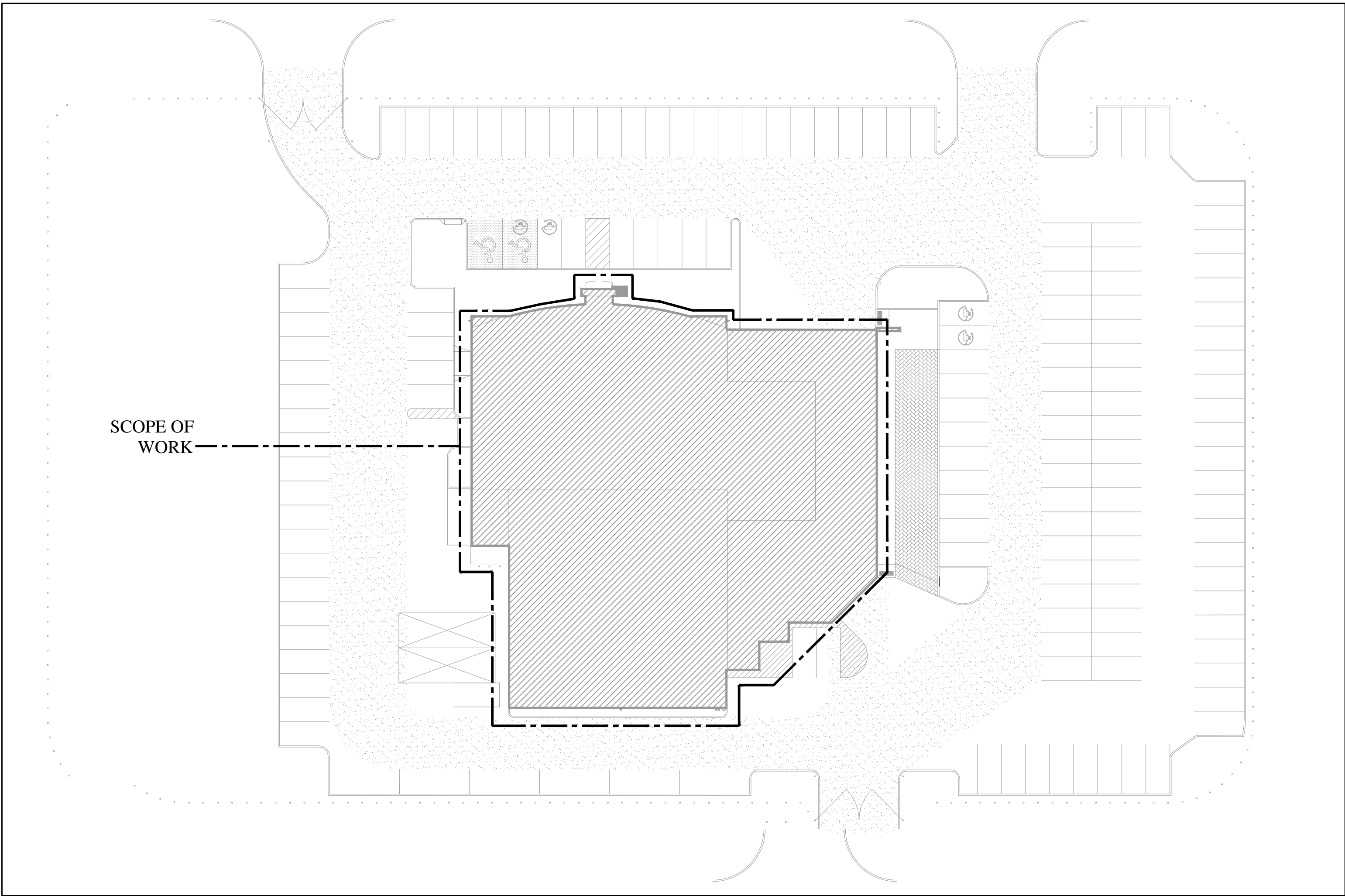


CLARINGTON TOYOTA

10 SPICER SQUARE,
BOWMANVILLE, ONTARIO
L1C 5M2

MECHANICAL DRAWINGS

DRAWING LIST			
NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
M-1	COVER SHEET	P-1	GROUND FLOOR – DEMOLITION PLUMBING AND DRAINAGE PLAN
M-2	SPECIFICATIONS SHEET	P-2	SECOND FLOOR – DEMOLITION PLUMBING AND DRAINAGE PLAN
M-3	LOAD CALCULATION AND LEGEND SHEET	P-3	GROUND FLOOR – NEW PLUMBING AND DRAINAGE PLAN
M-4	DEMOLITION MECHANICAL ROOF PLAN	P-4	SECOND FLOOR – NEW PLUMBING AND DRAINAGE PLAN
M-5	GROUND FLOOR – DEMOLITION HVAC PLAN	M-10	DETAILS SHEET NO. 1
M-6	SECOND FLOOR – DEMOLITION HVAC PLAN	M-11	DETAILS SHEET NO. 2
M-7	NEW MECHANICAL ROOF PLAN	M-12	DETAILS SHEET NO. 3
M-8	GROUND FLOOR – NEW HVAC PLAN	M-13	EQUIPMENT SCHEDULES SHEET NO. 1
M-9	SECOND FLOOR – NEW HVAC PLAN	M-14	EQUIPMENT SCHEDULES SHEET NO. 2



KEY PLAN

SCALE: N.T.S.

DISCLAIMER:

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The contractor is to verify and accept responsibility for all dimensions and conditions on site and must notify IANUZZIELLO & ASSOCIATES INC. of any variations from the drawings.

CONSULTANT:



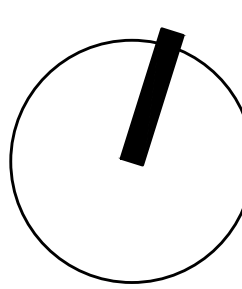
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2025-04-01	2	ISSUED FOR PRELIMINARY PRICING	J.I.	
2025-01-31	1	ISSUED FOR PERMIT	J.I.	
DATE	REV.	DESCRIPTION	DRN BY	

REVISION RECORD

SCALE:

NORTH ARROW



ARCHITECT:



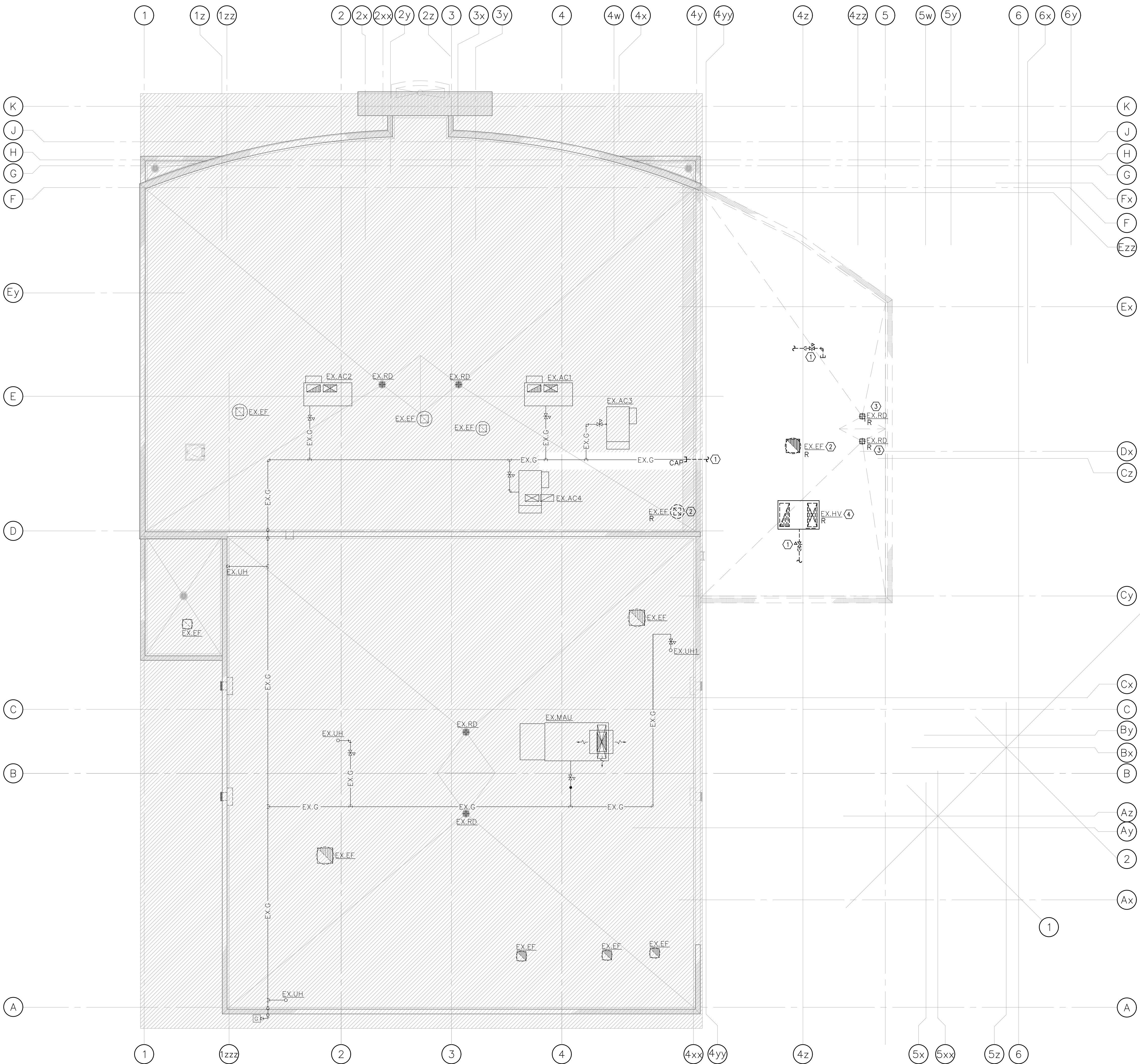
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PROJECT
CLARINGTON TOYOTA

LOCATION
10 SPICER SQUARE
BOWMNVILLE, ON

DRAWING TITLE COVER SHEET	DRAWING No. M-1
SCALE: N.T.S.	DRAWN BY: T.Y.
PROJECT NO. 23217	CHECKED BY: J.I.

