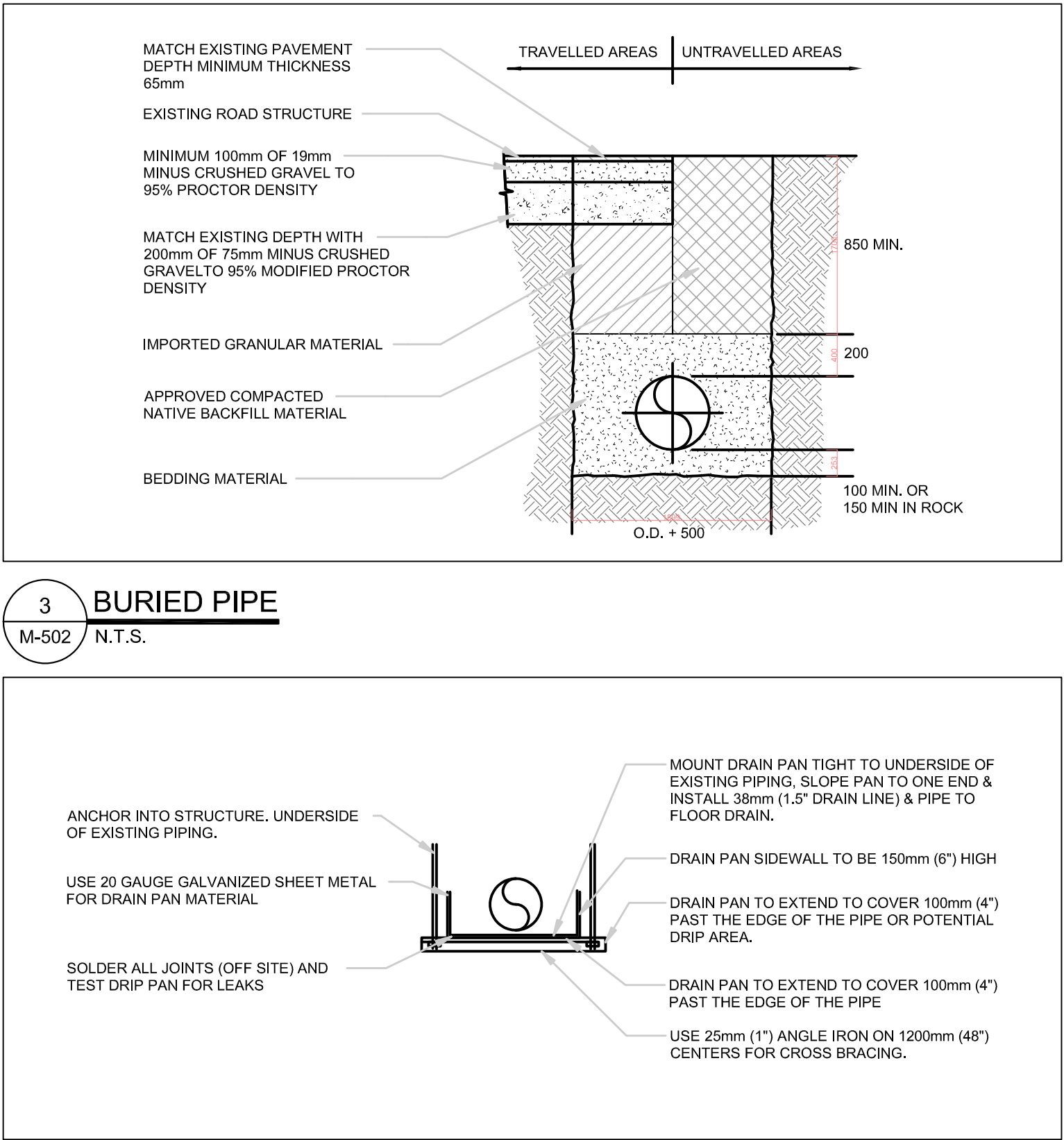
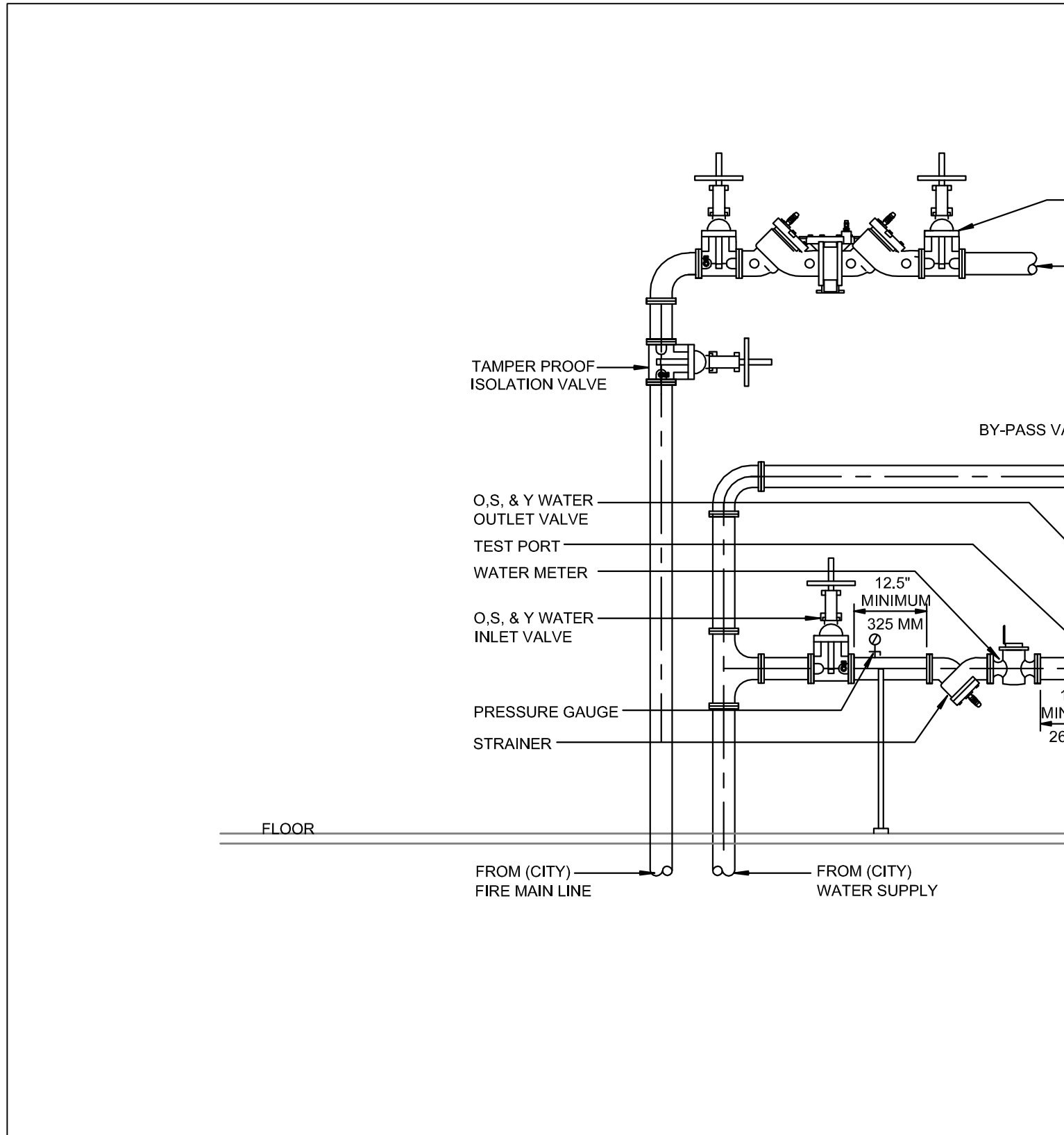
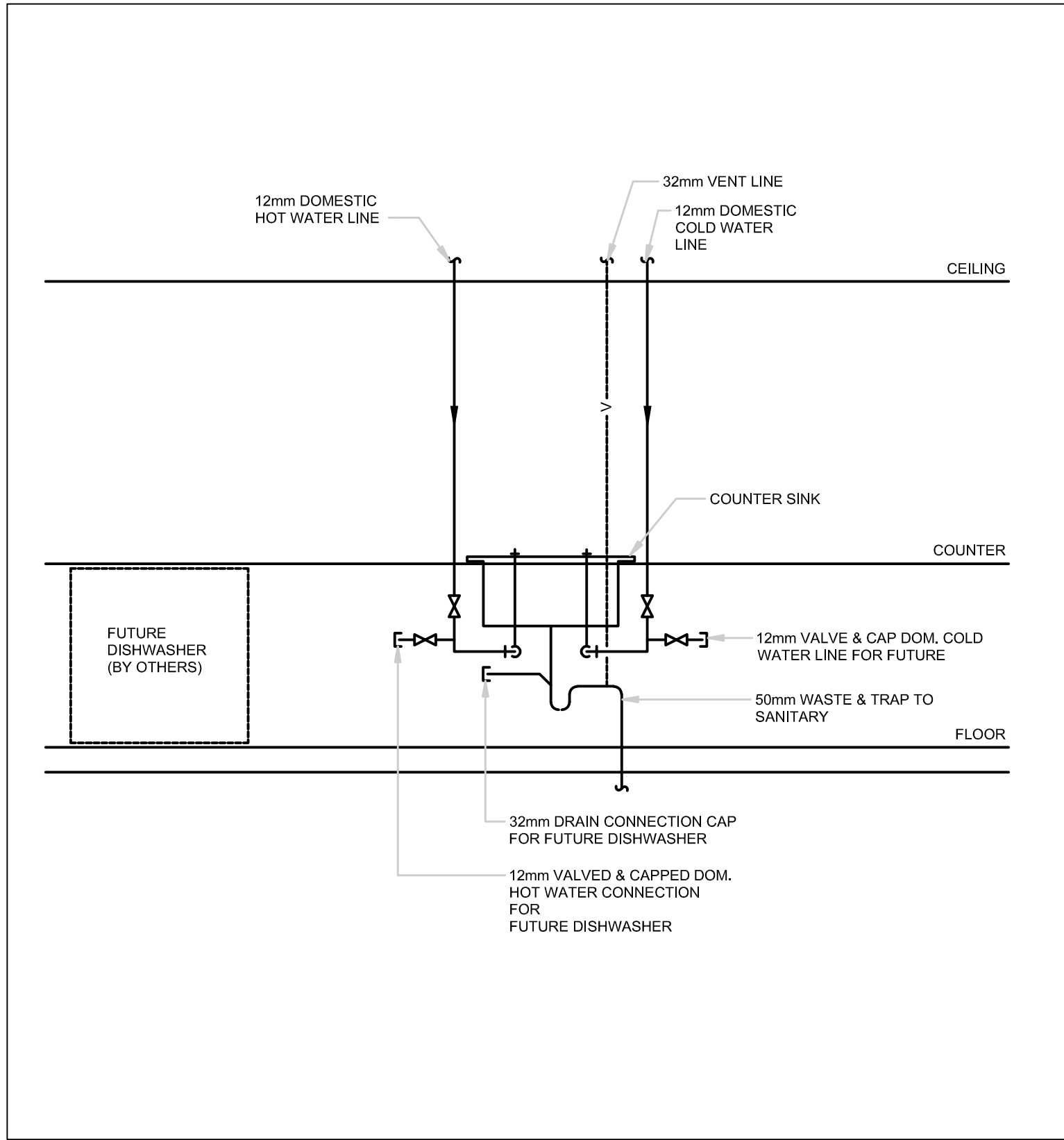
