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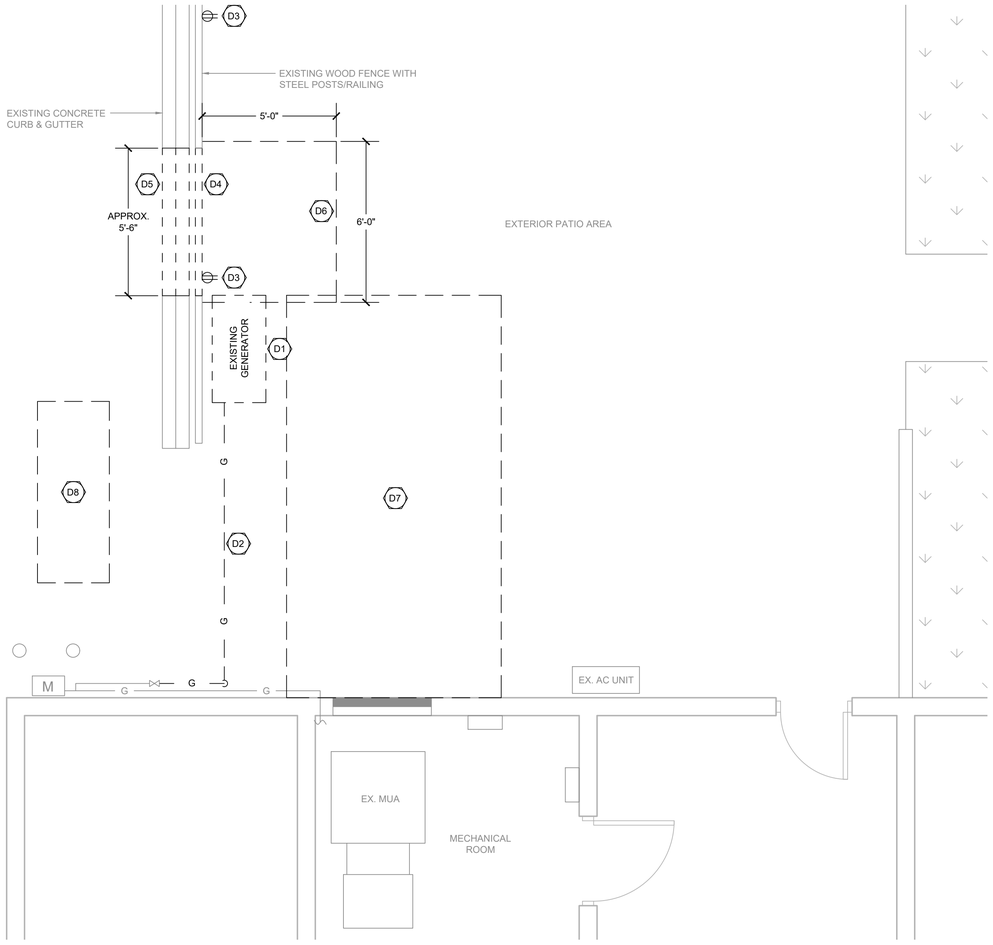
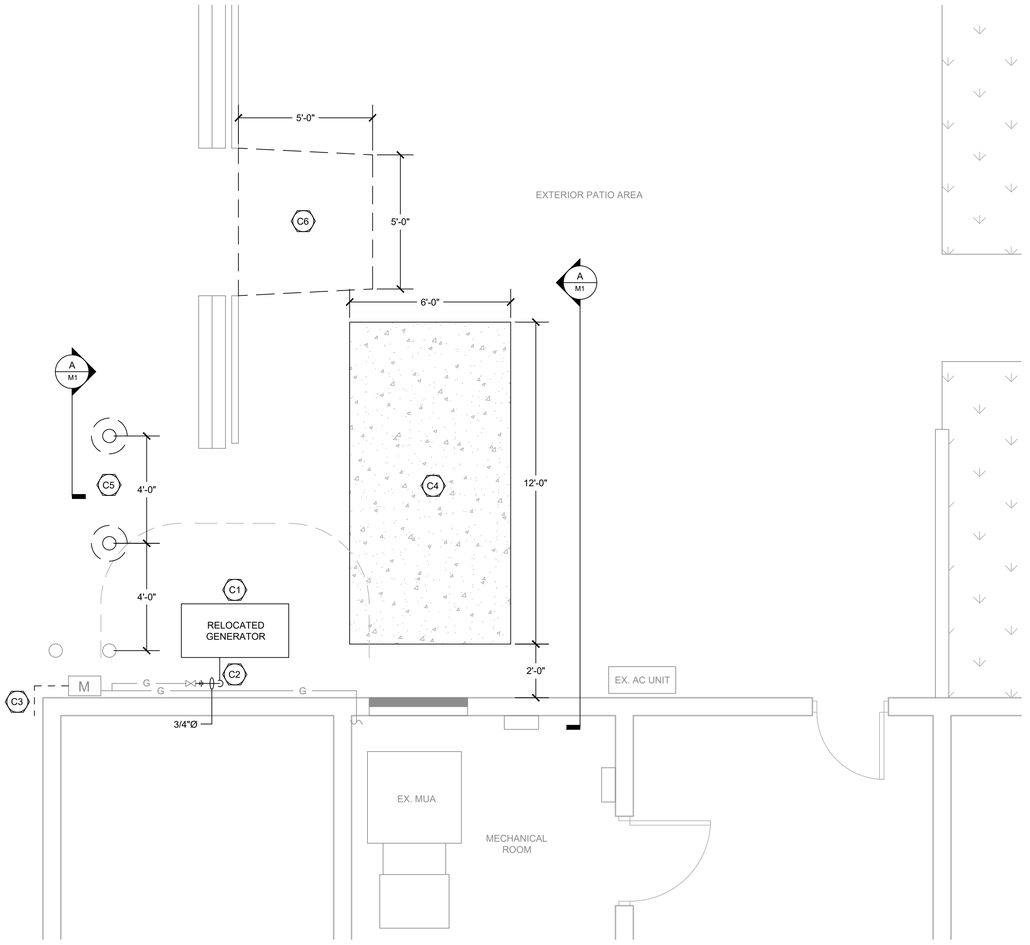


EXTERIOR PATIO AREA - DEMOLITION PLAN

3/8" = 1'-0"

D# DEMOLITION NOTES:

1. DISCONNECT EXISTING BACKUP GENERATOR. RELOCATE AS INDICATED.
2. REMOVE BURIED GAS PIPING AND GENERATOR POWER/CONTROL CABLING BACK TO NEW LOCATION.
3. REMOVE POWER RECEPTACLE(S) MOUNTED TO FENCING BEING REMOVED AND RELOCATE AS REQUIRED.
4. REMOVE SECTION(S) OF FENCING TO CREATE NEW PATHWAY FROM FROM PATIO AREA TO PARKING LOT.
5. REMOVE CURB AND GUTTER. SAWCUT EXISTING CONCRETE. GRIND REMAINING EDGES TO PRODUCE CHAMFER/SLOPE.
6. REMOVE PAVERS IN AREA INDICATED AND STORE FOR REUSE.
7. REMOVE PAVERS TO FACILITATE INSTALLATION OF NEW CONCRETE PAD. STORE FOR REUSE.
8. REMOVE PAVERS TO FACILITATE INSTALLATION OF NEW BOLLARDS. STORE FOR REUSE.