GENERAL SPECIFICATIONS		GENERAL SPECIFICATIONS CONT'D		HVAC SPECIFICATIONS		HVAC SPECIFICATIONS CONT'D		PLUMBING SPECIFICATIONS		DISCLAIMER: This drawing is the property of IANUZZIELLO & ASSOCIATES INC. This drawing shall be read in conjunction with the architectural, structural, mechanical and all other consultant's drawings prior to proceeding with the work. Do not scale the drawings. The contractor is to verify and accept responsibility for all dimensions and conditions on site and must notify IANUZZIELLO & ASSOCIATES INC. of any variations from the drawings.	
1. GENERAL 1.1. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE ONTARIO BUILDING CODE, CSA, ASHRAE, NFPA, ETC. WHERE CODES/STANDARD ARE PRESENT FROM MULTIPLE SOURCES, THE MOST STRINGENT SHALL BE UTILIZED. 1.2. THE FOLLOWING SPECIFICATIONS FORM AN ESSENTIAL PART OF THE CONTRACT DOCUMENTS. REFER TO AND COORDINATE WITH ALL OTHER DIVISIONS, SECTIONS AND SPECIFICATIONS TO PROVIDE A COMPLETE AND OPERATIONAL INSTALLATION. ADHERE TO AND BE GOVERNED BY CONTRACT DOCUMENTS. 1.3. FOR THE PURPOSE OF THESE SPECIFICATIONS, DRAWINGS AND CONTRACT DOCUMENTS, THE WORD "PROVIDE" REFERS TO THE SUPPLY, INSTALLATION AND TESTING OF THE RESPECTIVE EQUIPMENT/COMPONENTS. 1.4. CONTRACTOR SHALL REPORT ALL APPARENT DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS PRIOR TO BID SUBMISSION. NO EXCEPTIONS WILL BE GIVEN TO CONTRACTORS WHO DO NOT COMPLETELY UNDERSTAND THE SCOPE OF WORK. 1.5. ALL MECHANICAL WORK SHALL BE COORDINATED AND SCHEDULED WITH ALL OTHER DIVISIONS/TRADES. 1.6. THIS CONTRACTOR SHALL VISIT THE SITE AND COMPLETELY INVESTIGATE AND UNDERSTAND THE EXISTING CONDITIONS AND THEIR RELATION TO THE DESIGN DRAWINGS/DOCUMENTS. NO CONSIDERATION WILL BE GIVEN TO THE CONTRACTOR FOR ANY HINDRANCES TO THE MECHANICAL INSTALLATION FROM SITE CONDITIONS WHICH EXISTED PRIOR TO BID SUBMISSION. AS SUCH AND WHERE REQUIRED, THE CONTRACTOR SHALL PROVIDE INTERFERENCE DRAWINGS AND SHALL SUBMIT THEM TO THE CONSULTANT FOR REVIEW. 1.7. PROVIDE NEW MATERIALS AND EQUIPMENT OF ACCEPTABLE QUALITY THAT ARE MANUFACTURED IN CANADA OR THE UNITED STATES AND BEAR THE APPROVAL OF RECOGNIZED NORTH AMERICAN STANDARD ASSOCIATIONS SUCH AS CSA, ASME, ETC. THE CONTRACTOR SHALL MAXIMIZE THE UTILIZATION OF CANADIAN EQUIPMENT, MATERIALS, ETC. 1.8. ALL EQUIPMENT, MATERIALS, ETC. SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. 1.9. THE MECHANICAL DRAWINGS DISPLAY A GENERAL DESIGN AND INSTALLATION. THEREFORE THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE CONSULTANT PRIOR TO INSTALLATION. 1.10. THESE DRAWINGS HAVE BEEN PREPARED FOR MECHANICAL AND DO NOT ACCURATELY DISPLAY ALL ELECTRICAL, STRUCTURAL AND ARCHITECTURAL ELEMENTS. REFER TO OTHER DIVISION'S DRAWINGS FOR CLARIFICATION. 1.11. IN NO CASE SHALL THESE DRAWINGS BE SCALED. ALL ROUGH-IN'S SHALL BE COORDINATED WITH OTHER DIVISIONS/TRADES. 1.12. DO NOT PROCEED WITH WORK OUTSIDE THE SCOPE OF THE DESIGN DRAWINGS AND SPECIFICATIONS WITHOUT WRITTEN CONSENT FROM THE OWNER. THIS APPLIES TO ALL MECHANICAL DIVISION CHANGE NOTICES AS ISSUED BY THE CONSULTANT. 1.13. IN REGARDS TO MECHANICAL CHANGE NOTICES, THE CONTRACTOR SHALL PROVIDE A BREAKDOWN INCLUDING, BUT NOT LIMITED TO, MATERIALS, LABOUR, MARK-UP, ETC. QUOTATIONS SHALL BE BASED ON THE ALLPRISER PRICE BOOK FOR EQUIPMENT AND THE MECHANICAL CONTRACTORS OF AMERICA, SMACNA, AND NATIONAL ELECTRICAL CONTRACTORS FOR LABOUR RATES. 1.14. WHERE MECHANICAL EQUIPMENT HAS BEEN PRE-PURCHASED, THE CONTRACTOR SHALL ACCEPT ALL RESPONSIBILITY FOR EQUIPMENT DELIVERY, INSTALLATION, TESTING AND WARRANTY, SIMILAR TO AS IF THE EQUIPMENT WAS PURCHASED BY MECHANICAL DIVISION. 1.15. THE CONTRACTOR SHALL WARRANTY ALL MATERIALS, EQUIPMENT, INSTALLATION AND QUALITY OF WORKMANSHIP FOR A MINIMUM OF ONE (1) YEAR UNLESS OTHERWISE NOTED. 1.16. IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO PAY FOR ALL CHARGES AND DAMAGES ASSOCIATED WITH EQUIPMENT THAT IS NOT PROVIDED AS SPECIFIED AND INCLUDES NOT MEETING THE MANUFACTURER'S RATINGS, PUBLISHED DATA AND/OR THE APPLICABLE GOVERNING STANDARDS. 1.17. THE CONTRACTOR MAY SUBMIT FOR ALTERNATE MATERIALS AND EQUIPMENT ONLY WHEN THE SPECIFIED ARE NOT AVAILABLE OR WILL ADVERSELY IMPACT THE COMPLETION SCHEDULE. THE CONTRACTOR SHALL COMPENSATE THE PRIME CONSULTANTS FOR THE TIME REQUIRED TO REVIEW THE ALTERNATE SUBMITTALS. 1.18. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL CONFIRM ON HIS SUBMISSION LETTER IDENTIFYING ALL ADDENDA HAVE BEEN RECEIVED AND INCLUDED IN THE BID.		AS TEMPORARY SERVICES, THIS REQUIREMENT SHALL ALSO APPLY TO ALL OTHER MECHANICAL SYSTEMS INCLUDING HVAC, PLUMBING AND DRAINAGE, ETC. 3.4. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND RESTORATION. WHERE REQUESTED, THE CONTRACTOR SHALL CONTRACT THE SERVICES OF THE BASE BUILDING TRADES AT MECHANICAL DIVISION EXPENSE. 3.5. PROVISIONS SHALL BE MADE FOR THE PROTECTION OF MECHANICAL DIVISION WORK UNTIL THE COMPLETION OF THE PROJECT. THIS MAY INCLUDE, BUT IS NOT LIMITED TO, COVERING OF EQUIPMENT OPENINGS AND DUCTWORK, PLUMBING FIXTURES, FLOOR DRAINS, ETC. 3.6. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL MAKE ALL FINAL ADJUSTMENTS TO EQUIPMENT AS WELL AS REMOVE ALL PROTECTION. ALL INSTALLATIONS SHALL BE CLEANED THOROUGHLY AND TESTED FOR PROPER OPERATION. CHANGE ALL AIR AND WATER FILTERS AS REQUIRED. 3.7. IN REGARD TO INTERRUPTION OF SERVICES, THE CONTRACTOR SHALL CARRY OUT HIS WORK IN A MANNER THAT CAUSES THE LEAST DISTURBANCE TO THE OWNER. PROVIDE NOTIFICATION TO THE OWNER IN WRITING BEFORE AT LEAST 72 HOURS OF THE SCHEDULED INTERRUPTION. 3.8. ARRANGE AND PAY FOR THE SAFE DISPOSAL OF REMOVED ITEMS AS SPECIFIED. PROVIDE PROOF OF SAFE DISPOSAL FOR ITEMS SUCH AS HVAC REFRIGERANT. COORDINATE THE TIME AND METHOD OF DISPOSAL WITH THE OWNER. FOR EXAMPLE, CLEARLY INDICATE THE ROUTE THAT WILL BE TAKEN FROM THE INSIDE OF THE BUILDING TO THE OUTDOORS, AS WELL AS THE STORAGE LOCATION OUTDOORS IF APPLICABLE. 3.9. WHERE COMPONENTS ARE TO BE REUSED, THE CONTRACTOR SHALL CLEAN AND TEST THE COMPONENT TO ENSURE PROPER OPERATION. THE CONSULTANT SHALL BE NOTIFIED IN THE EVENT THERE IS A DEFICIENCY WITH THE COMPONENT. 3.10. PERFORM WORK SO AS TO CAUSE MINIMAL DISTURBANCE TO OWNER AND/OR ADJACENT AREAS. MINIMIZE DUST AND NOISE AND PROVIDE TEMPORARY AIR FILTERS ON AIR HANDLING SYSTEMS AFFECTED BY THE AREA OF WORK. ALL COSTS ASSOCIATED WITH DAMAGES AS A RESULT OF THE MECHANICAL INSTALLATION SHALL BE COVERED BY MECHANICAL DIVISION. MAINTAIN SAFETY STANDARDS AND PROVIDE ADEQUATE SIGNAGE FOR BOTH WORKERS AND OCCUPANTS. 3.11. WHERE CUTTING OR CORE DRILLING OF THE EXISTING CONCRETE STRUCTURE IS REQUIRED, THE MECHANICAL CONTRACTOR SHALL CONTRACT THE SERVICES OF AN EXPERIENCED AND REPUTABLE COMPANY TO CARRY OUT X-RAYING. THE RESULTS SHALL BE SUBMITTED TO THE BASE BUILDING STRUCTURAL ENGINEER AND NO CUTTING OR CORING SHALL TAKE PLACE UNTIL WRITTEN APPROVAL IS RECEIVED. THE CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST TO PERFORM X-RAYING AT LEAST 72 HOURS IN ADVANCE.		1. GENERAL 1.1. PROVIDE ALL LABOUR AND MATERIALS TO SUPPLY AND INSTALL THE DUCTWORK AND SHEET METAL SYSTEMS AS INDICATED ON MECHANICAL DRAWINGS. THIS INCLUDES INSTALLING THE DUCTWORK, ACCESSORIES, ASSOCIATED ITEMS AND ALL NECESSARY CONNECTIONS TO OUTLETS, INLETS AND EQUIPMENT TO PROVIDE A COMPLETE SYSTEM. 1.2. UNLESS OTHERWISE NOTED, FABRICATE ALL DUCTWORK SYSTEMS, INCLUDING DUCTWORK, HOUSINGS, DAMPERS AND ACCESS DOORS, WITH GALVANIZED STEEL SHEET METAL MEETING ASTM A653 AND A924. CONSTRUCTION OF THE DUCTWORK SYSTEMS SHALL BE IN STRICT ACCORDANCE WITH SMACNA. THE ADJUSTMENT OF CLEANLINESS AND ASHRAE RULING DUCTWORK SHALL BE SMOOTH ON THE INSIDE AND SHALL BE FREE FROM RATTLING OR VIBRATION. DUCTWORK NOT MEETING THESE STANDARDS WILL BE REPLACED AT NO EXTRA CHARGE TO THE OWNER. 1.3. CONSTRUCT DUCTWORK AND SEAL ACCORDING TO THE APPROPRIATE SMACNA STANDARDS. LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED WITH THE ONE (1) INCH PRESSURE CLASSIFICATION AND ALL OTHER DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE THREE (3) INCH CLASSIFICATION. DUCT PRESSURES SHALL BE CLASSIFIED AS FOLLOWS: 1.3.1. LOW: DUCT PRESSURES (LOW) OF 1/2" TO 2" W.C. AND NOT EXCEEDING AN AIR VELOCITY OF 2000 FPM. 1.3.2. MEDIUM: DUCT PRESSURES EXCEEDING 2" W.C. OR AIR VELOCITY OF 2000 FPM. 1.4. ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR TO TAKE INTO ACCOUNT DUCT LINERS, ETC. WHEN PERFORMING TAKE-OFFS. 1.5. MAKE ALL DUCT CONNECTIONS, CONCENTRIC AND ECCENTRIC TRANSITIONS, ETC., IN ACCORDANCE WITH SMACNA. 1.6. PROVIDE DUCT ACCESS DOORS AT LOCATIONS AS SHOWN ON DRAWINGS, AS WELL AS AT THE LINKAGE SIDE OF AUTOMATIC DAMPERS, FIRE DAMPERS AND ANY OTHER SERVICE, BALANCE OR CONTROL DEVICE REQUIRING PERIODIC MAINTENANCE. THE DOORS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA AND SHALL MATCH THE PRESSURE RATING OF THE DUCTWORK SYSTEM TO WHICH IT IS BEING INSTALLED. 1.7. PROVIDE FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET CONNECTION FOR EACH FAN BETWEEN DUCTWORK AND INLET AND OUTLET COLLARS. FLEXIBLE CONNECTIONS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE NEOPRENE COATED FIBERGLASS FABRIC. FOR OUTDOOR CONNECTIONS, PROVIDE A CONNECTOR THAT IS SUITABLE FOR EXPOSURE TO SUNLIGHT AND THE ELEMENTS. 1.8. PROVIDE FIRE DAMPERS WHERE INDICATED ON MECHANICAL DRAWINGS. ALL DAMPERS SHALL BE SELECTED TO SUIT THE RATING OF THE FLOOR OR WALL ASSEMBLY IN WHICH IT WILL BE INSTALLED, WITH A RATING OF NO LESS THAN 1-1/2 HOURS. FIRE DAMPERS SHALL BE ULC LISTED AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, NFPA 90A AND THE AUTHORITIES HAVING JURISDICTION. TYPE A FIRE DAMPERS ARE PERMITTED FOR NON-DUCTED TRANSFER DUCTWORK. TYPE B FIRE DAMPERS SHALL BE USED IN ALL OTHER CASES UNLESS OTHERWISE NOTED. 1.9. MANUAL BALANCING DAMPERS INSTALLED IN DUCTWORK NOT EXCEEDING 12" ON THE LONGEST SIDE SHALL BE CONSTRUCTED AS PER SMACNA. PROVIDE OPPOSED BLADE DAMPERS WHERE THE DIMENSION OF THE LONGEST SIDE OF THE DUCTWORK EXCEEDS 12", OPPOSED-BLADE DAMPERS SHALL BE OF GALVANIZED STEEL CONSTRUCTION WITH LOCK SCREWS AT OPPOSITE ENDS. PROVIDE BALANCING DAMPERS AT WHERE SHOWN ON DRAWING AS WELL AS ON BRANCHES OFF OF MAIN DUCTWORK WITH ADEQUATE ACCESS. 1.10. PROVIDE ALL DIFFUSERS, REGISTERS, GRILLES, ETC. OF TYPE AND SIZE AS INDICATED ON MECHANICAL DRAWINGS. CONFIRM ALL AIR TERMINAL COLOURS WITH ARCHITECT/INTERIOR DESIGNER, REGARDLESS OF SPECIFICATION ON MECHANICAL DRAWINGS. MECHANICAL CONTRACTOR IS TO COORDINATE INSTALLATION OF DOOR GRILLES WITH ARCHITECTURAL DRAWINGS AND GENERAL CONTRACTOR. 1.11. DUCTWORK INSULATION AND LINERS: WHERE NOTED ON MECHANICAL DRAWINGS, AS PER THE FOLLOWING: 1.11.1. ACOUSTIC LINING: <ul style="list-style-type: none">RECTANGULAR DUCTWORK: PROVIDE ONE INCH (1") THICK ACOUSTIC LINING EQUAL TO JOHNS MANVILLE LINACOUSTIC RC COMPLETE WITH PERMACOTE ACRYLIC ANTI-MICROBIAL COATING. 1.11.2. THERMAL INSULATION: <ul style="list-style-type: none">1.11.2.1. PROVIDE THERMAL INSULATION WHERE NOTED ON MECHANICAL DRAWINGS. INSULATE ALL DUCTWORK LEAVING OR ENTERING THE BUILDING FOR THE FIRST 6 FT. FROM THE BUILDING PENETRATION WITH 2" OF THERMAL INSULATION.1.11.2.2. DUCTWORK: PROVIDE ONE INCH (1") JOHNS MANVILLE SERIES 814 SPIN-GLAS FIBER GLASS DUCT BOARD INSULATION WITH FSK FACING. IMPALNE ON MECHANICALLY FASTENED PINS LOCATED AT NOT MORE THAN 12" ON CENTRE, AND SECURE WITH SPEED WASHERS. WHERE DUCTWORK IS INSTALLED OUTSIDE THE BUILDING OR EXPOSED TO THE ELEMENTS, PROVIDE TWO INCHES (2") OF THERMAL INSULATION, BUTT JOINTS TIGHTLY TOGETHER AND SEAL WASHERS, BREAKS AND JOINTS WITH SELF-ADHERING 4" WIDE PLAIN ALUMINUM TAPE, OR ADHERE FOIL WITH CHILDERS CPB2 OR BAKELITE 230-39 ADHESIVE.1.11.2.3. RIGID ROUND (SPIRAL) DUCTWORK: PROVIDE ONE INCH (1") JOHNS MANVILLE MICROLITE EQ FSK FIBER GLASS DUCT WRAP INSULATION WHERE INDICATED ON DRAWINGS. ADHERE INSULATION TO DUCT SURFACE AND LAP ALL EDGES AT LEAST 2". SEAL JOINTS WITH 4" WIDE ALUMINUM FOIL TAPE.1.11.2.4. FLEXIBLE DUCTWORK: PROVIDE ONE INCH (1.25") JOHNS MANVILLE FLEX-GLAS EQ FLEXIBLE DUCTWORK INSULATION WITH FSK FACING. LAP JOINTS AND SEAL WITH 4" WIDE ALUMINUM FOIL TAPE. 1.12. CONTRACTOR TO CLEAN ALL REUSED DUCTWORK. 1.13. CONTRACTOR TO INSPECT THE CONDITION OF ALL EXISTING EQUIPMENT AND PERFORM ALL NECESSARY REPAIRS TO PROVIDE A COMPLETE WORKING SYSTEM. 1.14. CONTRACTOR TO ENSURE ALL NEW/EXISTING VAV BOXES ARE CONNECTED TO MALL B.A.S. ALL CONTROLS WORK TO BE PERFORMED BY LANDLORD'S CONTROLS CONTRACTOR AT TENANT'S EXPENSE. 1.15. CONTRACTOR SHALL RETAIN AN AABC OR NEBB CERTIFIED BALANCING CONTRACTOR TO PERFORM ALL AIR AND WATER BALANCING AND TESTING/ADJUSTMENT OF HVAC SYSTEMS. SUBMIT AIR AND WATER BALANCING REPORT TO LANDLORD. USE LANDLORD APPROVED BALANCING CONTRACTOR. OBTAIN THE LIST OF APPROVED CONTRACTORS FROM MALL OPERATIONS. 1.16. CONTRACTOR SHALL VERIFY EXISTING AIR FLOW CAPACITY OF HVAC SYSTEM SERVING THEIR SPACE IMMEDIATELY AFTER REVIEWING THEIR PREMISES. TENANT SHALL NOTIFY THE LANDLORD OF THEIR FINDINGS AND CONFIRM SUFFICIENT AIR IS AVAILABLE TO MEET THEIR COOLING LOADS.		4. CONTROLS 4.1. PROVIDE ALL CONTROLS, WIRING, CONDUIT, ACCESSORIES, ETC. AND INTERLOCK WITH EQUIPMENT/STARTERS AS INDICATED ON DRAWINGS. 4.2. WHEN INSTALLED IN CEILING PLENUMS, CABLE MAY BE FREE-AIR, UNLESS OTHER 4.3. WHEN INSTALLED IN OPEN AREAS, PROVIDE EMT CONDUIT, FITTINGS, MOUNTING ACCESSORIES, ETC. TO DELIVER A NEAT AND CLEAN INSTALLATION. 4.4. MOUNTING HEIGHTS: 4.4.1. OCCUPANT ADJUSTABLE: MOUNT AT 3'-11" (1200 MM) A.F.F. 4.4.2. NON-ADJUSTABLE (SENSOR ONLY): MOUNT AT 5'-0" (1500 MM) A.F.F. **CONFIRM MOUNTING HEIGHTS WITH CONSULTANT PRIOR TO INSTALLATION. 4.5. COORDINATE INSTALLATION OF ALL CONTROL DEVICES/SENSORS WITH ARCHITECTURAL DRAWINGS. 4.6. INSTALL CONTROL DEVICES/SENSORS CLEAR OF DIMMERS SO AS TO AVOID INTERFERENCE. 4.7. THE MECHANICAL CONTRACTOR SHALL TEST ALL CONTROLS/INTERLOCKS FOR GOOD OPERATION PRIOR TO PROJECT CLOSE-OUT. PROVIDE A REPORT FOR REVIEW TO THE ENGINEER INDICATING DEFICIENCIES. 4.8. WIRE ALL DEVICES TO THEIR RESPECTIVE MAGNETIC STARTERS AND PROVIDE POWER TO DIV15 CONTROL PANELS FROM NEAREST AND MOST SUITABLE ELECTRICAL PANEL. 4.9. CONTRACT THE SERVICES OF THE BASE BUILDING APPROVED CONTROLS CONTRACTOR WHERE APPLICABLE.		1. GENERAL 1.1. PROVIDE PLUMBING SYSTEMS AS PER DRAWINGS, SPECIFICATIONS, THE LATEST EDITION OF THE ONTARIO BUILDING CODE, MUNICIPAL BY-LAWS AND THE AUTHORITY HAVING JURISDICTION. THE TERM "SYSTEM" REFERS TO ALL PIPING, FITTINGS, SUPPORTS, CURBS, ACCESSORIES, ETC. 1.2. ALL ITEMS REQUIRED FOR PLUMBING SYSTEMS SHALL BE CSA APPROVED UNLESS OTHERWISE NOTED. 1.3. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS PRIOR TO BID AND CONTRACT AWARD TO ENSURE THAT PIPING INVERTS, LOCATIONS, DIMENSIONS AND LENGTHS ARE SUFFICIENT IN TERMS OF ARRANGEMENT FOR THE RUNS SHOWN ON MECHANICAL DRAWINGS. REPORT DISCREPANCIES TO ENGINEER IMMEDIATELY. 1.4. CARRY OUT TESTING ON ALL SYSTEMS INCLUDING SANITARY DRAINAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND DOMESTIC WATER SYSTEMS AS PER THE CONSTRUCTION CODE AND THE AUTHORITIES HAVING JURISDICTION. TESTS MAY INCLUDE, BUT ARE NOT LIMITED TO, A WATER TEST, PRESSURE TEST, BALL TEST AND FINAL TEST. 1.5. PROVIDE FIRESTOPPING AT ALL FIRE-RATED WALL AND FLOOR ASSEMBLIES AS PER THE 'GENERAL SPECIFICATIONS'. 1.6. COORDINATE EXACT LOCATIONS OF ALL PLUMBING FIXTURES WITH ALL TRADES AND ARCHITECTURAL/INTERIOR DESIGN DRAWINGS. DO NOT SCALE MECHANICAL DRAWINGS 1.7. WHERE PLUMBING FIXTURES ARE SPECIFIED, THE CONTRACTOR SHALL PROVIDE ALL ACCESSORIES AND APPURTENANCES TO PROVIDE A FULL AND COMPLETE INSTALLATION OF THE RESPECTIVE FIXTURE. THIS MAY INCLUDE, BUT IS NOT LIMITED TO, STOP VALVES, RISER PIPING, ESCUTCHEON PLATES, ETC. 1.8. PROVIDE VENTING SYSTEMS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE. 1.9. PRIOR TO BID SUBMISSION THE CONTRACTOR SHALL EXAM THE SITE INCLUDING THE SPACES BELOW NEW AND/OR RENOVATED AREAS AND CARRY IN HIS BID TO ADJUST THE UNDER-SLAB SYSTEMS ROUTING TO MEET THE DESIGN INTENT. 1.10. CORE DRILLING FOR SERVICES AND/OR SYSTEM SHALL BE PROVIDED BY THIS CONTRACTOR. ALL LOCATIONS SHALL BE SUBMITTED FOR APPROVAL BY A STRUCTURAL ENGINEER BEFOREHAND.			
		4. ACCESS DOORS AND PANELS 4.1. PROVIDE ADEQUATE ACCESS TO CONCEALED EQUIPMENT AND COMPONENTS THAT REQUIRE ACCESS FOR MAINTENANCE, ADJUSTMENT AND INSPECTION. PROVIDE MARKINGS TO THE OWNER'S SATISFACTION THAT INDICATE THE LOCATIONS WHERE CONCEALED EQUIPMENT IS LOCATED. 4.2. ENSURE THAT THE SIZE OF THE DOOR COMPLIES WITH THE MANUFACTURER'S SUGGESTED ACCESS REQUIREMENTS. 4.3. COORDINATE ALL ACCESS DOOR AND PANEL SIZES AND LOCATIONS WITH ARCHITECT/INTERIOR DESIGNER. SUBMIT LAYOUT FOR REVIEW PRIOR TO INSTALLATION.						2. CLEANING, FLUSHING AND DISINFECTING OF DOMESTIC WATER PIPING 2.1. FOLLOW PROCEDURES AS OUTLINED IN THE LATEST EDITION OF STANDARD AWWA C651. ENSURE THAT THE METHODS COMPLY WITH LOCAL BY-LAWS. 2.2. PREVENT CONTAMINATING MATERIAL FROM ENTERING THE SYSTEM DURING STORAGE, CONSTRUCTION AND REPAIR. 2.3. REMOVE AND FLUSH ALL FOREIGN MATTER THAT HAS ENTERED THE PIPING. 2.4. PROTECT THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW DUE TO HYDROSTATIC PRESSURE AND DISINFECTING PROCEDURES. 2.5. CHLORINATE RESIDUAL CONTAMINATION THAT MAY REMAIN AND FLUSH THE CHLORINATED WATER WHEN COMPLETE. FOLLOWING THIS, DETERMINE THE BACTERIOLOGICAL QUALITY OF THE WATER BY LABORATORY TESTING. CONNECT THE WATER SYSTEM ONLY WHEN TEST RESULTS INDICATE AN APPROVED AND DISINFECTED SYSTEM.			
2. SUBMITTALS 2.1. THE CONTRACTOR SHALL SUBMIT THREE (3) HARD COPIES OF MECHANICAL SHOP DRAWINGS TO THE CONSULTANTS FOR REVIEW. ELECTRONIC SUBMISSION OF SHOP DRAWINGS SHALL BE DEEMED ACCEPTABLE UPON APPROVAL FROM CONSULTANT. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH THE DOCUMENT SUBMITTAL PROCESS. 2.2. ALL SHOP DRAWINGS SUBMITTED FOR REVIEW MUST BEAR THE REVIEW STAMP OF THE MECHANICAL AND GENERAL CONTRACTOR. SHOP DRAWINGS THAT DO NOT BEAR THE CONTRACTOR'S STAMP WILL BE REJECTED BY THE CONSULTANT. 2.3. SHOP DRAWINGS SHALL INCLUDE ALL INFORMATION REQUIRED FOR THE CONSULTANT TO PERFORM A REASONABLE REVIEW OF THE SUBMITTALS AS THEY PERTAIN TO THE MECHANICAL DESIGN DRAWINGS AND SPECIFICATIONS. 2.4. THE CONTRACTOR SHALL MAINTAIN ON SITE ONE (1) RECORD OF MECHANICAL DRAWINGS THAT SHALL INDICATE WITH RED LINES ALL PROJECT CONDITIONS, LOCATIONS, CONFIGURATIONS AND ANY OTHER CHANGES OR DEVIATIONS WHICH MAY VARY FROM THE ORIGINAL CONTRACT DOCUMENTS AND DRAWINGS. IN ADDITION, THIS SET SHALL INCLUDE REVISIONS AS A RESULT OF ALL ADDENDAS, CHANGE NOTICES, SITE INSTRUCTIONS, ETC. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND ENGINEER ONE (1) COPY EACH OF A HARDCOPY AND ELECTRONIC COPY (PDF) FOR REVIEW. ONE (1) SET OF BOTH COPIES SHALL ALSO BE INCLUDED IN THE CLOSEOUT DOCUMENT PACKAGE. 2.5. TWO (2) COPIES OF OPERATION AND MAINTENANCE MANUALS SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW UPON PROJECT COMPLETION. THE MANUALS SHALL CONTAIN THE FOLLOWING: <ul style="list-style-type: none">DESCRIPTION OF EACH SYSTEMDESCRIPTION OF EACH MAJOR COMPONENT OF SYSTEMALL SHOP DRAWINGS WITH APPROVAL STAMPSEQUIPMENT MANUFACTURER'S INSTALLATION AND OPERATIONMANUALS AND SPARE PARTS LISTWIRING DIAGRAMSLUBRICATION SCHEDULEEQUIPMENT IDENTIFICATION LIST WITH SERIAL NUMBERSVALVE TAG SCHEDULES AND FLOW DIAGRAMSFINAL AND REVIEWED BALANCING REPORTS (AIR AND WATER)WATER TREATMENT PROCEDURE AND TESTSCONTROL DRAWINGS AND SEQUENCES OF OPERATIONAS-BUILT DRAWINGS (HARDCOPY AND ELECTRONIC)WARRANTY DOCUMENTATIONSPRINKLER DOCUMENTATIONPHOTOS OF MAIN PLUMBING, DRAINAGE CONNECTION AND LOCATION IN PLAN		6. PIPE, DUCT AND EQUIPMENT INSTALLATION 6.1. INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT TO PROVIDE ADEQUATE CLEARANCES FOR SERVICING AS WELL AS MAXIMUM USABLE SPACE FOR ALL OTHER DIVISIONS/TRADES. 6.2. INSTALL PIPING AND DUCTWORK STRAIGHT, IN A NEAT AND CLEAN FASHION AND TIGHT TO STRUCTURES ABOVE (UNLESS OTHERWISE NOTED). 6.3. TAKE MEASURES AND PROVIDE CSA APPROVED MATERIALS TO PREVENT COPPER PIPING CORROSION FROM CONTACT WITH DISSIMILAR METALS.						3. PIPING INSULATION 3.1. PROVIDE PIPING INSULATION FOR PLUMBING SYSTEMS AS FOLLOWS: 4.1.1. DCW: TYPE 'A', 1"ø TO 4"ø - 1/2" THICK, 5" AND UP - 1" THICK 4.1.2. DHW(R): TYPE 'A', UP TO 2"ø - 1" THICK, 2-1/2"ø AND UP - 1-1/2" THICK 4.1.3. CD (HORIZONTAL): TYPE 'A', 1/2"ø AND UP - 1" THICK 3.2. TYPE 'A': JOHNS MANVILLE MICRO-LOK FIBER GLASS PIPE INSULATION COMPLETE WITH JACKET AND VAPOUR RETARDER. CONNECT SECTIONS OF INSULATION WITH BUTT STRIPS SUPPLIED BY THE INSULATION MANUFACTURER. 3.3. WHERE NOTED, RECOVER INSULATION WITH HEAVY-GAUGE PVC FITTINGS, COVER AND JACKETING EQUAL TO JOHNS MANVILLE ZESTON 300 SERIES.			
		7. HANGERS AND SUPPORTS 7.1. PROVIDE HANGER SYSTEMS FOR ALL DUCTWORK, PIPING AND EQUIPMENT TO RENDER A SAFE AND FUNCTIONAL INSTALLATION. HANGER RODS SHALL BE ATTACHED DIRECTLY TO THE STRUCTURE AND IN NO WAY SHALL BE ATTACHED TO OTHER MECHANICAL COMPONENTS OR CEILING SYSTEMS, WHERE COMPONENTS ARE TO BE SUSPENDED BETWEEN JOISTS OR BEAMS, PROVIDE AUXILIARY STEEL CHANNEL SUPPORTS TO SUIT. 7.2. FOR GENERAL CONDITIONS, PROVIDE ROUND STEEL THREADED RODS CONFORMING TO ASTM A-36, WHERE SPECIAL CONDITIONS EXIST, SUCH AS HIGH HUMIDITY OR EXPOSURE TO ELEMENTS, PROVIDE HANGER COMPONENTS TO SUIT. 7.3. IN REGARD TO ALL PIPING, PROVIDE SUPPORTS AT CONNECTIONS AND AT EVERY CHANGE IN DIRECTION. 7.4. PROVIDE ONLY BASE BUILDING APPROVED EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH BASE BUILDING OPERATORS PRIOR TO BID SUBMISSION AND INSTALLATION.						5. PIPING MATERIALS (SEE BELOW FOR MATERIALS SPECIFICATIONS) 5.1. DCW AND DHW(R) <div><div>5.1.1. ABOVE GROUND: TYPE 1</div><div>5.1.2. UNDERGROUND: TYPE 2</div></div> 5.2. SANITARY & STORM DRAINAGE PIPING <div><div>5.2.1. ABOVE GROUND: TYPE 3, TYPE 4</div><div>5.2.2. UNDERGROUND: TYPE 4 (2"ø MIN.), TYPE 5, TYPE 7</div></div> 5.3. VENT PIPING <div><div>5.3.1. ABOVE GROUND: TYPE 3, TYPE 4,</div><div>5.3.2. UNDERGROUND: TYPE 4, TYPE 5, TYPE 7</div></div> TYPE 1: TYPE L HARD DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS. TYPE 2: TYPE K SOFT ANNEALED COPPER TUBING WITH NO JOINTS. TYPE 3: TYPE DWV COPPER TUBE AND FITTINGS WITH 95/5 TIN/ANTIMONY SOLDER JOINTS. TYPE 4: CAST IRON PIPING AND FITTINGS COMPLYING WITH CAN/CSA-B70. FOR MECHANICAL JOINTS ABOVE GRADE, USE NEOPRENE OR BUTYL RUBBER COMPRESSION GASKETS TO CAN/CSA-B70 WITH STAINLESS STEEL CLAMPS. FOR MECHANICAL JOINTS BELOW GRADE, USE MISSION HEAVYWEIGHT COUPLINGS FOR HUB AND SPIGOT CONNECTIONS, PROVIDE NEOPRENE GASKET TO CAN/CSA-B70 AND COLD CAULKING COMPOUNDS. DO NOT USE HUB AND SPIGOT FOR ABOVE GROUND APPLICATIONS. TYPE 5: IPEX RING-TITE PVC SDR 35 SEWER PIPE IN COMPLIANCE WITH CSA B182.2 AND CSA B182.7. LATERALS WILL BE IPEX RING-TITE PVC SDR 28 IN COMPLIANCE WITH CSA B182.2. TYPE 6: IPEX SYSTEM PIPING AND FITTINGS COMPLYING WITH CSA B181.2, SCHEDULE 40 WITH A FLAME SPREAD RATING OF NOT GREATER THAN 25 AND A SMOKE DEVELOPED CLASSIFICATION OF LESS THAN 50. TYPE 7: ROYAL ABS-DWV PIPING AND FITTINGS CERTIFIED TO CSA B181.1.			
3. EXECUTION 3.1. PERIODIC INSPECTIONS OF THE WORK WILL BE CONDUCTED BY THE CONSULTANT OVER THE COURSE OF THE PROJECT. ANY REPORTED DEFICIENCIES SHALL BE RECTIFIED BY THE CONTRACTOR IN A TIMELY FASHION. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR NOT MEETING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND ISSUANCE OF A COMPLAINE LETTER. 3.2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL INSPECTIONS WITH MUNICIPAL OFFICIALS AND ALL OTHER AUTHORITIES HAVING JURISDICTION. 3.3. IN REGARD TO TEMPORARY SERVICES, PROVIDE, AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION, TEMPORARY FIRE PROTECTION SYSTEMS. REFRAIN FROM USING INSTALLED SYSTEMS FROM THE CONTRACT DOCUMENTS		8. STRUCTURAL AND SEISMIC 8.1. WHERE THERE IS NO STRUCTURAL DIVISION AS PART OF THE PROJECT, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE STRUCTURAL REINFORCING FOR ALL MECHANICAL SCOPE INSTALLATIONS. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER WHO IS TO PROVIDE A DESIGN BEARING THE ENGINEER'S PROFESSIONAL SEAL. THE CONTRACTOR SHALL APPLY FOR BUILDING PERMIT AND ASSUME ALL RESPONSIBILITY AND COST FOR THE PERMIT PROCESS. UPON COMPLETION OF WORK, CONTRACTOR SHALL SUBMIT A LETTER COMPLETE WITH PROFESSIONAL SEAL FROM THE STRUCTURAL ENGINEER TO INDICATE THAT THE WORK HAS BEEN COMPLETED TO THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, THE AUTHORITIES HAVING JURISDICTION, AND ALL OTHER RELEVANT CODES AND STANDARDS. 8.2. WHERE APPLICABLE, IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE THE REQUIREMENTS FOR SEISMIC BRACING AND SUPPORTS WITH STRUCTURAL DRAWINGS. THIS CONTRACTOR SHALL CONTRACT THE SERVICES									



GENERAL DEMOLITION MECHANICAL NOTES

1. REMOVED ALL EQUIPMENT AS INDICATED AND ITS ASSOCIATED DUCTWORK, PIPING, AND CONTROLS. REPATCH AND REPAIR ALL EXISTING HOLES AND PENETRATION TO MATCH EXISTING.

DEMOLITION MECHANICAL DRAWING NOTES

① EXISTING GAS PIPING TO BE CUT AND CAP AS SHOWN. REFER TO DRAWING M-5 FOR CONTINUATION. EXACT ROUTING TO BE VERIFIED ON SITE. TYPICAL.

② EXISTING ROOF EXHAUST FAN TO BE REMOVED IN ITS ENTIRETY C/W DUCTWORK, WIRING, CONTROLS AND ACCESSORIES. POWER DISCONNECTION BY ELECTRICAL DIVISION.

③ EXISTING ROOF DRAIN TO BE REMOVED. REFER TO DRAWING P-1 FOR CONTINUATION AND PIPING DEMOLITION. TYPICAL FOR 2.

④ EXISTING HEAT VENTILATION UNIT TO BE REMOVED IN ITS ENTIRETY C/W DUCTWORK, WIRING, CONTROLS AND ACCESSORIES. POWER DISCONNECTION BY ELECTRICAL DIVISION.

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DATE	REV.	DESCRIPTION	DRN BY
2025-04-01	2	ISSUED FOR PRELIMINARY PRICING	J.L.
2025-01-31	1	ISSUED FOR PERMIT	J.L.