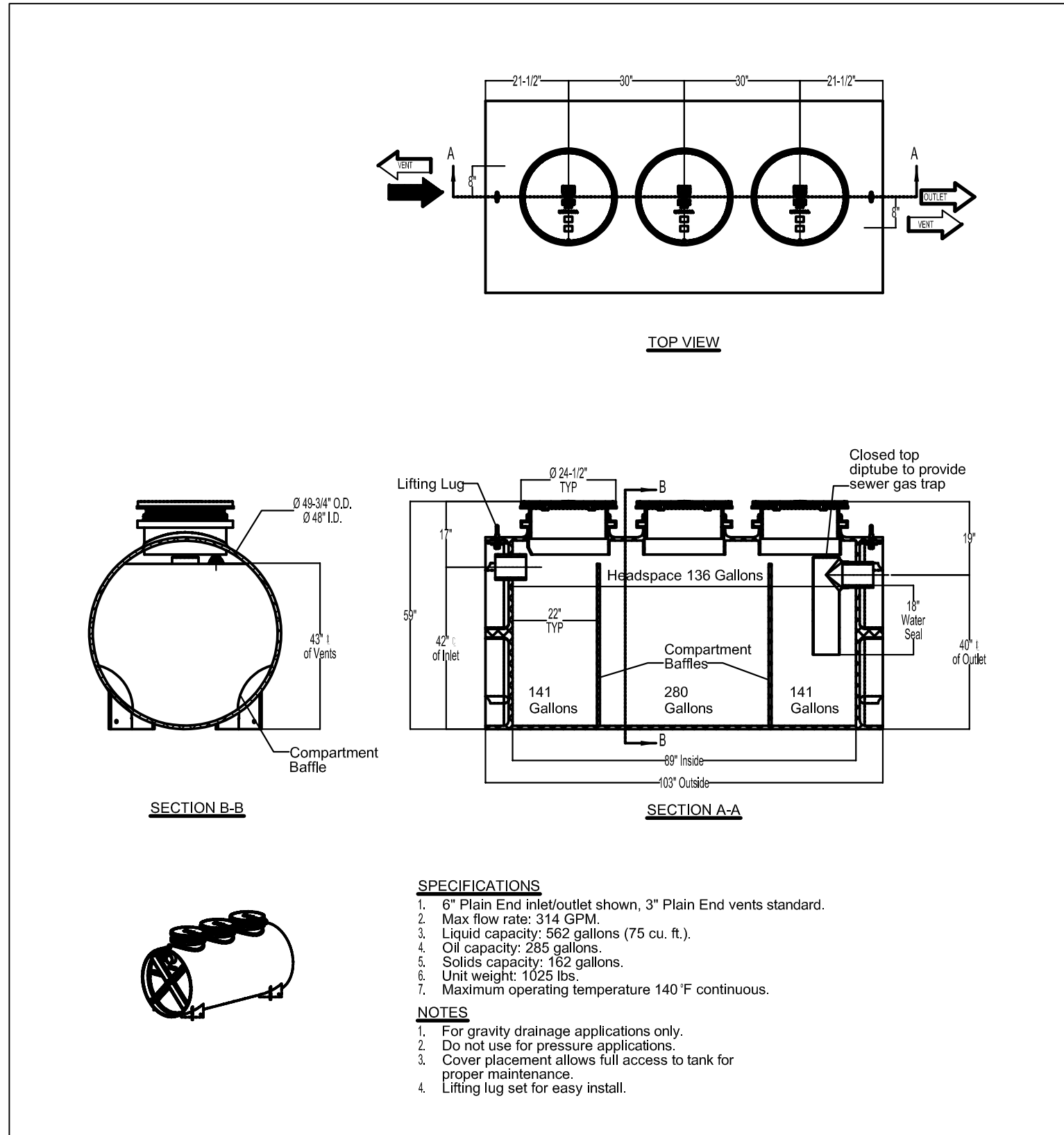
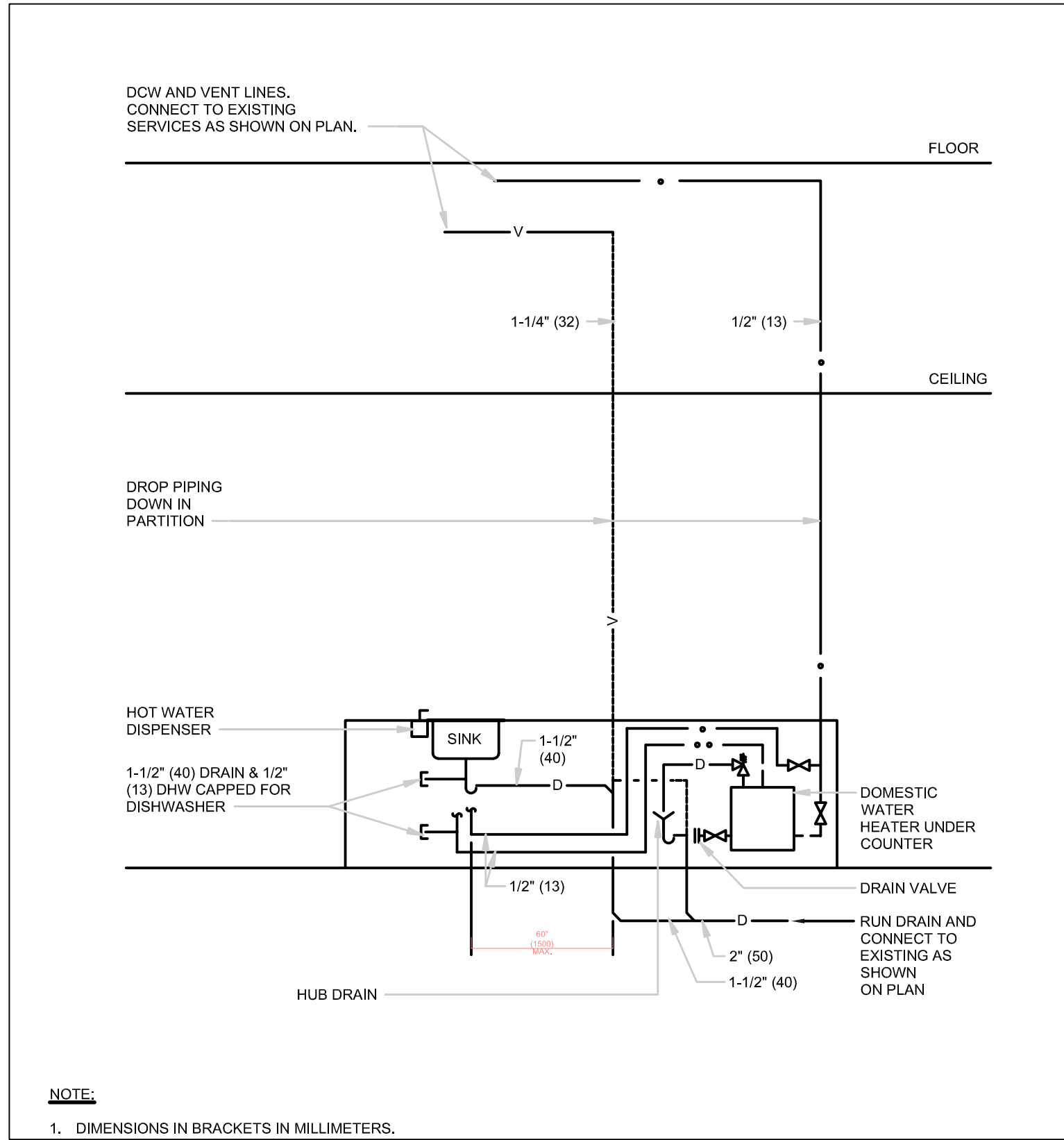
PROJECT

CONNOR BUILDING RENOVATIONS