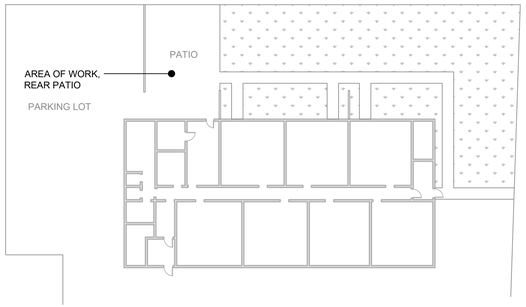


EXTERIOR PATIO AREA - RENOVATION PLAN

3/8" = 1'-0"

C# CONSTRUCTION NOTES:

1. REINSTALL BACKUP GENERATOR IN NEW LOCATION AS INDICATED. MAINTAIN REQUIRED SERVICE CLEARANCES (REFER TO MANUFACTURER'S INSTALLATION MANUAL)
2. REWORK GAS PIPING AND POWER/CONTROL CABLING TO NEW GENERATOR LOCATION. PROVIDE FLEXIBLE GAS LINE AT GENERATOR. TEST AND VERIFY PROPER OPERATION AFTER INSTALLATION.
3. EXTEND NATURAL GAS REGULATOR RELIEF VENT MIN. 5'-0" AWAY FROM GENERATOR.
4. CONSTRUCT CONCRETE PAD FOR NEW OUTDOOR MAKE-UP AIR UNIT. CONFIRM DIMENSIONS WITH UNIT SHOP DRAWINGS. REFER TO DETAIL.
5. INSTALL NEW PROTECTIVE BOLLARDS AS INDICATED. REFER TO DETAIL.
6. REINSTALL PAVERS WITH GRADUAL SLOPE TO MATCH EXISTING GRADES FROM PARKING TO PATIO AREA. LAY PAVERS OVER 1" LEVELING SAND BEDDING ON 12" COMPACTED GRANULAR 'A' BASE.



KEY PLAN

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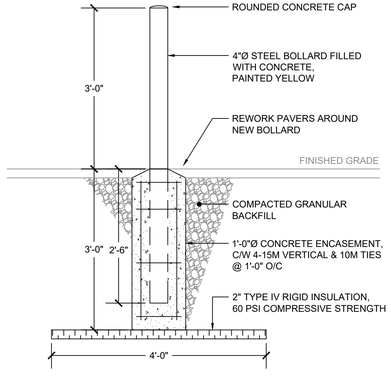

A M1 DETAIL - CONCRETE BOLLARD

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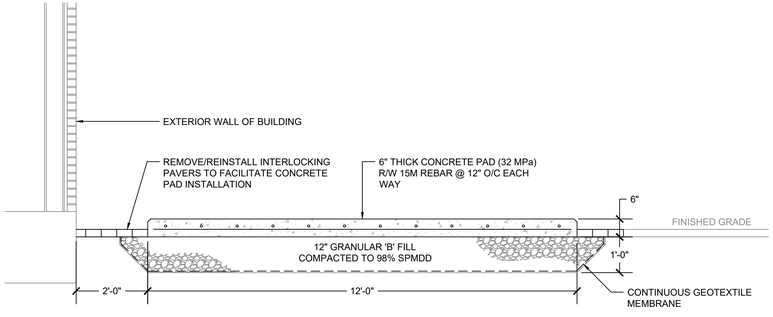

B M1 DETAIL - CONCRETE PAD

N.T.S.

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GENERAL NOTES

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- ONLY FIRST-CLASS WORKMANSHIP AND GOOD INSTALLATION PRACTICES WILL BE ACCEPTED. USE LICENSED TRADESMEN FOR ALL TYPES OF WORK.