REVISION RECORD

SEAL: NORTH ARROW

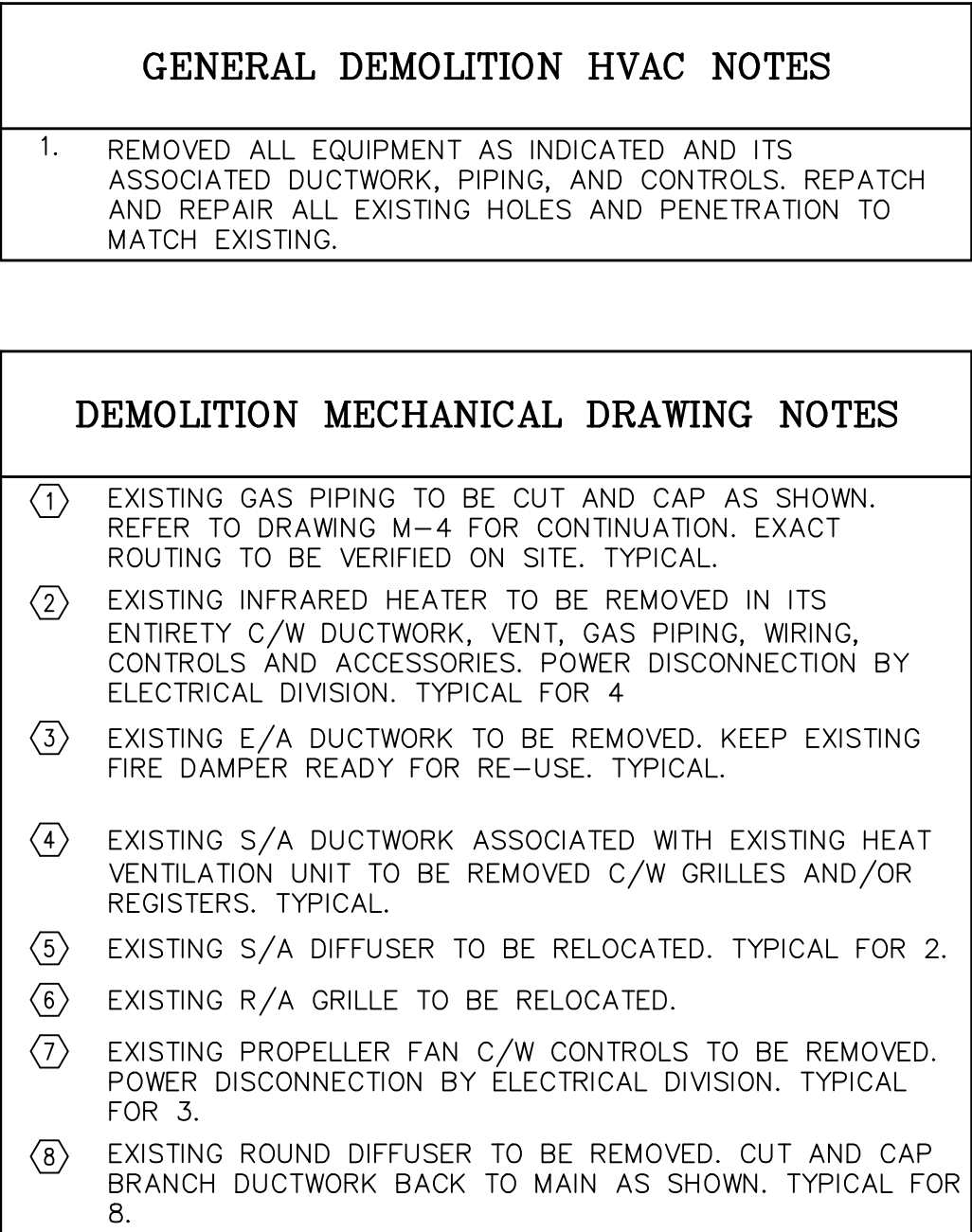
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PROJECT
CLARINGTON TOYOTA

LOCATION
10 SPICER SQUARE
BOWMNVILLE, ON

DRAWING TITLE DEMOLITION MECHANICAL ROOF PLAN	DRAWING No. M-4
SCALE: 1:100	DRAWN BY: T.Y.
PROJECT NO. 23217	CHECKED BY: J.L.

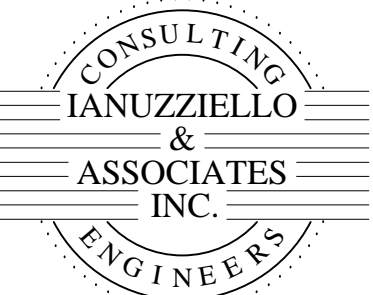


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CONSULTANT:



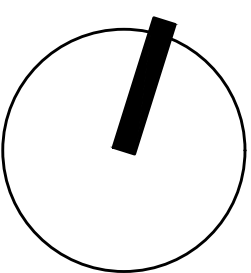
IANUZZIELLO & ASSOCIATES INC
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DATE	REV.	DESCRIPTION	DRN

REVISION RECORD

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PROJECT

CLARINGTON
TOYOTA

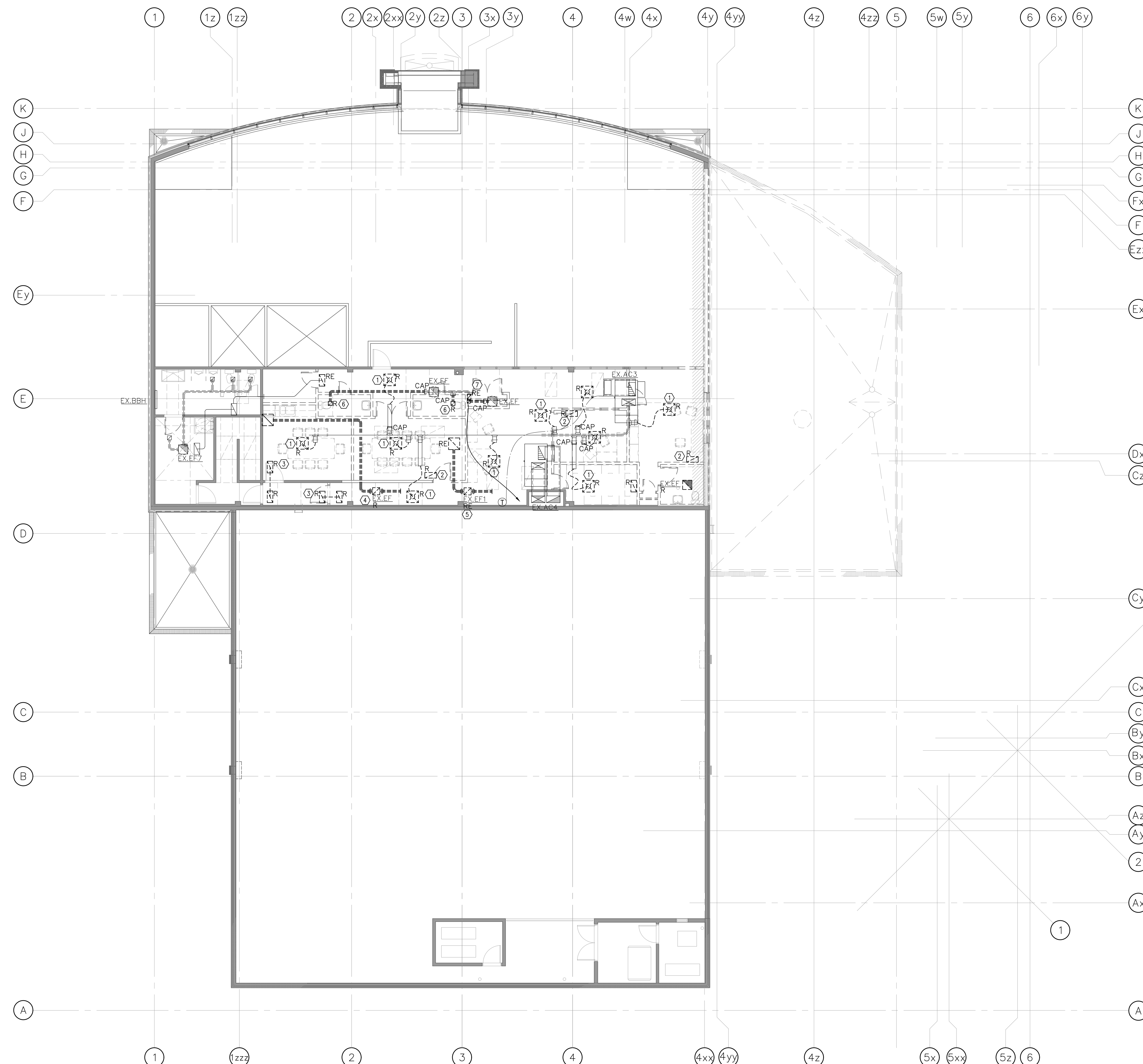
10 SPICER SQUARE
BOWMNVILLE, ON

DRAWING TITLE
GROUND FLOOR
DEMOLITION HVAC PLAN

DRAWING No.

M-5

SCALE:	1:100	DRAWN BY:	T
PROJECT NO.	23217	CHECKED BY:	



GENERAL DEMOLITION HVAC NOTES

1. REMOVED ALL EQUIPMENT AS INDICATED AND ITS ASSOCIATED DUCTWORK, PIPING, AND CONTROLS. REPATCH AND REPAIR ALL EXISTING HOLES AND PENETRATION TO MATCH EXISTING.

DEMOLITION MECHANICAL DRAWING NOTES

① EXISTING S/A DIFFUSER TO BE REMOVED. CUT AND CAP (IF SHOWN) BRANCH DUCTWORK BACK TO MAIN. TYPICAL.

② EXISTING R/A GRILLE TO BE REMOVED. TYPICAL.

③ EXISTING T/A DUCTWORK C/W GRILLE TO BE REMOVED. TYPICAL FOR 2.

④ EXISTING INLINE EXHAUST FAN TO BE REMOVED IN ITS ENTIRETY C/W DUCTWORK, WIRING, GRILLES AND CONTROLS. POWER DISCONNECTION BE ELECTRICAL DIVISION.

⑤ EXISTING INLINE EXHAUST FAN TO BE RELOCATED C/W GRILLE AND CONTROLS. POWER DISCONNECTION BY ELECTRICAL AND RECONNECTION BY ELECTRICAL DIVISION.

⑥ EXISTING E/A GRILLE TO BE REMOVED. CUT AND CAP EXISTING DUCTWORK BACK TO MAIN AS SHOWN. TYPICAL FOR 2.

⑦ EXISTING E/A DUCT DROP TO GROUND FLOOR CEILING SPACE TO BE RELOCATED. TYPICAL FOR 2.

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CONSULTANT:

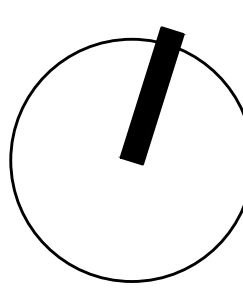


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2025-04-01	2	ISSUED FOR PRELIMINARY PRICING		J.L.
2025-01-31	1	ISSUED FOR PERMIT		J.L.
DATE	REV.	DESCRIPTION		DRN BY

REVISION RECORD

SCALE: NORTH ARROW



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PROJECT

CLARINGTON TOYOTA

LOCATION

10 SPICER SQUARE
BOWMNVILLE, ON

DRAWING TITLE

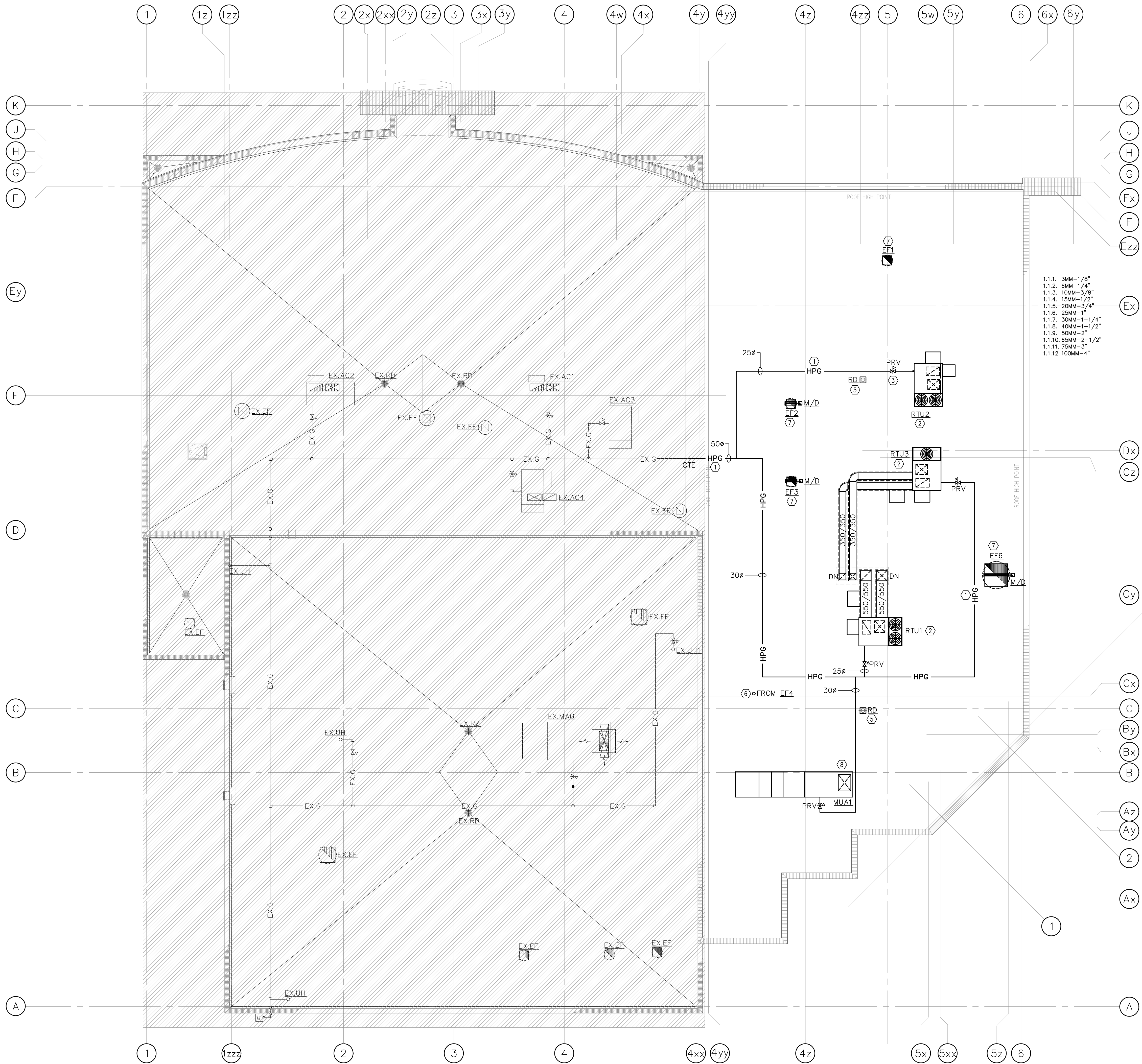
SECOND FLOOR
DEMOLITION HVAC PLAN

DRAWING No.

M-6

SCALE: 1:100 DRAWN BY: T.Y.

PROJECT NO. 23217 CHECKED BY: J.L.



GENERAL MECHANICAL NOTES

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. INFORMATION SHOWN ON FLOOR PLANS SHALL BE ASSUMED TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- ROOF CUTTING, PATCHING, FLASHING ETC. REQUIRED FOR INSTALLATION MECHANICAL EQUIPMENT BY GENERAL CONTRACTOR.
- PROVIDE GAS PRESSURE REGULATOR TO SUIT REQUIREMENTS. VENT REGULATOR AS REQUIRED. TYPICAL.

NEW MECHANICAL DRAWING NOTES

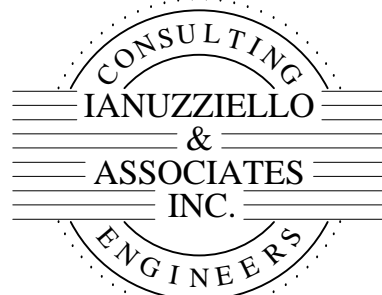
- PROVIDE NEW HIGH PRESSURE GAS LINE ON ROOF OF SIZE INDICATED. EXACT ROUTING TO BE VERIFIED ON SITE. RUN PIPE ON ROOF C/W GAS PIPING SUPPORT. CONTRACTOR TO DO THE EXACT MEASUREMENT FOR THE NEW PIPE LENGTH ON SITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER. TYPICAL.
- PROVIDE NEW ROOF TOP UNIT AS SPECIFIED. INSTALL AS PER MANUFACTURER'S RECOMMENDATION C/W MANUFACTURER SUPPLIED CURB. ENSURE THAT ALL REQUIRED CLEARANCES ARE MAINTAINED. EXACT LOCATION TO BE COORDINATED ON SITE WITH STRUCTURAL ENGINEER AND OTHER TRADES. LOCATE UNIT SO AS TO MAINTAIN ALL RECOMMENDED CLEARANCES AND ENSURE UNIT FRESH AIR INTAKE AS PER SCHEDULE. MIN. 10'-0" AWAY FROM ANY INTAKE/EXHAUST. TYPICAL OF 3.
- CONNECT NEW HIGH PRESSURE GAS LINE OF SIZE INDICATED TO NEW ROOF TOP UNIT C/W PRV AND CGA APPROVED VALVE. PAINT NEW GAS PIPE YELLOW. REFER TO DETAILS FOR PIPING SUPPORT REQUIREMENT. TYPICAL.
- PROVIDE NEW ROOF TOP UNIT AS SPECIFIED. INSTALL AS PER MANUFACTURER'S RECOMMENDATION C/W MANUFACTURER SUPPLIED CURB. ENSURE THAT ALL REQUIRED CLEARANCES ARE MAINTAINED. EXACT LOCATION TO BE COORDINATED ON SITE WITH STRUCTURAL ENGINEER AND OTHER TRADES. LOCATE UNIT SO AS TO MAINTAIN ALL RECOMMENDED CLEARANCES AND ENSURE UNIT FRESH AIR INTAKE AS PER SCHEDULE. MIN. 10'-0" AWAY FROM ANY INTAKE/EXHAUST. TYPICAL OF 3.
- PROVIDE NEW ROOF DRAIN AS SPECIFIED. RUN PIPE U/S THE CEILING OF FLOOR BLOW AND DOWN TO GROUND FLOOR. EXACT LOCATION OF ROOF DRAIN TO BE COORDINATED WITH THE ARCHITECT. TYPICAL.
- PROVIDE GOOSENECK AND BIRD SCREEN FOR EXHAUST DUCT AS PER DETAIL. TYPICAL.
- PROVIDE NEW ROOF EXHAUST FAN C/W MANUFACTURER'S SUPPLIED CURB. ENSURE THAT ALL REQUIRED CLEARANCES ARE MAINTAINED. EXACT LOCATION TO BE COORDINATED ON SITE WITH STRUCTURAL ENGINEER AND OTHER TRADES. FAN TO BE CONTROLLED BY 24/7 TIMER. PROVIDE NEW MOTORIZED DAMPER (IF SPECIFIED). POWER BY ELECTRICAL DIVISION. TYPICAL FOR 4.
- PROVIDE NEW MAKE-UP AIR UNIT AS SPECIFIED. INSTALL AS PER MANUFACTURER'S RECOMMENDATION C/W MANUFACTURER SUPPLIED CURB AND ENSURE THAT ALL REQUIRED CLEARANCES ARE MAINTAINED. EXACT LOCATION TO BE COORDINATED ON SITE WITH STRUCTURAL ENGINEER AND OTHER TRADES. LOCATE UNIT SO AS TO MAINTAIN ALL RECOMMENDED CLEARANCES AND ENSURE UNIT FRESH AIR INTAKE AS PER SCHEDULE. MIN. 10'-0" AWAY FROM ANY INTAKE/EXHAUST. UNIT SHALL BE CONTROLLED WITH HAND/OFF/AUTO CONTROL PANEL.

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2025-01-31	1	ISSUED FOR PERMIT	J.I.

REVISION RECORD

SCALE:	NORTH ARROW

ARCHITECT:



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e-mail: rai@raiaarchitect.com

PROJECT

CLARINGTON
TOYOTA

LOCATION

10 SPICER SQUARE
BOWMVILLE, ON

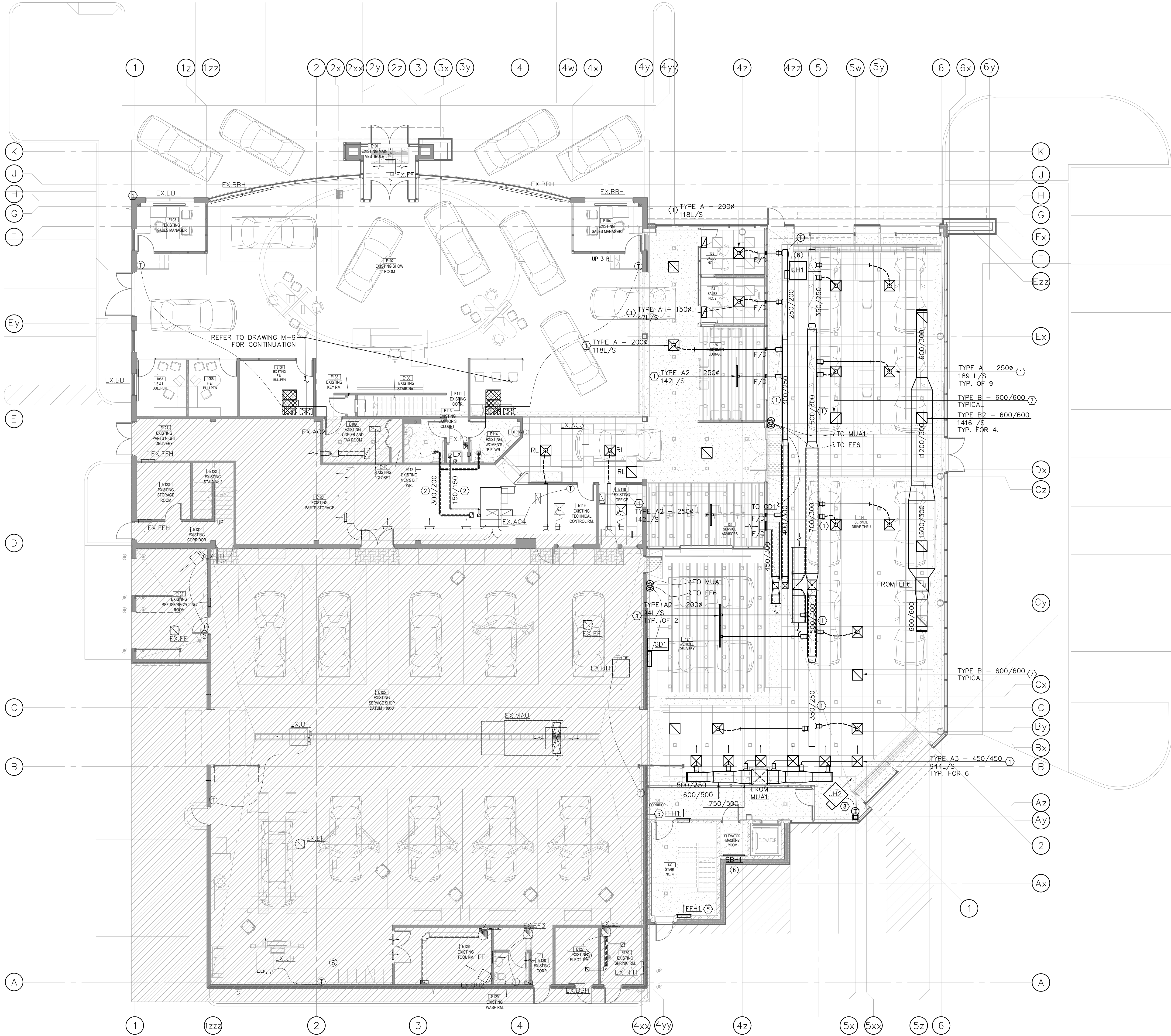
DRAWING TITLE

NEW MECHANICAL ROOF PLAN

DRAWING No.

M-7

SCALE:	1:100	DRAWN BY:	T.Y.
PROJECT NO.	23217	CHECKED BY:	J.I.



GENERAL HVAC NOTES

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- FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. INFORMATION SHOWN ON FLOOR PLANS SHALL BE ASSUMED TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- ALL TRANSFER AIR DUCTS SHALL BE ACOUSTICALLY LINED ELBOW DUCTS AS SHOWN OR UNLESS INDICATED OTHERWISE. TRANSFER AIR DUCTS SHALL NOT BE USED IN LIEU OF SILENCERS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF GRILLES AND DIFFUSERS.
- COORDINATE FINAL LOCATION WITH THE ARCHITECT WITHIN 100MM (40 IN) OF LOCATION SHOWN. ALL RELOCATIONS OUTSIDE OF THIS RANGE SHALL BE REVIEWED WITH THE CONSULTANT.
- TEMPERATURE SENSORS SHALL MATCH ELEVATION OF LIGHT SWITCHES ABOVE THE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
- DIFFUSER DUCT RUN-OUTS SHALL BE THE SAME SIZE AS THE DIFFUSER INLETS UNLESS INDICATED OTHERWISE.
- ALL DUCT BRANCHES TO EACH DIFFUSER SHALL BE EQUIPPED WITH A BALANCING DAMPER EXCEPT WHERE THE DIFFUSER INCLUDES THE DAMPER.

NEW HVAC DRAWING NOTES

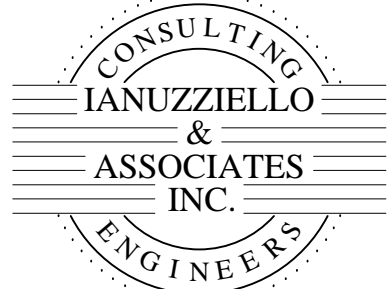
- PROVIDE NEW S/A SQUARE/LINEAR DIFFUSER OF SIZE AND TYPE INDICATED. PROVIDE NEW FLEXIBLE/RIGID DUCT (DUCT SIZE TO MATCH DIFFUSER NECK SIZE). BALANCE TO AIR QUANTITY SHOWN. TYPICAL.
- RUN NEW E/A DUCTWORK IN CEILING SPACE FROM FLOOR ABOVE AS SHOWN. CONNECT TO EXISTING EXHAUST GRILLE C/W EXISTING FIRE DAMPERS (IF ANY). EXACT ROUTING TO BE VERIFIED ON SITE WITH OTHER TRADES/SERVICES. TYPICAL.
- PROVIDE NEW RETURN AIR DUCTWORK OF SIZE INDICATED C/W ACOUSTIC INSULATION AS SHOWN. TYPICAL FOR 2.
- PROVIDE NEW S/A DUCTWORK C/W ACOUSTIC INSULATION AS SHOWN IN CEILING SPACE OF SIZE INDICATED. COORDINATE ROUTING ON SITE WITH OTHER TRADES/SERVICES. TYPICAL.
- PROVIDE NEW FORCE FLOW HEATER AS SPECIFIED. POWER BY ELECTRICAL DIVISION. TYPICAL.
- PROVIDE NEW BASEBOARD HEATER AS SPECIFIED. POWER BY ELECTRICAL DIVISION.
- PROVIDE NEW R/A GRILLE OF SIZE AND TYPE INDICATED. TYPICAL.
- PROVIDE NEW ELECTRIC UNIT HEATER AS SPECIFIED C/W HANGERS, SUPPORT, WIRING AND REMOTE THERMOSTAT. POWER BY ELECTRICAL DIVISION. TYPICAL FOR 2.