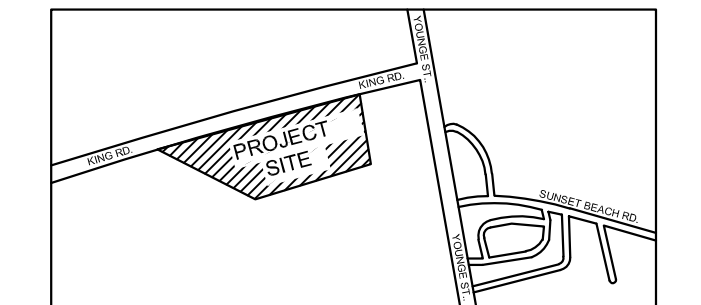
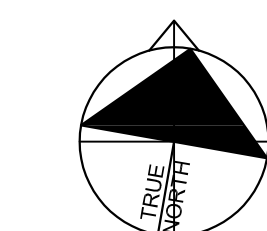
DRAWING TITLE

MECHANICAL DETAILS 1





NOT FOR  
CONSTRUCTION



3	2025-04-01	ISSUED FOR TENDER
2	2025-03-17	ISSUED FOR SPA 3rd SUBMISSION
1	2025-01-10	ISSUED FOR BUILDING PERMIT
NO.	DATE	ISSUED

CONNOR BUILDING  
RENOVATIONS

MECHANICAL  
DETAILS 2