ORIENTATION

NORTH

PROJECT NAME

RRDSSAB RIVERVIEW MANOR MUA REPLACEMENT

PROJECT ADDRESS

106 4TH STREET
RAINY RIVER, ONTARIO

LICENSED PROFESSIONAL ENGINEER
2025/09/03
S. L. PEPE
100543213
PROVINCE OF ONTARIO

NO.	DESCRIPTION	DATE
0	ISSUED FOR PERMIT & CONSTRUCTION	2025-09-03

DRAWING NAME

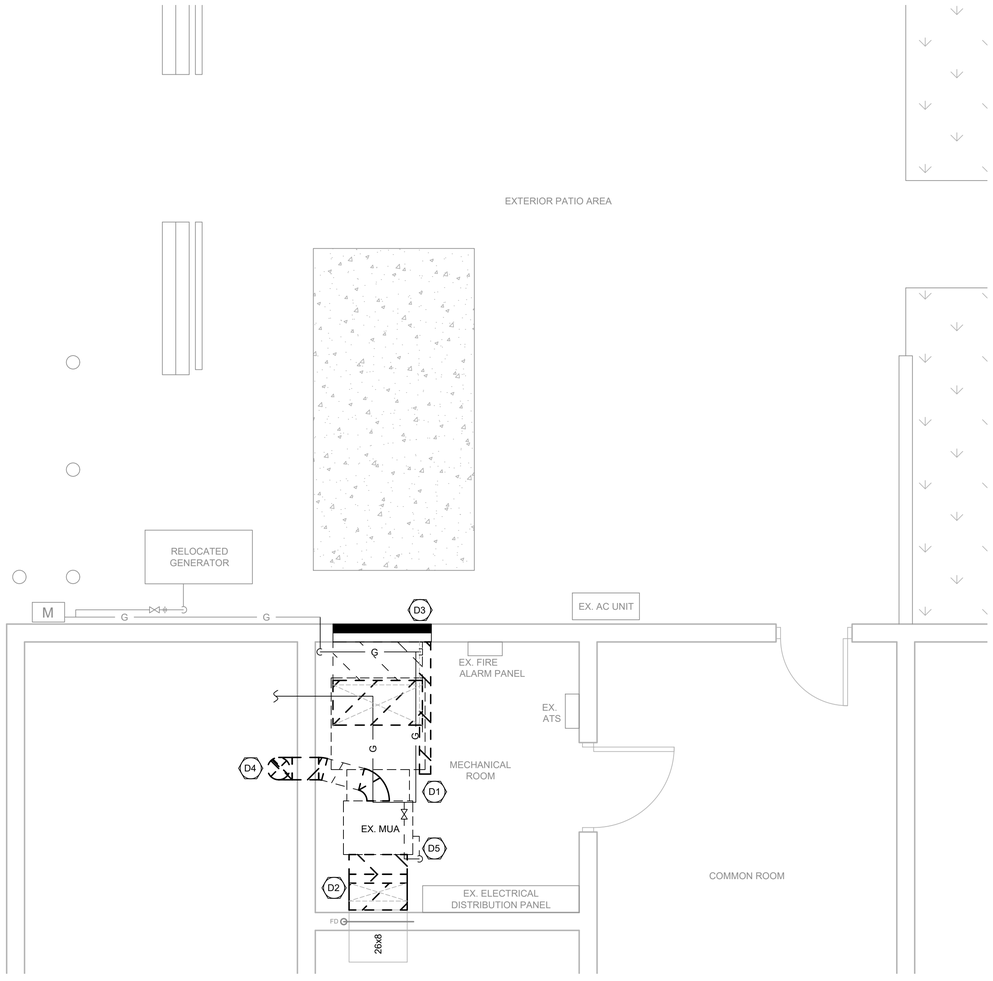
PHASE I
EXTERIOR GROUNDWORK

DRAWING NUMBER

M1

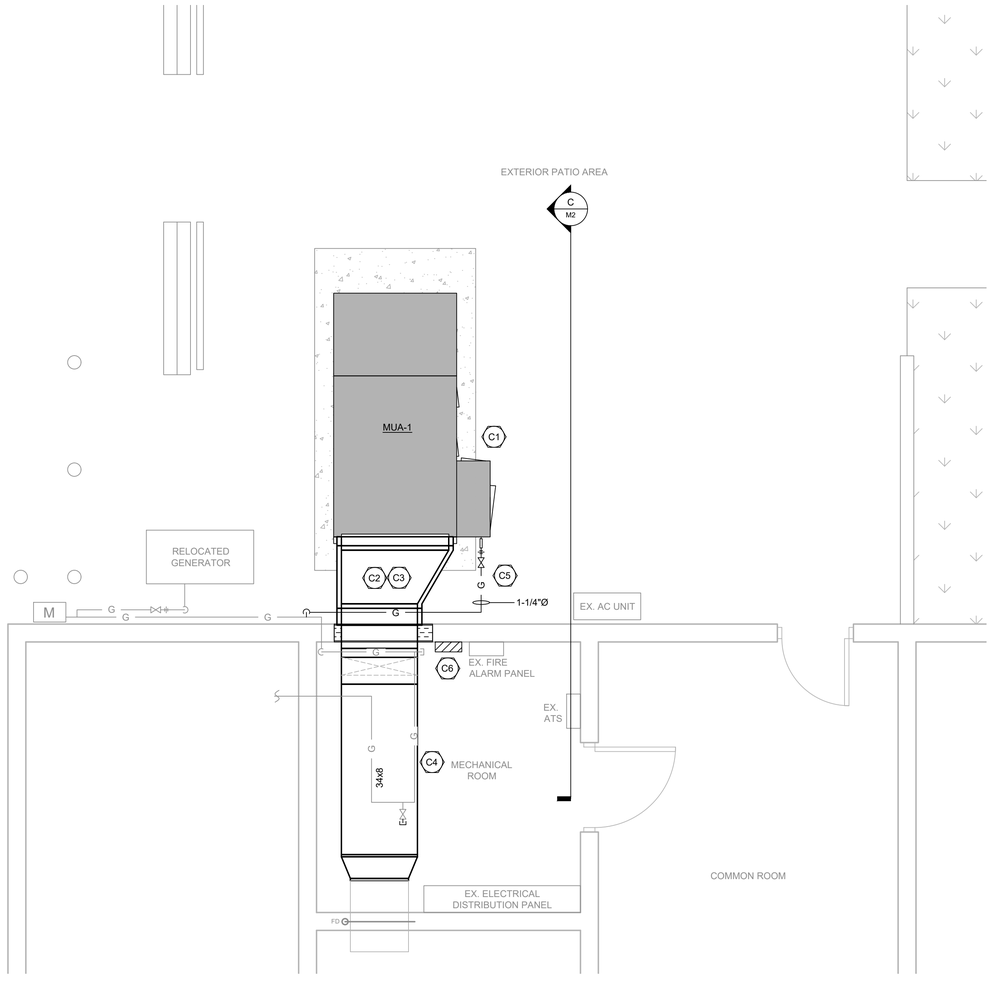
DRAWN BY	KB	SCALE	AS INDICATED
CHECKED BY	SLP	SHEET NUMBER	1 OF 1
PROJECT NUMBER			RVI-25021

PLOT DATE: 9/3/2025 2:45 PM



MECHANICAL ROOM - MUA DEMOLITION PLAN

3/8" = 1'-0"



MECHANICAL ROOM - MUA RENOVATION PLAN

3/8" = 1'-0"

D# DEMOLITION NOTES:

1. REMOVE & DISPOSE OF EXISTING MAKE UP AIR UNIT. CUT INTO SECTIONS TO FACILITATE REMOVAL THRU DOORWAYS. REMOVE ASSOCIATED STEEL STAND.
2. REMOVE SUPPLY DUCTWORK BACK TO FIRE DAMPER ACCESS FITTING.
3. REMOVE & DISPOSE OF EXISTING INTAKE LOUVER, DUCTWORK TO UNIT, AND COMBUSTION AIR DUCT. REUSE WALL OPENING FOR NEW SUPPLY DUCT. REFER TO RENOVATION PLAN.
4. REMOVE & DISPOSE OF EXISTING VENTING INCLUDING CHIMNEY THRU ROOF. PATCH ROOF OPENING TO MATCH EXISTING. PATCH OPENING THROUGH MECHANICAL ROOM WALL WITH FIRE-RATED GYPSUM TO MATCH EXISTING RATING.
5. DISCONNECT GAS PIPING, REMOVE BACK TO MAIN, AND CAP.

C# CONSTRUCTION NOTES:

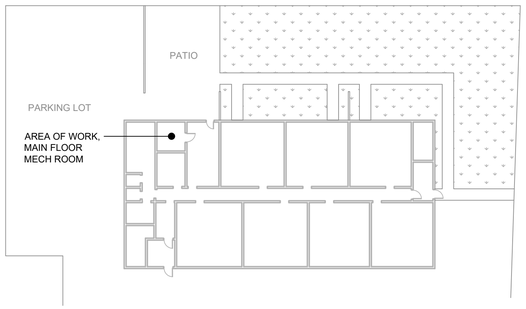
1. INSTALL NEW MAKE-UP AIR UNIT (MUA-1) OUTDOORS ON CONCRETE PAD. INSTALL ON FACTORY CURB AS PER MANUFACTURER'S INSTRUCTIONS. REFER TO DETAIL.
2. INSTALL SUPPLY DUCT INTO BUILDING THROUGH EXISTING WALL OPENING. INFILL OPENING AROUND DUCT, INSULATE CAVITY, VAPOUR BARRIER, AND DRYWALL/PAINT TO MATCH INTERIOR FINISH. PROVIDE METAL PANEL TO MATCH EXTERIOR & SEAL WEATHERTIGHT. (COORDINATE FINISHES W/ OWNER)
3. INSULATE EXTERIOR DUCTWORK & CLAD W/ STUCCO EMBOSSED ALUMINUM.
4. ROUTE DUCTWORK THROUGH MECHANICAL ROOM AT HIGH LEVEL AND TIE INTO EXISTING BUILDING SUPPLY.
5. PROVIDE NEW 1-1/4"Ø GAS LINE TO OUTDOOR MUA. INSTALL ISOLATION VALVE, UNION, & BRAIDED FLEXIBLE LINE AT UNIT.
6. INSTALL NEW REMOTE PANEL & TIMECLOCK IN MECHANICAL ROOM.