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2025-04-01	2	ISSUED FOR PRELIMINARY PRICING	J.L.
2025-01-31	1	ISSUED FOR PERMIT	J.L.
DATE	REV.	DESCRIPTION	DRN BY

REVISION RECORD

SCALE:	NORTH ARROW

ARCHITECT:



RAI Architect Inc.
Suite 104, 92 Church St. S.
Ajax, Ontario
L1S 6B4
tel: 905.339.0600
e-mail: rai@raiarchitect.com

PROJECT

CLARINGTON
TOYOTA

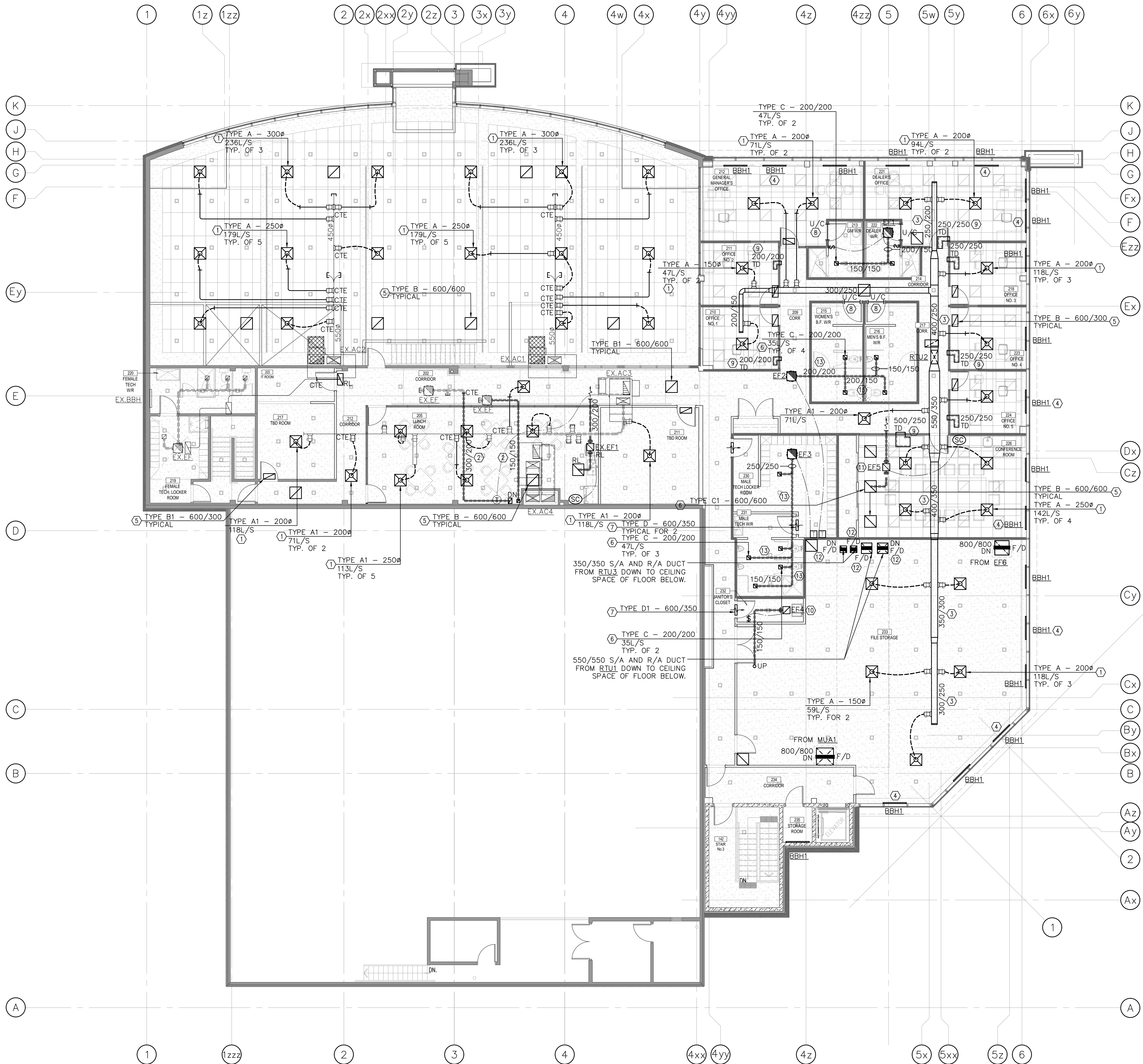
LOCATION

10 SPICER SQUARE
BOWMNVILLE, ON

DRAWING TITLE
GROUND FLOOR
NEW HVAC PLAN

DRAWING No.
M-8

SCALE:	1:100	DRAWN BY:	T.Y.
PROJECT NO.	23217	CHECKED BY:	J.L.



GENERAL HVAC NOTES

- DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
- FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. INFORMATION SHOWN ON FLOOR PLANS SHALL BE ASSUMED TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- ALL TRANSFER AIR DUCTS SHALL BE ACOUSTICALLY LINED ELBOW DUCTS AS SHOWN OR UNLESS INDICATED OTHERWISE. TRANSFER AIR DUCTS SHALL NOT BE USED IN LIEU OF SILENCERS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF GRILLES AND DIFFUSERS.
- COORDINATE FINAL LOCATION WITH THE ARCHITECT WITHIN 100MM (40 IN) OF LOCATION SHOWN. ALL RELOCATIONS OUTSIDE OF THIS RANGE SHALL BE REVIEWED WITH THE CONSULTANT.
- TEMPERATURE SENSORS SHALL MATCH ELEVATION OF LIGHT SWITCHES ABOVE THE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
- DIFFUSER DUCT RUN-OUTS SHALL BE THE SAME SIZE AS THE DIFFUSER INLETS UNLESS INDICATED OTHERWISE.
- ALL DUCT BRANCHES TO EACH DIFFUSER SHALL BE EQUIPPED WITH A BALANCING DAMPER EXCEPT WHERE THE DIFFUSER INCLUDES THE DAMPER.

NEW HVAC DRAWING NOTES

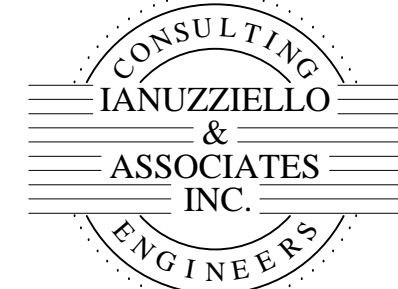
- PROVIDE NEW S/A SQUARE DIFFUSER OF SIZE AND TYPE INDICATED. PROVIDE NEW FLEXIBLE/RIGID DUCT (DUCT SIZE TO MATCH DIFFUSER NECK SIZE). BALANCE TO AIR QUANTITY SHOWN, TYPICAL.
- RUN NEW E/A DUCTWORK IN CEILING SPACE TO CEILING SPACE OF FLOOR BELOW AS SHOWN. EXACT ROUTING TO BE VERIFIED ON SITE WITH OTHER TRADES/SERVICES. TYPICAL.
- PROVIDE NEW S/A DUCTWORK C/W ACOUSTIC INSULATION AS SHOWN IN CEILING SPACE OF SIZE INDICATED. COORDINATE ROUTING ON SITE WITH OTHER TRADES/SERVICES. TYPICAL.
- PROVIDE NEW BASEBOARD HEATER AS SPECIFIED. POWER BY ELECTRICAL DIVISION. TYPICAL.
- PROVIDE NEW R/A GRILLE OF SIZE AND TYPE INDICATED. TYPICAL.
- PROVIDE NEW DUCT MOUNTED E/A GRILLES OF SIZE AND TYPE INDICATED C/W BALANCING DAMPER. BALANCE TO AIR QUANTITY SHOWN, TYPICAL.
- PROVIDE NEW DOOR GRILLE OF SIZE AND TYPE INDICATED. TYPICAL FOR 3.
- PROVIDE NEW DOOR 20MM DOOR UNDERCUT. TYPICAL.
- PROVIDE NEW TRANSFER AIR DUCTWORK OF SIZE AND TYPE INDICATED. TYPICAL.
- PROVIDE NEW JANITOR EXHAUST FAN. RUN DISCHARGE DUCT UP TO ROOF C/W GOOSENECK. INSULATE ENTIRE RUN. FAN TO BE CONTROLLED BY STARTER. FOR INSTALLATION REQUIREMENTS REFER TO DETAILS ON DRAWINGS. POWER BY ELECTRICAL DIVISION.
- PROVIDE NEW TRANSFER FAN. RUN DISCHARGE DUCT IN CEILING PLENUM. INSULATE ENTIRE RUN. FAN TO BE CONTROLLED BY STARTER. FOR INSTALLATION REQUIREMENTS REFER TO DETAILS ON DRAWINGS.
- PROVIDE FIRE DAMPER ON DUCT DROP THROUGH GROUND FLOOR. REFER TO ARCHITECTURAL PLANS FOR FIRE RATING REQUIREMENTS. ARCHITECT TO ENCLOSE VERTICAL DUCTWORK WITH DRYWALL. TYPICAL FOR 4.
- PROVIDE NEW E/A DUCTWORK TO FAN ON ROOF. ACOUSTICALLY INSULATE ENTIRE RUN. COORDINATE ROUTING WITH OTHER/TRADES AND SERVICES. TYPICAL.

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REVISION RECORD

SCALE:	NORTH ARROW

ARCHITECT:



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Suite 104, 92 Church St. S.
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tel: 605.539.0600
e-mail: rai@raichitect.com

PROJECT

**CLARINGTON
TOYOTA**

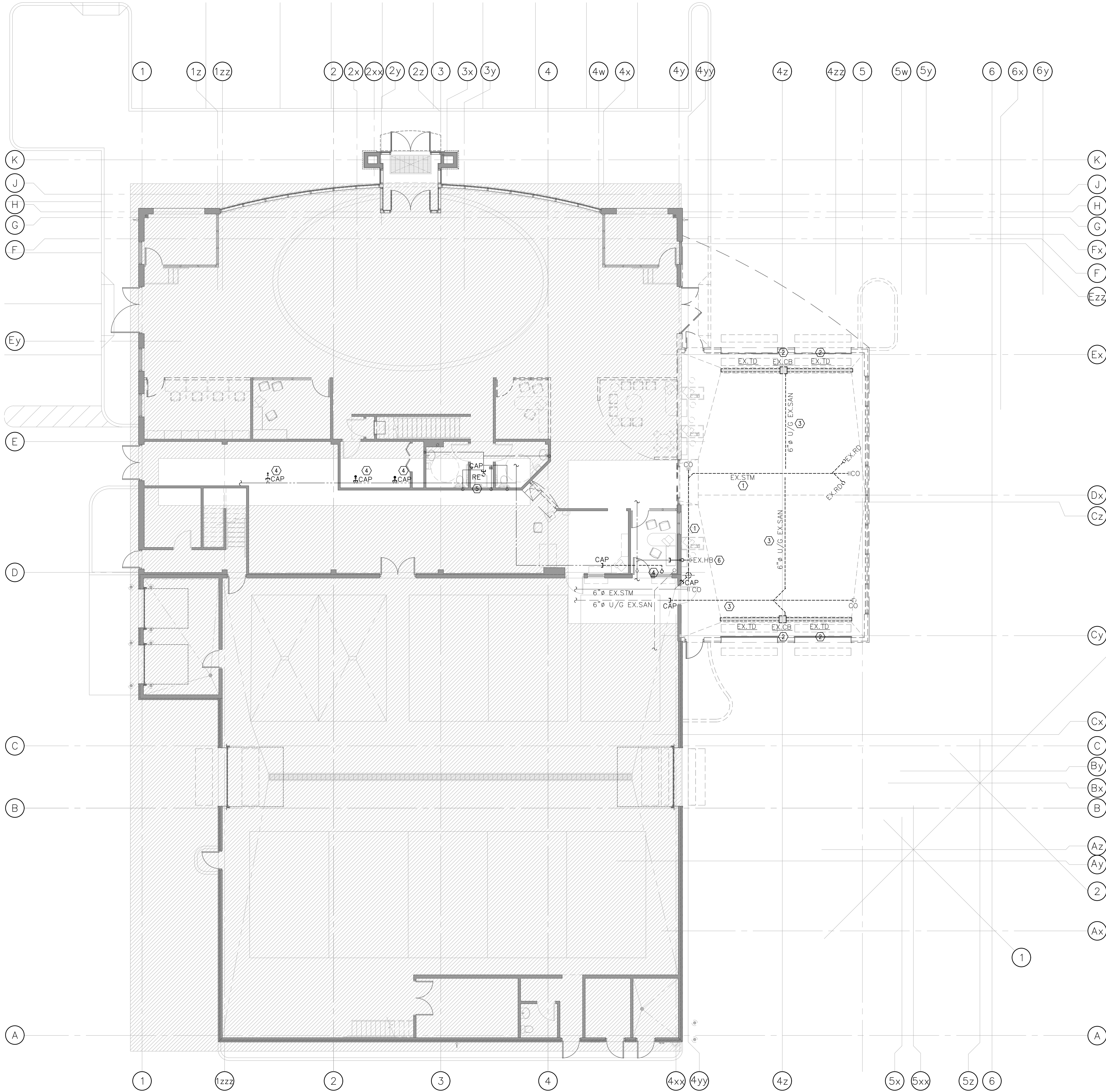
LOCATION

**10 SPICER SQUARE
BOWMNVILLE, ON**

DRAWING TITLE:
**SECOND FLOOR
NEW HVAC PLAN**

DRAWING No.
M-9

SCALE:	1:100	DRAWN BY:	T.Y.
PROJECT NO.	23217	CHECKED BY:	J.L.



GENERAL DEMOLITION PLUMBING & DRAINAGE NOTES

1. SLAB CUTTING/CORE AND FLOOR REPAIR RELATED TO PLUMBING WORK SHALL BE BY GENERAL CONTRACTOR.
2. PLUMBING DEMOLITION WORK INCLUDING SHUT DOWN OF PLUMBING SERVICES SHALL BE COORDINATED WITH THE BUILDING MANAGEMENT. INCLUDE FOR ALL RELATED COST IN TENDER PRICE INCLUDING AFTER HOURS WORK.
3. REMOVE ALL ABANDONED PLUMBING SERVICES WHICH ARE NOT GOING TO BE REUSED.

NEW DEMOLITION PLUMBING & DRAINAGE DRAWING NOTES

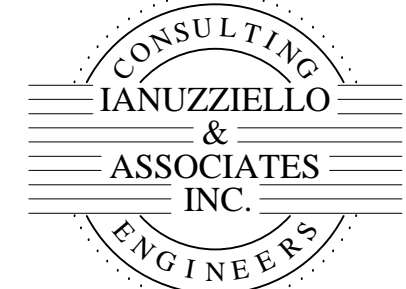
- ① EXISTING STORM DRAINAGE TO BE CUT AND CAP BACK AS SHOWN. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE. TYPICAL.
- ② EXISTING CATCH BASIN/TRENCH DRAIN TO BE REMOVED. TYPICAL.
- ③ EXISTING BURIED SANITARY TO BE CUT AND CAP BACK AS SHOWN. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE. TYPICAL. INCLUDE COST FOR ALL FLOOR SCANNING, CORING, TRENCHING, FILLING AND PATCHING. TYPICAL.
- ④ EXISTING DHW CONNECTION TO EXISTING SINK ABOVE FLOOR TO CUT AND CAP AS SHOWN. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE. TYPICAL.
- ⑤ EXISTING DCW STACK TO BE RELOCATED. CAP TEMPORARILY READY FOR RECONNECTION. REFER TO P-3 FOR NEW PIPING. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE. TYPICAL.
- ⑥ EXISTING HOSE BIB TO BE REMOVED. CUT AND CAP DCW CONNECTION BACK TO MAIN. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE.

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e-mail: rai@raiarchitect.com

PROJECT

**CLARINGTON
TOYOTA**

LOCATION

**10 SPICER SQUARE
BOWMVILLE, ON**

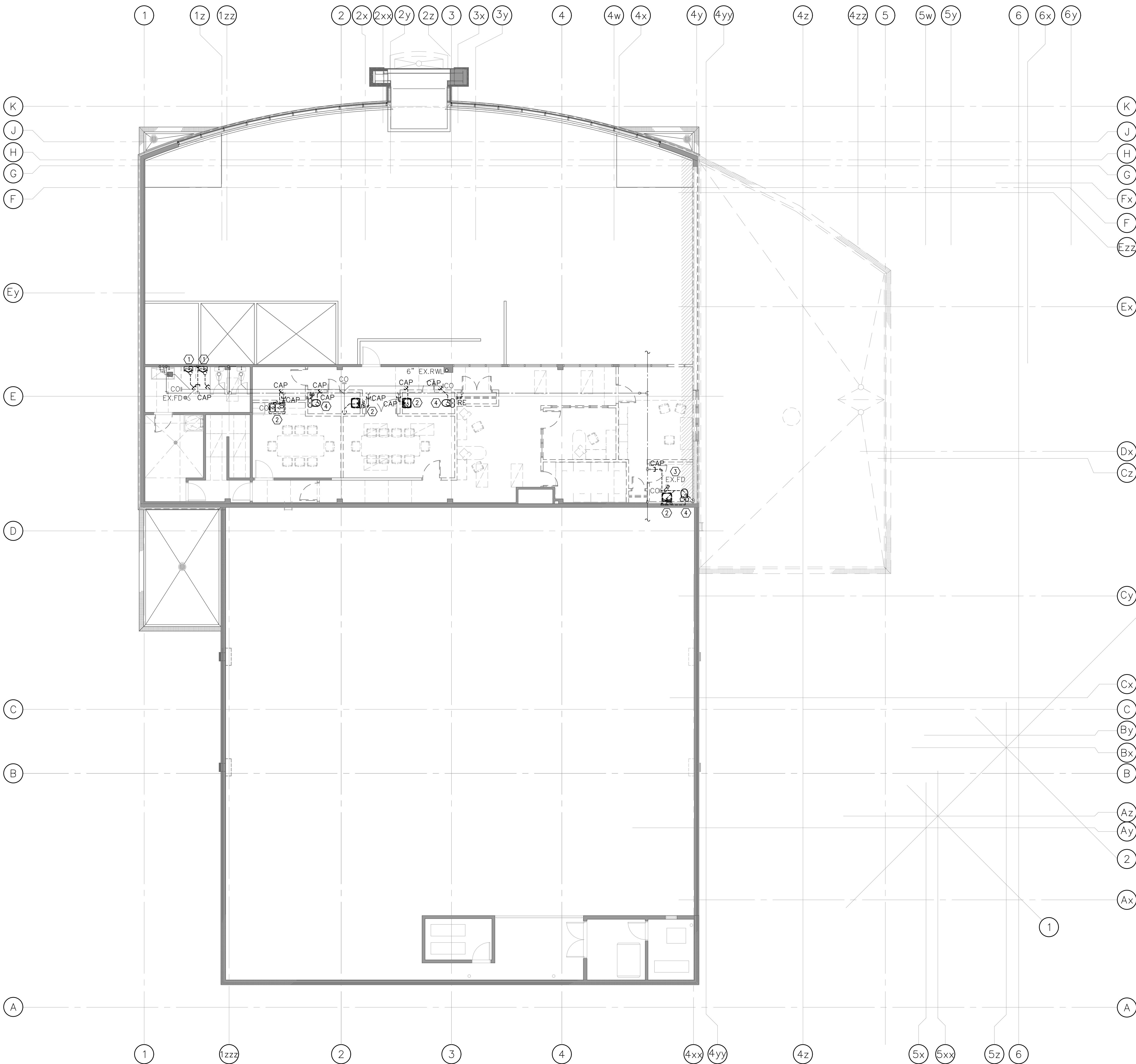
DRAWING TITLE

**GROUND FLOOR
DEMOLITION PLUMBING AND
DRAINAGE PLAN**

DRAWING No.

P-1

SCALE:	1:100	DRAWN BY:	T.Y.
PROJECT NO.	23217	CHECKED BY:	J.L.



GENERAL DEMOLITION PLUMBING & DRAINAGE
NOTES

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3. REMOVE ALL ABANDONED PLUMBING SERVICES WHICH ARE NOT GOING TO BE REUSED.

NEW DEMOLITION PLUMBING & DRAINAGE
DRAWING NOTES

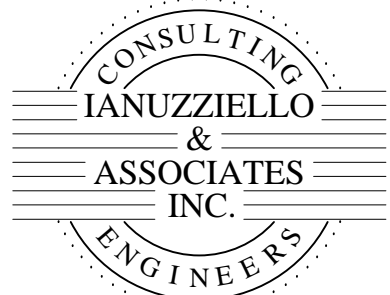
- ① EXISTING URINAL TO BE REMOVED. CUT AND CAP PLUMBING, DRAIN AND VENT BACK TO MAIN. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE. TYPICAL FOR 2.
- ② EXISTING SINK/LAVATORY TO BE REMOVED. CUT AND CAP PLUMBING, DRAIN AND VENT BACK TO MAIN. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE. TYPICAL.
- ③ EXISTING FLOOR DRAIN TO BE REMOVED. CUT AND CAP SANITARY PIPING BACK TO MAIN RISER. EXACT ROUTING TO BE VERIFIED ON SITE.
- ④ EXISTING WATER CLOSET TO BE REMOVED. CUT AND CAP PLUMBING, DRAIN AND VENT BACK TO MAIN. EXACT ROUTING OF PIPING TO BE VERIFIED ON SITE. TYPICAL.

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SCALE:	NORTH ARROW

ARCHITECT:



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Suite 104, 9/2 Church St. S.
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tel: 905.339.0600
e-mail: rai@raichitect.com

PROJECT

**CLARINGTON
TOYOTA**

LOCATION

**10 SPICER SQUARE
BOWMNVILLE, ON**

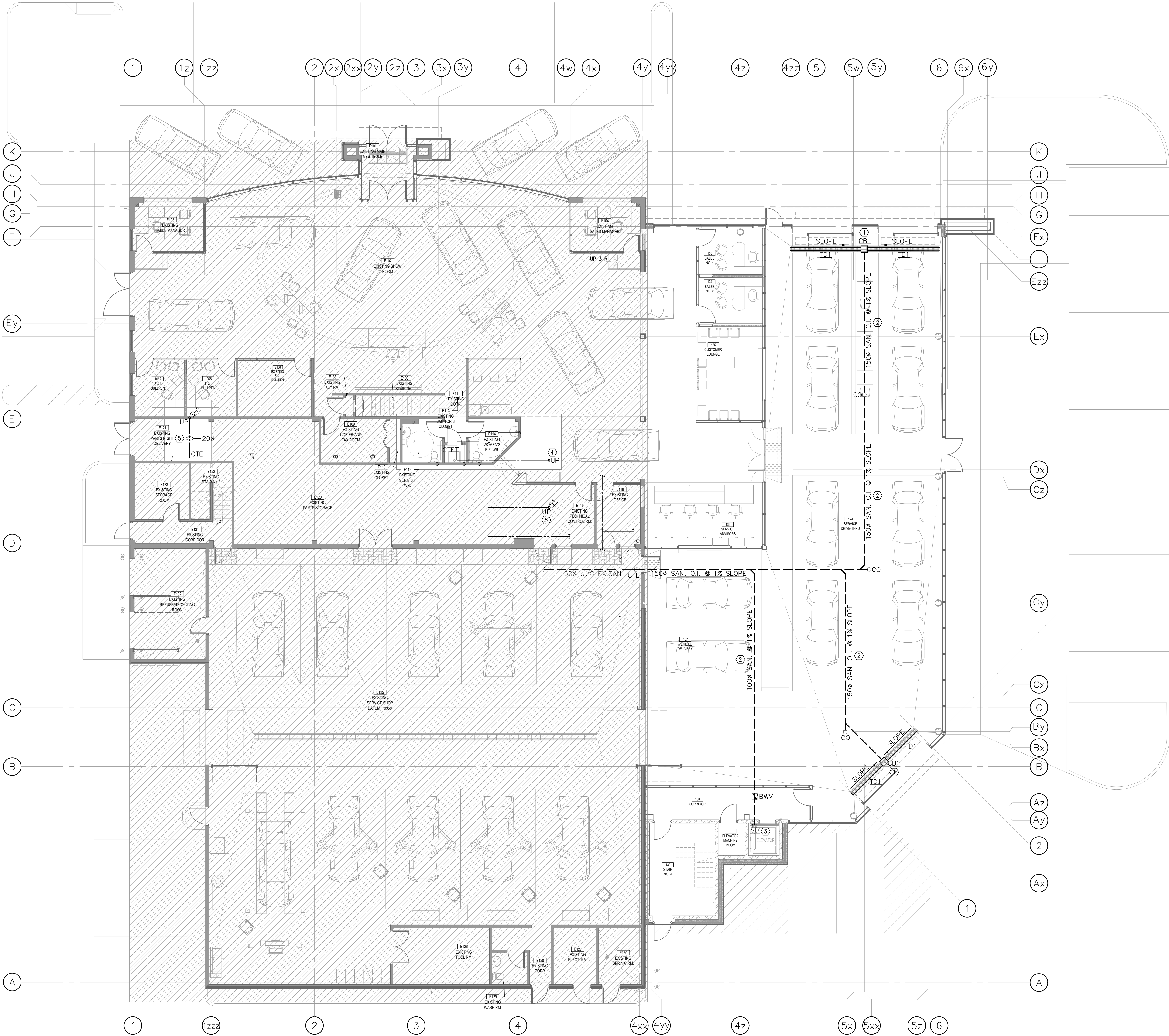
DRAWING TITLE

**SECOND FLOOR
DEMOLITION PLUMBING AND
DRAINAGE PLAN**

DRAWING No.