ELECTRICAL NOTES:

1. DISCONNECT POWER, CONTROL, & FIRE ALARM CABLING FROM EXISTING MUA AND REMOVE BACK TO SOURCE.
2. PROVIDE NEW 3P-20A BREAKER IN MAIN DISTRIBUTION PANEL TO FEED NEW OUTDOOR MUA. INSTALL LOCAL DISCONNECT SWITCH AT UNIT.
3. PROVIDE NEW 1P-15A BREAKER IN HOUSE PANEL FOR UNIT CONTROL PANEL.
4. UTILIZE TECK90 FOR ALL POWER AND CONTROLS CABLING.

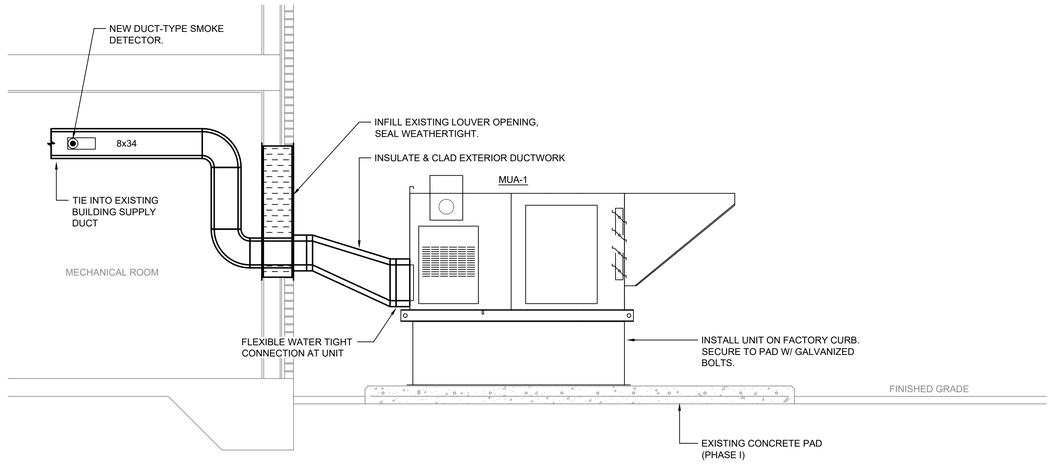
FIRE ALARM NOTES:

1. PROVIDE NEW FIRE ALARM FAN SHUTDOWN FOR NEW MUA. PROVIDE ALL REQUIRED RELAYS AND/OR MODULES. FIRE ALARM CONTROL PANEL LOCATED IN MAIN FLOOR MECHANICAL ROOM.
2. PROVIDE NEW DUCT-TYPE SMOKE DETECTOR IN MUA SUPPLY DUCT. TIE INTO FIRE ALARM SYSTEM.
3. NEW DEVICE INSTALLATION SHALL CONFORM TO CAN/ULC-S524 - STANDARD FOR INSTALLATION OF FIRE ALARM SYSTEMS.
4. UPON COMPLETION, VERIFY & TEST FIRE ALARM SYSTEM AS PER CAN/ULC-S537 - STANDARD FOR VERIFICATION OF FIRE ALARM SYSTEMS.



KEY PLAN

N.T.S.



C / M2 ELEVATION - MUA INSTALLATION DETAIL

N.T.S.

DRAWING SIZE ARCH D

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MUA REPLACEMENT

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106 4TH STREET
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LICENSED PROFESSIONAL ENGINEER
2025/09/03
S. L. PEPE
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PROVINCE OF ONTARIO

NO.	DESCRIPTION	DATE
0	ISSUED FOR PERMIT & CONSTRUCTION	2025-09-03

DRAWING NAME

PHASE II
MUA REPLACEMENT

DRAWING NUMBER

M2

DRAWN BY	KB	SCALE	AS INDICATED
CHECKED BY	SLP	SHEET NUMBER	1 OF 1
PROJECT NUMBER			RVI-25021

PLOT DATE: 9/3/2025 2:45 PM

MECHANICAL SPECIFICATIONS - DIVISION(S) 23

GENERAL NOTES:

1. ALL MATERIAL SHALL BE NEW AND BE CSA APPROVED OR ULC LISTED.
2. THE CONTRACTOR SHALL ENSURE THAT ALL MATERIALS AND EQUIPMENT ARE INSTALLED IN FULL COMPLIANCE WITH THE CURRENT ONTARIO FIRE CODE AND ONTARIO BUILDING CODE.
3. PROVIDE ALL MATERIAL AND EQUIPMENT AND PERFORM ALL LABOUR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODE.
4. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
5. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES AND INSPECTIONS.
6. CONTRACTOR TO DETERMINE BEST ACCESS POINT TO REMOVE EXISTING & MOVE NEW EQUIPMENT INTO SPACE. IF NEW WALL OPENING OR ENLARGED DOOR OPENING IS REQUIRED, CONTRACTOR SHALL REVIEW WITH THE OWNER & ENGINEER PRIOR TO COMMENCING WORK.
7. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
8. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL, ETC. SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
9. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
10. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. FIELD VERIFY AND COORDINATE ALL DUCT DIMENSIONS BEFORE FABRICATION.
11. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS 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 PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
12. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL TRADES INVOLVED. CONTRACTOR IS RESPONSIBLE FOR STRUCTURAL REVIEW OF ANY NEW OPENINGS AS WELL AS FINISHING OPENINGS TO THE SATISFACTION OF THE OWNER.
13. CONTRACTOR IS RESPONSIBLE FOR SEALING ALL PENETRATIONS THROUGH FIRE RATED WALLS AND ASSEMBLIES WITH RATED FIRE STOP RATED EQUAL TO THAT OF THE ADJACENT MATERIALS. ALL FIRE STOP MATERIALS AND INSTALLATION SHALL CONFORM TO UL 1479 AND ASTM E-814-10.
14. CONTRACTOR SHALL BE FAMILIAR AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, CITY BY-LAWS AND REGULATIONS RELATING TO THE WORK.
15. CONTRACTOR SHALL ENSURE THAT ALL PERSONS ON THE SITE HAVE SUCCESSFULLY COMPLETED THE SAFETY ORIENTATION AND REQUIREMENTS SET OUT BY THE OWNER, AS WELL AS MAINTAINING CURRENT WHMIS TRAINING.
16. CONTRACTOR SHALL PROVIDE AND PAY FOR ALL MATERIALS, LABOUR, WATER, TOOLS, PLANT, EQUIPMENT, LIGHT, HEAT AND POWER AS MAY BE NECESSARY FOR THE EXECUTION OF THE WORK.
17. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY AT THE SITE AND FOR COMPLIANCE WITH THE RULES, REGULATIONS AND PRACTICES REQUIRED BY THE APPLICABLE CONSTRUCTION SAFETY LEGISLATION AND OTHER AUTHORITIES HAVING JURISDICTION.
18. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL INSTALLED EQUIPMENT FOR APPROVAL BY ENGINEER.
19. CONTRACTOR SHALL PROVIDE ONE SET OF AS-BUILT DRAWINGS UPON COMPLETION OF WORK. AS-BUILTS TO BE CLEAN AND ALL CHANGES SHALL BE CLEARLY LEGIBLE AND IN RED INK.
20. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY OR ALL DEFECTS IN WORKMANSHIP WHICH MAY ARISE FOR A PERIOD OF 12 MONTHS FROM SUBSTANTIAL COMPLETION.
21. CONTRACTOR SHALL PROVIDE ONE HARDCOPY AND ONE DIGITAL (PDF) COPY OF OPERATION AND MAINTENANCE MANUALS TO THE OWNER PRIOR TO FINAL PAYMENT REQUEST. THE MANUALS WILL BE APPROVED BY THE ENGINEER.
22. THE CONTRACTOR SHALL SUPERVISE THE INITIAL STARTUP OF ALL EQUIPMENT AND SHALL ASSIST THE OWNERS REPRESENTATIVE IN THE PROPER OPERATION AND MAINTENANCE OF THE EQUIPMENT.
23. ALL EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR UNLESS SPECIFICALLY NOTED TO BE SUPPLIED BY OTHERS.