P-2

SCALE:	1:100	DRAWN BY:	T.Y.
PROJECT NO.	23217	CHECKED BY:	J.L.



GENERAL NEW PLUMBING & DRAINAGE NOTES

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- FLOOR PLANS SHALL BE READ IN CONJUNCTION WITH SCHEMATICS. INFORMATION SHOWN ON FLOOR PLANS SHALL BE ASSUMED TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- COORDINATE ALL MECHANICAL SITE SERVICES, PIPING, AND EQUIPMENT WITH ALL OTHER DIVISIONS.
- ALL BRANCH PIPING SHALL BE EQUIPPED WITH SHUT-OFF VALVES. PROVIDE ISOLATION VALVES AT ALL FIXTURES.
- ALL CLEANOUTS AND ISOLATION VALVES AND EQUIPMENT INSTALLED IN CEILING SPACE NOT ACCESSIBLE, THE CEILING SHALL BE ACCESSIBLE VIA AN ACCESS HATCH.
- LAYOUT INDICATED ON THIS DRAWINGS IS DIAGRAMMATIC AND IDENTIFIES THE DESIGN INTENT ONLY.
- THE MECHANICAL CONTRACTOR SHALL EXAM THE SITE PRIOR TO BID SUBMISSION.
- REMOVE, CAP AND SEAL ALL PLUMBING CONNECTIONS THAT ARE NOT TO BE REUSED IN THIS CONTRACT.
- PROVIDE PIPE SLEEVES FOR ALL PENETRATIONS THROUGH WALLS AND FLOORS. PACK AND SEAL OPENINGS WITH APPROVED FIRE PROOFING MATERIAL AS DIRECTED BY ARCHITECT.
- PROVIDE SHUT OFF VALVE AT EACH WATER CONNECTION TO FIXTURES.
- CONTRACTOR TO FIELD LOCATE ALL EXISTING SERVICES THAT ARE REQUIRE FOR THIS PROJECT.
- PROVIDE INSULATION FOR ALL DCW/DHW PIPING. PROVIDE PVC RECOVERY JACKET FOR ALL PIPING IN EXPOSE AREA'S.
- ALL FLOOR DRAINS/HUB DRAINS SHALL BE COMPLETE WITH TRAPS AND TRAP PRIMERS IN COMPLIANCE WITH OBC.

NEW PLUMBING AND DRAINAGE DRAWING NOTES

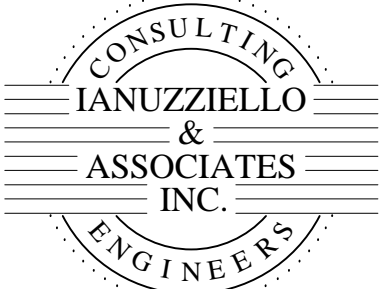
- PROVIDE TRENCH DRAIN AND CATCH BASIN ASSEMBLY AS SPECIFIED. EXACT LENGTH TO BE VERIFIED ON SITE. TYPICAL.
- PROVIDE NEW BURIED SANITARY DRAIN OF SIZE INDICATED ON PLAN. EXACT ROUTING TO BE VERIFIED ON SITE. TIE-IN TO EXISTING OIL INTERCEPTOR SANITARY LINE. INCLUDE COST FOR ALL FLOOR SCANNING, CORING, TRENCHING, FILLING AND PATCHING. TYPICAL.
- PROVIDE NEW SCUPPER DRAIN AS SPECIFIED C/W BACK WATER VALVE.
- RUN NEW DCW CONNECTION FROM ABOVE FLOOR. TIE-IN TO EXISTING. SIZE TO MATCH EXISTING PIPE. EXACT ROUTING TO BE COORDINATED WITH OTHER TRADES SERVICES. TYPICAL.
- RUN NEW DHW TO NEW SHOWER/SINK ABOVE FLOOR. EXACT ROUTING AND TIE-IN POINT TO BE VERIFIED ON SITE. TYPICAL FOR 2.

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PROJECT

CLARINGTON
TOYOTA

LOCATION

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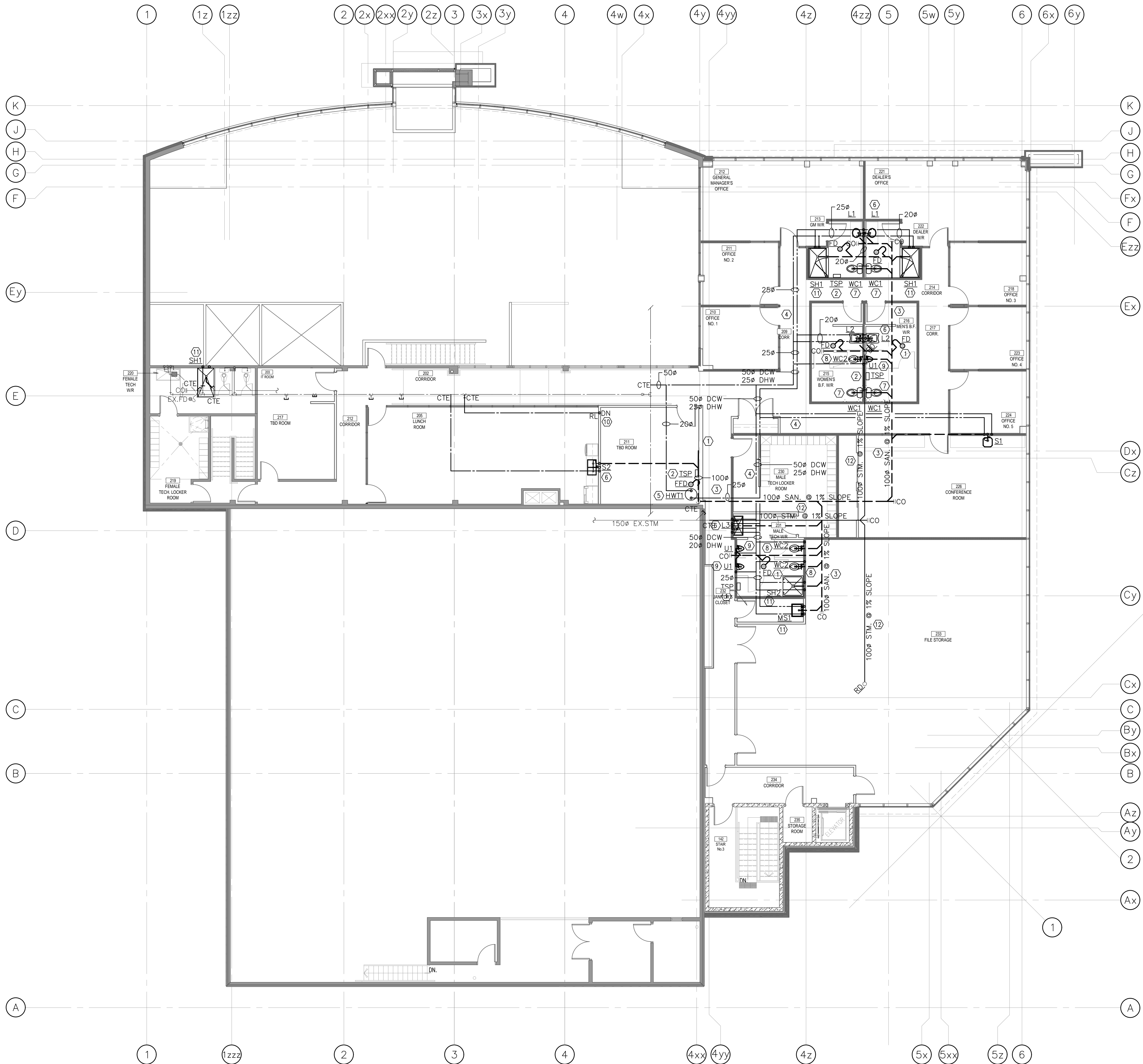
DRAWING TITLE

GROUND FLOOR
NEW PLUMBING AND DRAINAGE
PLAN

DRAWING No.

P-3

SCALE: 1:100	DRAWN BY: T.Y.
PROJECT NO. 23217	CHECKED BY: J.L.



- GENERAL NEW PLUMBING & DRAINAGE NOTES**
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 - COORDINATE ALL MECHANICAL SITE SERVICES, PIPING, AND EQUIPMENT WITH ALL OTHER DIVISIONS.
 - ALL BRANCH PIPING SHALL BE EQUIPPED WITH SHUT-OFF VALVES. PROVIDE ISOLATION VALVES AT ALL FIXTURES.
 - ALL CLEANOUTS AND ISOLATION VALVES AND EQUIPMENT INSTALLED IN CEILING SPACE NOT ACCESSIBLE, THE CEILING SHALL BE ACCESSIBLE VIA AN ACCESS HATCH.
 - LAYOUT INDICATED ON THIS DRAWINGS IS DIAGRAMMATIC AND IDENTIFIES THE DESIGN INTENT ONLY.
 - THE MECHANICAL CONTRACTOR SHALL EXAM THE SITE PRIOR TO BID SUBMISSION.
 - REMOVE, CAP AND SEAL ALL PLUMBING CONNECTIONS THAT ARE NOT TO BE REUSED IN THIS CONTRACT.
 - PROVIDE PIPE SLEEVES FOR ALL PENETRATIONS THROUGH WALLS AND FLOORS. PACK AND SEAL OPENINGS WITH APPROVED FIRE PROOFING MATERIAL AS DIRECTED BY ARCHITECT.
 - PROVIDE SHUT OFF VALVE AT EACH WATER CONNECTION TO FIXTURES.
 - CONTRACTOR TO FIELD LOCATE ALL EXISTING SERVICES THAT ARE REQUIRE FOR THIS PROJECT.
 - PROVIDE INSULATION FOR ALL DCW/DHW PIPING. PROVIDE PVC RECOVERY JACKET FOR ALL PIPING IN EXPOSE AREA'S.
 - ALL FLOOR DRAINS/HUB DRAINS SHALL BE COMPLETE WITH TRAPS AND TRAP PRIMERS IN COMPLIANCE WITH OBC.

- NEW PLUMBING AND DRAINAGE DRAWING NOTES**
- PROVIDE 75# SANITARY DRAIN AND 40# SANITARY VENT FROM FUNNEL/FLOOR DRAIN. ALL FLOOR DRAIN SHALL BE PRIMED BY TRAP SEAL PRIMER. TYPICAL.
 - PROVIDE NEW ELECTRONIC TRAP SEAL PRIMER. POWER BY ELECTRICAL DIVISION. TYPICAL FOR 4.
 - RUN NEW SANITARY DRAIN LINE IN CEILING SPACE OF FLOOR BELOW. EXACT ROUTING AND TIE-IN POINT TO EXISTING SANITARY RISER TO BE VERIFIED AND COORDINATED ON SITE.
 - PROVIDE NEW DCW/DHW IN CEILING SPACE OF SIZE INDICATED ON PLAN. EXACT ROUTING TO BE COORDINATED ON SITE WITH OTHER TRADES/SERVICES. TYPICAL.
 - PROVIDE NEW ELECTRIC HOT WATER TANK AS SPECIFIED. INSTALL ON 18 GA. GALVANIZED SHEET METAL DRAIN PAN ON FLOOR TERMINATE RELIEF AND DRAIN PAN DRAIN AT FUNNEL FLOOR DRAIN. REFER TO DETAILS FOR INSTALLATION REQUIREMENTS. ELECTRICAL DIVISION TO POWER.
 - PROVIDE 15# DCW/DHW DOWN TO SERVE NEW LAVATORY/KITCHEN SINK, 40# SANITARY DRAIN AND 30# SANITARY VENT FROM LAVATORY/KITCHEN SINK. RUN ALL VERTICAL PIPING IN WALL CAVITY. TYPICAL.
 - PROVIDE 15# DCW DOWN TO SERVE NEW TANK TYPE WATER CLOSET, 75# SANITARY DRAIN AND 40# SANITARY VENT FROM WATER CLOSET. RUN ALL VERTICAL PIPING IN WALL CAVITY. TYPICAL.
 - PROVIDE 25# DCW DOWN TO SERVE NEW FLUSH VALVE TYPE WATER CLOSET, 75# SANITARY DRAIN AND 40# SANITARY VENT FROM WATER CLOSET. RUN ALL VERTICAL PIPING IN WALL CAVITY. TYPICAL.
 - PROVIDE 20# DCW DOWN TO SERVE NEW URINAL, 50# SANITARY DRAIN AND 40# SANITARY VENT FROM WATER CLOSET. RUN ALL VERTICAL PIPING IN WALL CAVITY. TYPICAL.
 - RUN NEW 25# DCW DOWN TO SERVE WASHROOM BELOW FLOOR. EXACT ROUTING TO BE VERIFIED ON SITE.
 - PROVIDE 20# DCW/DHW DOWN TO SERVE NEW MOP SINK/SHOWER. 75# SANITARY DRAIN AND 40# SANITARY VENT FROM MOP SINK/SHOWER. RUN ALL VERTICAL PIPING IN WALL CAVITY. TYPICAL.
 - PROVIDE NEW STORM DRAIN AT H/L OF SIZE INDICATED. COORDINATE ROUTING ON SITE. TIE-IN POINT TO EXISTING STORM DRAINAGE AS SHOWN. TO BE VERIFIED ON SITE. TYPICAL.

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PROJECT

CLARINGTON TOYOTA

LOCATION

10 SPICER SQUARE
BOWMVILLE, ON

DRAWING TITLE

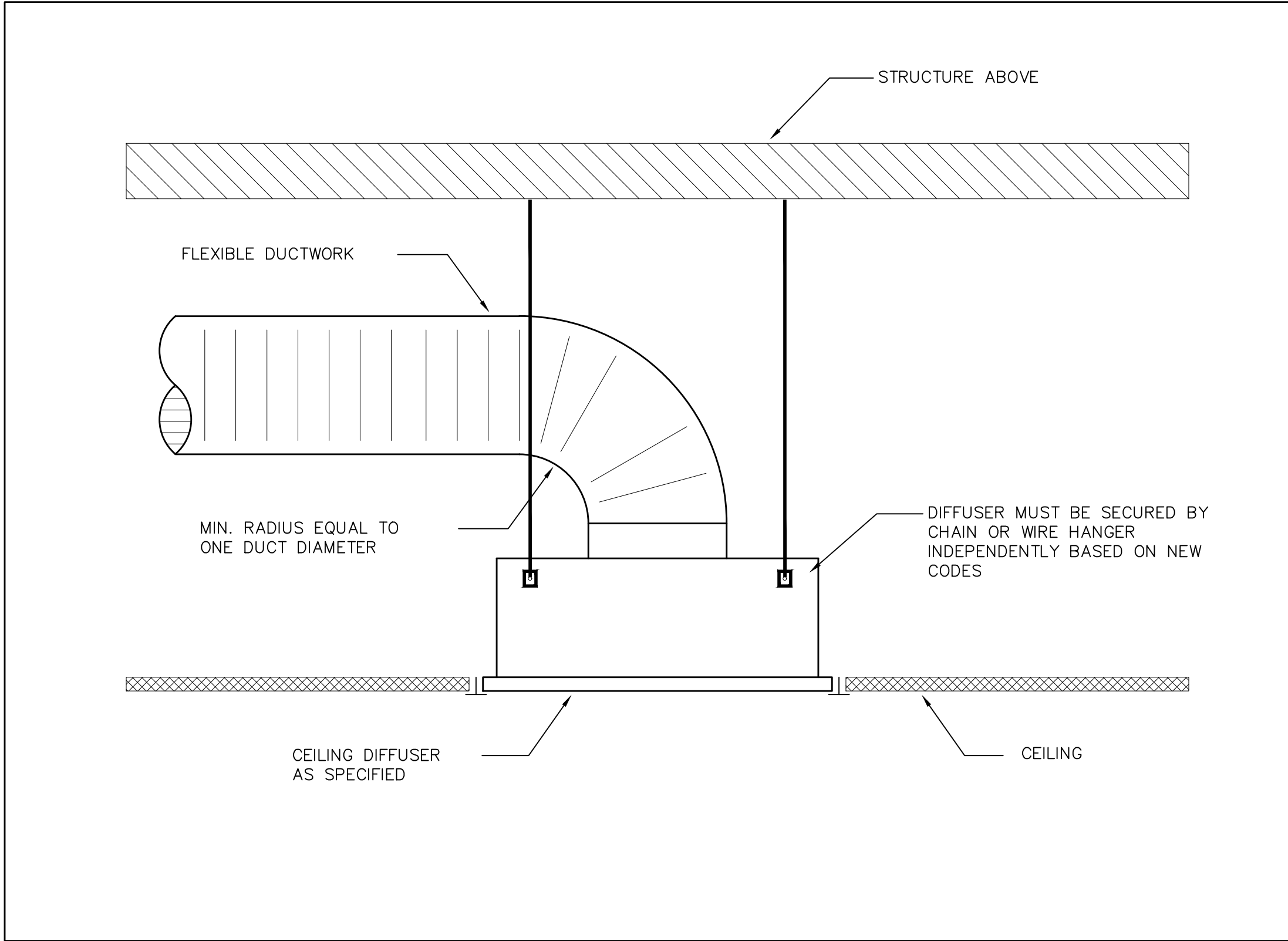
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NEW PLUMBING AND DRAINAGE
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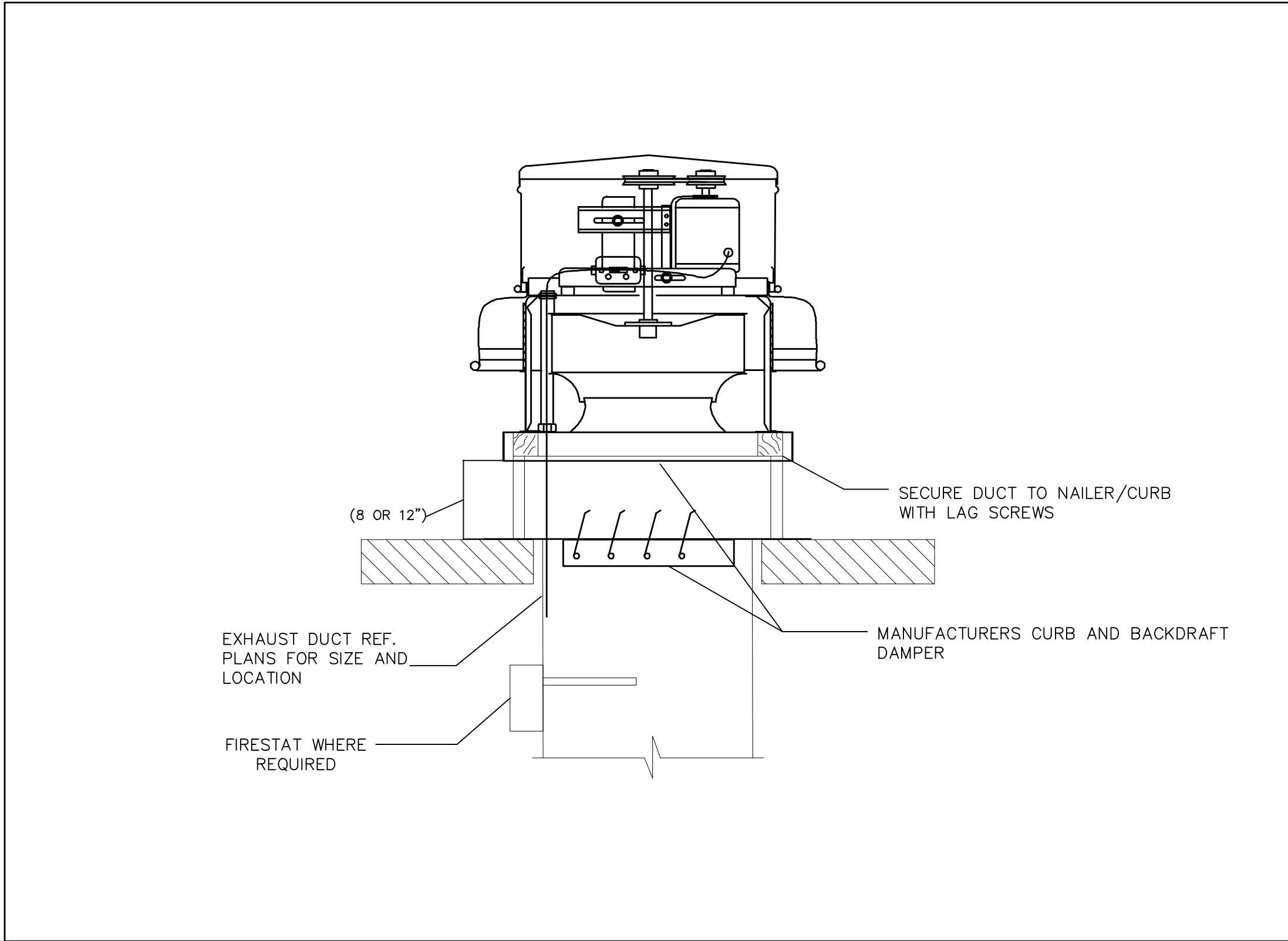
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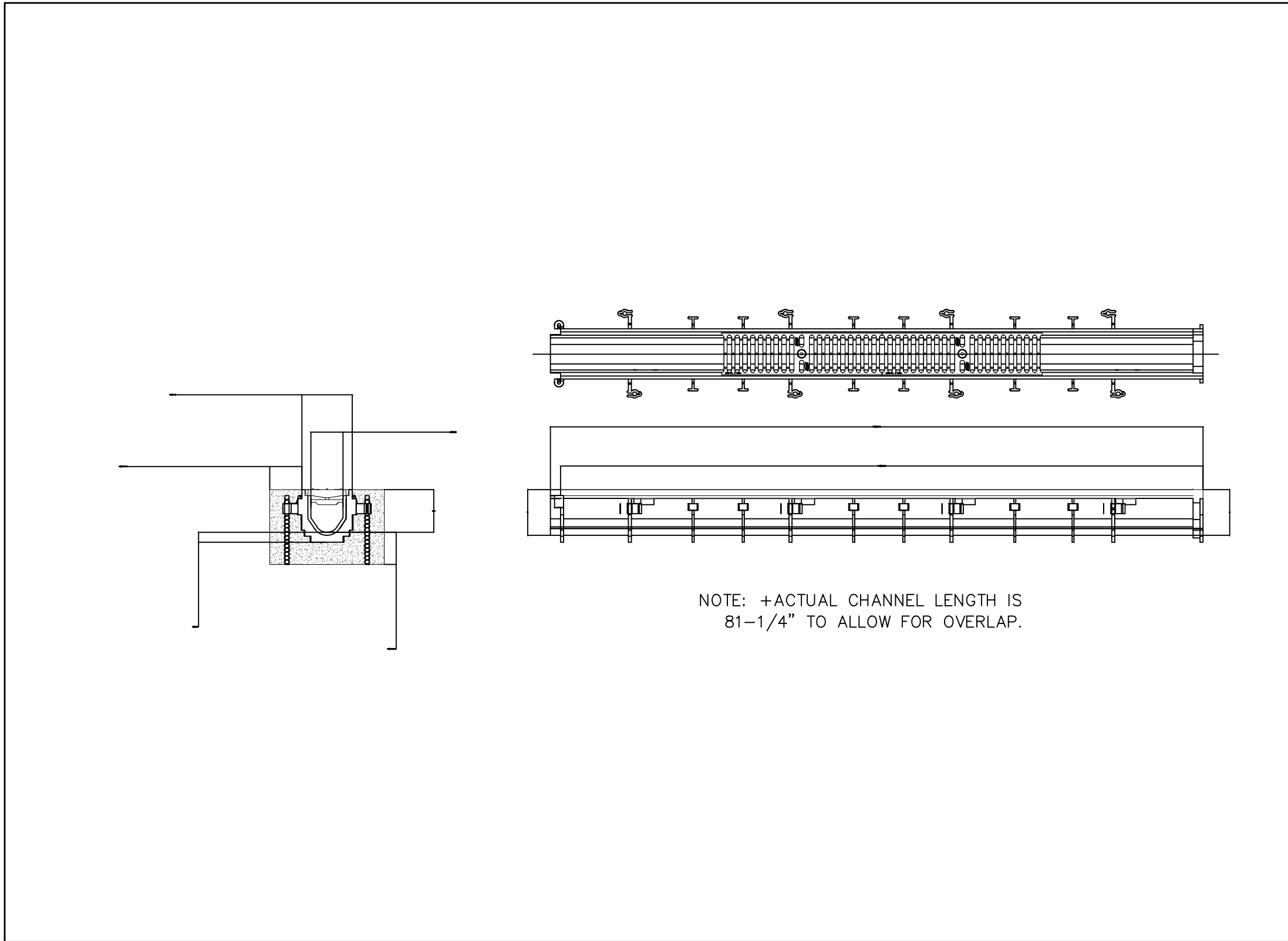
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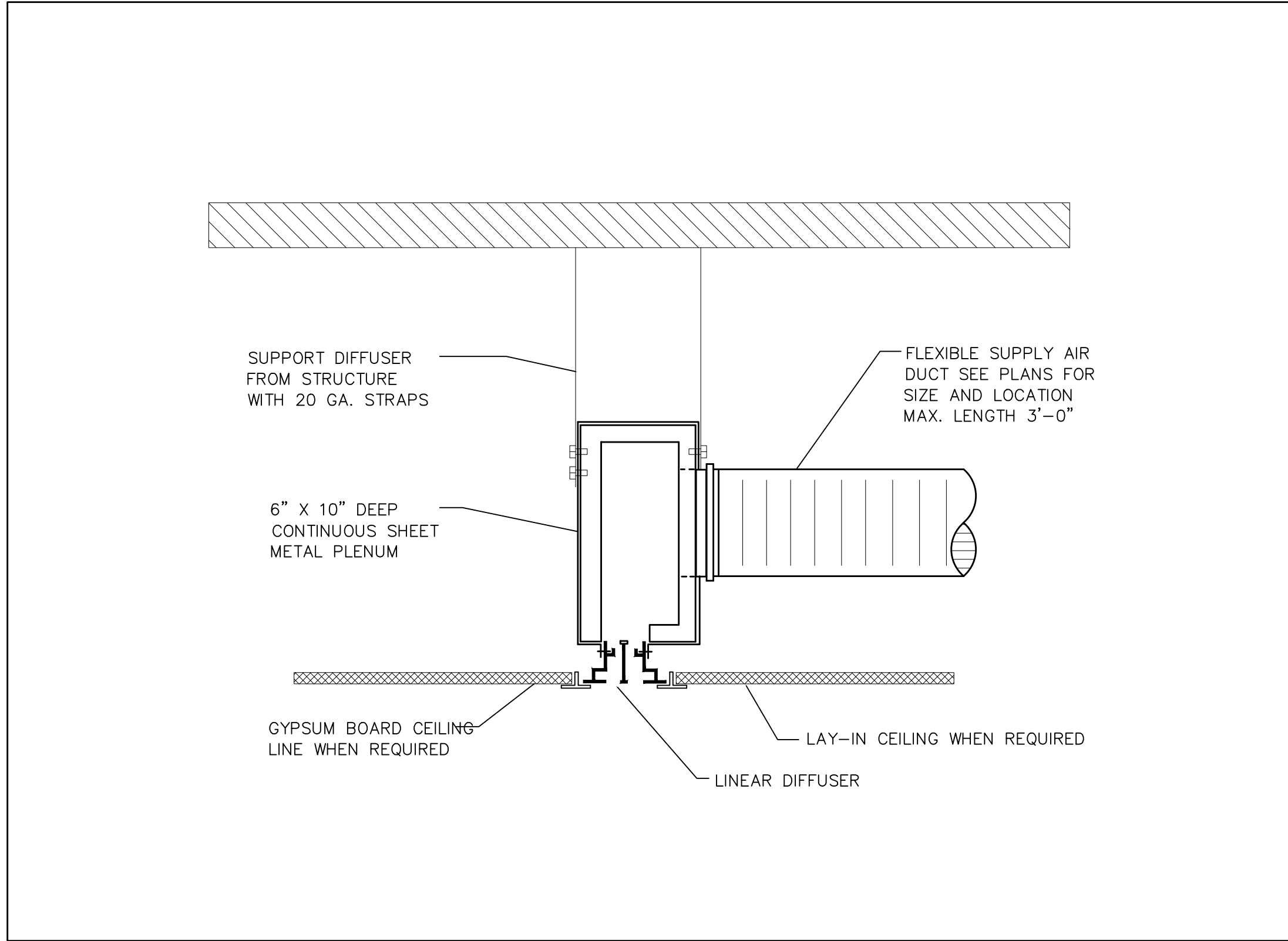
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M-10 SQUARE DIFFUSER-SUPPORT DETAIL
SCALE: N.T.S.



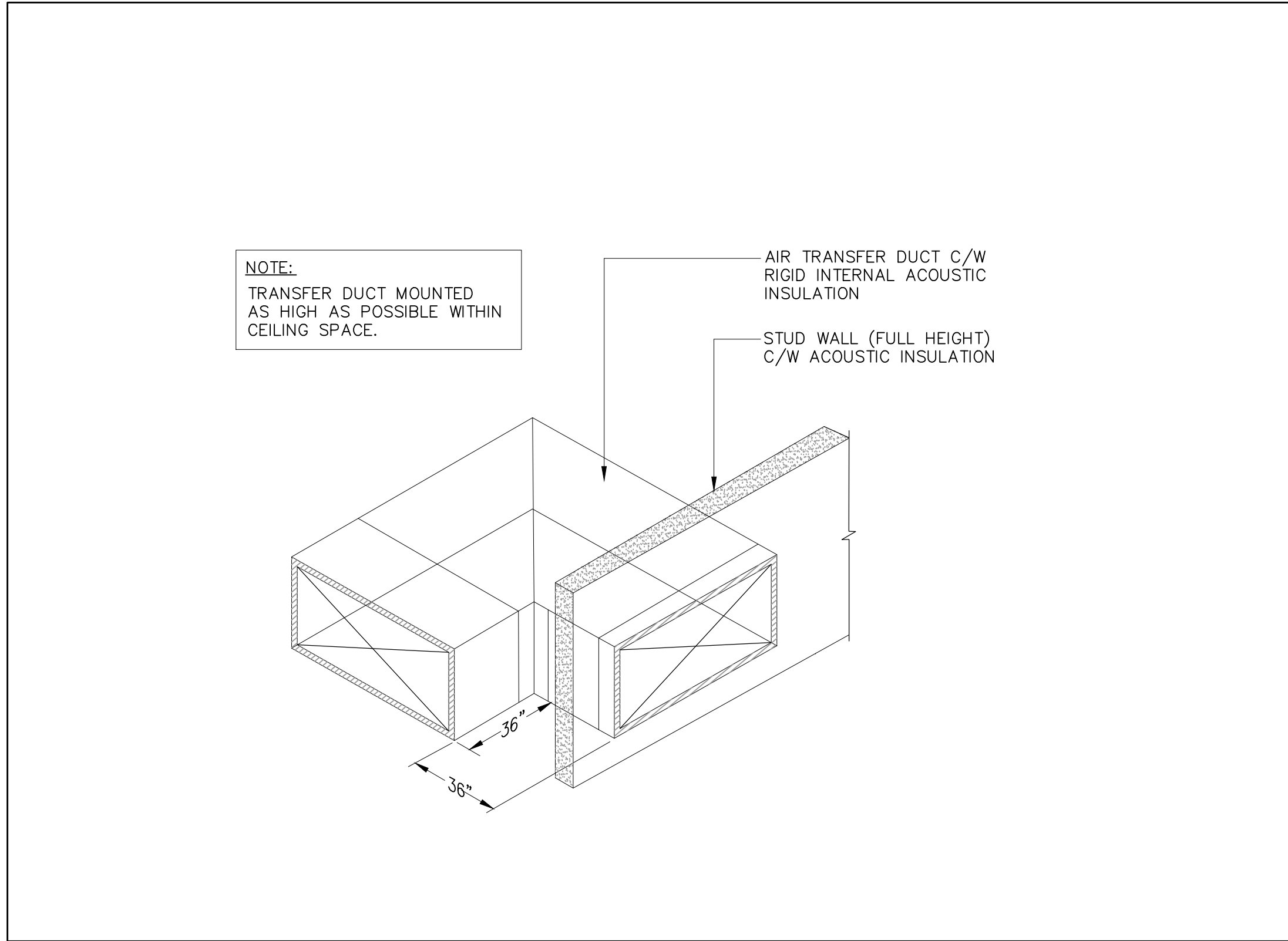
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M-10 ROOF EXHAUST FAN DETAIL
SCALE: N.T.S.



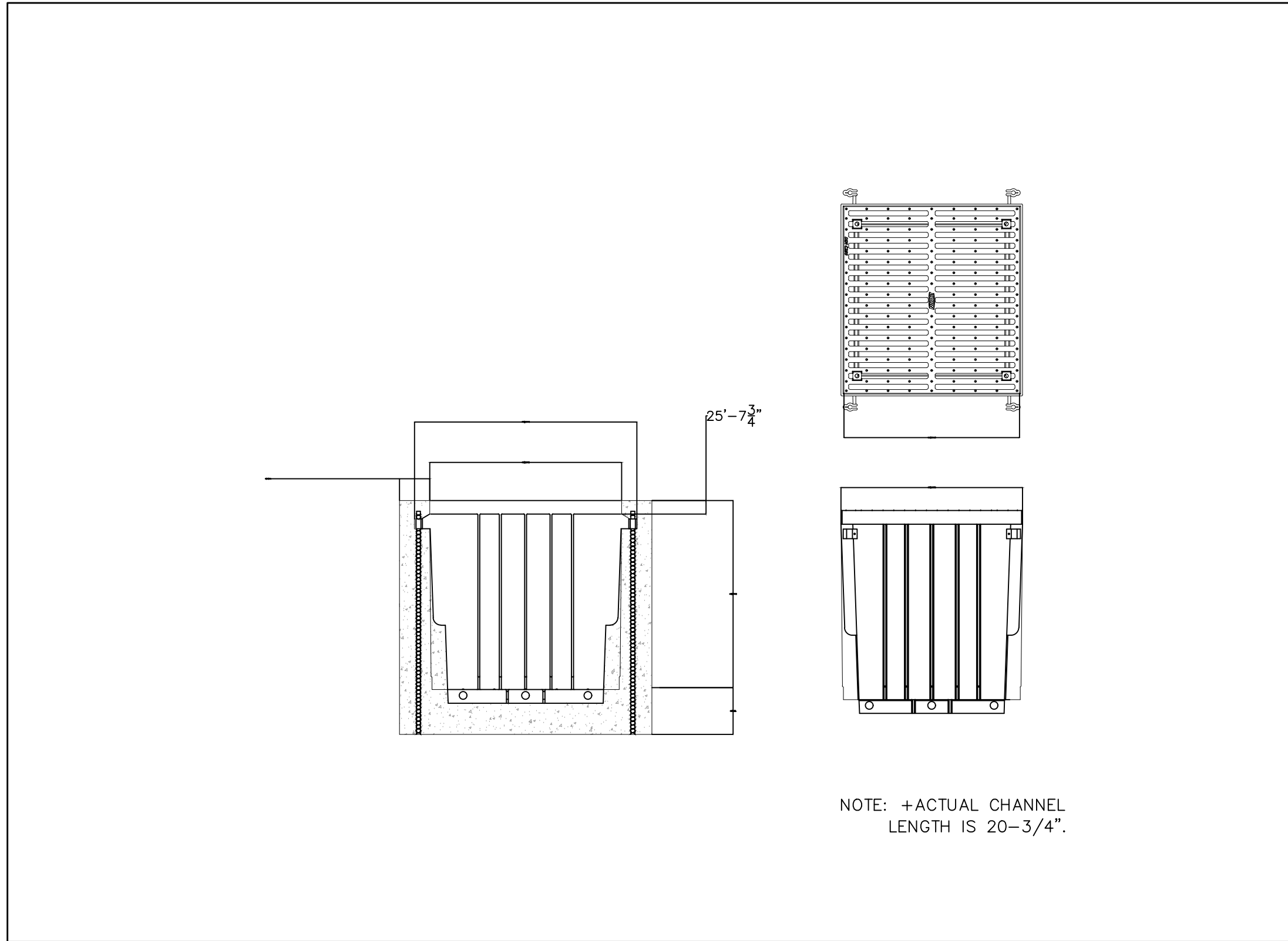
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M-10 TRENCH DRAIN DETAIL
SCALE: N.T.S.



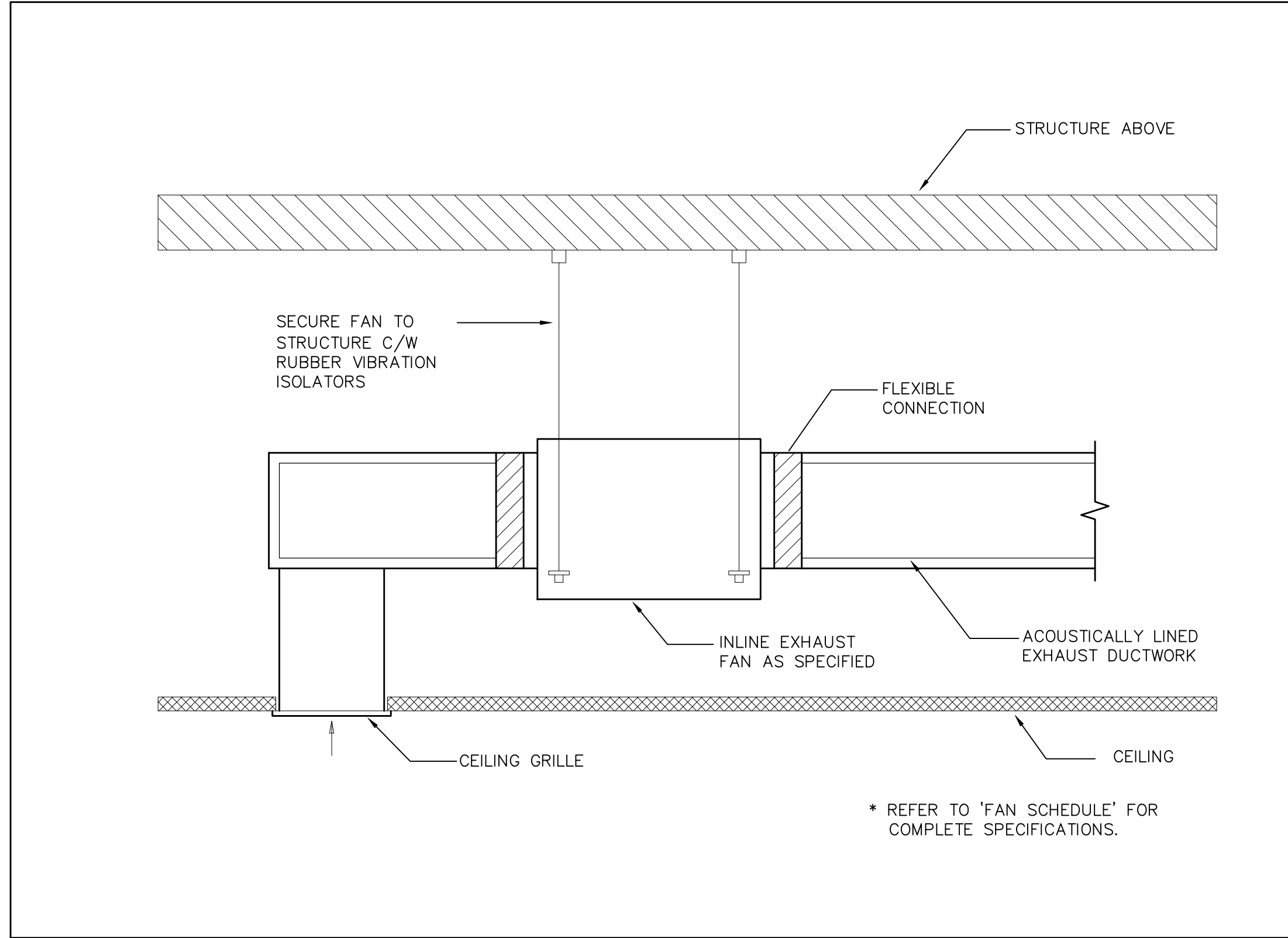
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M-10 LINEAR DIFFUSER AND PLENUM DETAIL
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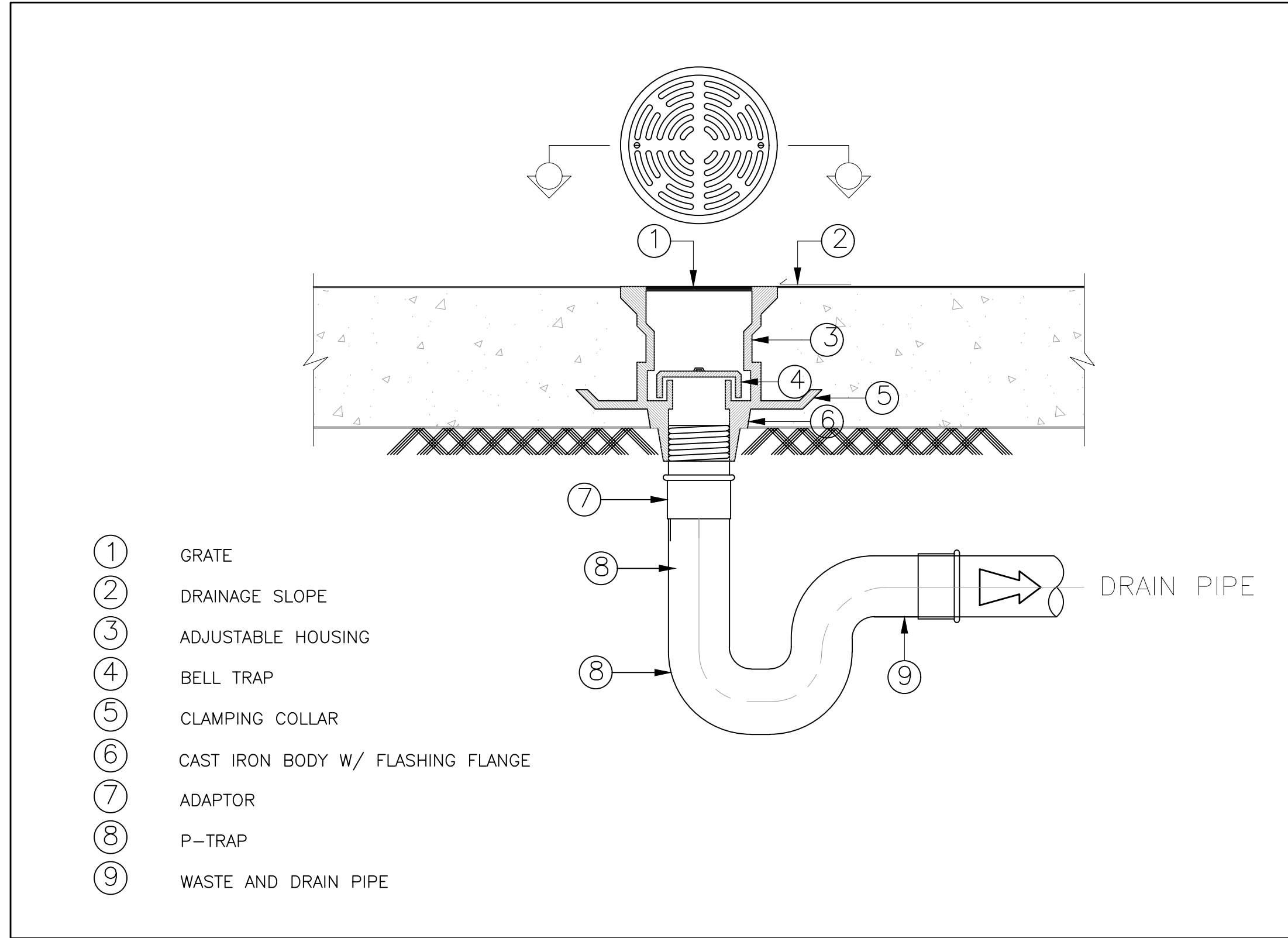
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M-10 90° TRANSFER AIR DUCT DETAIL
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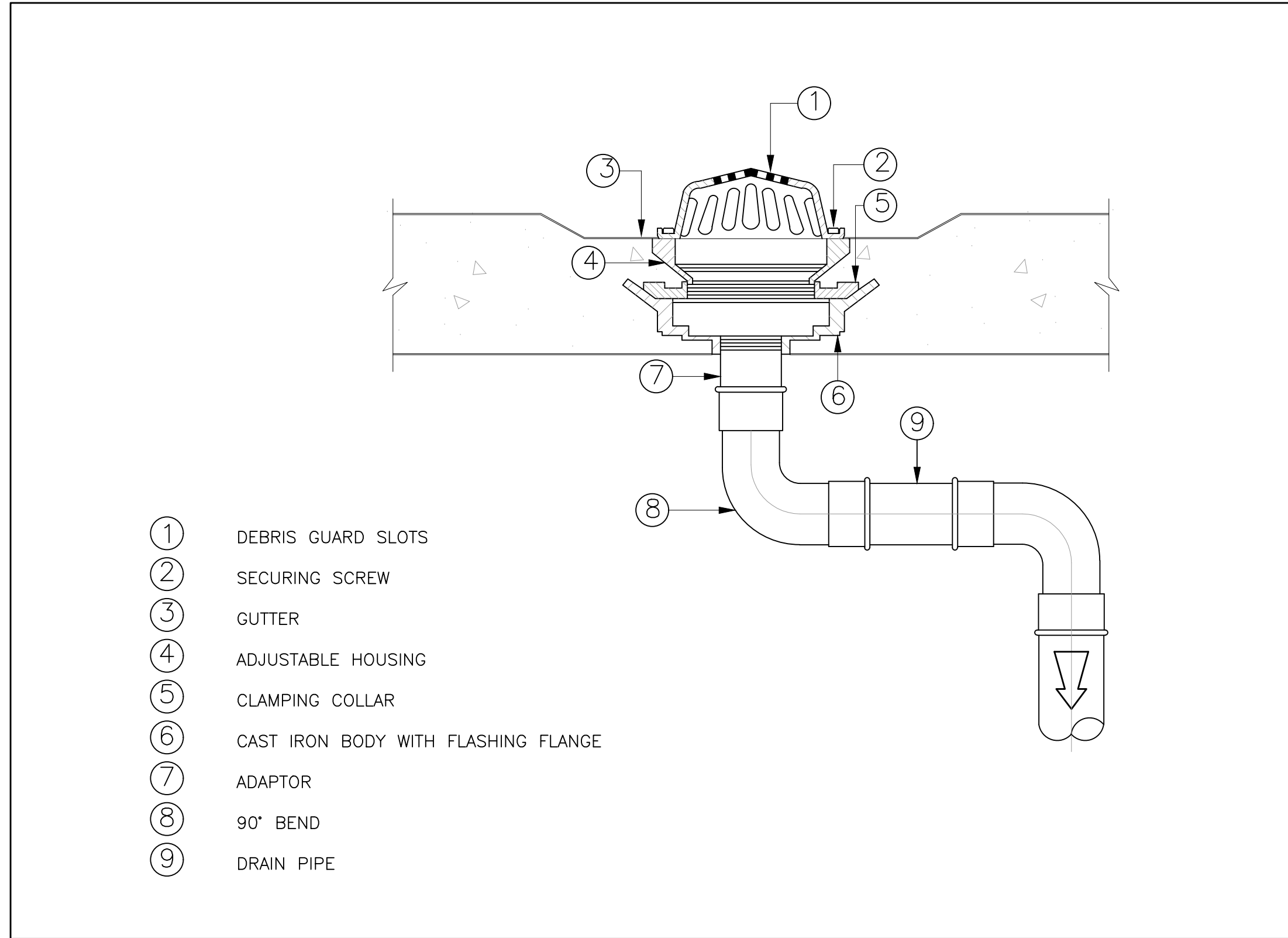
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M-10 CATCH BASIN DETAIL
SCALE: N.T.S.