HVAC NOTES:

1. DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC & ARE INTENDED TO CONVEY SCOPE & GENERAL ARRANGEMENT ONLY.
2. DUCTWORK SHALL BE KEPT AS TIGHT AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE & EXTERIOR/PARTITION WALL WHERE APPLICABLE.
3. OFFSETS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER SHOULD INTERFERENCES ARISE DURING CONSTRUCTION. MAINTAIN FULL CROSS-SECTIONAL AREA WHERE OFFSETS ARE REQUIRED DUE TO OBSTRUCTIONS.
4. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
5. WHERE PERMITTED, MITERED ELBOWS SHALL BE COMPLETE WITH DOUBLE THICKNESS TURNING VANES.
6. DUCTWORK TO BE GALVANIZED STEEL LOCK FORMING QUALITY TO ASTM A653/A653M, Z90 ZINC COATING. THICKNESS, FABRICATION & REINFORCEMENT TO SMACNA, JOINTS TO SMACNA 2" W.C. SEAL CLASS 'B'.
7. DUCT HANGARS, SUPPORTS, RODS, CONNECTIONS TO MSS-SP58/MSS-SP69. CONFIGURATION & SPACING TO SMACNA. INSTALL STRAP HANGERS IN ACCORDANCE WITH SMACNA.
8. FLEXIBLE CONNECTIONS TO BE GALVANIZED SHEET METAL FRAME 0.04" THICK WITH FABRIC CLENCHED BY MEANS OF DOUBLE LOCKED SEAMS. FABRIC TO BE FIRE RESISTANT, SELF EXTINGUISHING, NEOPRENE COATED GLASS FABRIC, RATED -40°C TO 90°C.
9. INDOOR SUPPLY AIR DUCTWORK TO BE INSULATED WITH MIN. 1" THICK FOIL BACK MINERAL FIBRE BLANKET TO ASTM C553 WITHOUT VAPOUR RETARDER JACKET. WRAP DUCT INSULATION WITH 1/2" STAINLESS STEEL BANDING, 0.02" THICK AT 16" CENTERS.
10. INSULATE ALL OUTDOOR DUCTWORK WITH MIN. 2 LAYERS OF 1-1/2" THICK RIGID MINERAL FIBRE BOARD, STAGGERED JOINTS, TO ASTM C612, FACTORY APPLIED VAPOUR RETARDER JACKET TO CGSB 51-GP-52MA. CLAD WITH STUCCO EMBOSSED ALUMINUM 0.02" THICK WITH 3/4" STAINLESS STEEL BANDING, 0.02" THICK AT 12" CENTERS.
11. WHERE INSULATION EXCEEDS 1-1/2" THICK, JOINTS SHALL BE STAGGERED.
12. CONTRACTOR SHALL PROVIDE SERVICES OF AN INDEPENDENT TAB CAABC CONTRACTOR TO TEST & BALANCE SYSTEM TO THE DESIGNED FLOWS +/- 5%. SUBMIT DIGITAL (PDF) COPY OF THE BALANCE REPORT TO THE ENGINEER.

GAS PIPING NOTES:

1. GAS PIPING TO BE STEEL PIPE TO ASTM A53/A53M, SCHEDULE 40, SEAMLESS. NPS 1/2" TO 2" SHALL BE SCREWED, MALLEABLE IRON, STEEL PIPE FLANGES AND FLANGED FITTINGS TO ASME B16.5. NPS 2-1/2" AND OVER SHALL BE PLAIN END, WELDED FITTINGS TO SCA W47.1, BOLT & NUTS TO ASME B18.2.1.
2. GAS PIPING SHALL BE PAINTED WITH MIN. 2 COATS OF YELLOW PAINT.

ELECTRICAL SPECIFICATIONS - DIVISION(S) 26, 28

1. GENERAL REQUIREMENTS

a. THE CONTRACTOR SHALL ENSURE THAT ALL MATERIALS, EQUIPMENT, AND DEVICES ARE PROCURED, INSTALLED, COMMISSIONED, AND OPERATIONAL IN FULL COMPLIANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE (OESC) AND ASSOCIATED BULLETINS, ONTARIO FIRE CODE, ONTARIO BUILDING CODE (OBC), ULC/CSA-S524 STANDARD FOR FIRE ALARM SYSTEM INSTALLATION, AND ALL APPLICABLE BYLAWS, CODES, STANDARDS, AND REGULATIONS, INCLUDING MANUFACTURER'S INSTALLATION MANUALS. WHERE CONTRACT DOCUMENTS EXCEED CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE.

b. DRAWINGS AND DETAILS ARE DIAGRAMMATIC AND SYMBOLIC, INDICATING APPROXIMATE LOCATIONS OF EQUIPMENT, DEVICES, AND COMPONENTS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY ALL EXACT LOCATIONS, MOUNTING HEIGHTS, AND ORIENTATIONS WITH STAKEHOLDERS AND APPLICABLE CODES PRIOR TO INSTALLATION. ALL EQUIPMENT SHALL MEET BARRIER-FREE REQUIREMENTS PER OBC.

c. VERIFY DRAWING DIMENSIONS AGAINST FIELD CONDITIONS AND SUPPLEMENTARY DRAWINGS. REPORT ANY DISCREPANCIES BEFORE PROCEEDING. SUBMIT ANY MODIFICATIONS OR SUBSTITUTIONS FOR WRITTEN APPROVAL.