3
M-10 INLINE EXHAUST FAN DETAIL
SCALE: N.T.S.



6
M-10 FLOOR DRAIN DETAIL
SCALE: N.T.S.



9
M-10 ROOF DRAIN DETAIL
SCALE: N.T.S.

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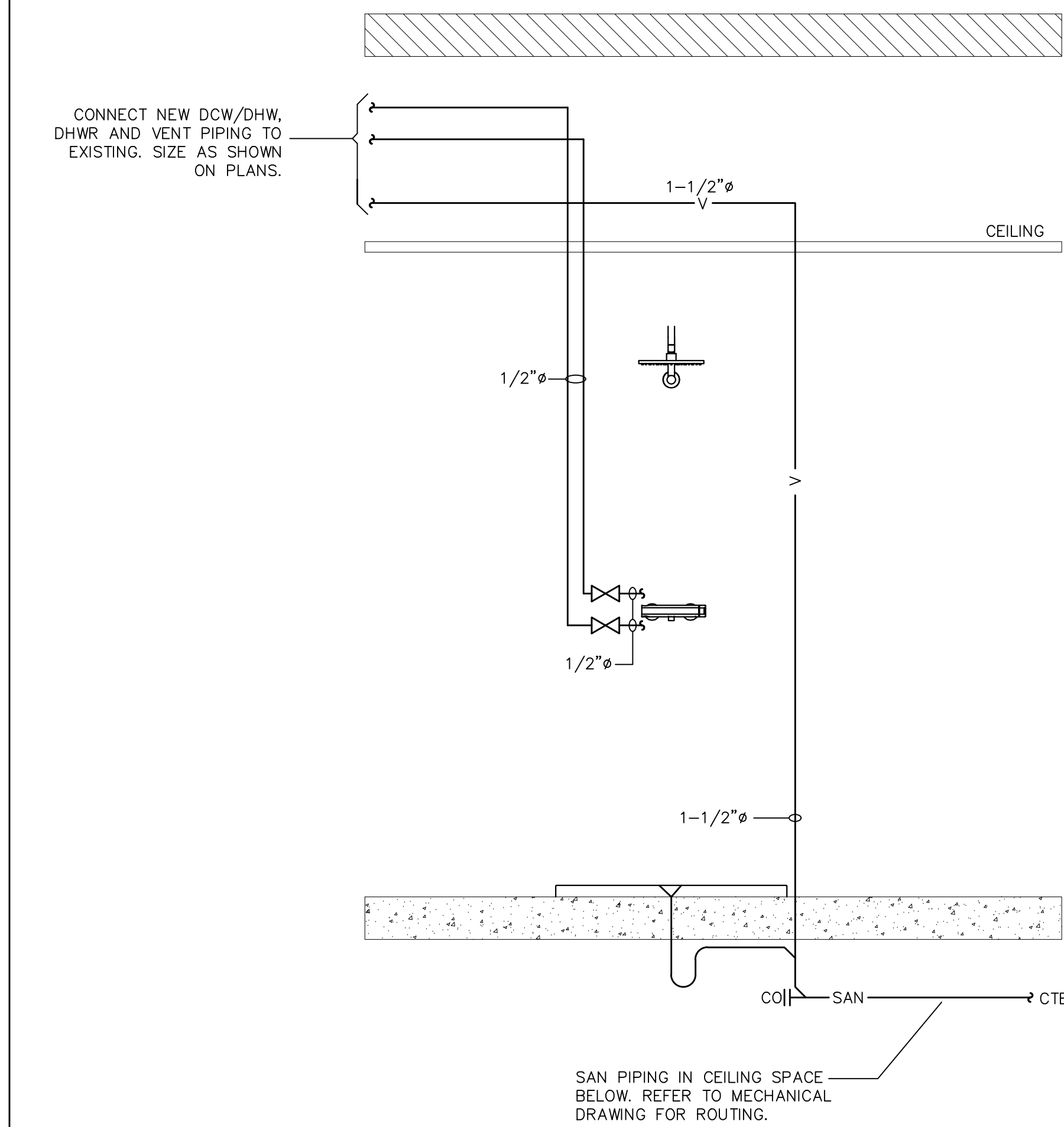
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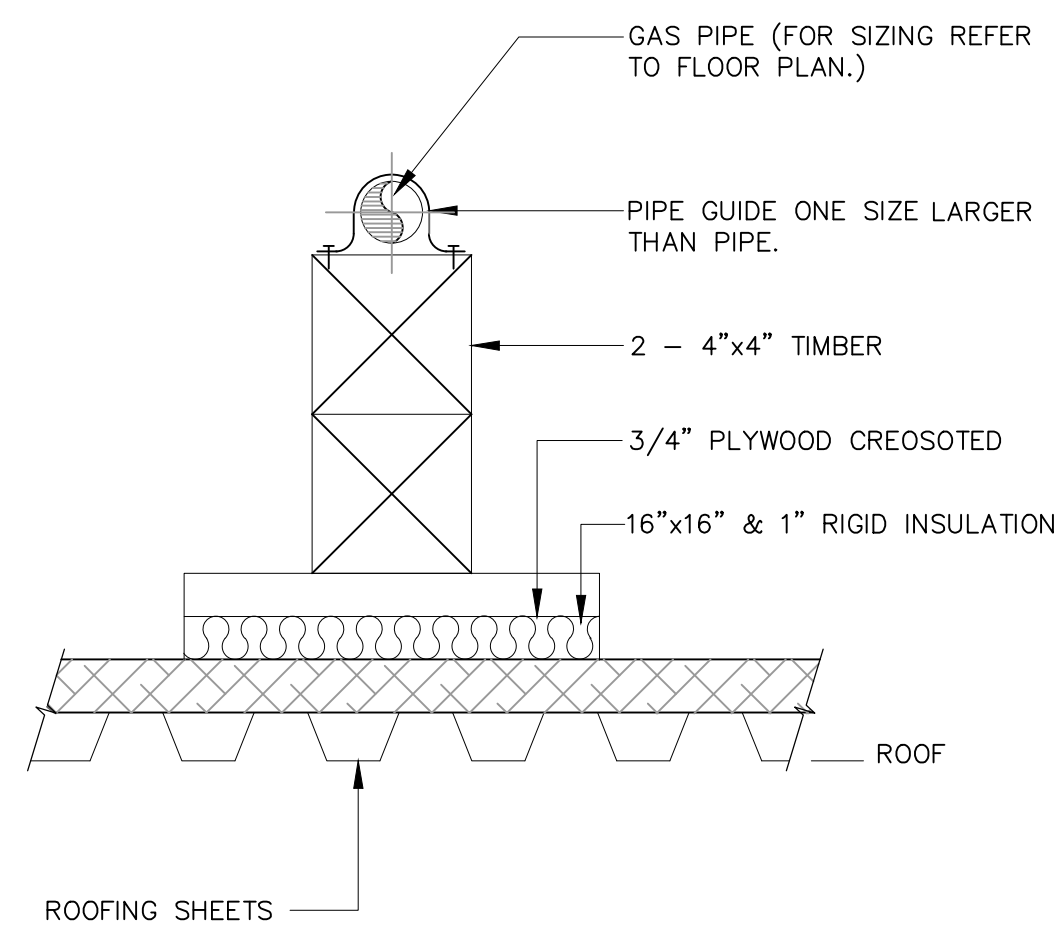
ARCHITECT:
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e-mail: rai@raichitect.com

PROJECT
CLARINGTON
TOYOTA
LOCATION
10 SPICER SQUARE
BOWMNVILLE, ON

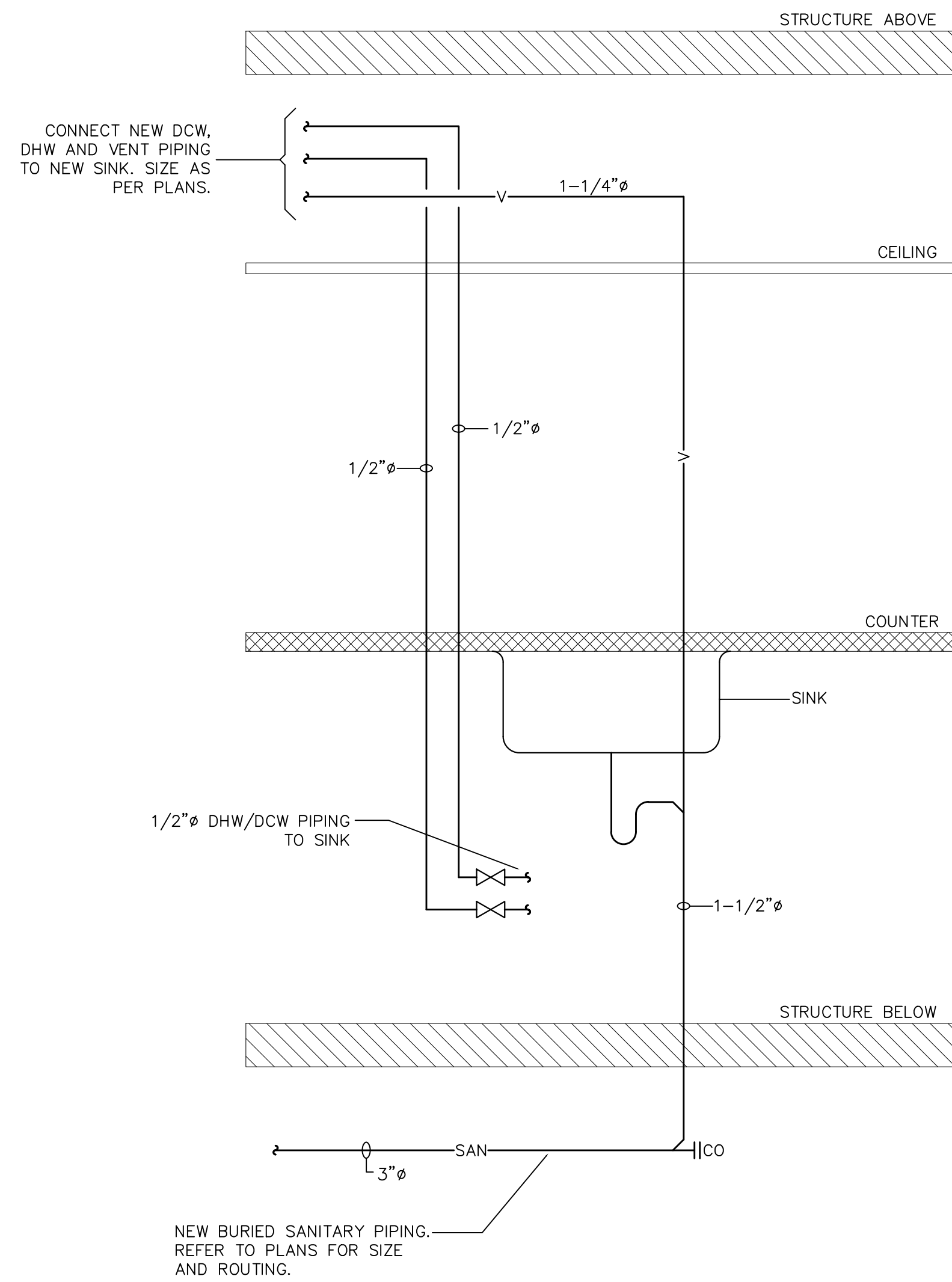
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SCALE: N.T.S.	DRAWN BY: T.Y.
PROJECT NO. 23217	CHECKED BY: J.I.



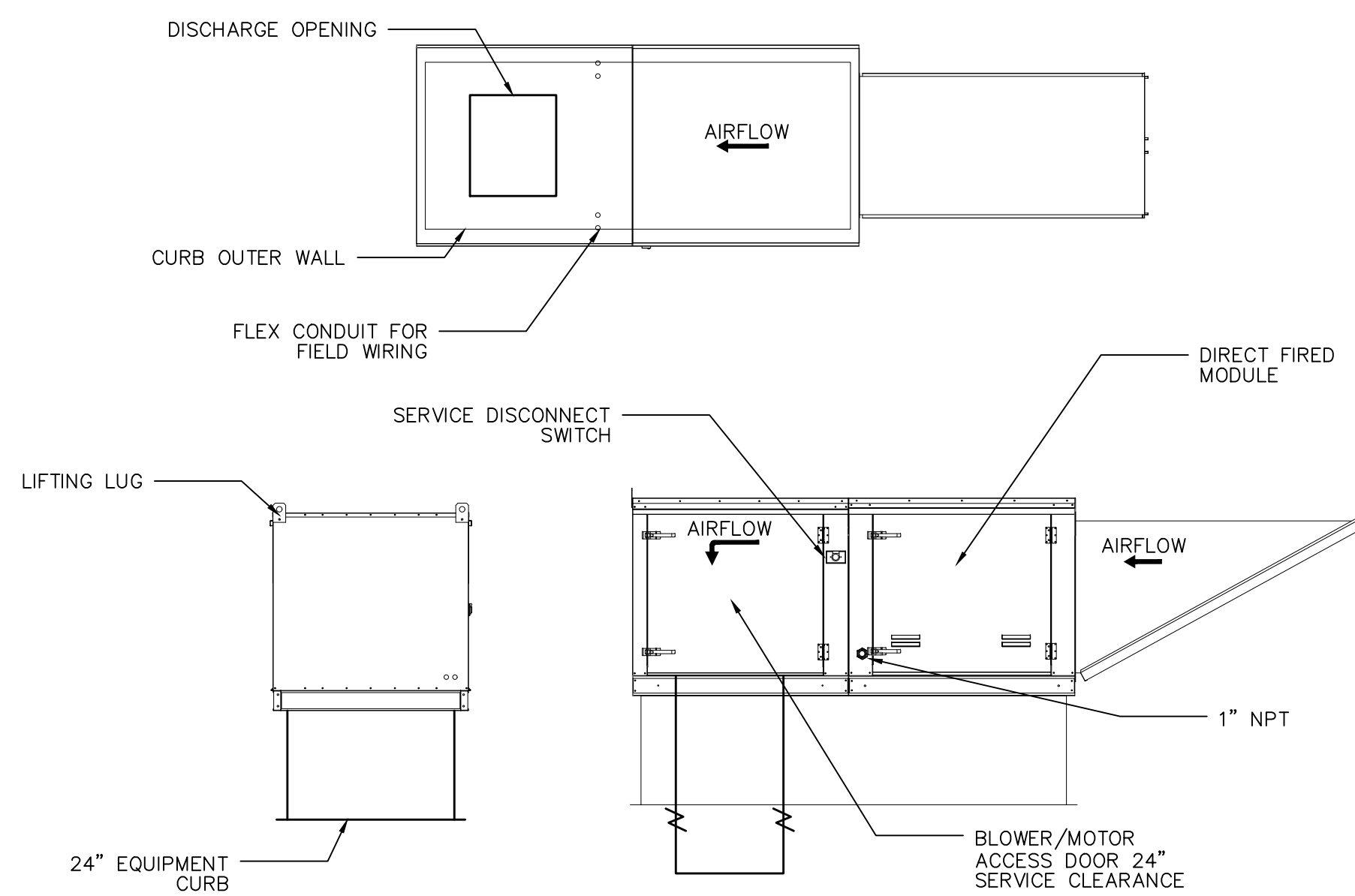
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M-11 SHOWER PIPING DETAIL
SCALE: N.T.S.



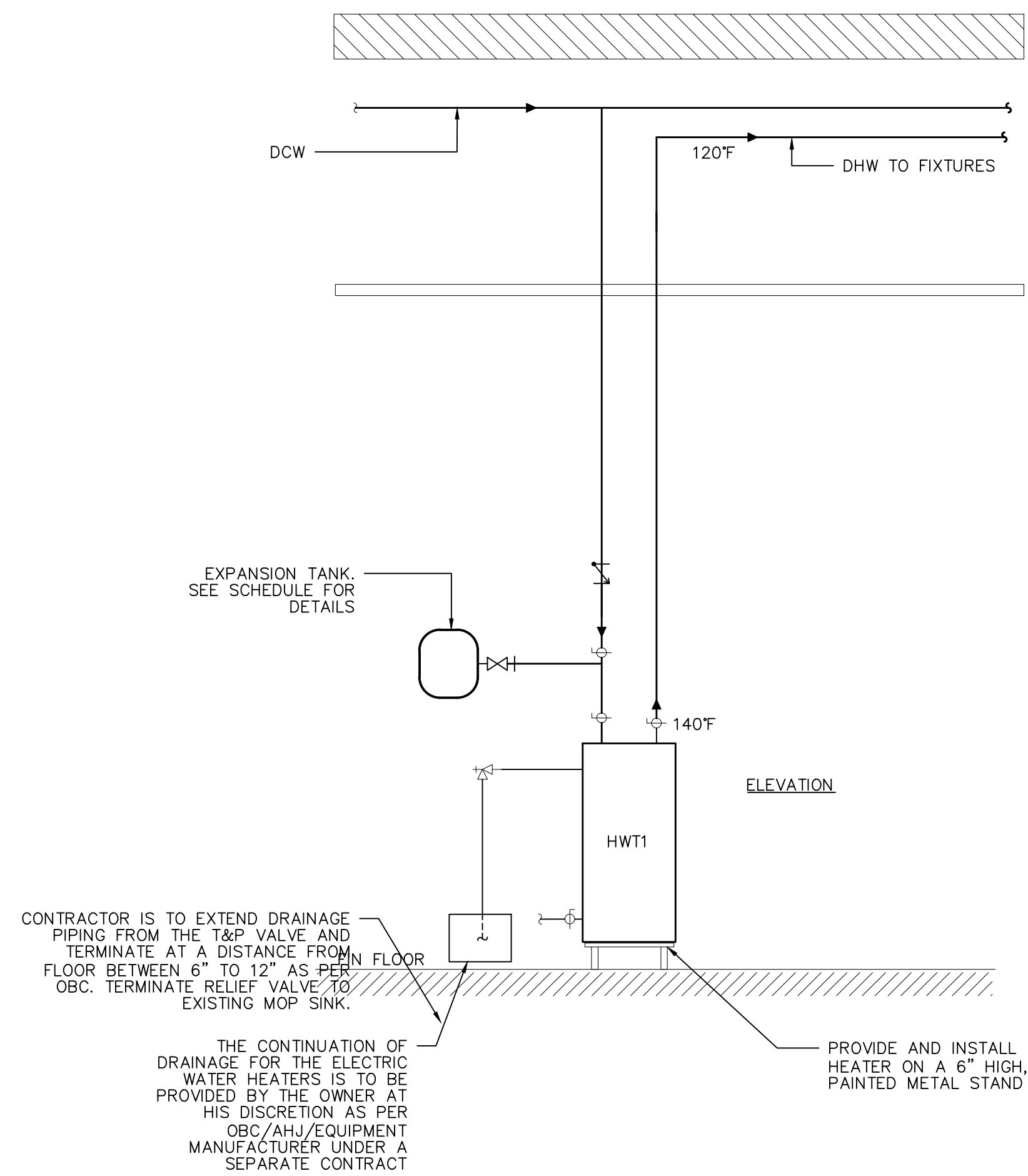
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M-11 SUPPORT GAS PIPING ON ROOF DETAIL
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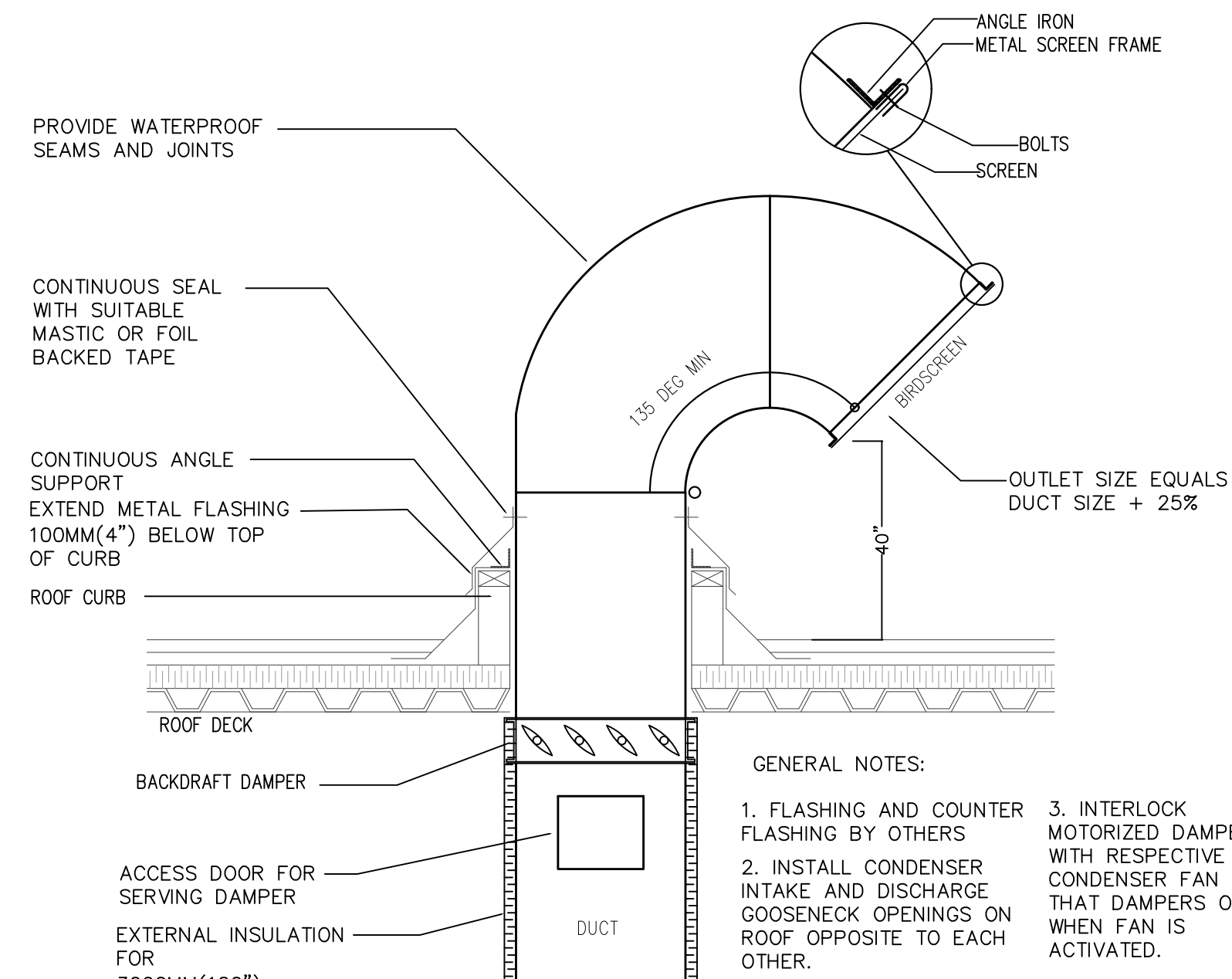
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M-11 KITCHEN SINK PIPING DETAIL
SCALE: N.T.S.