2. TENDER REQUIREMENTS

a. BIDDERS SHALL REVIEW ALL SITE CONDITIONS, INCLUDING UTILITIES AND SYSTEMS, BEFORE SUBMITTING BIDS. REQUEST CLARIFICATIONS AS REQUIRED.

b. ENSURE ALL CONTRACT DRAWINGS, FRONT-END AND TECHNICAL SPECIFICATIONS, AND ASSOCIATED TENDER DOCUMENTS ARE THOROUGHLY REVIEWED AND CONSIDERED IN BID PREPARATION AND CONSTRUCTION.

3. CONSTRUCTION ADMINISTRATION REQUIREMENTS

a. CONTRACTOR SHALL REVIEW CONSTRUCTION ADMINISTRATION REQUIREMENTS WITH STAKEHOLDERS AND ACCOUNT FOR ALL CONTRACT DOCUMENTS DURING EXECUTION.

b. SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT, MATERIALS, LABELS, AND DEVICES FOR REVIEW AND COMMENT. PROVIDE OPERATION AND MAINTENANCE MANUALS FOR REVIEW AND APPROVAL. SUBMIT THREE (3) FINAL COPIES AFTER APPROVAL.

c. PROVIDE CONSULTANT ACCESS TO THE SITE DURING ALL WORK PHASES FOR GENERAL REVIEWS IN ACCORDANCE WITH OBC AND ANY CONSULTANT COMMITMENTS. UPON PROJECT COMPLETION, SUBMIT DOCUMENTATION FROM COMMISSIONING AGENTS, SYSTEM VERIFIERS, AND AUTHORITIES HAVING JURISDICTION TO ENABLE PROJECT COMPLETION NOTICES PER PEO STANDARDS.

d. UPON COMPLETION, SUBMIT ONE FULL SET OF AS-BUILT DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS INCLUDING ALL FIELD CHANGES, CHANGE ORDERS, AND SITE CONDITIONS. DOCUMENT ALL JUNCTION BOXES, PULL BOXES, CABLING ROUTES, AND CONDUITS WITH DIMENSIONS USING RED INK MARKUPS.

e. PROVIDE A 12-MONTH WARRANTY COVERING ALL WORKMANSHIP, EQUIPMENT, DEVICES, AND COMPONENTS FROM FINAL ACCEPTANCE.

4. HEALTH AND SAFETY REQUIREMENTS

a. REFER TO FRONT-END DOCUMENTS FOR ADDITIONAL REQUIREMENTS.

b. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY AND COMPLIANCE WITH ALL APPLICABLE SAFETY LEGISLATION, INCLUDING CSA-Z462 AND OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS.

c. ENSURE ALL PERSONNEL AND THE PUBLIC ARE INFORMED OF HAZARDS AND COMPLETE REQUIRED SAFETY TRAINING INCLUDING WHMIS PRIOR TO SITE ACCESS.

d. COORDINATE WORK TO MINIMIZE IMPACT ON OPERATIONS. MAINTAIN SAFETY BARRICADES AND KEEP WORKSPACES ORDERLY AND FREE OF DEBRIS.

5. DEMOLITION REQUIREMENTS

a. DEMOLITION SHALL BE CONDUCTED SAFELY AND IN A CONTROLLED MANNER WITH DAILY REMOVAL AND DISPOSAL OF DEBRIS.

b. INSTALL DUST-PROOF AND SAFETY BARRIERS TO PROTECT OCCUPIED AREAS. PROTECT ADJACENT FURNITURE AND EQUIPMENT FROM DAMAGE.

c. MATERIALS REMOVED DURING DEMOLITION REMAIN THE OWNER'S PROPERTY; UNCLAIMED ITEMS MUST BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

d. REFER TO FRONT-END DOCUMENTS AND VERIFY DEMOLITION SCOPE WITH STAKEHOLDERS PRIOR TO STARTING WORK.

e. REMOVE, DECOMMISSION, AND DISPOSE OF OBSOLETE EQUIPMENT, FIXTURES, CABLING, AND WIRING. UPDATE PANEL DIRECTORIES AND MARK UNUSED BREAKERS AS SPARES. RELOCATE ITEMS CONFLICTING WITH THE NEW LAYOUT AS REQUIRED.

f. REPAIR, PATCH, AND PAINT ALL SURFACES AFFECTED BY REMOVALS TO MATCH EXISTING CONDITIONS BEFORE INSTALLING NEW EQUIPMENT.

6. CONSTRUCTION REQUIREMENTS

a. OBTAIN ALL REQUIRED PERMITS, INCLUDING MINISTRY OF LABOUR, POWER UTILITY CONTRACTS, AND ESA PERMITS. PAY ASSOCIATED FEES AND COORDINATE ALL INSPECTIONS AND DOCUMENTATION PRIOR TO FINAL PAYMENT.

b. COORDINATE WORK WITH ALL CONTRACTORS AND STAKEHOLDERS TO PREVENT INTERFERENCES AND DELAYS. RESOLVE ISSUES PRIOR TO WORK COMMENCEMENT. ABIDE BY FIRE PREVENTION, SECURITY, SAFETY, AND SCHEDULING REQUIREMENTS. PLAN WORK HOURS TO MINIMIZE OPERATIONAL IMPACT AND INCLUDE RELATED COSTS.

c. PROVIDE ALL LABOUR, MATERIALS, EQUIPMENT, DEVICES, TOOLS, AND TEMPORARY SERVICES REQUIRED TO DELIVER A COMPLETE, TESTED, COMMISSIONED, AND OPERATIONAL SYSTEM WITH FIRST-CLASS WORKMANSHIP.

d. REMOVE ALL WASTE AND CLEAN EQUIPMENT AND WORK AREAS TO THE OWNER'S SATISFACTION UPON COMPLETION.

7. GENERAL EXECUTION REQUIREMENTS

a. ALL WORK SHALL BE PERFORMED BY LICENSED ELECTRICAL CONTRACTORS AND ELECTRICIANS IN ACCORDANCE WITH ESA REQUIREMENTS.

b. COMPLETE ALL REQUIRED PUBLIC AND PRIVATE LOCATES PRIOR TO WORK COMMENCEMENT.

c. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL BE SEALED WITH APPROVED FIRE-RATED PRODUCTS COMPLYING WITH UL-1479 AND ASTM-E814 TO MAINTAIN FIRE RATING INTEGRITY.

d. CONCEAL ALL CONDUITS, CABLING, DEVICES, AND EQUIPMENT IN PUBLIC SPACES WITH RECESSED OR FLUSH MOUNTING. REPAIR AND RESTORE ALL DAMAGED SURFACES TO MATCH EXISTING CONDITIONS PRIOR TO START OF WORK. SERVICE ROOM WORK SHALL USE EMT CONDUIT; EXTERIOR WORK SHALL USE TECK90.

e. ENSURE ALL EQUIPMENT, SYSTEMS, DEVICES, AND COMPONENTS ARE FULLY INSTALLED, ENERGIZED, TESTED, COMMISSIONED, AND APPROVED TO THE SATISFACTION OF THE STAKEHOLDERS.

f. ALLOW FOR RELOCATION OF ANY FIXTURE, DEVICE, OR COMPONENT UP TO 3 METERS PRIOR TO INSTALLATION WITHOUT ADDITIONAL COST, DOCUMENTING CHANGES ON AS-BUILT DRAWINGS. INSTALL EQUIPMENT TO MINIMIZE IMPACT ON HEADROOM, ROOM SPACE, AND CLEARANCES.

g. SEAL ALL BURIED CONDUITS ENTERING BUILDINGS TO PREVENT MOISTURE, VAPOURS, AND GASES FROM ENTERING THE INTERIOR.

8. GENERAL PRODUCT REQUIREMENT

a. ALL MATERIALS, EQUIPMENT, AND DEVICES UTILIZED FOR THIS PROJECT SHALL BE NEW, FREE FROM DEFECTS, AND SHALL BE MINIMUM RESIDENTIAL GRADE WITHIN SUITES AND COMMERCIAL GRADE ELSEWHERE. ALL PRODUCTS SHALL BE APPROVED, LISTED, OR CERTIFIED TO CSA, ULC, CUL OR AN EQUIVALENT RECOGNIZED STANDARD.

b. ALL LINE-VOLTAGE CABLING AND CONDUCTORS SHALL BE COPPER UNLESS SPECIFIED OTHERWISE. CABLING WITHIN INTERIOR SPACES SHALL BE AC90; EXTERIOR SPACES SHALL UTILIZE TECK90. NMD90 CABLING SHALL NOT BE USED IN EITHER INTERIOR OR EXTERIOR INSTALLATIONS.

c. CONDUCTORS FOR POWER DISTRIBUTION AND FOR CIRCUITS WITH AMPACITY GREATER THAN 40A SHALL BE R90. ALL OTHER BRANCH CIRCUITS SHALL BE T90. OUTDOOR CONDUCTORS INSTALLED IN CONDUIT SHALL BE RW90 OR TW90. UNDERGROUND CONDUCTORS SHALL BE RWU90 OR TWU90. ALL CONDUCTORS AND CABLING SHALL BE RATED FOR 600V ON 208/240V SYSTEMS AND 1000V ON 600V SYSTEMS.

d. ALL UNDERGROUND ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE (OESC), INCLUDING RULE 12-0012.

e. UNLESS OTHERWISE NOTED, MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG THROUGHOUT.

f. INTERIOR CONDUIT SHALL BE EMT OR FLEXIBLE EQUIVALENT APPROVED FOR THE APPLICATION. EXTERIOR CONDUIT SHALL BE RIGID OR FLEXIBLE PVC. ALL CONDUIT INSTALLATIONS SHALL INCLUDE AN INSULATED GREEN BONDING CONDUCTOR.

g. CABLING, CONDUIT, CONDUCTORS, DEVICES, AND EQUIPMENT INSTALLED WITHIN RETURN AIR PLENUM SPACES SHALL BE FT6 FIRE-RATED OR APPROVED FOR USE IN SUCH LOCATIONS.

h. CONDUCTOR SIZING SHALL BE IN ACCORDANCE WITH OVERCURRENT PROTECTION DEVICES AND FULL CONFORMANCE WITH THE OESC. CONDUCTOR SIZING SHALL ACCOUNT FOR VOLTAGE DROP LIMITS NOT EXCEEDING 3% FROM MAIN SERVICE OVERCURRENT DEVICE TO THE FURTHEST CONNECTED DEVICE, LIGHT FIXTURE, RECEPTACLE, OR PIECE OF EQUIPMENT.

i. MATERIAL TYPES, COLOURS, AND FINISHES OF FIXTURES, DEVICES, RECEPTACLES, LIGHTING CONTROLS, COVER PLATES, AND SIMILAR ITEMS SHALL BE REVIEWED AND APPROVED BY THE OWNER. UNLESS OTHERWISE NOTED, ALL DEVICE PLATES SHALL BE STAINLESS STEEL. FINAL COORDINATION SHALL BE CONFIRMED WITH PROJECT STAKEHOLDERS.

9. LABELLING REQUIREMENTS

a. ALL EQUIPMENT AND DEVICES SHALL BE CLEARLY IDENTIFIED WITH PERMANENT EQUIPMENT TAGS, DESIGNATIONS, AND IDENTIFICATION MARKINGS, INCLUDING ALL MANDATORY WARNING LABELS SUCH AS ELECTROCUTION, ARC FLASH, AND PROXIMITY HAZARD WARNINGS. INTERIOR RECEPTACLES SHALL BE LABELED USING CLEAR ADHESIVE TAPE WITH BLACK PRINTED TEXT. JUNCTION BOXES SHALL BE IDENTIFIED USING A BLACK PERMANENT MARKER TO INDICATE ALL CIRCUITS CONTAINED AND THE SOURCE PANEL. EXTERIOR RECEPTACLES SHALL BE LABELED WITH LAMACOID (OR EQUIVALENT) TAGS INDICATING SOURCE PANEL AND CIRCUIT (E.G., D-1).

b. ALL POWER DISTRIBUTION AND MECHANICAL/HVAC EQUIPMENT INCLUDING PANELBOARDS, METER STACKS, GENERATORS, CONTROL PANELS, DISCONNECTS, AND SPLITTERS SHALL BE IDENTIFIED WITH LAMACOID OR METALLIC EQUIVALENT TAGS. LABELS SHALL CLEARLY INDICATE THE EQUIPMENT TAG, VOLTAGE, POWER RATING, PHASE/CHARACTERISTICS, AND SUPPLY SOURCE. TEXT HEIGHT SHALL BE MINIMUM 3/8". SUBMIT LABEL SAMPLES WITH SHOP DRAWINGS FOR ENGINEER'S REVIEW.

c. PROVIDE NEW, COMPLETE, PRINTED, AND ACCURATE PANEL DIRECTORIES FOR ALL NEW POWER DISTRIBUTION EQUIPMENT. UPDATE EXISTING PANEL DIRECTORIES TO REFLECT ANY CIRCUIT MODIFICATIONS CLEARLY. WHERE MORE THAN 20% OF EXISTING CIRCUITS ARE ALTERED, THE PANEL DIRECTORY SHALL BE REPLACED IN FULL.

d. ALL CONDUCTORS AND WIRING SHALL BE LABELED AND GROUPED IN ACCORDANCE WITH THE OESC. MAINTAIN CONSISTENT PHASE AND COLOUR SEQUENCING THROUGHOUT THE INSTALLATION.

10. POWER DEVICES AND EQUIPMENT

a. SUPPLY, INSTALL, ENERGIZE, AND COMMISSION ALL POWER DEVICES AND EQUIPMENT AS INDICATED OR REQUIRED. ENSURE SYSTEMS ARE COMPLETE, TESTED, AND FULLY OPERATIONAL.

b. COORDINATE FINAL LOCATIONS OF POWER DEVICES, INCLUDING RECEPTACLES ASSOCIATED WITH EQUIPMENT, MILLWORK, OR BUILT-IN ELEMENTS, PRIOR TO INSTALLATION.

c. PROVIDE POWER AND CONTROL CONNECTIONS FOR ALL MECHANICAL, PLUMBING, AND HVAC EQUIPMENT. INSTALL LOCKABLE, CODE-RATED LOCAL DISCONNECT SWITCHES WHERE REQUIRED. VERIFY PROPER PHASE ROTATION DURING START-UP. CONFIRM OVERCURRENT PROTECTION, CONDUCTOR SIZING, AND CONTROLS AGAINST MANUFACTURER REQUIREMENTS AND ADJUST AS REQUIRED.

11. FIRE ALARM AND LIFE SAFETY REQUIREMENTS

a. FIRE ALARM CABLING AND WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE OESC, OBC, ULC-S524, AND OTHER APPLICABLE CODES. ALL FIRE ALARM CONDUIT AND CABLE SHALL BE RED WITH IDENTIFICATION MARKINGS AT 5 METER INTERVALS. ALL BOXES AND COVERS SHALL BE RED.

b. INSTALL FIRE ALARM SYSTEM DEVICES, INCLUDING INITIATION AND NOTIFICATION APPLIANCES, MODULES, CABLING, AND HARDWARE AS INDICATED OR REQUIRED. SYSTEM INSTALLATION SHALL CONFORM TO OBC, NFPA 72, CAN/ULC-S524, AND CAN/ULC-S527. PROVIDE ALL REQUIRED INPUT/OUTPUT MODULES, ISOLATORS, END-OF-LINE DEVICES, EQUIPMENT MONITORING AND SHUTDOWN INTERFACES AS REQUIRED BY CODE AND SCOPE.

c. ENGAGE AND PAY FOR QUALIFIED FIRE ALARM PERSONNEL TO COMPLETE INSTALLATION, COMMISSIONING, TESTING, AND VERIFICATION. PROVIDE FINAL VERIFICATION REPORT TO ALL PROJECT STAKEHOLDERS. RETAIN CFAA-CERTIFIED THIRD-PARTY TECHNICIAN TO CONDUCT PARTIAL FIRE ALARM VERIFICATION INSPECTION IN ACCORDANCE WITH CAN/ULC-S537. CORRECT ALL DEFICIENCIES WITHIN SCOPE AT NO ADDITIONAL COST, INCLUDING RE-VERIFICATION IF REQUIRED.

d. COORDINATE AND FUNCTIONALLY TEST ALL FIRE ALARM INTERLOCKS WITH RELATED SYSTEMS INCLUDING MECHANICAL, HVAC, AND DUCTED AIR SYSTEMS. INTERLOCKS SHALL BE DOCUMENTED IN THE VERIFICATION REPORT. CONFIRM INTERLOCKS AND SEQUENCES OF OPERATION WITH THE MECHANICAL ENGINEER PRIOR TO FINAL PROGRAMMING.

SEQUENCE OF OPERATION

MECHANICAL CONTRACTOR TO SUPPLY & INSTALL ALL REQUIRED COMPONENTS FOR A COMPLETE FUNCTIONING SYSTEM AS DESCRIBED BELOW.

MAKE-UP AIR UNIT (MUA-1) TO BE SUPPLIED WITH SUMMER/WINTER REMOTE PANEL AND 7-DAY PROGRAMMABLE TIMECLOCK. REMOTE PANEL TO INCLUDE ON-OFF SWITCH, SUMMER-WINTER SWITCH, RUN LIGHT, HEAT LIGHT, DIRTY FILTER LIGHT

WINTER OPERATION:
UNIT TO OPERATE CONTINUOUSLY ON HIGH SPEED (1,760 CFM) DURING THE DAY (6AM TO 11PM ADJ.). UNIT TO OPERATE CONTINUOUSLY ON LOW SPEED (880 CFM) OVER NIGHT (11PM-6AM ADJ.). GAS BURNER SHALL AUTOMATICALLY MODULATE TO MAINTAIN DISCHARGE AIR SETPOINT (70°F ADJ.)

SUMMER OPERATION:
UNIT TO OPERATE AS DESCRIBED, HEATING IS LOCKED OUT.

EQUIPMENT LIST:

MUA-1 MAKE-UP AIR UNIT
ENGINEERED AIR INDIRECT GAS FIRED MAKE-UP AIR UNIT, MODEL DJS40/O/MV, 1,760 CFM @ 1" ESP., 1.5 HP MOTOR W/ VFD, 250 MBH INPUT, 203 MBH OUTPUT HEATING CAPACITY, NATURAL GAS, STAINLESS STEEL HEAT EXCHANGER, MODULATING GAS VALVE W/ DISCHARGE AIR SENSOR, OUTDOOR UNIT, DOUBLE WALL CONSTRUCTION, INSULATED, WEATHERHOOD WITH BIRDSCREEN, INLET AIR DAMPER, 2" MERV 8 FILTRATION, AUTO LOW LIMIT, C/W SUMMER/WINTER CONTROL PANEL AND TIMECLOCK, 2'-0" CURB FOR PAD MOUNT
APPROXIMATE WEIGHT - 1,650 LB
208V/3ϕ/60, MCA-12.1, MOP-20

DRAWING SIZE ARCH D

RVI Group Ltd.
THUNDER BAY, ON | (807) 625-5430 | info@rvigroup.ca

GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- FLOOR PLANS ARE USED AS A REFERENCE ONLY, AND RVI GROUP LTD. ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OR ANY ITEMS DEPICTED IN THE REFERENCE PLANS.
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- PERFORM ALL WORK IN ACCORDANCE WITH APPLICABLE PROVINCIAL AND LOCAL ORDINANCES AND REGULATIONS, THE RULES AND REGULATIONS OF OBC, CSA, ANSI, ASTM, OFC, NFPA, UL, ESA, NEC, ASHRAE, SMACNA, ETC., WHICHEVER IS MORE STRINGENT.
- ONLY FIRST-CLASS WORKMANSHIP AND GOOD INSTALLATION PRACTICES WILL BE ACCEPTED. USE LICENSED TRADESMEN FOR ALL TYPES OF WORK.

PROJECT NAME
RRDSSAB RIVERVIEW MANOR
MUA REPLACEMENT

PROJECT ADDRESS
106 4TH STREET
RAINY RIVER, ONTARIO

LICENSED PROFESSIONAL ENGINEER
2025/09/03
S. L. PEPE
100543213
PROVINCE OF ONTARIO

NO.	DESCRIPTION	DATE
0	ISSUED FOR PERMIT & CONSTRUCTION	2025-09-03

DRAWING NAME
EQUIPMENT LIST, NOTES, & SPECIFICATIONS

DRAWING NUMBER
M3

DRAWN BY	KB	SCALE	AS INDICATED
CHECKED BY	SLP	SHEET NUMBER	1 OF 1
PROJECT NUMBER	RVI-25021		