5
M-11 MAKE-UP AIR UNIT DETAIL
SCALE: N.T.S.



3
M-11 FLOOR MOUNTED ELECTRIC HOT WATER TANK DETAIL
SCALE: N.T.S.



6
M-11 GOOSENECK DETAIL
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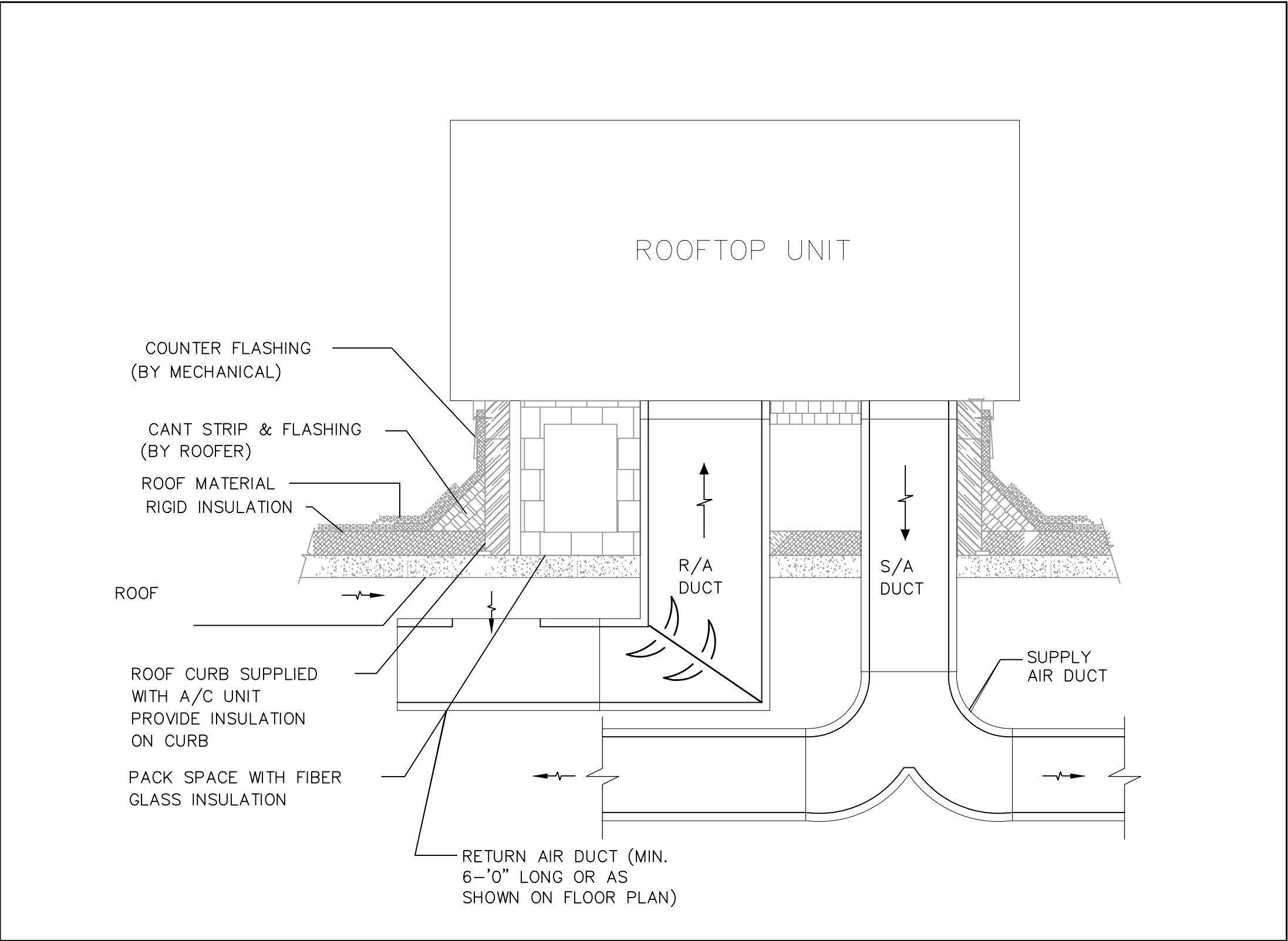
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DATE	REV.	DESCRIPTION	DRN BY

SCALE:	NORTH ARROW
ARCHITECT:	

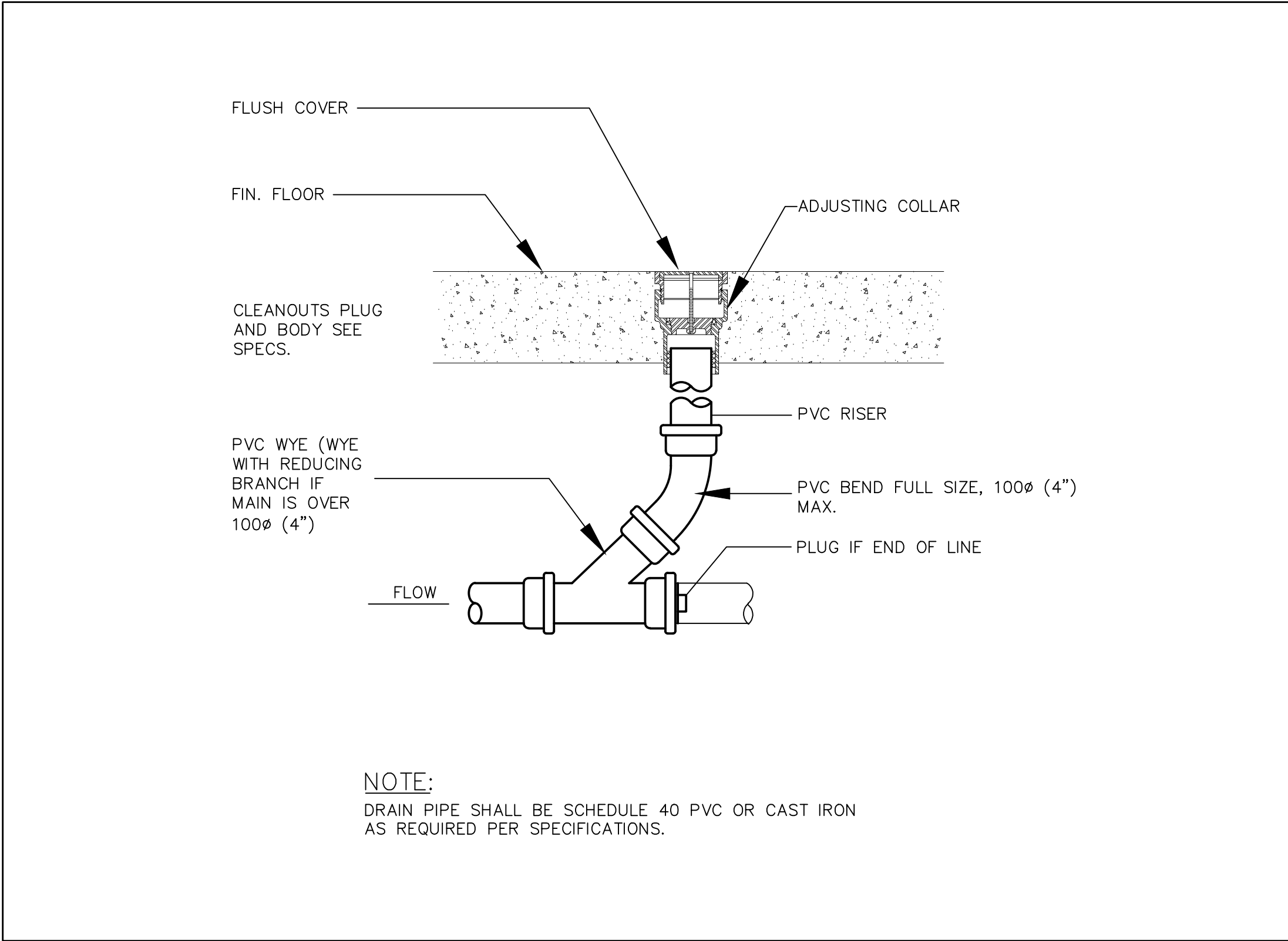


PROJECT
CLARINGTON
TOYOTA
LOCATION
10 SPICER SQUARE
BOWMVILLE, ON

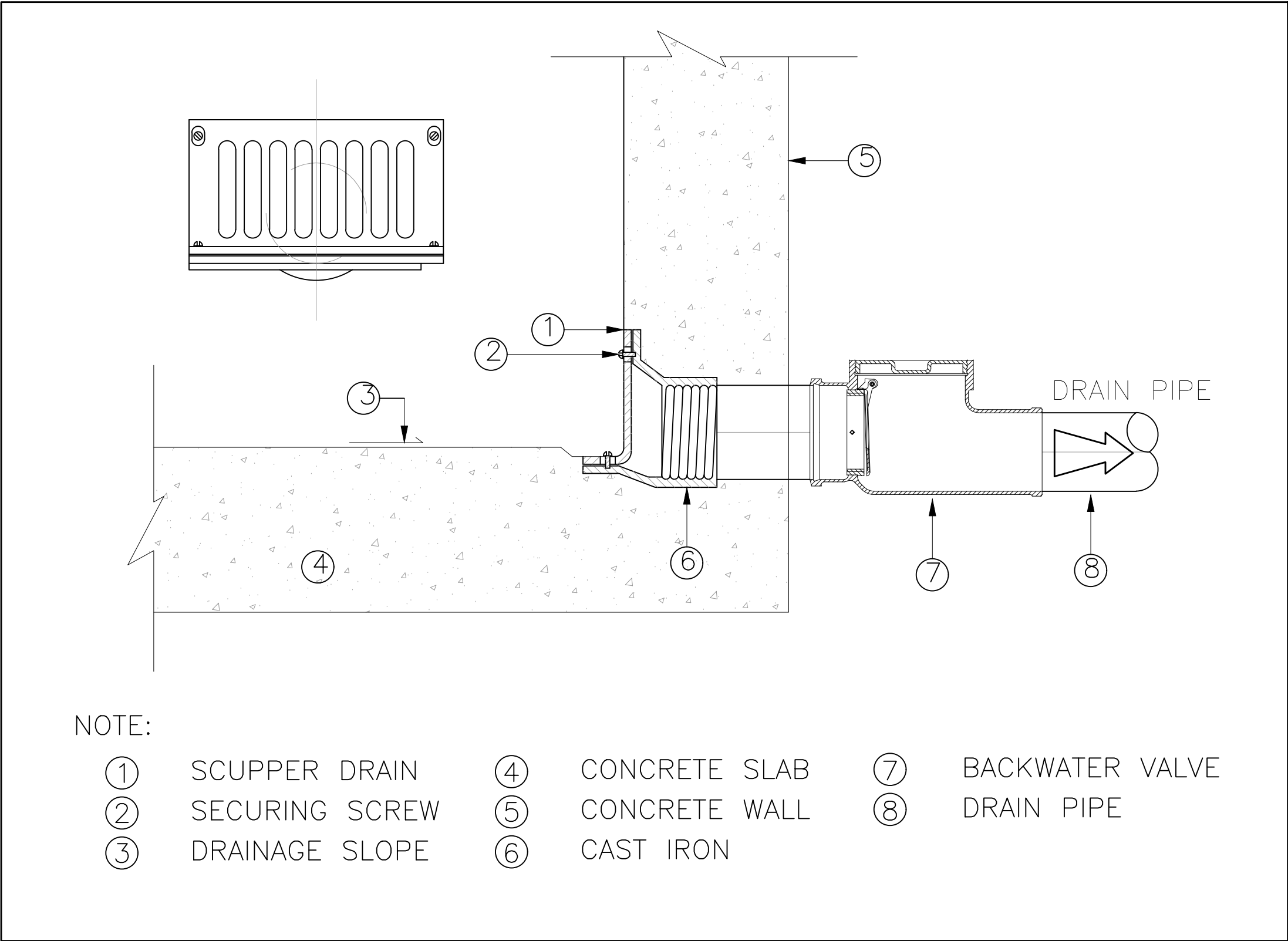
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SCALE: N.T.S.	DRAWN BY: T.Y.
PROJECT NO. 23217	CHECKED BY: J.L.



1 ROOFTOP UNIT INSTALLATION DETAIL
SCALE: N.T.S.



2 FLOOR CLEANOUT DETAIL
SCALE: N.T.S.



3 ELEVATOR PIT DRAIN DETAIL
SCALE: N.T.S.

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25-01-31	1	ISSUED FOR PERMIT		JL
DATE	REV.	DESCRIPTION		DRN BY

REVISION RECORD			
SCALE:	NORTH ARROW		

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PROJECT
CLARINGTON
TOYOTA

LOCATION
10 SPICER SQUARE
BOWMVILLE, ON

DRAWING TITLE
DETAILS SHEET NO. 3

DRAWING No.
M-12

SCALE:	N.T.S.	DRAWN BY:	T.Y.
PROJECT NO.	23217	CHECKED BY:	J.I.

DIFFUSER SCHEDULE									
TAG	MAKE/MODEL					REMARKS			
A	EH PRICE MODEL SPD 24"x24" SQUARE PLAQUE DIFFUSER (S/A)					STEEL CONSTRUCTION, FOR T-BAR LAY-IN. NECK SIZE AND AIR BALANCE AS PER DRAWINGS.			
A1	EH PRICE MODEL SPD 24"x24" SQUARE PLAQUE DIFFUSER (S/A)					STEEL CONSTRUCTION, DRYWALL SURFACE STANDARD MOUNTING. NECK SIZE AND AIR BALANCE AS PER DRAWINGS.			
A2	EH PRICE SDS LINEAR DIFFUSER (S/A)					STEEL CONSTRUCTION. 2 SLOT, 1" WIDTH, 4' LONG. NECK SIZE AND AIR BALANCE AS PER DRAWINGS.			
A3	EH PRICE PDL PERFORATED FACE SUPPLY DIFFUSER (S/A)					STEEL CONSTRUCTION. CURVED BLADE, 1-WAY, 450/450 INLET. NECK SIZE AND AIR BALANCE AS PER DRAWINGS.			
B	EH PRICE MODEL 80 EGG CRATE RETURN					CORE ONLY, 1/2"x1/2"x1/2" ALUMINUM GRID CORE, FOR T-BAR LAY-IN			
B1	EH PRICE MODEL 80 EGG CRATE RETURN					CORE ONLY, 1/2"x1/2"x1/2" ALUMINUM GRID CORE, FOR DRY-WALL APPLICATION.			
B2	EH PRICE MODEL 80 EGG CRATE RETURN					CORE ONLY, 1/2"x1/2"x1/2" ALUMINUM GRID CORE, C/W PLENUM, FOR DUCT MOUNTING APPLICATION.			
C	EH PRICE MODEL 535 LOUVERED FACE EXHAUST GRILLE					STEEL CONSTRUCTION, 45° DEFLECTION, FOR DUCT CONNECTION AND DRYWALL SURFACE STANDARD MOUNTING.			
D	EH PRICE MODEL ATG1 TRANSFER DOOR GRILLE					ALUMINIUM CONSTRUCTION, SIGHT-PROOF. SIZE AS PER DRAWING.			
D1	NAILOR MODEL 61DG-FR FIRE-RATED DOOR GRILLE					COLD ROLLED STEEL GA. FRAME AND 16 GA. BLADES, 74°C FUSIBLE LINK WITH STAINLESS STEEL OPERATING SPRING AND ACTION BAR. SIZE AS PER DRAWING. FIRE-RATING TO BE COORDINATED WITH ARCHITECT.			

NOTES:
1. TITUS AND NAILOR WILL BE CONSIDERED EQUAL GIVEN THAT THE PERFORMANCE DATA IS EQUIVALENT.
2. SIZE ALL GRILLES, DIFFUSERS, ETC. AS PER MECHANICAL DRAWINGS.
3. CONFIRM ALL FINISHES WITH ARCHITECT/INTERIOR DESIGNER.

HOT WATER TANK SCHEDULE									
REF.	MAKE	MODEL	CAPACITY (GAL)	TYPE	INPUT (KW)	RECOVERY RATE (USGAL/HR)	V/PH/Hz	APPROX OPERATING WEIGHT (LBS)	REMARKS
HWT1	AOSMITH	DEN-80	80.0	ELECTRIC	10.0	45 @ ΔT=90°F	208/3/60	879.0	COMMERCIAL GRADE ELECTRIC HOT WATER TANK. INSTALL SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO DETAILS FOR PIPING SCHEMATIC.

BASEBOARD/FORCE FLOW HEATER SCHEDULE							
TAG	MANUFACTURER	MODEL	STYLE	KW	V/PH/Hz	COLOUR	REMARKS
FFH1	STELPRO	WF4008T	FORCE FLOW	4.0	208/1/60	WHITE	ELECTRIC FORCE FLOW HEATER C/W BUILT-IN TAMPERPROOF THERMOSTAT.
BBH1	STELPRO	B1008W	CEILING FORCE FLOW	1.0	208/1/60	WHITE	C/W BUILT-IN THERMOSTAT.

NOTES:
1. ALL ELECTRICAL HEATERS SHALL BE SUPPLIED BY DIV.15 AND INSTALLED BY DIV.16.
2. ALL COLOURS ARE TO BE CONFIRMED WITH ARCHITECT/INTERIOR DESIGNER.
3. QUELLET, DIMPLEX AND QMARK WILL BE CONSIDERED EQUAL GIVEN THAT THE PERFORMANCE DATA IS EQUIVALENT.

ELECTRIC UNIT HEATER SCHEDULE							
TAG	MANUFACTURER	MODEL	STYLE	KW	V/PH/Hz	COLOUR	REMARKS
UH1	STELPRO	SHU3063C24CHAR	UNIT HEATER	30.0	600/3/60	CHARCOAL	C/W CEILING MOUNTED WITH UNIVERSAL MOUNTING BRACKET AND REMOTE TAMPERPROOF THERMOSTAT.
UH2	STELPRO	SHU3063C24CHAR	UNIT HEATER	30.0	600/3/60	CHARCOAL	C/W CEILING MOUNTED WITH UNIVERSAL MOUNTING BRACKET AND REMOTE TAMPERPROOF THERMOSTAT.

NOTES:
1. ALL ELECTRICAL HEATERS SHALL BE SUPPLIED BY DIV.15 AND INSTALLED BY DIV.16.
2. ALL COLOURS ARE TO BE CONFIRMED WITH ARCHITECT/INTERIOR DESIGNER.
3. QUELLET, DIMPLEX AND QMARK WILL BE CONSIDERED EQUAL GIVEN THAT THE PERFORMANCE DATA IS EQUIVALENT.

SUPPLY/EXHAUST FAN SCHEDULE															
TAG	SERVICE	EQUIPMENT LOCATION	MANUFACTURER	MODEL NO.	CAPACITY	E.S.P.	MOTOR SIZE		TYPE	POWER V/PH/CYCLE	WEIGHT (LBS)	FLA (A)	MCA (A)	MOCP (A)	REMARKS
					CFM	IN. WC.	RPM	W / HP							
EF1	EXHAUST	ROOF	GREENHECK	6-080-9	200	0.50	1725	1/20 HP	ROOF EXHAUST FAN	115/1/60	30	--	--	--	C/W ROOF CURB. FAN TO BE CONTROLLED BY ON/OFF SWITCH.
EF2	EXHAUST	ROOF	GREENHECK	6-008-A	300	0.75	1725	1/4 HP	ROOF EXHAUST FAN	115/1/60	50	--	--	--	C/W ROOF CURB. FAN TO BE CONTROLLED BY ON/OFF TIMER.
EF3	EXHAUST	ROOF	GREENHECK	G-090-VG	450	0.50	1526	1/10 HP	ROOF EXHAUST FAN	115/1/60	41	1.5	1.9	--	C/W ROOF CURB. FAN TO BE CONTROLLED BY ON/OFF TIMER.
EF4	EXHAUST	JANITOR'S CLOSET - 232	GREENHECK	SP-LP0810W	100	0.25	894	8 W	CEILING FAN	115/1/60	16	0.29	0.4	15	FAN TO BE CONTROLLED BY ON/OFF SPEED CONTROL.
EF5	EXHAUST	CONFERENCE ROOM - 226	GREENHECK	CSP-A700-VG	500	0.25	910	62 W	INLINE FAN	115/1/60	39	4.10	5.10	--	FAN TO BE CONTROLLED BY ON/OFF SWITCH.
EF6	EXHAUST	ROOF	GREENHECK	GB-330-50	12000	1	1725	5 HP	ROOF EXHAUST FAN	575/60/3	335	6.10	7.63	--	NEMA PREMIUM EFFICIENT MOTOR - MWMTA NWM TABLE 12-12, STANDARD CURB CAP. SIZE - 46 SQUARE, UL/CUL 705 LISTED - "POWER VENTILATOR", SWITCH, NEMA-1, HEAVY DUTY W/AUXILIARY CONTACT (MEETS AUTOMOTIVE DUTY REQUIREMENTS), SHIPPED WITH UNIT FOAM CURB SEAL (FACTORY APPLIED), BIRDSCREEN: GALVANIZED, NOM 84% FREE AREA, BEARINGS WITH GREASE FITTINGS, L10 LIFE OF 100,000 HRS (L50 AVG. LIFE 500,000 HRS), CONDUIT CHASE QTY 1.

NOTE:
1. PROVIDE 18" ROOF CURB WHERE REQUIRED.

GAS-FIRED MAKE-UP AIR UNIT SCHEDULE														
EQUIPMENT NO.	MANUFACTURER	MODEL	INPUT / OUTPUT HEATING CAPACITY (MBH)	AIRFLOW (CFM)	ESP (IN. WC.)	RPM	HP	V/PH/Hz	FLA	MCA	MOCP	APPROX. OPERATING WEIGHT (LBS)	REMARKS	
MUA1	GREENHECK	IGX-P127-H32-MF3-S	1050.0 / 850.5	12000	0.5	1305	9.76	575/3/60	--	23.0	35.0	3000	C/W UNIT CONSTRUCTION - DOUBLE WALL, WALL INSULATION, ACCESS AND CONNECTIONS - RIGHT SIDE WHEN FACING INTAKE, SERVICE ACCESS - HINGED ACCESS DOORS, UNIT FINISH - G90 GALVANIZED, DIRECT-DRIVE, MIXED FLOW PLENUM, NEOPRENE VIBRATION INSULATION, WITH REMOTE PANEL - INDUSTRIAL, NEMA-1, TERMINAL STRIP WITH REMOTE PANEL, REMOTE PANEL - INDUSTRIAL (NEMA-1), TEMPERATURE CONTROL - DISCHARGE CONTROL, VFD BY FACTORY, SUPPLY FAN CONTROL, CONSTANT VOLUME, HEATING INLET AIR SENSOR, FREEZE PROTECTION, WEATHERHOOD - ALUMINIUM MESH FILTERED, SUPPLY AIR FILTERS - 2" MERV8, 20X25X2 - (10), OUTDOOR AIR INLET DAMPER - LOW LEAKAGE, ROOF CURB - GPI, FURNACE VENTING - OUTDOOR, FURNACE VENTING METHOD - STANDARD, STAINLESS STEEL HEAT EXCHANGER, DDC ASSISTED FURNACE COMMISSIONING. UNIT TO BE INTERLOCKED WITH EXHAUST FAN "EF6".	

ROOFTOP UNIT SCHEDULE														
TAG	MANUFACTURER	MODEL	TON	GROSS / SENSIBLE COOLING CAPACITY (MBH)	AIR FLOW (CFM)	ESP (IN. WC)	HEATING CAPACITY INPUT/ OUTPUT (MBH)	POWER REQUIREMENT	FAN POWER (BHP)	MCA (A)	MOCP (A)	DISCHARGE	APPROX. OPERATING WEIGHT (LBS)	REMARKS
RTU1	YORK	KJ120N24R5AAAAA1A1	10.0	120.7 / 89.5	4000	1.0	240.0 / 194.0	600/3/60	2.82	21.7	25.0	HORIZONTAL /SIDEFLOW	1600	C/W REFRIGERANT DETECTION SYSTEM, 3 HP HIGH STATIC BELT DRIVE BLOWER, STANDARD 2" THROWAWAY FILTERS, INTELLISPEED CONTROL OF THE VFD BASED ON STAGES COOLING, SMART EQUIPMENT CONTROLLER, MICRO-CHANNEL ALUMINUM CONDENSER COIL, COPPER TUBE/ALUMINUM FIN EVAPORATOR COIL, COMPOSITE DRAIN PAN, HINGED DOORS FOR ALL ACCESS PANELS, SLIDE-OUT BLOWER AND BLOWER MOTOR TRAY, ECONOMIZER FOR DEDICATED HORIZONTAL/SIDEFLOW APPLICATIONS. INCLUDES FA HOOD, 1EH0408 BAROMETRIC RELIEF KIT FOR POWER EXHAUST, HORIZONTAL APPLICATION, 18" ROOF CURB.
RTU2	YORK	KJ120N24R5AAAAA1A1	10.0	120.7 / 89.5	4000	1.0	240.0 / 194.0	600/3/60	2.82	21.7	25.0	DOWNFLOW	1600	C/W REFRIGERANT DETECTION SYSTEM, 3 HP HIGH STATIC BELT DRIVE BLOWER, STANDARD 2" THROWAWAY FILTERS, INTELLISPEED CONTROL OF THE VFD BASED ON STAGES COOLING, SMART EQUIPMENT CONTROLLER, MICRO-CHANNEL ALUMINUM CONDENSER COIL, COPPER TUBE/ALUMINUM FIN EVAPORATOR COIL, COMPOSITE DRAIN PAN, HINGED DOORS FOR ALL ACCESS PANELS, SLIDE-OUT BLOWER AND BLOWER MOTOR TRAY, 18" ROOF CURB.
RTU3	YORK	KJ037N08D2AAAAA1A1	3.0	38.0 / 27.5	1200	1.0	80.0 / 65.0	230/3/60	1.50	22.7	30.0	HORIZONTAL /SIDEFLOW	1000	C/W REFRIGERANT DETECTION SYSTEM, 3 HP HIGH STATIC BELT DRIVE BLOWER, STANDARD 2" THROWAWAY FILTERS, INTELLISPEED CONTROL OF THE VFD BASED ON STAGES COOLING, SMART EQUIPMENT CONTROLLER, MICRO-CHANNEL ALUMINUM CONDENSER COIL, COPPER TUBE/ALUMINUM FIN EVAPORATOR COIL, COMPOSITE DRAIN PAN, HINGED DOORS FOR ALL ACCESS PANELS, SLIDE-OUT BLOWER AND BLOWER MOTOR TRAY, ECONOMIZER FOR DEDICATED HORIZONTAL/SIDEFLOW APPLICATIONS. INCLUDES FA HOOD, 1EH0408 BAROMETRIC RELIEF KIT FOR POWER EXHAUST, HORIZONTAL APPLICATION, R18" ROOF CURB.

GAS-FIRED UNIT HEATER SCHEDULE														
TAG	MANUFACTURER	MODEL	INPUT / OUTPUT HEATING CAPACITY (MBH)	AIRFLOW (CFM)	GAS CONNECTION (IN. DIA.)	COMBUSTION AIR INTAKE (IN. DIA.)	VENT (IN. DIA.)	FLA (A)	MOCP	POWER CONSUMPTION (W)	MOTOR HP	V/PH/Hz	APPROX. NET WEIGHT (LBS)	REMARKS
UH1 UH2	REZNOR	UDXC-150	150.0 / 124.5	--	1/2"ø	5"ø	5"ø	3.8	15	--	1/4	120/1/60	200	UNIT HEATER C/W HORIZONTAL CONCENTRIC INTAKE/VENT DUCT, REMOTE LOW VOLTAGE THERMOSTAT AND CEILING MOUNTING KIT.

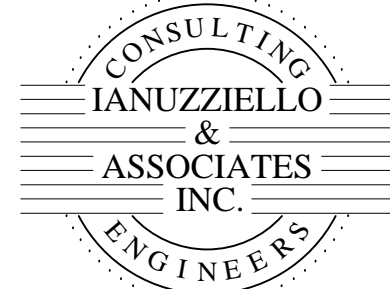
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DATE	REV.	DESCRIPTION	DRN BY

REVISION RECORD	
SCALE:	NORTH ARROW

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PROJECT CLARINGTON TOYOTA	
LOCATION 10 SPICER SQUARE BOWMNVILLE, ON	
DRAWING TITLE EQUIPMENT SCHEDULES SHEET NO. 1	DRAWING No. M-13
SCALE:	N.T.S.
PROJECT NO.	23217
DRAWN BY:	T.Y.
CHECKED BY:	J.L.


PLUMBING FIXTURE SCHEDULE

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2025-01-31	1	ISSUED FOR PERMIT	✓
DATE	REV.	DESCRIPTION	DRN

SEAL:	NORTH ARROW
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PROJECT

LOCATION
10 SPICER SQUARE
BOWMVILLE, ON

DRAWING TITLE
EQUIPMENT SCHEDULE
SHEET NO. 2

SCALE:	N.T.S.	DRAWN BY:
PROJECT NO.	23217	CHECKED BY: