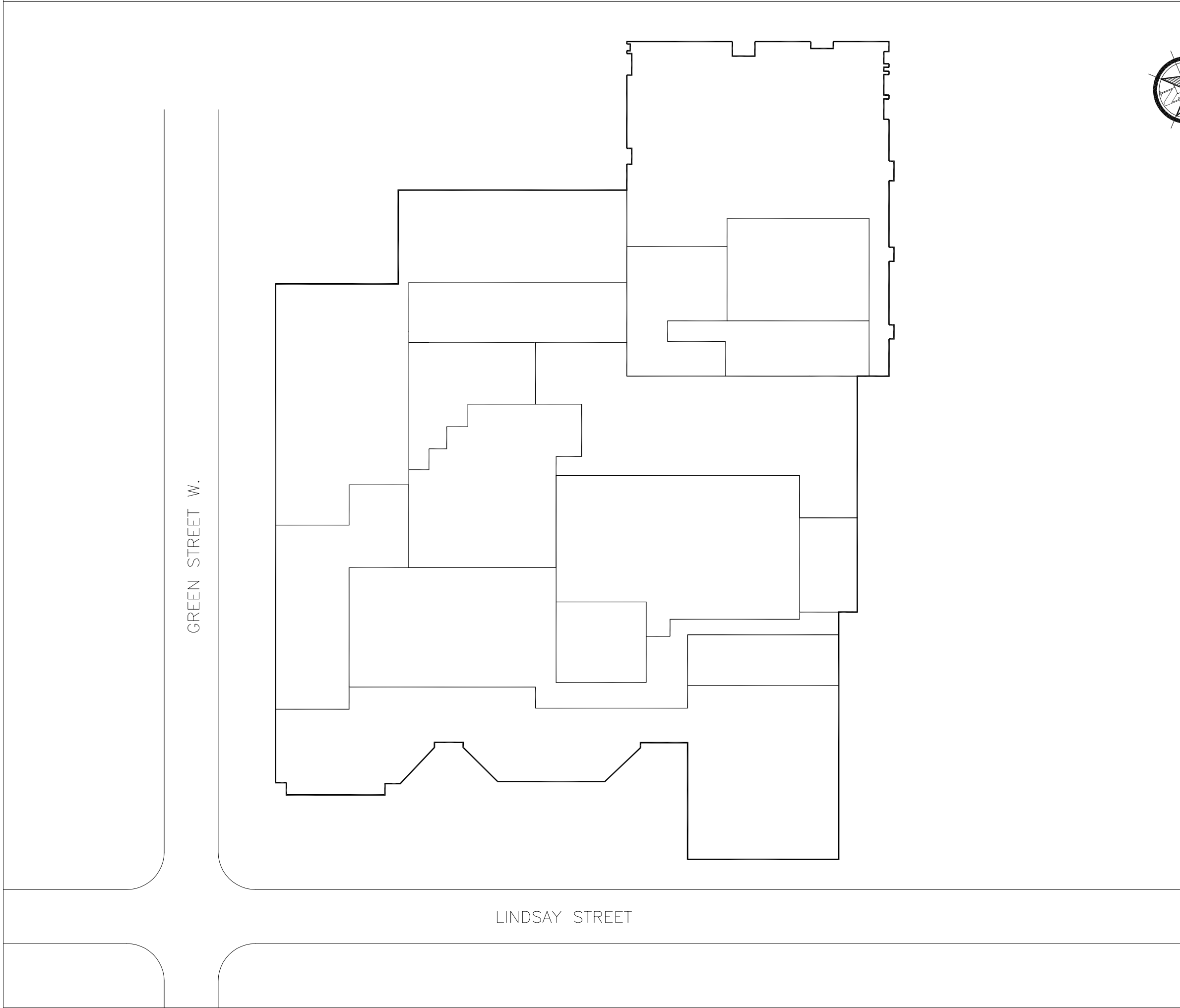


TLDSB
FENELON FALLS SECONDARY SCHOOL
FENELON FALLS

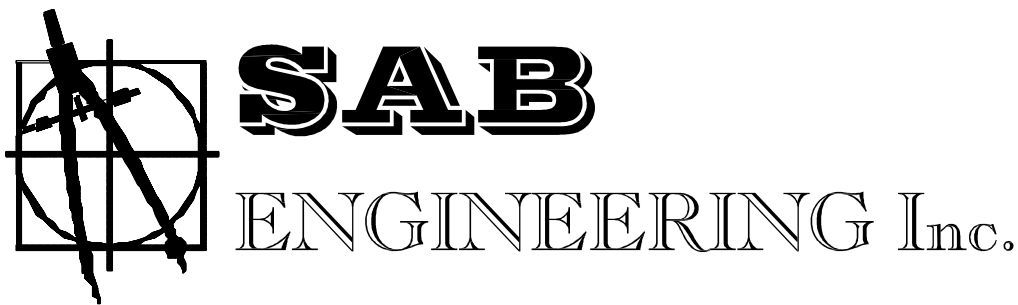
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FENELON FALLS, ON K0M 1N3

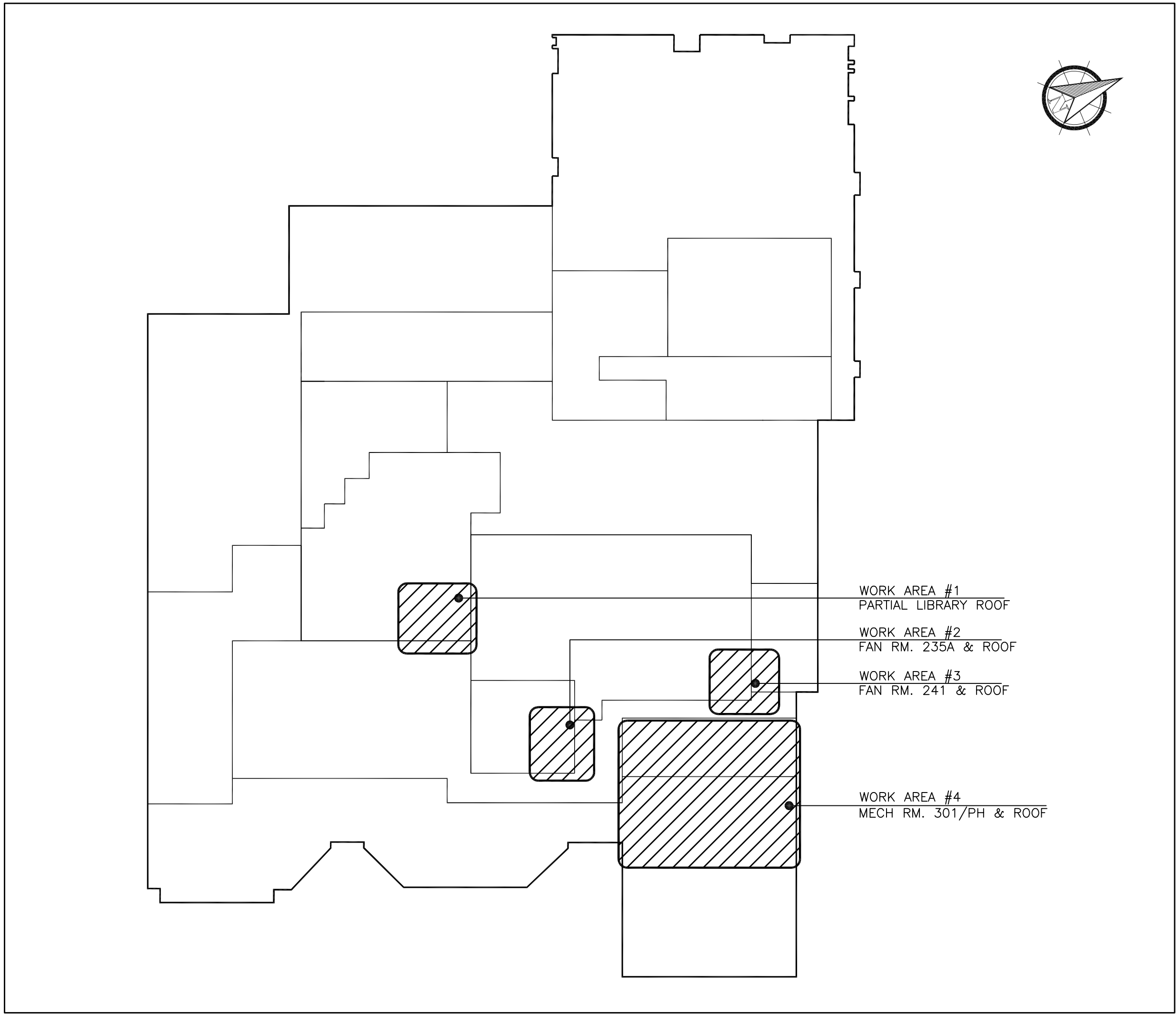
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JUNE 2021



DRAWING LIST

NO.	DRAWING TITLE
M-1	KEY PLAN, SYMBOL LIST, EQUIPMENT SCHEDULE & DETAILS - MECHANICAL
M-2	PART OF LIBRARY ROOF & FAN ROOM 235A & 241 - EXISTING & DEMOLITION WORK - MECHANICAL
M-3	PART OF LIBRARY ROOF & FAN ROOM 235A & 241 - NEW WORK - MECHANICAL
M-4	MECHANICAL ROOM 301/PENTHOUSE, PART OF ROOF & GAS PIPING LAYOUT - MECHANICAL
M-5	CONTROL DIAGRAMS
E-1	KEY PLAN, SYMBOL LIST, EQUIPMENT WIRING SCHEDULE & GENERAL NOTES - ELECTRICAL
E-2	PART OF LIBRARY ROOF, FAN RM. 235A, 241, MECHANICAL RM. 301/PENTHOUSE - EXISTING, DEMOLITION & NEW WORK - ELECTRICAL
E-3	DISTRIBUTION POWER PLAN - ELECTRICAL



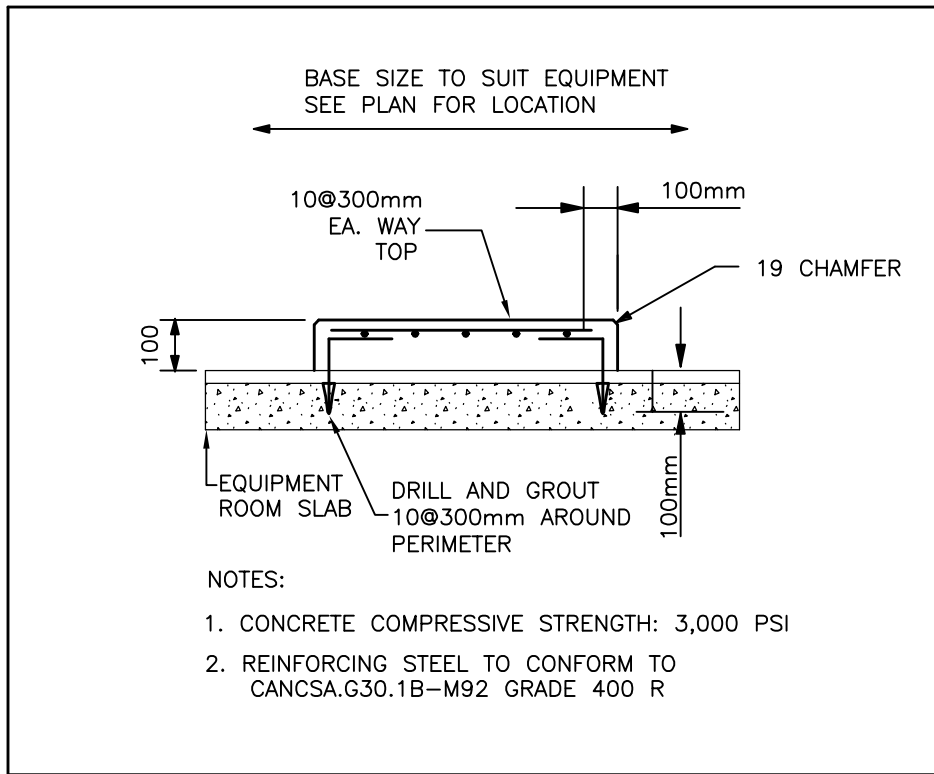


KEY PLAN
SCALE: N.T.S.

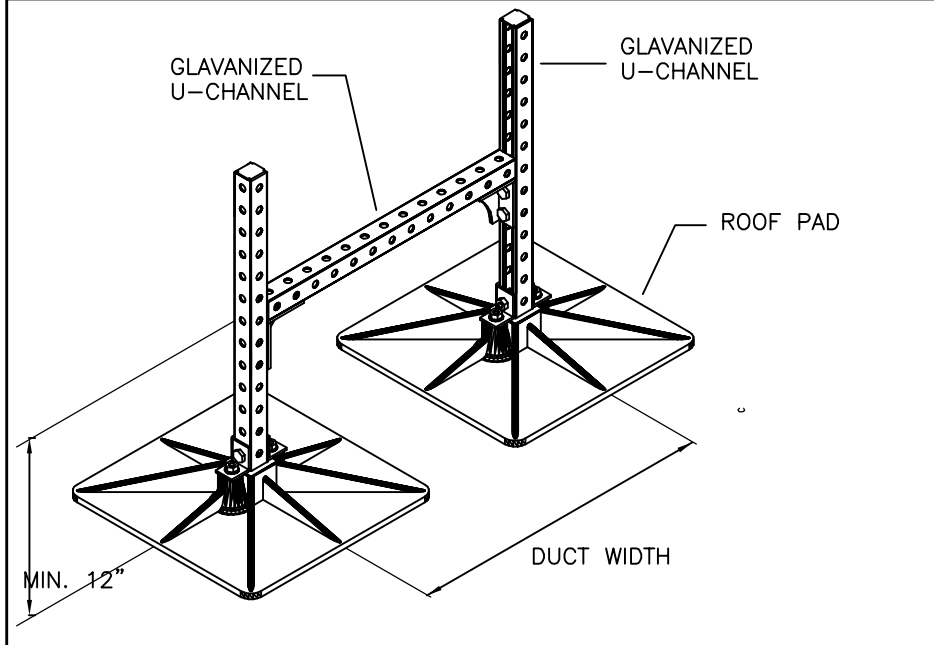
SCHEDULE OF ROOF TOP UNIT															
TAG	SERVING	MANUFACTURER	MODEL	SUPPLY AIR FLOW CFM	E.S.P. Pa [IN]	COOLING CAPACITY (TONS)	REFRIGERANT TYPE	HEATING CAPACITY IN/OUT kW [MBH]	MIN. OUTDOOR AIR FLOW CFM	UNIT POWER				UNIT WEIGHT KG [LBS]	REMARKS
										VOLTAGE	FAN HP	AMPS (MCA)	MOCP (A)		
RTU-1	LIBRARY	TRANE	TSD150G3R0C	4,600	187 [0.75]	12.5	R410A	N/A	920	208/3/60	3.0	60	80	1088 [2398]	DX COOLING, RE-USE ROOF OPENING
RTU-2	GYM	DAIKIN	DPS015A	6,000	187 [0.75]	15.0	R410A	117 [400]/94 [320]	1,200	208/3/60	4.0	72.1	100	1200 [2645]	DX COOLING, GAS HEATING
RTU-3	GYM	DAIKIN	DPS016A	7,200	187 [0.75]	16.5	R410A	132 [450]/105 [360]	1,400	208/3/60	5.0	104.4	150	1800 [3967]	DX COOLING, GAS HEATING
NOTES: 1. EACH RTU TO BE COMPLETE WITH DUAL ENTHALPY ECONOMIZER 2. RTU-2 AND RTU-3 UNITS TO BE COMPLETE WITH ROOF CURB PLENUM 3. SUPPLY AND INSTALL NEW TEMPERATURE SENSORS C/W NEW WIRING AND CODUIT FOR EACH UNIT. EXACT LOCATION TO BE DETERMINED ON SITE.															

SCHEDULE OF OUTDOOR CONDENSERS											
TAG	MANUFACTURER	MODEL	COOLING CAP. TONS	REFRIGERANT	CONNECTION SIZES			POWER SUPPLY (V/PH/MCA)	MCA/MOCP (A)	WEIGHT KG [LB]	REMARKS
					RL (MM/IN)	RG (MM/IN)	HGBP				
CU-6	ENGINEERED AIR	CU143	15	R-410A	3x 12 [¾]	3x 30 [1½]	✓	208/3/127.4	87.0/100	680 [1500]	
NOTES: 1. PROVIDE ALL INTERCONNECTED REFRIGERANT LINES BETWEEN INDOOR AND OUTDOOR UNITS. 2. UNITS TO BE BACNET AND CONTROLLED BY THE BAS. 3. ALL THE FINAL SIZE FOR THE REFRIGERATION PIPES TO BE BY THE UNIT/ SYSTEM MANUFACTURER BASED ON FINAL ROUTING. 4. MANUFACTURER TO PROVIDE DETAILED PIPE SIZE AND SCHEMATIC AS PART OF SHOP DRAWINGS SUBMITAL. 5. C/W FULL CHARGE OF REFRIGERANT AND OIL.											

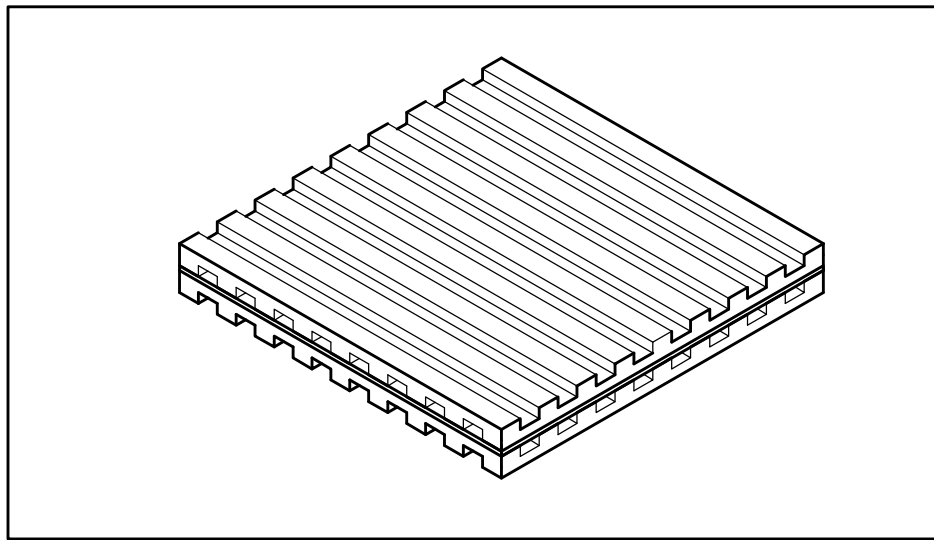
SCHEDULE OF DX COOLING COILS									
TAG	AIR FLOW (CFM)/COIL	TOTAL COOLING CAPACITY KW [MBH]	DX COIL SIZE MM/IN (HxL-#ROWS & FINS PER IN)	AIR TEMPERATURES		# OF CIRCUITS (PER COIL)	TOTAL # OF COILS	COIL PRESURE DROP PA [IN W.G.]	REMARKS
				ENTRY DBT/WBT	LEAVING DBT/WBT				
CC-6	7,500	52.7 [180]	8357x1575/33.75x62-4R10	26.7°C/19.4°C [80°F/67.0°F]	16.4°C/15.4°C [61.6°F/59.7°F]	3	3	137.9 [0.56]	
NOTES: ALL COIL DIMENSIONS AND # OF FINNS ARE APPROXIMATE FOR PRICING PURPOSES ONLY. COIL SUPPLIER MUST SITE MEASURE FOR ALL FINAL COIL DIMENSIONS PRIOR TO ORDERING. PERFORMANCE BASED ON R-410A REFRIGERANT AND 45 DEG F SUCTION TEMPERATURE									



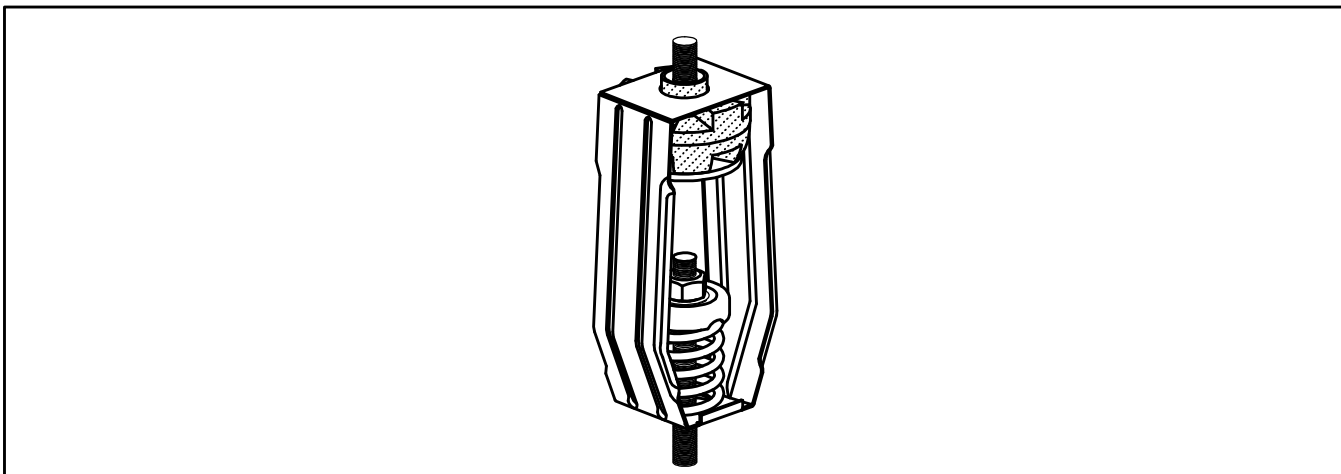
TYPICAL CONCRETE PAD DETAIL
N.T.S.



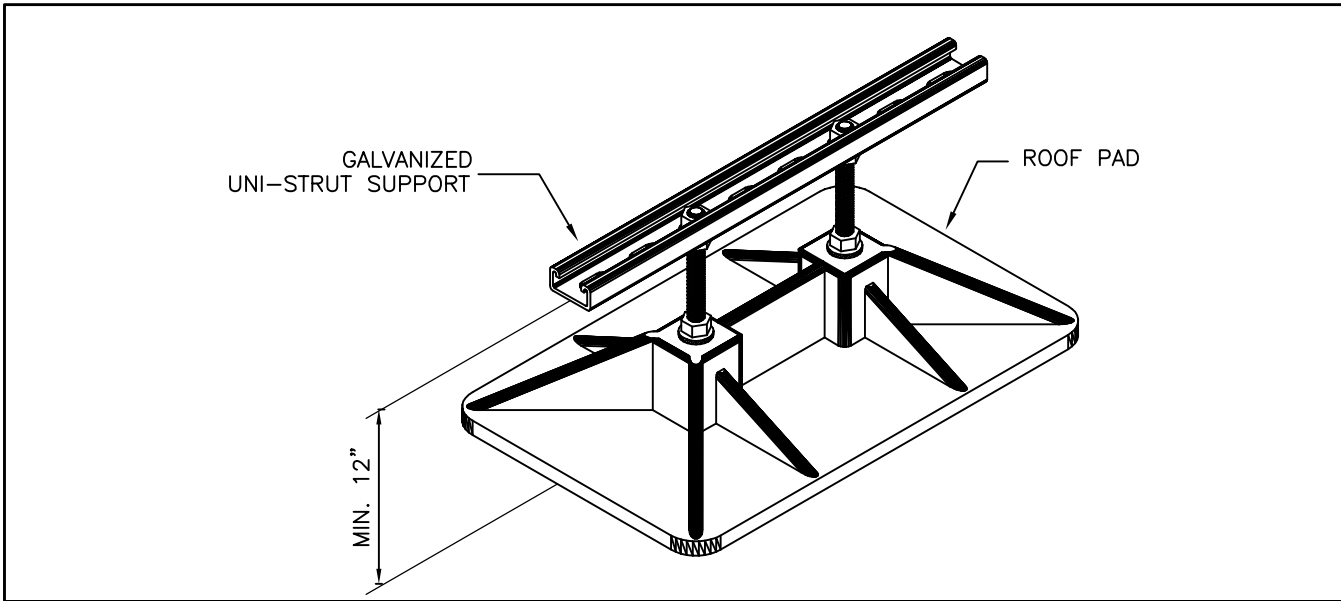
TYPICAL DUCT SUPPORT ON THE ROOF
N.T.S.



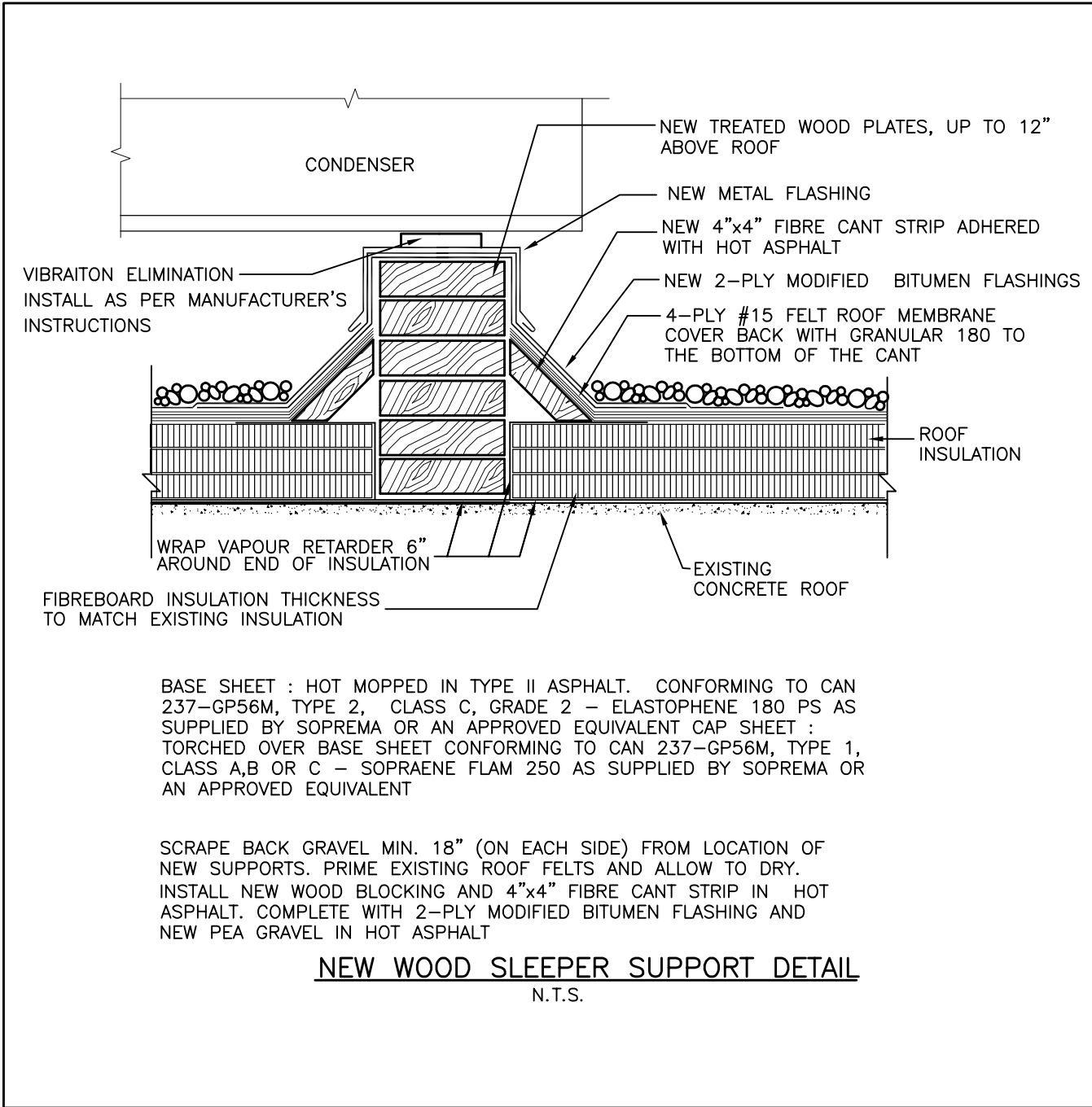
NEOPRENE PAD SUPPORT
N.T.S.



PIPE SPRING HANGER
N.T.S.



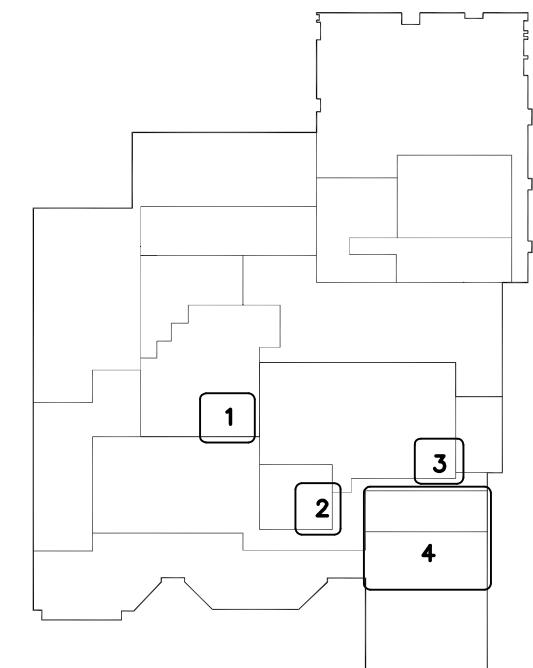
DETAIL OF PIPE SUPPORT ON ROOF
N.T.S.



NEW WOOD SLEEPER SUPPORT DETAIL
N.T.S.

SYMBOLS	
—HWR—	HEATING WATER RETURN
—HWS—	HEATING WATER SUPPLY
—RG—	REFRIGERANT GAS LINE
—RL—	REFRIGERANT LIQUID LINE
—G—	GAS PIPE
↙↘	PIPE TURNING DOWN
↗↖	PIPE TURNING UP
—X—X—X—	DENOTES: EQUIPMENT OR PIPING TO BE REMOVED
⊙	FLOOR DRAIN
○VTR	VENT THROUGH ROOF
○RD	ROOF DRAIN
CTE	DENOTES: CONNECT TO EXISTING
CUT	DENOTES: CUT POINT OF EXISTING SERVICE
⊙TG	THERMOMETER
⊙PG	PRESSURE GAUGE
⊙	ROOM THERMOSTAT
⊙P	PUMP
⊙AV	AUTOMATIC CONTROL VALVE — TWO WAY
⊙MV	MIXING OR DIVERTER VALVE (3-WAY)
⊙V	VALVE
⊙BV	BALANCING VALVE
⊙CV	CHECK VALVE
⊙STR	STRAINER — OVER 50mm PROVIDE WITH VALVED FLUSHING DRAIN
300x150	SHEET METAL DUCT — FIRST FIGURE INDICATES DIMENSION SHOWN
⊙SRU	SHEET METAL RISER UP — SUPPLY
⊙SRD	SHEET METAL RISER DOWN — SUPPLY
⊙SRE	SHEET METAL RISER DOWN — RETURN AND EXHAUST
⊙SE	SHEET METAL RISER DOWN — RETURN AND EXHAUST
⊙F/D	FUSIBLE LINK FIRE DAMPER WITH ACCESS DOOR IN DUCT
⊙MD	MOTORIZED DAMPER
RTU-1 CU-6 CC-6	ROOF ROOF PACKAGE #1 CONDENSING UNIT #6 COOLING COIL #6
S/A, R/A F/A, E/A	DENOTES: SUPPLY AIR, RETURN AIR, FRESH AIR, EXHAUST AIR

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No.	DATE	DESCRIPTION
I.	01/06/2021	ISSUED FOR TENDER



KEY MAP

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
DO NOT SCALE DRAWINGS.

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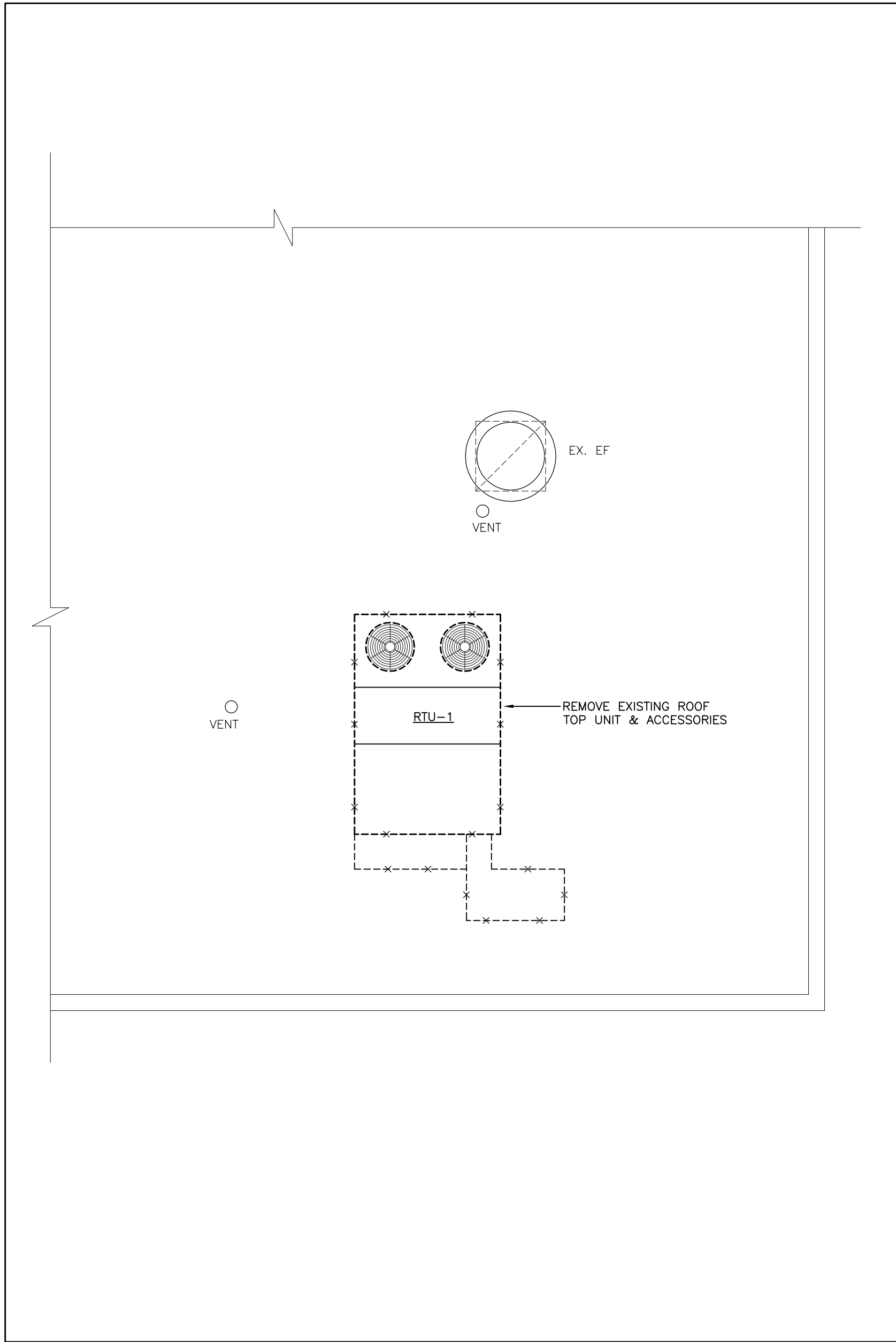
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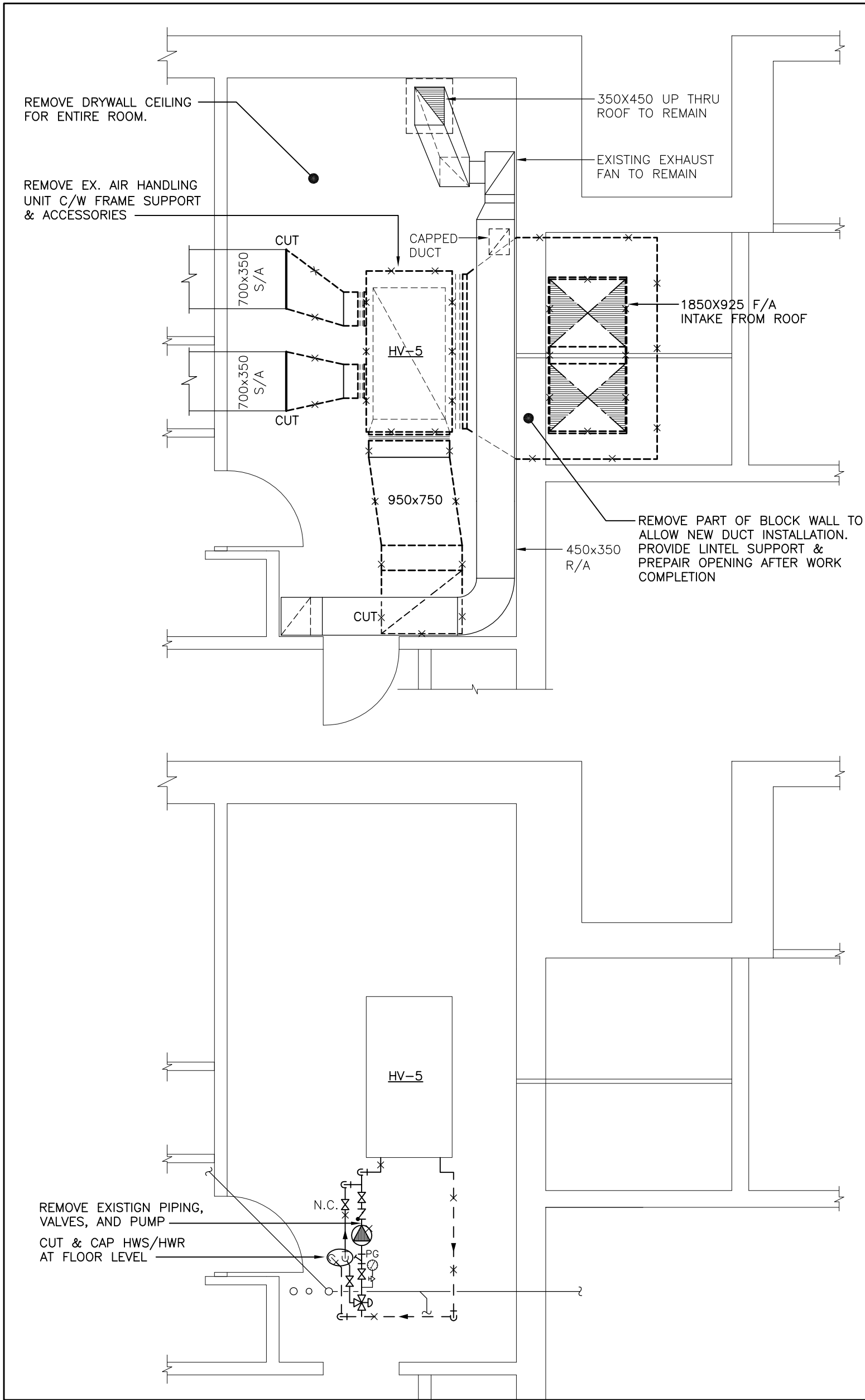
PROJECT
FENELON FALLS SECONDARY SCHOOL
H.V.A.C. UPGRADE
66 LINDSAY ST., FENELON FALLS, ON K0M 1N0
DRAWING TITLE
KEY PLAN, SYMBOL LIST, EQUIPMENT SCHEDULE & DETAILS - MECHANICAL

DATE	SCALE
MAY 2021	N.T.S.
DRAWN BY T.N.	DWG. No.
JOB No. 2021-44	

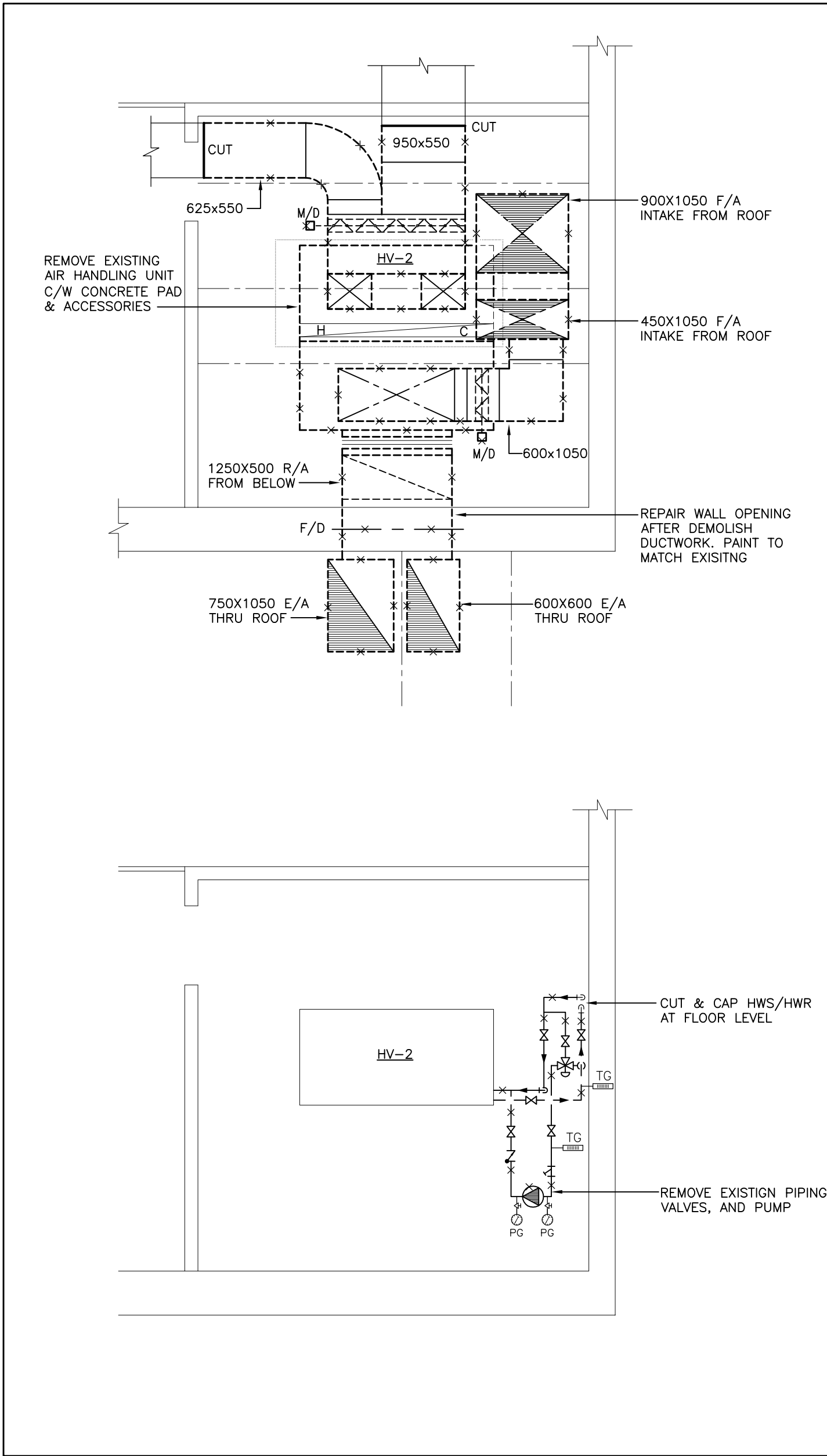
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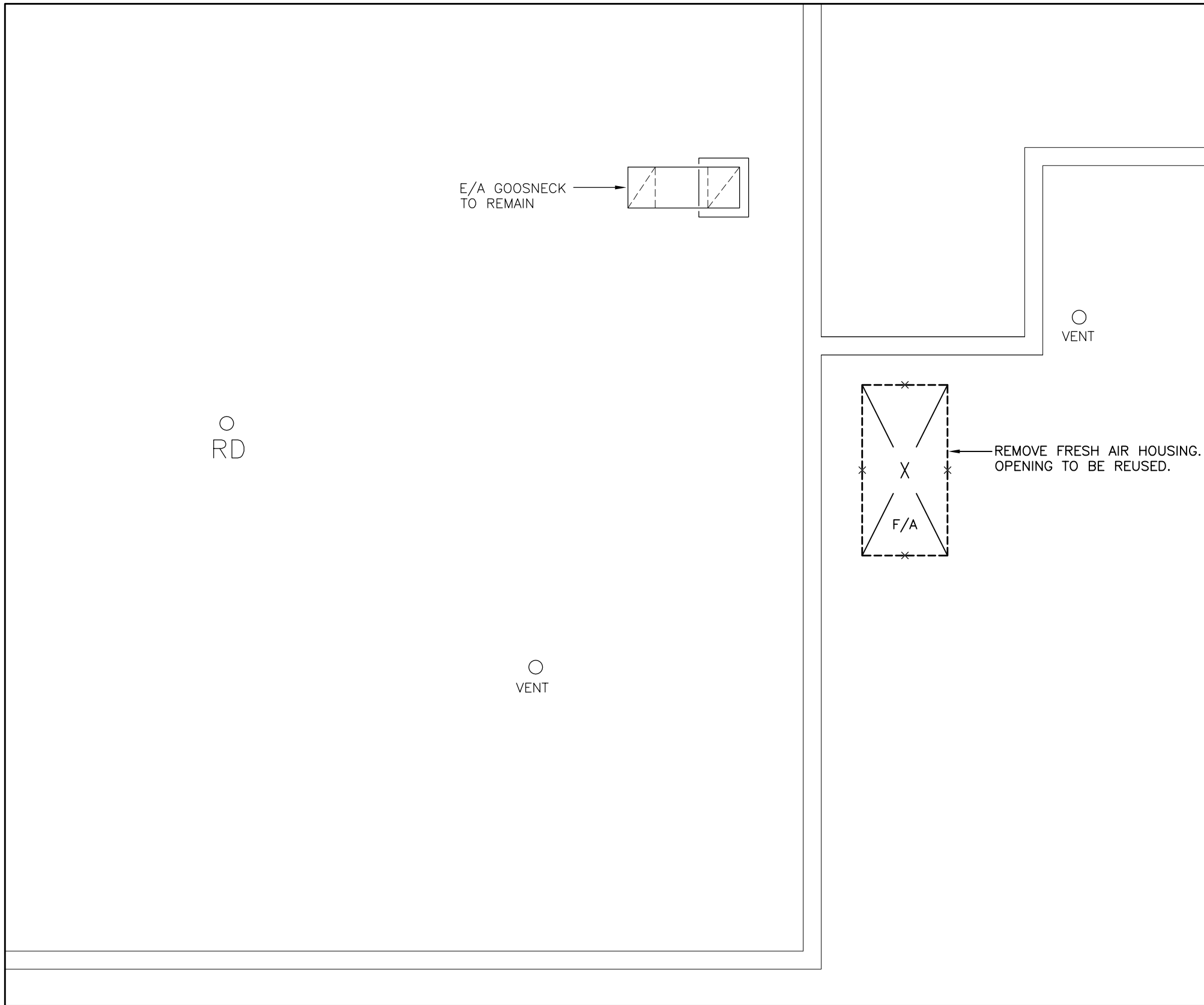
PARTIAL LIBRARY ROOF (WORK AREA #1) - EXISTING & DEMOLITION WORK
SCALE: 1:50



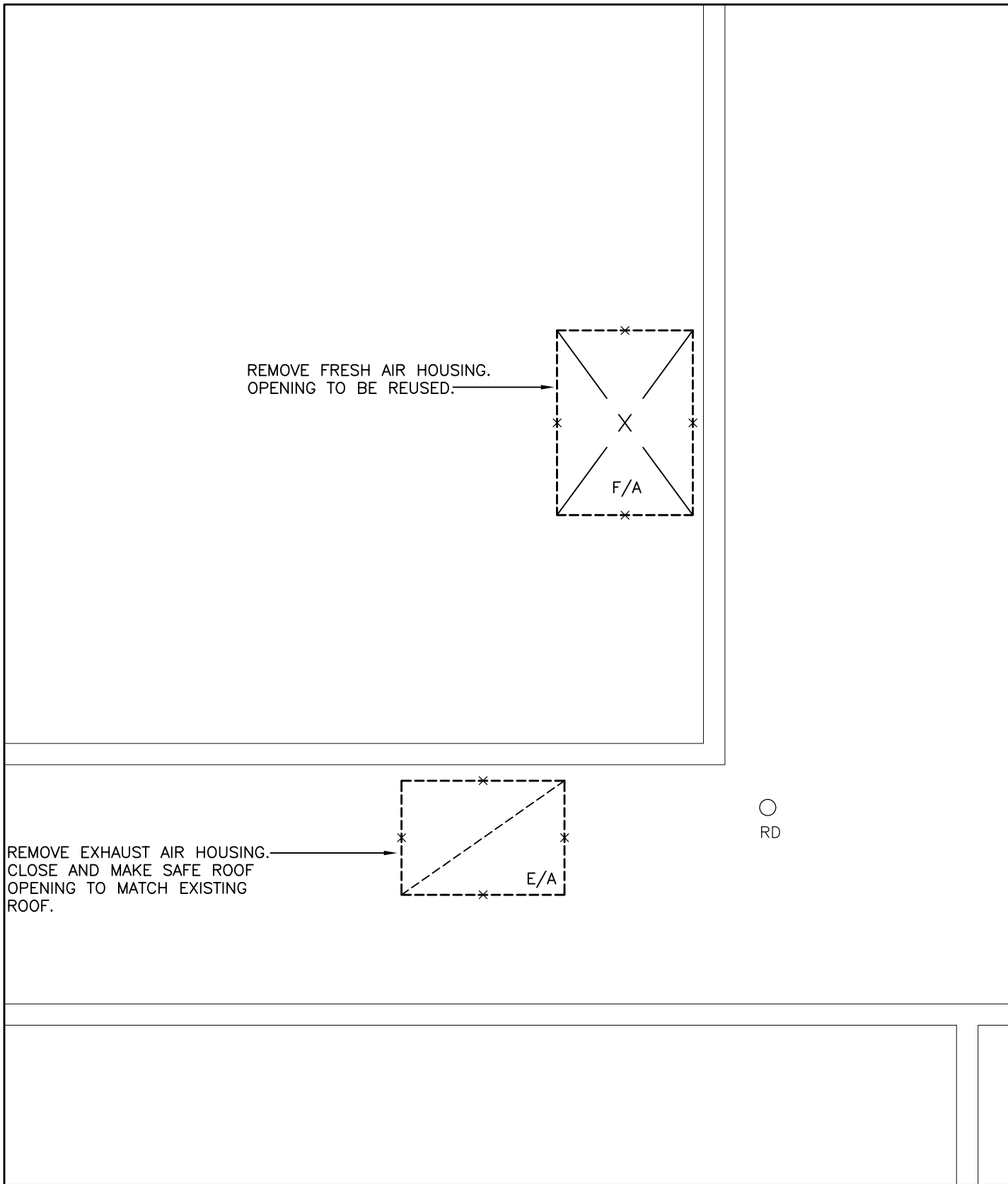
FAN ROOM 235A (WORK AREA #2) - EXISTING & DEMOLITION WORK
SCALE: 1:50



FAN ROOM 241 (WORK AREA #3) - EXISTING & DEMOLITION WORK
SCALE: 1:50



PART OF ROOF ABOVE FAN ROOM 235A - EXISTING & DEMOLITION WORK
SCALE: 1:50



PART OF ROOF ABOVE FAN ROOM 241 - EXISTING & DEMOLITION WORK
SCALE: 1:50

DEMOLITION WORK NOTES:

THESE NOTES SHALL BE READ IN CONJUNCTION WITH, AND SHALL FORM AN INTEGRAL PART OF THE SPECIFICATIONS.

PRIOR TO COMMENCING THE DEMOLITION WORK, EXAMINE CAREFULLY THE ELEMENTS OF THE EXISTING SYSTEMS TO BE REMOVED. FOR REASONS OF CLARITY, THE DRAWINGS DO NOT SHOW ALL BUILDING SERVICES LOCATED IN THE WORK AREAS OR ALL STRUCTURAL ELEMENTS. ALL BUILDING SERVICES AND OTHER UTILITIES NOT AFFECTED BY THIS WORK SHALL REMAIN OPERATIONAL. ANY DAMAGE TO BUILDING SERVICES AND UTILITIES NOT AFFECTED BY THE WORK SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR, AT NO COST TO THE OWNER.

THE SIZES AND LOCATION OF PIPING, DUCTWORK, EQUIPMENT AND OTHER UTILITIES INDICATED ON THE DRAWINGS WERE SITE MEASURED OR TAKEN FROM EXISTING DRAWINGS. MAKE ANY CHANGES REQUIRED TO SUIT THE ACTUAL SITE CONDITIONS AT NO COST TO THE OWNER.

REMOVE EXISTING ROOFTOP UNIT, INDOOR AIR HANDLING UNITS, PART OF DUCTS & PIPINGS AS INDICATED ON THE DRAWING AND AS REQUIRED FOR THE INSTALLATION OF THE NEW EQUIPMENT. DISCONNECT FROM POWER SUPPLY AND CONTROLS. REMOVE ALL REDUNDANT ELECTRICAL POWER SUPPLY WIRING, CONDUITS AND DEVICES SUCH AS DISCONNECTS AND STARTERS (REFER TO ELECTRICAL DRAWINGS FOR FULL SCOPE); MAKE SAFE ALL REMAINING WIRING.

ENSURE THAT DURING THE DEMOLITION WORK, THE FLOOR DRAINS ARE PROTECTED AGAINST CLOGGING WITH DEBRIS. REMOVE ALL REDUNDANT PIPE HANGERS AND SUPPORTS.

THE CONTROL CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION OF ALL THE CONTROLS ASSOCIATED WITH THE EQUIPMENT TO BE REMOVED, INCLUDING SENSORS, DEVICES, (PRESSURE SENSORS, HUMIDITY AND TEMPERATURE SENSORS), TUBING AND WIRING. CONTRACTOR TO IDENTIFY ALL EXISTING TUBING PRIOR TO DEMOLITION TO ENSURE THAT ALL EXISTING EQUIPMENT THAT IS TO REMAIN WILL NOT BE AFFECTED BY THIS WORK AND SHALL REMAIN OPERATIONAL AND UNCONTAMINATED BY OIL OR DEBRIS. REMOVE ALL EXISTING CONTROL PANELS THAT ARE REDUNDANT.

REMOVAL OF EXISTING SMOKE DETECTORS AND SUBSEQUENT INSTALLATION OF NEW DETECTORS, AS WELL AS CONNECTING NEW AHUS TO FIRE ALARM SHALL BE DONE BY A BOARD APPROVED FIRE PROTECTION SUB-CONTRACTOR.

ALLOW FOR DRAINING OF THE EXISTING HEATING SYSTEM, AS NECESSARY TO PERFORM THE WORK.

CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL REMOVED EQUIPMENT AND MATERIALS.

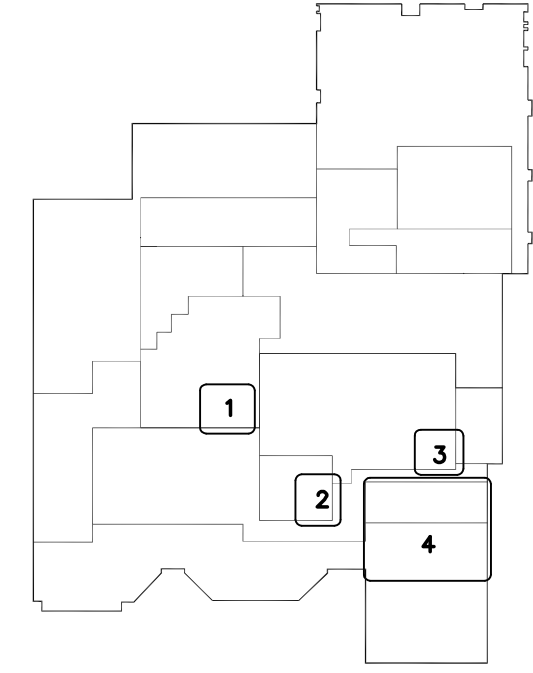
REMOVE ALL EXISTING HANGERS AND SUPPORTS FOR THE DEMOLISHED EQUIPMENT AND DUCTWORK. REMOVE EXISTING CONCRETE PADS AND PREPARE THE FLOOR.

REMOVE EXISTING EXHAUST AND OUTSIDE AIR LOUVERED PENTHOUSES LOCATED ON THE ROOF THAT SERVE THE EQUIPMENT TO BE REMOVED. PREPARE THE OPENING FOR THE NEW DUCT INSTALLATION. ALL TEH UNUSED OPENINGS TO BE SEALED AND WATER PROOF.

REMOVE DRY WALL CEILING IN ROOM 235A. TEMPORARILY REMOVE ANY DEVICES SUCH AS HEAT DETECTORS, LIGHTS, CONDUITS, ETC. AS REQUIRED FOR THE FULL CEILING REMOVAL.

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No.	DATE	DESCRIPTION
I.	01/06/2021	ISSUED FOR TENDER

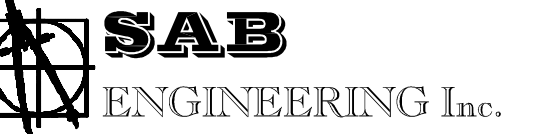


KEY MAP

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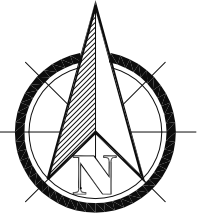
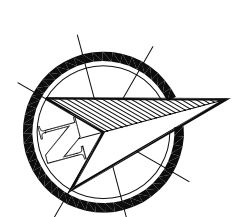
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PROJECT

FENELON FALLS SECONDARY SCHOOL
H.V.A.C. UPGRADE

66 LINDSAY ST., FENELON FALLS, ON K0M 1N0

DRAWING TITLE

PART OF LIBRARY ROOF & FAN ROOM
235A & 241 - EXISTING & DEMOLITION
WORK - MECHANICAL

DATE

MAY 2021

SCALE

1: 50

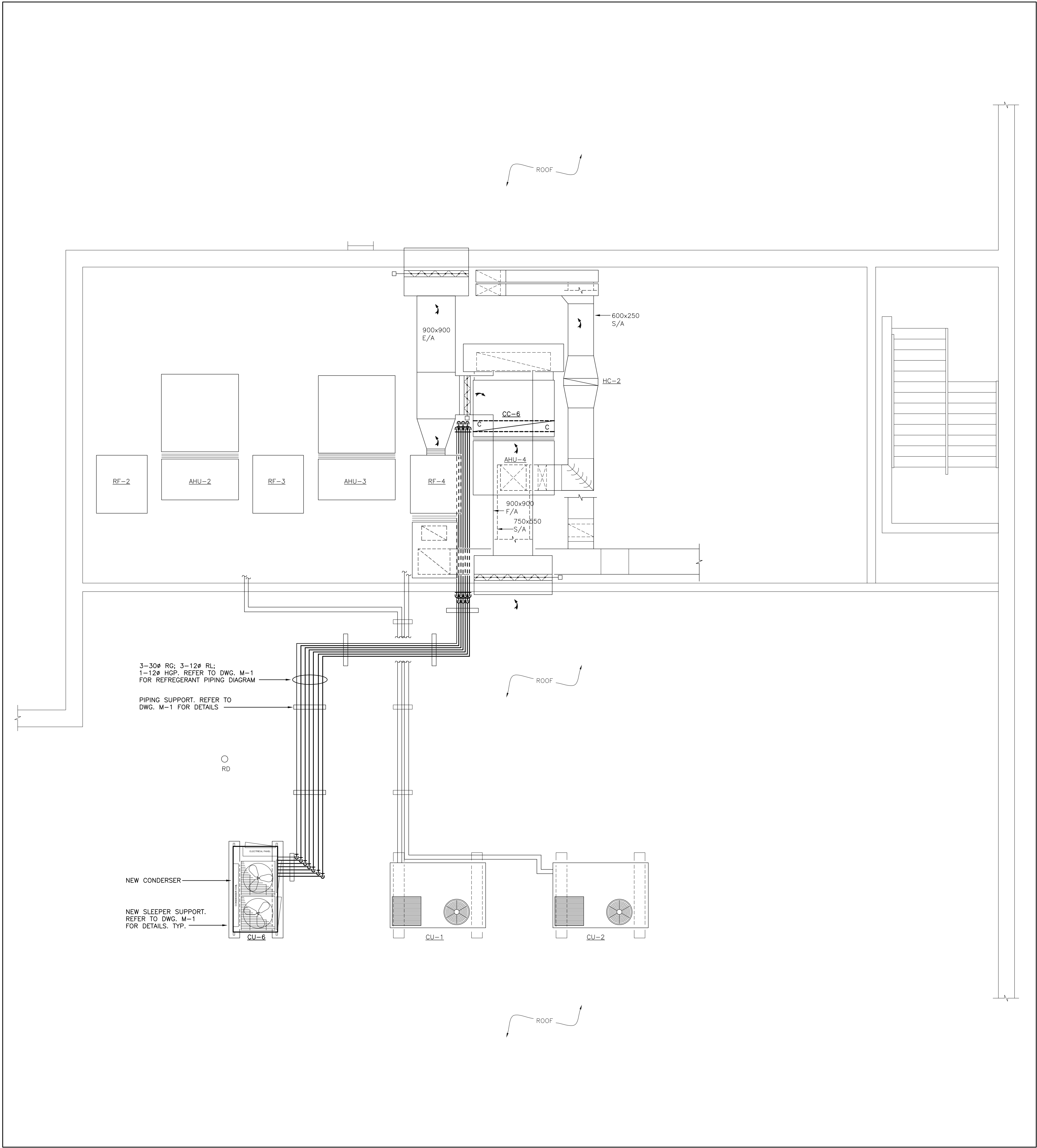
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T.N.

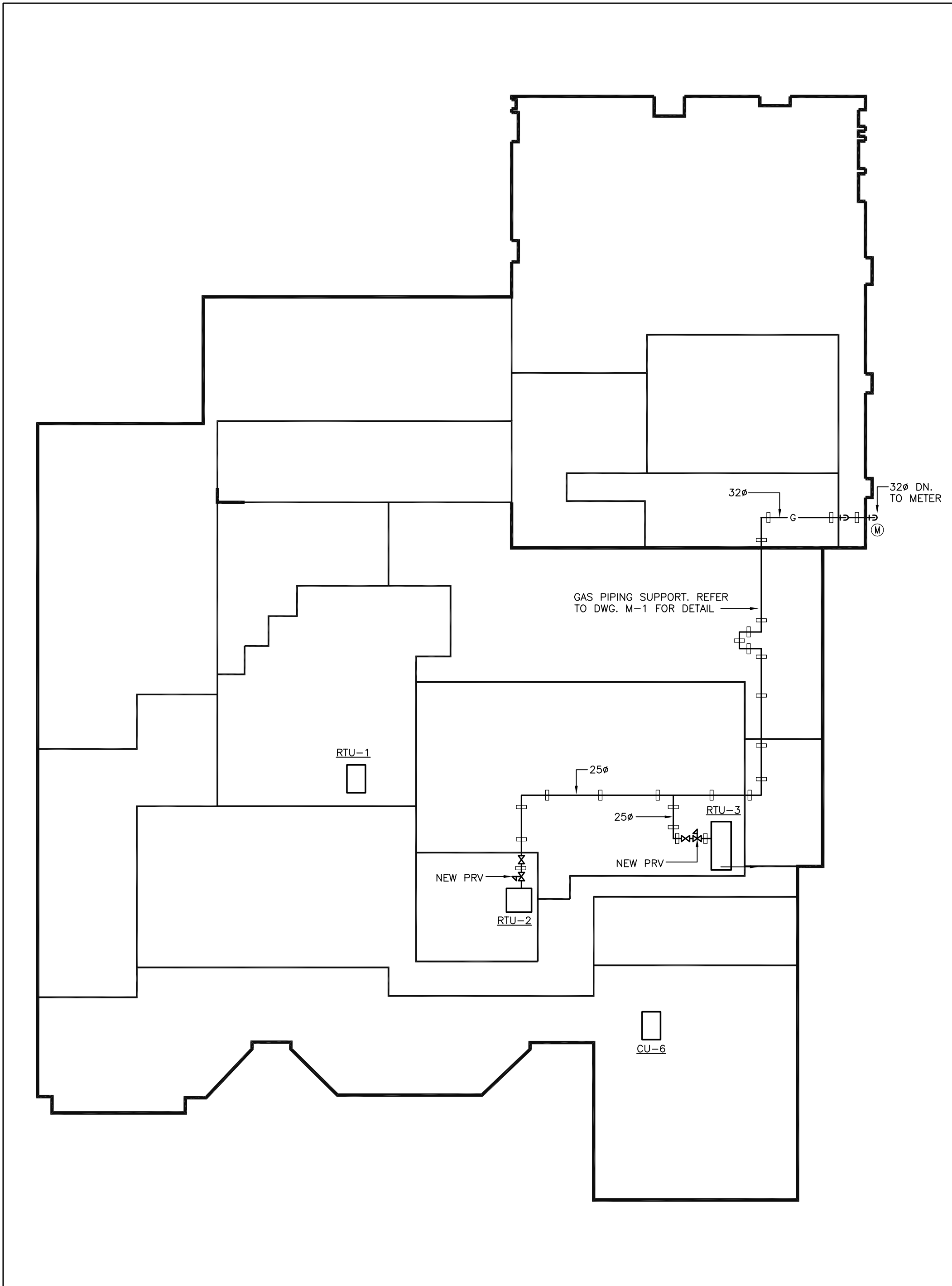
DWG. No.

2021-44

M-2



MECHANICAL ROOM 301/PENTHOUSE & PART OF ROOF (WORK AREA #4) – EXISTING & NEW WORK
SCALE: 1:50



NEW GAS PIPING ON ROOF LAYOUT
SCALE: N.T.S.

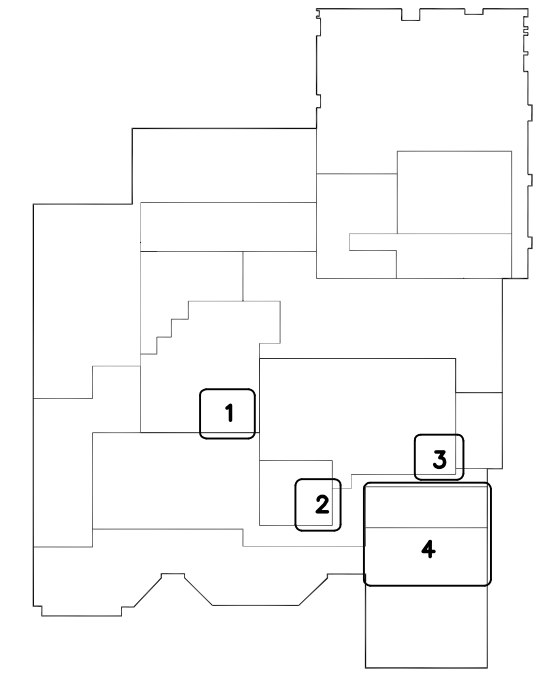
NEW WORK NOTES:

CONNECT NEW CONDENSING UNIT TO NEW DX COOLING COIL BY REFRIGERANT LINES. COORDINATE ROUTING OF NEW REFRIGERANT LINES WITH EXISTING BUILDING SERVICES AND STRUCTURAL ELEMENTS. SEAL ALL OPENINGS THROUGH WALL FOR FULL EXTENT OF REFRIGERANT ACCESSORIES AND INSTRUMENTATION. REFER TO REFRIGERANT PIPING DIAGRAM. NEW REFRIGERANT SUCTION LINES TO BE FULLY INSULATED. PROVIDE NEW PIPE SUPPORTS FOR THE NEW REFRIGERANT PIPES. LOCATE THE SUPPORTS AS PER MANUFACTURER RECOMMENDATIONS. INDOORS, USE SUPPORTS AS SPECIFIED FOR COPPER PIPING, INCLUDING DIELECTRIC PROTECTION. DO NOT USE OTHER MECHANICAL/ELECTRICAL EQUIPMENT OR DUCTWORK TO SUPPORT REFRIGERANT PIPING OR CONDUITS.

MAKE REFRIGERANT CONNECTIONS TO OUTDOOR CONDENSER AND INDOOR COIL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. USE VIBRATION ISOLATION FLEXIBLE CONNECTORS AS SPECIFIED. FINAL SIZE OF REFRIGERANT PIPING: BY MANUFACTURER, TO SUIT LOCAL EQUIPMENT ARRANGEMENT.

INSTALL NEW GAS LINE ON THE ROOF AS SHOWN. PROVIDE NEW SUPPORTS AS REQUIRED. REFER TO DRAWING M-1 FOR PIPE SUPPORT DETAIL. PAINT ALL NEW GAS PIPING YELLOW.

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No.	DATE	DESCRIPTION
I.	01/06/2021	ISSUED FOR TENDER



KEY MAP

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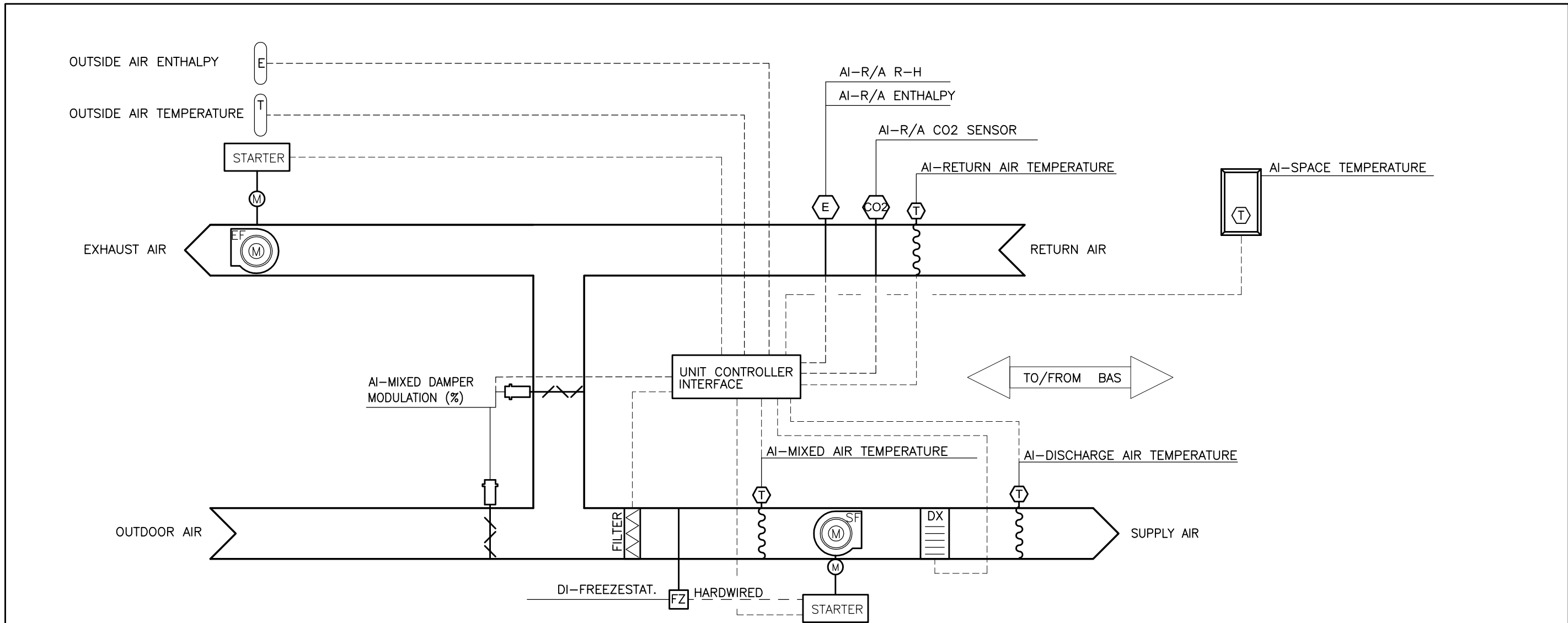
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PROJECT
FENELON FALLS SECONDARY SCHOOL
H.V.A.C. UPGRADE
66 LINDSAY ST., FENELON FALLS, ON K0M 1N0
DRAWING TITLE
MECHANICAL ROOM 301/PENTHOUSE,
PART OF ROOF & GAS PIPING LAYOUT -
MECHANICAL

DATE	SCALE	AS SHOWN
MAY 2021		
DRAWN BY T.N.	DWG. No.	M-4
JOB No. 2021-44		



SEQUENCE OF OPERATION:

THE ROOFTOP UNIT SHALL BE EQUIPPED WITH A CONTROLLER CAPABLE OF INTERFACING WITH THE SCHOOL BAS. UNIT CONTROLLER SHALL OPERATE THE EQUIPMENT IN ACCORDANCE WITH THE SEQUENCE DESCRIBED HEREIN, THE BAS SHALL ENABLE/ DISABLE THE UNIT, SET THE DISCHARGE AIR TEMPERATURE AND MONITOR AS NOTED. UNIT CONTROLLER TO BE BACNET TESTING LAB (BTL) CERTIFIED.

UNIT SHALL BE ENABLED/DISABLED BY THE BAS BASED ON THE TIME OF DAY SCHEDULE (OCCUPIED/UNOCCUPIED).

WHEN RTU IS ENABLED DURING THE OCCUPIED MODE, THE SUPPLY FAN SHALL RUN CONTINUOUSLY WITH ALL OTHER PARAMETERS BEING CONTROLLED BY THE INTEGRAL RTU CONTROLLER AS REQUIRED TO PROVIDE CONTINUOUS VENTILATION (BASED ON SPACE CO2 CONCENTRATION) AND TO MAINTAIN THE OCCUPIED SUPPLY AIR TEMPERATURE AT 12.8°C (ADJUSTABLE).

IN THE UNOCCUPIED MODE THE FRESH AIR DAMPER SHALL CLOSE AND RETURN AIR DAMPER SHALL OPEN.

EXHAUST FAN, ECONOMIZER, SHALL BE CONTROLLED BY THE INTEGRAL RTU CONTROLLER AS PER THE PRE-PROGRAMMED SEQUENCE BY UNIT MANUFACTURER.

BAS GUI SHALL DISPLAY AT LEAST THE FOLLOWING POINTS:

SPACE TEMPERATURE – SETPOINT
SPACE TEMPERATURE – ACTUAL
UNIT (ENABLE/DISABLE) COMMAND
OCCUPIED/UNOCCUPIED BUILDING STATUS
EXHAUST FAN STATUS
SUPPLY FAN STATUS
COOLING STATUS
FILTER STATUS
DISCHARGE AIR TEMPERATURE
RETURN AIR TEMPERATURE
RETURN AIR CO2 CONCENTRATION (ACTUAL AND SETPOINT)
OUTSIDE AIR TEMPERATURE

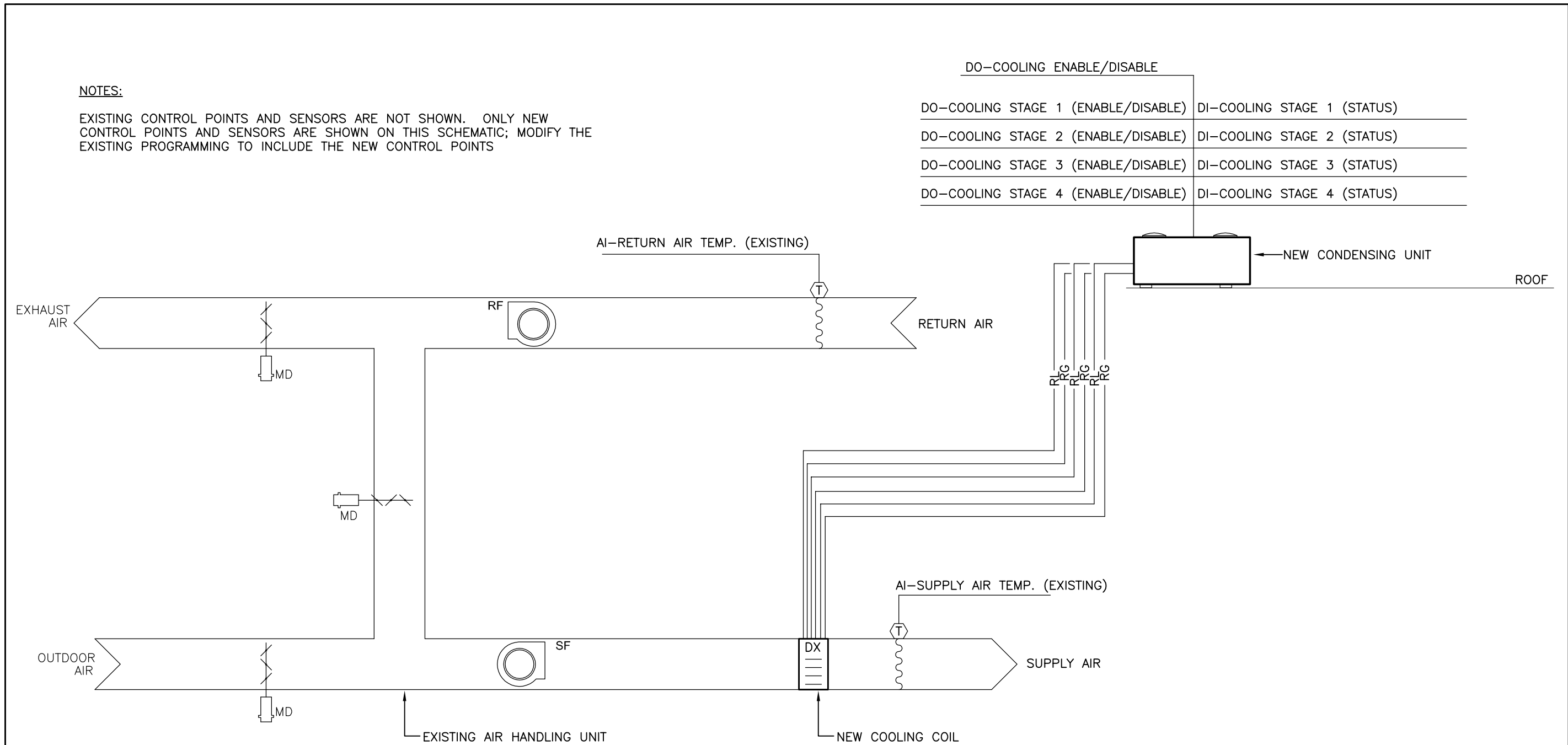
ALARMS

THE BAS SHALL GENERATE ALARMS IN CASE OF:

SUPPLY FAN FAILURE;
EXHAUST FAN FAILURE;
SPACE TEMPERATURE VARIANCE OF $\pm 3^{\circ}\text{C}$ FROM SETPOINT (OCCUPIED MODE ONLY);
DIRTY FILTER;
UNIT GENERATED ALARMS THROUGH BACNET.

ROOFTOP UNIT RTU-1 CONTROL DIAGRAM

N.T.S.



NOTES:

EXISTING CONTROL POINTS AND SENSORS ARE NOT SHOWN. ONLY NEW CONTROL POINTS AND SENSORS ARE SHOWN ON THIS SCHEMATIC; MODIFY THE EXISTING PROGRAMMING TO INCLUDE THE NEW CONTROL POINTS

DO-COOLING ENABLE/DISABLE

DO-COOLING STAGE 1 (ENABLE/DISABLE)	DI-COOLING STAGE 1 (STATUS)
DO-COOLING STAGE 2 (ENABLE/DISABLE)	DI-COOLING STAGE 2 (STATUS)
DO-COOLING STAGE 3 (ENABLE/DISABLE)	DI-COOLING STAGE 3 (STATUS)
DO-COOLING STAGE 4 (ENABLE/DISABLE)	DI-COOLING STAGE 4 (STATUS)

SEQUENCE OF OPERATION:

ADD THE FOLLOWING SEQUENCES TO THE OPERATION OF THE UNIT. MODIFY THE EXISTING SEQUENCES AS NECESSARY.

COOLING MODE – OCCUPIED HOURS

COOLING MODE SHALL BE ENABLED IN ACCORDANCE WITH THE CURRENT BUILDING CONTROL STRATEGY.

UNIT FAN AND DAMPER SEQUENCES TO REMAIN AS THEY ARE.

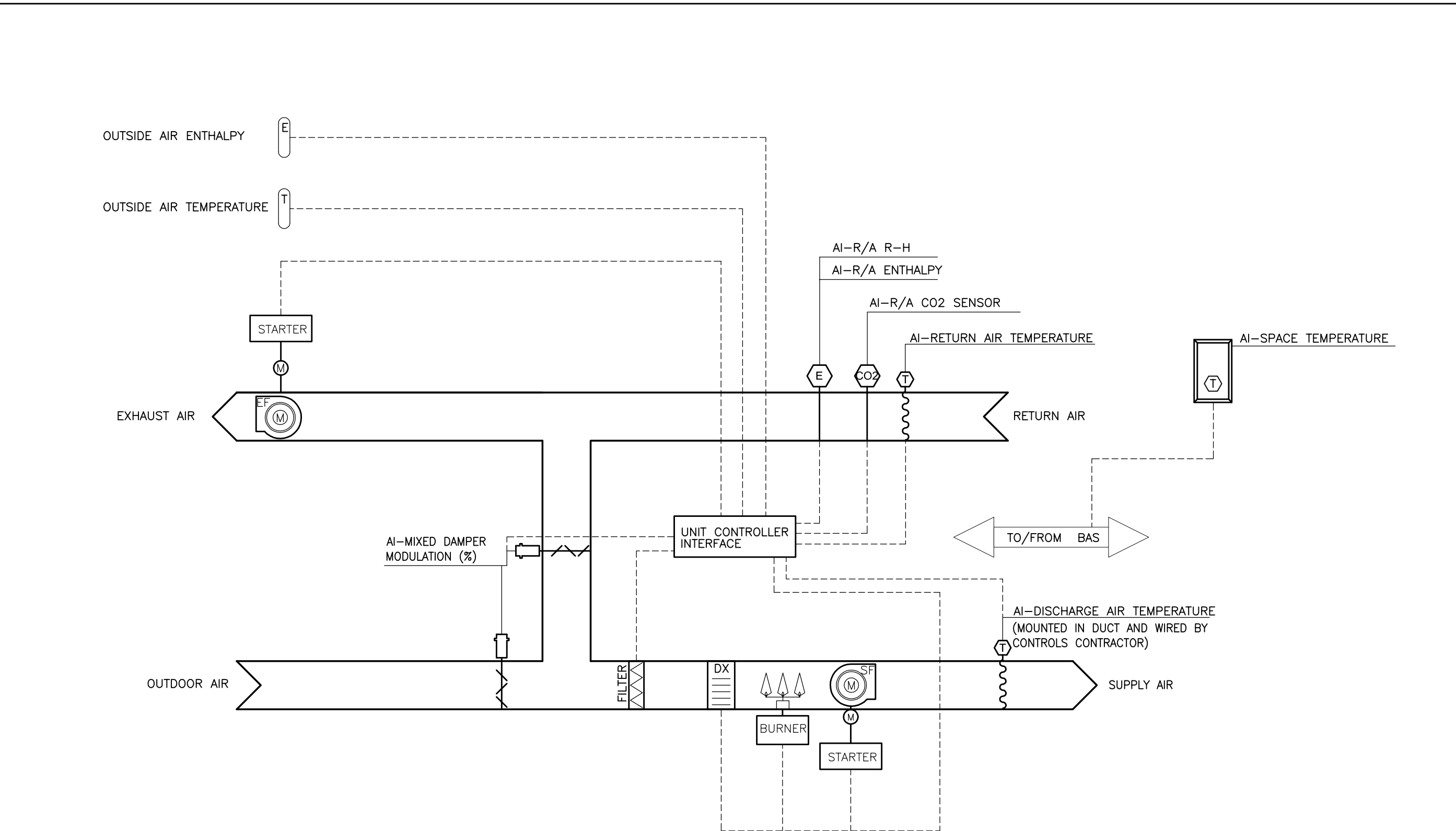
THE REMOTE CONDENSING UNIT SHALL BE STAGED BY THE BAS AS REQUIRED TO MAINTAIN THE RETURN AIR TEMPERATURE AT SETPOINT (DEFAULT VALUE: 74°F; ADJUSTABLE THROUGH BAS) SUBJECT TO A LOW LIMIT DISCHARGE TEMPERATURE OF 55°F.

COOLING MODE – UNOCCUPIED HOURS:

THE UNIT SHALL BE DE-ENERGIZED; THE FANS WILL STOP, EXHAUST AND FRESH AIR DAMPERS WILL CLOSE, THE RETURN AIR DAMPER SHALL OPEN. THE CONDENSING UNIT SHALL BE DISABLED.

EXISTING AIR HANDLER #4 & NEW CONDENSER #4 CONTROL DIAGRAM

N.T.S.



SEQUENCE OF OPERATION:

THE ROOFTOP UNIT SHALL BE EQUIPPED WITH A CONTROLLER CAPABLE OF INTERFACING WITH THE SCHOOL BAS. UNIT CONTROLLER SHALL OPERATE THE EQUIPMENT IN ACCORDANCE WITH THE SEQUENCE DESCRIBED HEREIN, THE BAS SHALL ENABLE/ DISABLE THE UNIT, SET THE DISCHARGE AIR TEMPERATURE AND MONITOR AS NOTED. UNIT CONTROLLER TO BE BACNET TESTING LAB (BTL) CERTIFIED.

UNIT SHALL BE ENABLED/DISABLED BY THE BAS BASED ON THE TIME OF DAY SCHEDULE (OCCUPIED/UNOCCUPIED).

WHEN RTU IS ENABLED DURING THE OCCUPIED MODE, THE SUPPLY FAN SHALL RUN CONTINUOUSLY WITH ALL OTHER PARAMETERS BEING CONTROLLED BY THE INTEGRAL RTU CONTROLLER AS REQUIRED TO PROVIDE CONTINUOUS VENTILATION (BASED ON SPACE CO2 CONCENTRATION) AND TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT AT 23°C (ADJUSTABLE).

IN THE UNOCCUPIED MODE THE FRESH AIR DAMPER SHALL CLOSE AND RETURN AIR DAMPER SHALL OPEN. THE RTU SHALL BE DISABLED. THE RTU SHALL ENABLE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE.

EXHAUST FAN, ECONOMIZER, SHALL BE CONTROLLED BY THE INTEGRAL RTU CONTROLLER AS PER THE PRE-PROGRAMMED SEQUENCE BY UNIT MANUFACTURER.

BAS GUI SHALL DISPLAY AT LEAST THE FOLLOWING POINTS:

SPACE TEMPERATURE – SETPOINT
SPACE TEMPERATURE – ACTUAL
UNIT (ENABLE/DISABLE) COMMAND
OCCUPIED/UNOCCUPIED BUILDING STATUS
EXHAUST FAN STATUS
SUPPLY FAN STATUS
HEATING STATUS (%)
COOLING STATUS
FILTER STATUS
DISCHARGE AIR TEMPERATURE
RETURN AIR TEMPERATURE
RETURN AIR CO2 CONCENTRATION (ACTUAL AND SETPOINT)
OUTSIDE AIR TEMPERATURE

ALARMS

THE BAS SHALL GENERATE ALARMS IN CASE OF:

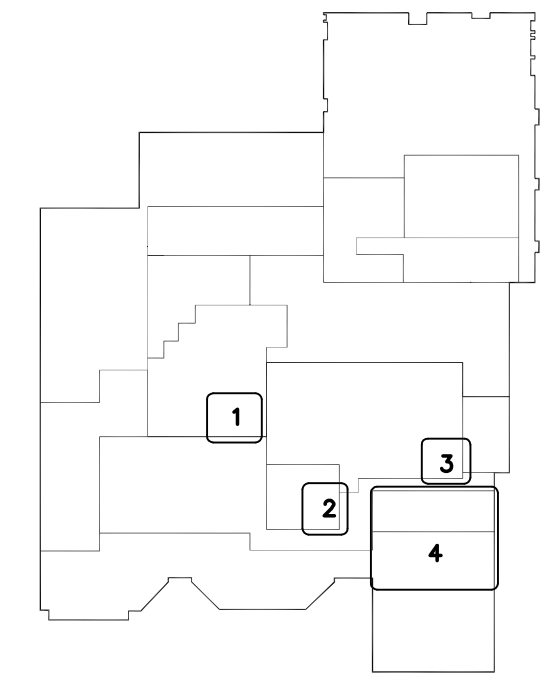
SUPPLY FAN FAILURE;
EXHAUST FAN FAILURE;
DISCHARGE AIR BELOW 12°C (HEATING MODE ONLY);
SPACE TEMPERATURE VARIANCE OF $\pm 3^{\circ}\text{C}$ FROM SETPOINT (OCCUPIED MODE ONLY);
DIRTY FILTER;
UNIT GENERATED ALARMS THROUGH BACNET.

ROOFTOP UNIT RTU-2 & 3 CONTROL DIAGRAM

N.T.S.

ISSUED

No.	DATE	DESCRIPTION
I.	01/06/2021	ISSUED FOR TENDER



KEY MAP

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

DO NOT SCALE DRAWINGS.

CONSULTANT



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TRUE NORTH

PROJECT NORTH



PROJECT

FENELON FALLS SECONDARY SCHOOL
H.V.A.C. UPGRADE

66 LINDSAY ST., FENELON FALLS, ON K0M 1N0

DRAWING TITLE

CONTROL DIAGRAMS

DATE

MAY 2021

SCALE

N.T.S.

DRAWN BY

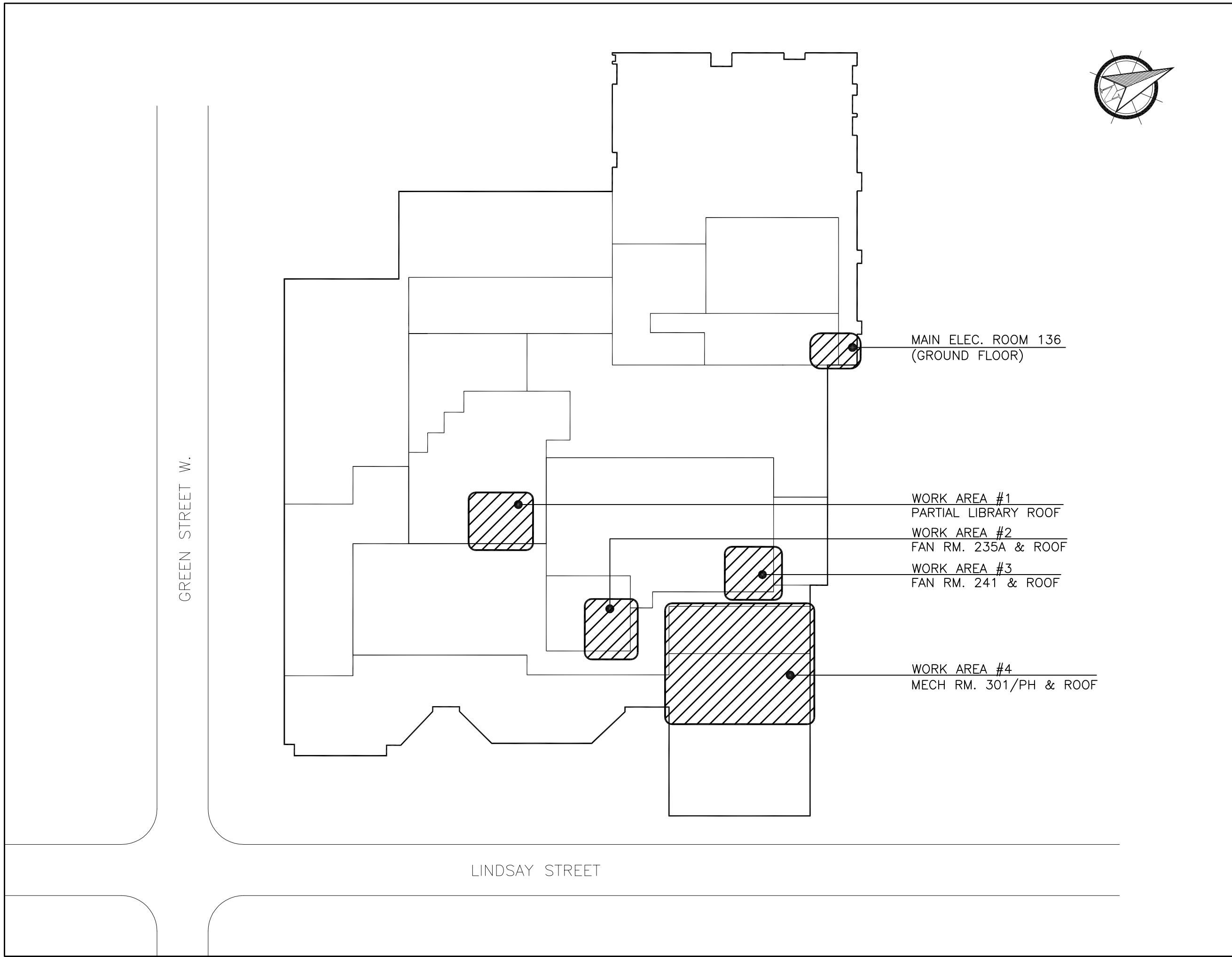
T.N.

DWG. No.

M-5

JOB No.

2021-44



ELECTRICAL GENERAL NOTES

GENERAL

EXAMINE ARCHITECTURAL, STRUCTURAL AND MECHANICAL CONDITIONS AND AVAILABLE DRAWINGS BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES BETWEEN DRAWINGS AND/OR SPECIFICATIONS MUST BE REFERRED TO THE PRIME CONSULTANT BEFORE ANY AFFECTED WORK IS COMMENCED.

ALL MATERIALS USED THROUGHOUT SHALL BE NEW, OF BEST QUALITY CSA APPROVED AND OF ONE MANUFACTURER.

OBTAIN AND PAY FOR APPROVALS AND PERMITS FROM AUTHORITIES HAVING JURISDICTION.

PROVIDE ALL CONDUIT, WIRING, BOXES, SWITCHES, OUTLETS, DEVICES, ETC. AS REQUIRED. MAKE UP TO THE LAST 3 FT OF FINAL CONNECTIONS TO ROTATING EQUIPMENT WITH LIQUID TIGHT FLEXIBLE CONDUIT.

CONTRACTORS SHALL NOTE THAT THIS CONTRACT IS AN ALTERATION TO AN EXISTING BUILDING AND SHALL THOROUGHLY INVESTIGATE THE EXISTING ELECTRICAL INSTALLATION AND CONDITIONS.

DEMOLITION, REMOVE POWER CONNECTIONS AS SHOWN ON DRAWINGS C/W CONDUIT AND WIRING TO SOURCE.

CONDUCTORS AND CABLES

CONDUCTORS AND CABLES SHALL BE IN ACCORDANCE WITH NEMA WC-70 AND AS SPECIFIED HEREIN.

CONDUCTORS SHALL BE ANNEALED COPPER, STRANDED FOR SIZES NO. 8 AWG AND LARGER, SOLID FOR SIZES NO. 10 AWG AND SMALLER. CONDUCTORS SHALL BE MINIMUM SIZE NO. 12 AWG, EXCEPT WHERE SMALLER SIZES ARE SPECIFICALLY SHOWN ON THE DRAWINGS. MINIMUM SIZE WIRING FOR DC WIRING SHALL BE #10 GAUGE.

ALL WIRING SHALL BE 600 VOLT TYPE RW90 AND RUN IN METALLIC CONDUIT EXCEPT WHERE ALLOWED IN FLEXIBLE LIQUID-TIGHT FLEXIBLE ENCLOSURE (SEE SECTION 15241). MAXIMUM VOLTAGE DROP SHALL NOT EXCEED 2%. PROVIDE GROUND WIRES WITH ALL FEEDERS AND BRANCH CIRCUITS IN ACCORDANCE WITH APPLICABLE CODES AND ONTARIO ELECTRICAL SAFETY CODE REQUIREMENTS. PROVIDE MAIN GROUND TO ESA APPROVAL.

INSULATION:

THHN-THWN SHALL BE IN ACCORDANCE WITH NEMA WC-70, UL 44, AND UL 83.

CONDUITS

ALL CONDUIT SHALL BE RIGID ALUMINUM (OUTDOORS) OR EMT THINWALL (INDOORS) WITH STEEL SET SCREW COUPLINGS AND CONNECTORS WITH INSULATED THROATS UNLESS OTHERWISE NOTED. RUN CONDUITS PARALLEL TO BUILDING LINES AND CONCENTRIC RIGHT ANGLE BENDS ONLY SHALL BE USED.

SEAL ALL PENETRATIONS THROUGH FLOOR SLABS WITH AN APPROVED NON-SHRINK, WATERPROOF AND FIREPROOF SEALANT.

NEW CONDUIT HANGERS SHALL BE SUPPORTED FROM BUILDING STRUCTURE AND INDEPENDENTLY FROM OTHER EXISTING ELEMENTS SUCH AS DUCTWORK, CONDUITS, PIPING ETC.

POWER DISTRIBUTION SYSTEM

THE POWER DISTRIBUTION SYSTEM SHALL BE MODIFIED AS SHOWN ON THE PLANS AND AS HEREINAFTER SPECIFIED. BREAKERS RATING SHALL MATCH EXISTING EQUIPMENT TO WHICH THEY ARE INSTALLED.

SPICES AND JOINTS

IN ACCORDANCE WITH UL 486A, C, D, E, AND NEC.

CONNECTORS: SOLDERLESS, SCREW ON, REUSABLE PRESSURE CABLE TYPE, RATED 600 V, 220° F [105° C], WITH INTEGRAL INSULATION, APPROVED FOR COPPER CONDUCTORS. THE INTEGRAL INSULATOR SHALL HAVE A SKIRT TO COMPLETELY COVER THE STRIPPED WIRES. THE NUMBER, SIZE, AND COMBINATION OF CONDUCTORS, AS LISTED ON THE MANUFACTURER'S PACKAGING, SHALL BE STRICTLY FOLLOWED.

CONNECTORS SHALL BE INDENT, HEX SCREW, OR BOLT CLAMP TYPE OF HIGH CONDUCTIVITY AND CORROSION RESISTANT MATERIAL, LISTED FOR USE WITH COPPER AND ALUMINUM CONDUCTORS. FIELD-INSTALLED COMPRESSION CONNECTORS FOR CABLE SIZES 250 MCM AND LARGER SHALL HAVE NOT FEWER THAN TWO CLAMPING ELEMENTS OR COMPRESSION INDENTS PER WIRE.

INSULATE SPICES AND JOINTS WITH MATERIALS APPROVED FOR THE PARTICULAR USE, LOCATION, VOLTAGE, AND TEMPERATURE. SPICE AND JOINT INSULATION LEVEL SHALL BE NOT LESS THAN THE INSULATION LEVEL OF THE CONDUCTORS BEING JOINED. PLASTIC ELECTRICAL INSULATING TAPE: PER ASTM D2304, FLAME-RETARDANT, COLD AND WEATHER RESISTANT.

LOW VOLTAGE FUSED AND NON-FUSED DISCONNECT SWITCHES RATED 600 AMPERES AND LESS

IN ACCORDANCE WITH UL 98, NEMA KST, AND NEC. SHALL HAVE NEMA CLASSIFICATION GENERAL DUTY (GD) FOR 240 V SWITCHES AND NEMA CLASSIFICATION HEAVY DUTY (HD) FOR 600 V SWITCHES. SHALL BE HP RATED.

LOCATE IN THE PROXIMITY OF THE EQUIPMENT SERVED, IN ACCORDANCE WITH NEC REQUIREMENTS.

SHALL HAVE THE FOLLOWING FEATURES:

- SWITCH MECHANISM SHALL BE THE QUICK-MAKE, QUICK-BREAK TYPE.
- COPPER BLADES, VISIBLE IN THE OFF POSITION.
- AN ARC CHUTE FOR EACH POLE.
- EXTERNAL OPERATING HANDLE SHALL INDICATE ON AND OFF POSITION AND HAVE LOCK OPEN PADLOCKING PROVISIONS.
- MECHANICAL INTERLOCK SHALL PERMIT OPENING OF THE DOOR ONLY WHEN THE SWITCH IS IN THE OFF POSITION, DEFEATABLE TO PERMIT INSPECTION.
- FUSE HOLDERS FOR THE SIZES AND TYPES OF FUSES SPECIFIED (WHERE APPLICABLE).
- WHERE APPLICABLE, FUSIBLE DISCONNECT SWITCHES SHALL BE FURNISHED COMPLETE WITH FUSES. ARRANGE FUSES SUCH THAT RATING INFORMATION IS READABLE WITHOUT REMOVING THE FUSE.
- SOLID NEUTRAL FOR EACH SWITCH BEING INSTALLED IN A CIRCUIT WHICH INCLUDES A NEUTRAL CONDUCTOR.
- GROUND LUGS FOR EACH GROUND CONDUCTOR.

ENCLOSURES:

SHALL BE THE NEMA TYPES SHOWN ON THE DRAWINGS FOR THE SWITCHES. WHERE THE TYPES OF SWITCH ENCLOSURES ARE NOT SHOWN, THEY SHALL BE THE NEMA TYPES MOST SUITABLE FOR THE AMBIENT ENVIRONMENTAL CONDITIONS. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL OUTDOOR SWITCHES SHALL BE NEMA 3R. SHALL BE FINISHED WITH MANUFACTURER'S STANDARD GRAY BAKED ENAMEL PAINT OVER PRE-TREATED STEEL (FOR THE TYPE OF ENCLOSURE REQUIRED).

SYMBOL LIST

----	DEMOLITION
⦿	DIRECT POWER OUTLET FOR USE AS NOTED INCLUDING FINAL CONNECTION.
□	DISCONNECT SWITCH
⊠	DISCONNECT SWITCH WITH OVER-CURRENT PROTECTION
⊠	COMBINATON MAGNETIC MOTOR STARTER WITH DISCONNECT SWITCH
⊠	MAGNETIC MOTOR STARTER
⊠	COMBINATON MAGNETIC MOTOR STARTER WITH DISCONNECT SWITCH & OVERCURRENT PROTECTION
⌀ GFI	20A, 120V U-GROUND GROUND FAULT INTERRUPTER TYPE DUPLEX RECEPTACLE
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
EX	DENOTES EXISTING TO REMAIN
R	DENOTES EXISTING TO BE REMOVED ENTIRELY U.N.O.
N	DENOTES NEW

GENERAL NOTES

1. IT IS MANDATORY FOR THE ELECTRICAL CONTRACTOR TO VISIT SITE AND REVIEW EXISTING CONDITIONS AND DEMOLITION SCOPE OF WORK TO SUIT EXISTING ARCHITECTURAL AND STRUCTURAL CONDITIONS AND MECHANICAL DRAWINGS.
2. CAREFULLY EXAMINE OTHER EXISTING UTILITY LINES SUCH AS GAS, WATER ETC. PRIOR TO START THE ELECTRICAL CONSTRUCTION WORKS AND COORDINATE WITH OTHER TRADES AND REPORT OF ANY DISCREPANCY PRIOR TO PROCEEDING.
3. REFER TO ELECTRICAL AND MECHANICAL LAYOUTS FOR EXACT LOCATION OF ALL EQUIPMENT.
4. LOCATIONS OF ALL NEW DISCONNECT SWITCHES, VFDS AND STARTERS SHALL BE CONFIRMED WITH DIVISION 15 PRIOR TO INSTALLATION.

ELECTRICAL GENERAL NOTES

1. OBTAIN ALL APPROVALS FROM PUBLIC AUTHORITIES HAVING JURISDICTION, BEFORE COMMENCING WORK AND PAY ALL ASSOCIATED INSPECTION FEES AND ALL PERMITS.
2. EXAMINE ARCHITECTURAL, STRUCTURAL AND MECHANICAL CONDITIONS AND AVAILABLE DRAWINGS BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES BETWEEN DRAWINGS AND/OR SPECIFICATIONS MUST BE REFERRED TO THE CONSULTANT BEFORE ANY AFFECTED WORK IS COMMENCED.
3. ALL CUTTING AND PATCHING REQUIRED FOR THE ELECTRICAL WORK SHALL BE INCLUDED. NO CHASING BLOCKWORK WILL BE ALLOWED. PROVIDE FIRE-STOPPING TO SUIT FT RATING OF THE FLOOR OR WALL PENETRATION TO SUIT. MAKE GOOD ALL BUILDING ELEMENTS AFFECTED BY THIS WORK TO THEIR ORIGINAL CONDITION OR BETTER.
4. ALL MATERIAL USED THROUGHOUT SHALL BE NEW, OF BEST QUALITY CSA APPROVED AND OF ONE MANUFACTURE.
5. PROVIDE ALL CONDUIT, WIRING, BOXES, SWITCHES, OUTLETS, DEVICES, ETC., AS REQUIRED. MAKE FINAL CONNECTIONS TO VIBRATING EQUIPMENT WITH LIQUID TIGHT FLEXIBLE CONDUIT. ALSO REFER TO SECTION 15241.
6. PROVIDE ALL HANGERS, INSERTS AND SUPPORTS OF APPROVED TYPES REQUIRED FOR THE ELECTRICAL WORK. PROVIDE CONDUIT FOR ALL SERVICES PENETRATING THE FLOOR SLAB. SEAL ALL PENETRATIONS THROUGH FLOOR SLABS WITH AN APPROVED NON-SHRINK, WATERPROOF AND FIREPROOF SEALANT.
7. ALL CONDUIT SHALL BE EMT THINWALL WITH STEEL SET SCREW COUPLINGS AND CONNECTORS WITH INSULATED THROATS UNLESS OTHERWISE NOTED. PAINT CONDUIT TO MATCH EXISTING SURFACE THEY ARE INSTALLED ON. IN FINISHED AREA, RUN PARALLEL TO BUILDING WALLS AND CONCENTRIC RIGHT ANGLE BENDS ONLY SHALL BE USED.
8. ALL WIRING SHALL BE MINIMUM #12 GAUGE COPPER, EXCEPT AS OTHERWISE NOTED. ALL WIRING SHALL BE 600 VOLT TYPE RW90 AND RUN IN CONDUITS. MINIMUM SIZE WIRING FOR DC WIRING SHALL BE #10 GAUGE. MAXIMUM VOLTAGE DROP NOT EXCEED 2 PERCENT. PROVIDE GROUND WIRES WITH ALL FEEDERS AND BRANCH CIRCUITS IN ACCORDANCE WITH APPLICABLE CODES AND ONTARIO ELECTRICAL SAFETY CODE REQUIREMENTS. PROVIDE MAIN GROUND TO ESA APPROVAL.
9. PROVIDE ALL CONDUIT, WIRING, SPLITTERS, OUTLET BOXES AND DISCONNECT SWITCHES AS SHOWN AND AS REQUIRED TO MAKE THE EQUIPMENT FULLY OPERATIONAL. SUPPLY AND INSTALL ALL STARTERS AND WIRE COMPLETE. COORDINATE THE FINAL LOCATION OF DISCONNECT SWITCHES AND VFD DEVICES SUCH AS TO MAINTAIN THE PRESCRIBED CLEARANCES AND AVOID INTERFERENCE WITH OTHER EQUIPMENT.
10. CONTRACTORS SHALL NOTE THAT THIS CONTRACT IS AN ALTERATION TO AN EXISTING BUILDING AND SHALL THOROUGHLY INVESTIGATE THE EXISTING ELECTRICAL INSTALLATION AND CONDITIONS.
11. DEMOLITION OF EXISTING SERVICES: REMOVE POWER CONNECTIONS AS SHOWN ON DRAWINGS C/W CONDUIT AND WIRING TO SOURCE.
12. ALL WORK SHALL BE DONE WITH MINIMUM POSSIBLE INTERRUPTION TO EXISTING BUILDING SYSTEMS AND IN THE TIME SCHEDULE PERMITTED BY THE PROJECT MANAGER. INCLUDE FOR AFTER HOURS/WEEKEND WORK FOR POWER SHUTDOWN & CONNECTION WORK.
13. PROVIDE LAMACOID LABEL AT EACH EQUIPMENT DISCONNECT SWITCH STATING PANEL SOURCE, OVER-CURRENT PROTECTION AND BRANCH WIRING SIZE.

MECHANICAL EQUIPMENT WIRING SCHEDULE

EQUIPMENT DESCRIPTION	POWER SOURCE	STARTER TYPE	MCA/HP/ KW/AMP	VOLTS/PH/ FREQUENCY	BREAKER SIZE OR FUSE SIZE	FEEDER SIZE	REMARKS
RTU-1	EXISTING	INTEGRAL	3.0 HP 60 MCA	208/3/60	80A-3P	3#AWG6+G-35mmC	RE-USE EXISTING
RTU-2	PANEL DP-2 (ELECTRICAL ROOM)	INTEGRAL	4.0 HP 72.1 MCA	208/3/60	100A-3P	3#AWG3+G-35mmC	PROVIDE A NEW BREAKER IN EXISTING PANEL DP-2. PROVIDE NEW WIRING IN CONDUIT FROM THE BREKAEK PANEL TO UNIT VIA LOCAL DISCONNECT SWITCH. PROVIDE FLEXIBLE LIQUID TIGHT CONDUIT FOR THE LAST 900 MM.
RTU-3	PANEL DP-2 (ELECTRICAL ROOM)	INTEGRAL	5 HP 104.4 MCA	208/3/60	150A-3P	3#AWG000+G-65mmC	PROVIDE A NEW BREAKER IN EXISTING PANEL DP-2. PROVIDE NEW WIRING IN CONDUIT FROM THE BREKAEK PANEL TO UNIT VIA LOCAL DISCONNECT SWITCH. PROVIDE FLEXIBLE LIQUID TIGHT CONDUIT FOR THE LAST 900 MM.
CONDENSING UNIT 'CU-6'	PANEL DP-2 (ELECTRICAL ROOM)	INTEGRAL	COMP. (3)8.4 HP FAN (2)1.0 HP 87 MCA	208/3/60	100A-3P	3#AWG3+G-35mmC	PROVIDE A NEW BREAKER IN EXISTING PANEL DP-2. PROVIDE NEW WIRING IN CONDUIT FROM THE BREKAEK PANEL TO UNIT VIA LOCAL DISCONNECT SWITCH. PROVIDE FLEXIBLE LIQUID TIGHT CONDUIT FOR THE LAST 900 MM.

NOTES:

PROVIDE CONNECTION TO MECHANICAL EQUIPMENT TO ENSURE THAT FULL OPERATIONAL SYSTEMS ARE DELIVERED TO THE BOARD.

PROVIDE POWER CONNECTION TO ALL EQUIPMENT LISTED IN THE SCHEDULE. REFER TO ELECTRICAL AND MECHANICAL LAYOUTS FOR EXACT LOCATION OF EQUIPMENT.

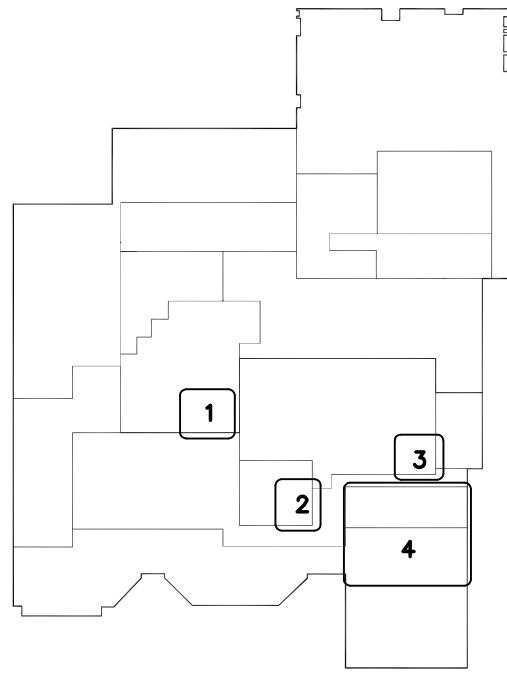
PROVIDE SEPARATE DISCONNECTS FOR INDIVIDUAL MECHANICAL EQUIPMENT. SIZE AS INDICATED IN THE SCHEDULE.

DISCONNECTS LOCATIONS SHALL BE VERIFIED AND CO-ORDINATED ON SITE.

CONNECT ALL DUCT MOUNTED SMOKE DETECTORS TO THE FIRE ALARM. PROVIDE ALL REQUIRED DEVICES AND WIRING TO CONNECT ALL NEW EQUIPMENT BACK TO FIRE ALARM FOR SHUT-DOWN.

ISSUED

No.	DATE	DESCRIPTION
I.	01/06/2021	ISSUED FOR TENDER

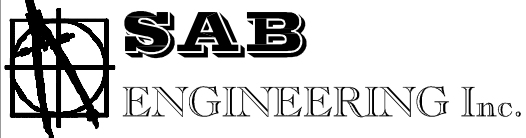


KEY MAP

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

DO NOT SCALE DRAWINGS.

CONSULTANT



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SEAL



TRUE NORTH PROJECT NORTH



PROJECT
FENELON FALLS SECONDARY SCHOOL
H.V.A.C. UPGRADE

66 LINDSAY ST., FENELON FALLS, ON K0M 1N0

DRAWING TITLE

KEY PLAN, SYMBOL LIST, EQUIPMENT
WIRING SCHEDULE & GENERAL NOTES
- ELECTRICAL

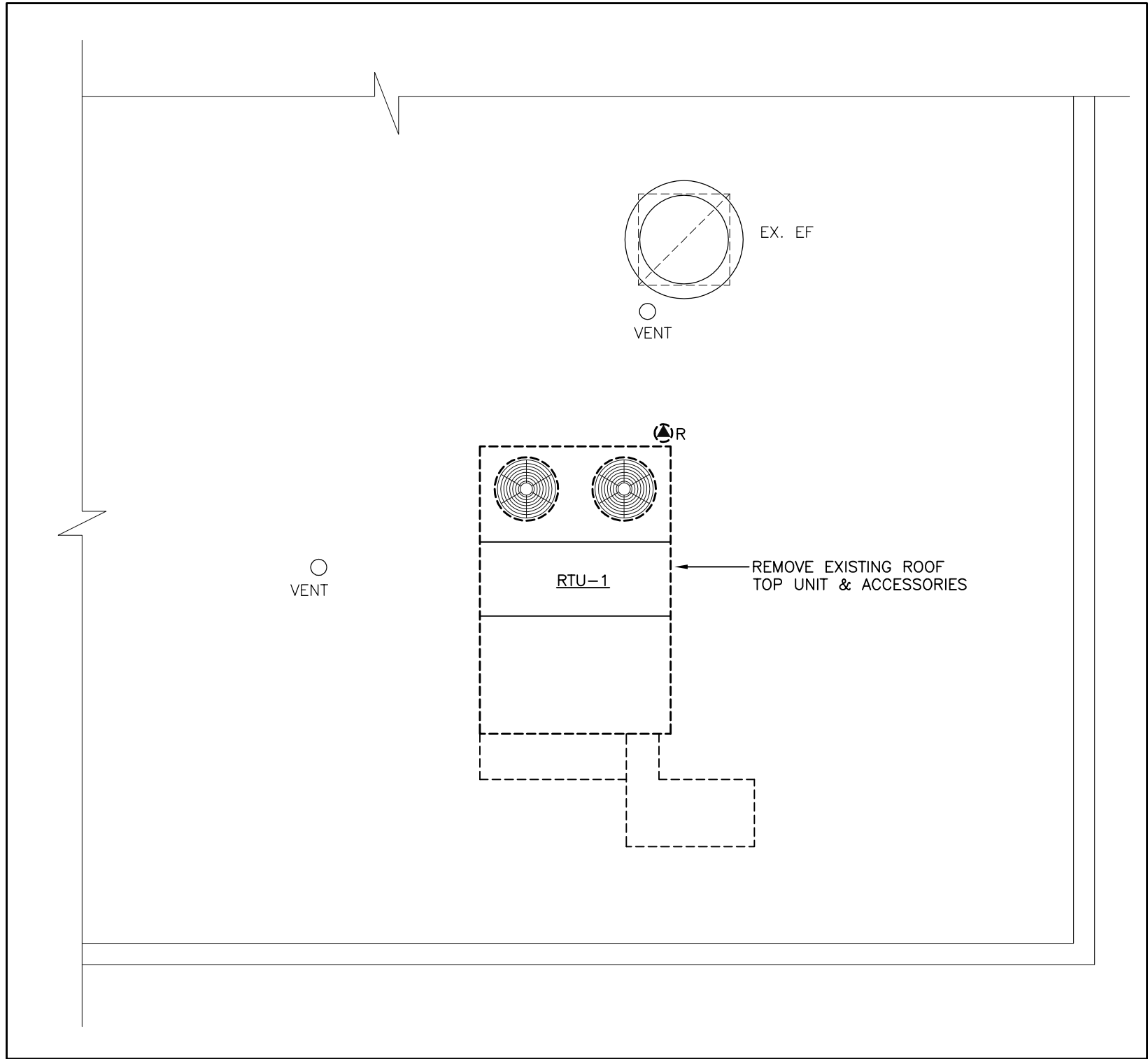
DATE
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SCALE
N.T.S.

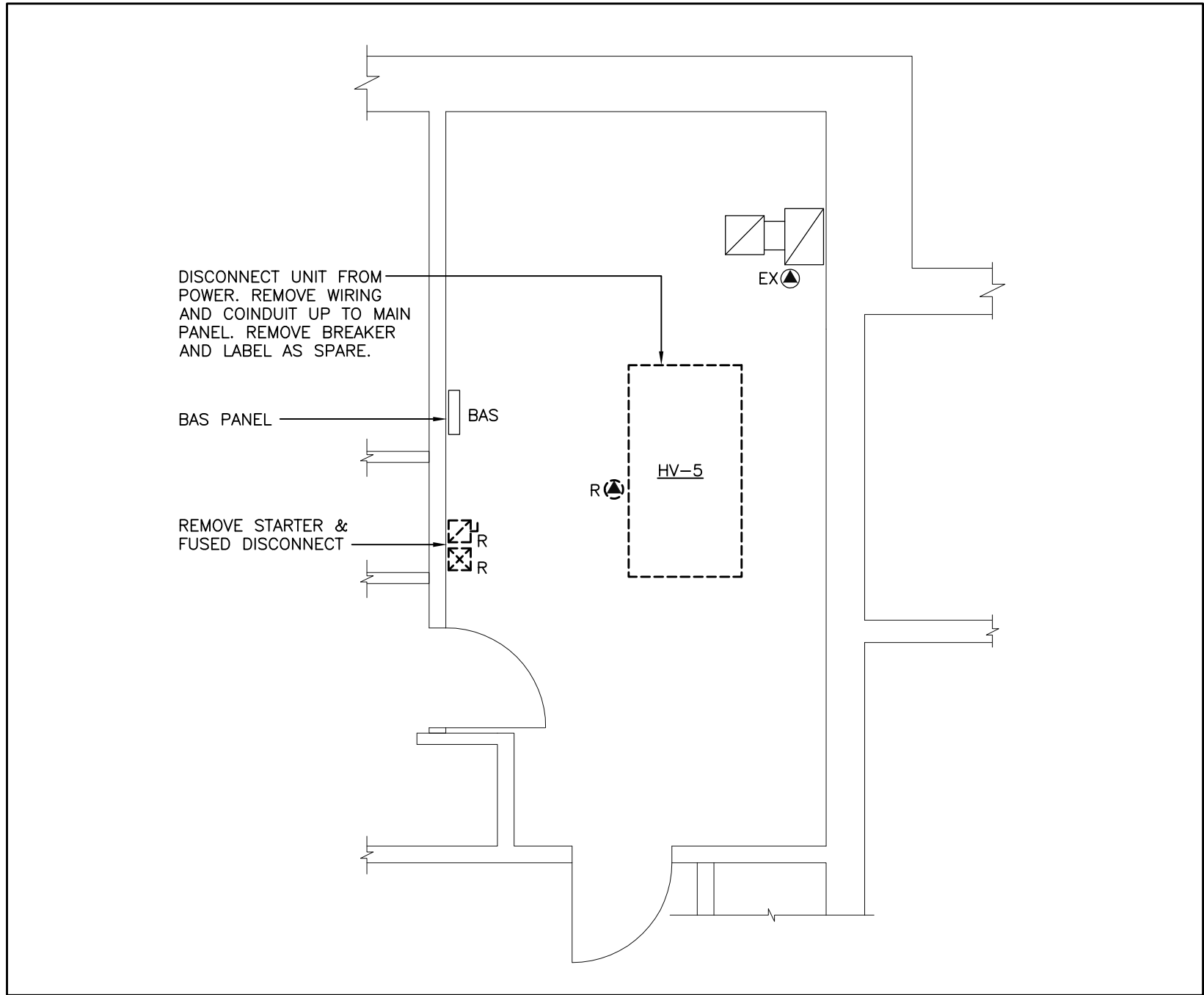
DRAWN BY
T.N.

JOB No.
2021-44

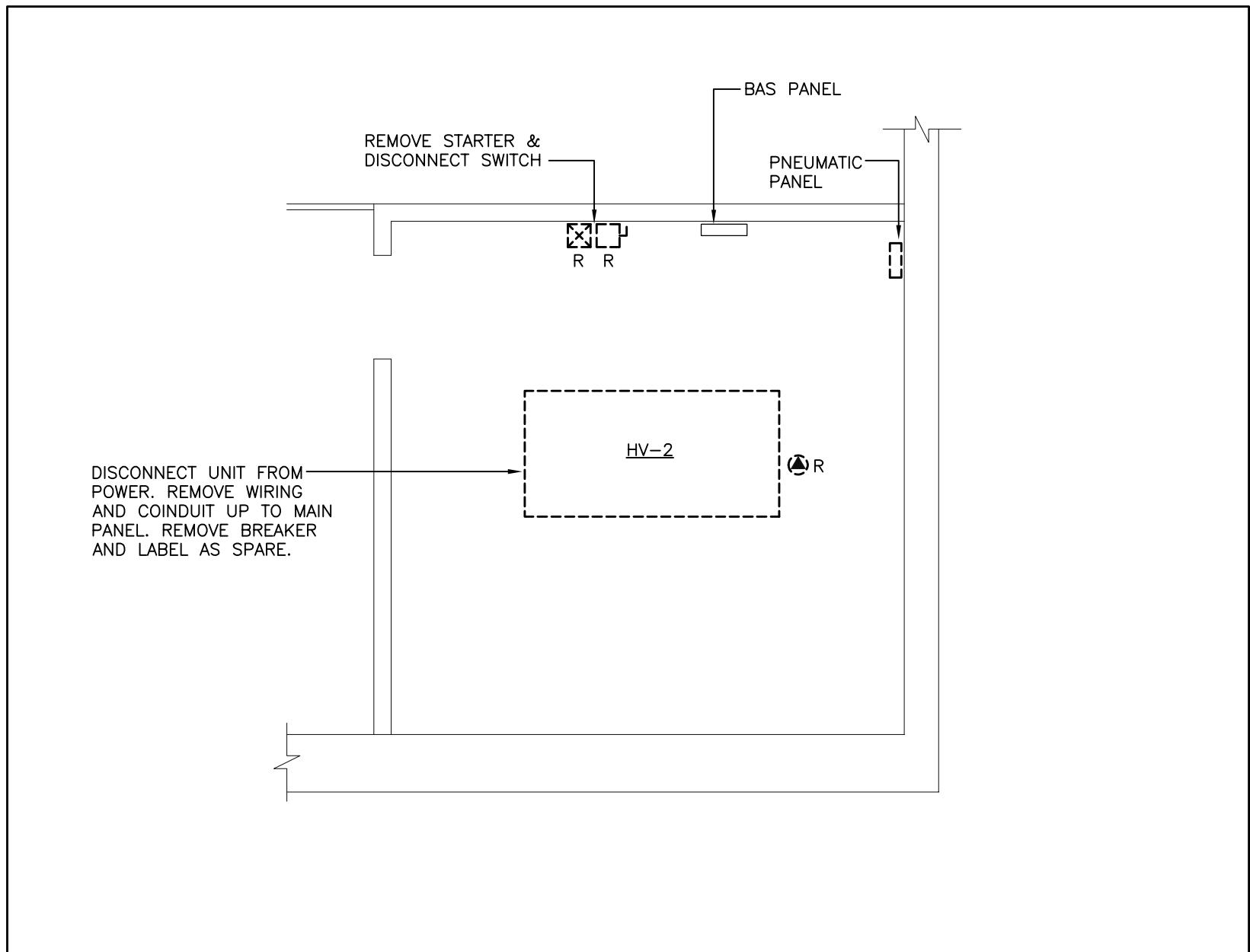
E-1



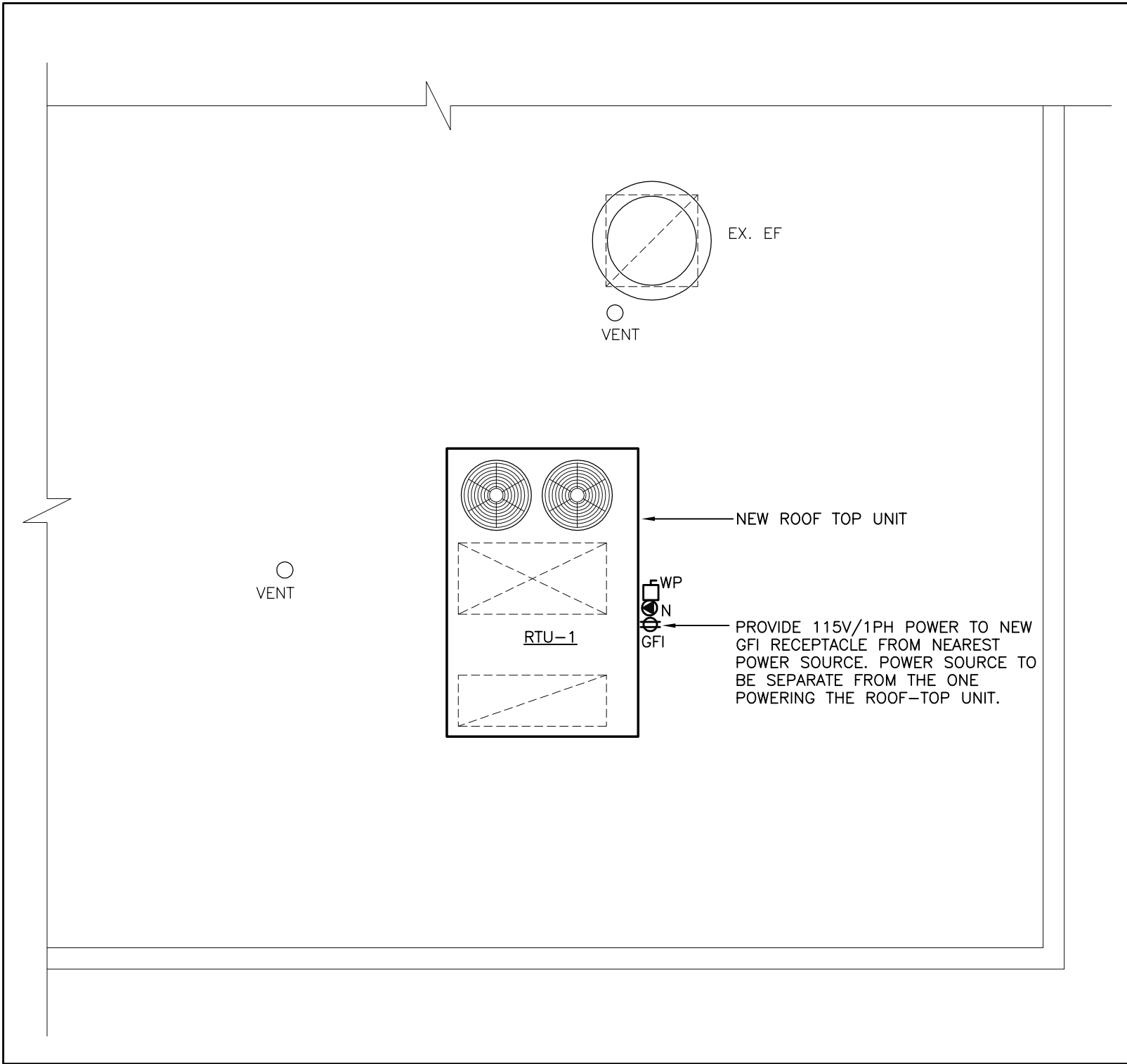
PART OF LIBRARY ROOF (WORK AREA #1) – EXISTING & DEMOLITION WORK
SCALE: 1:50



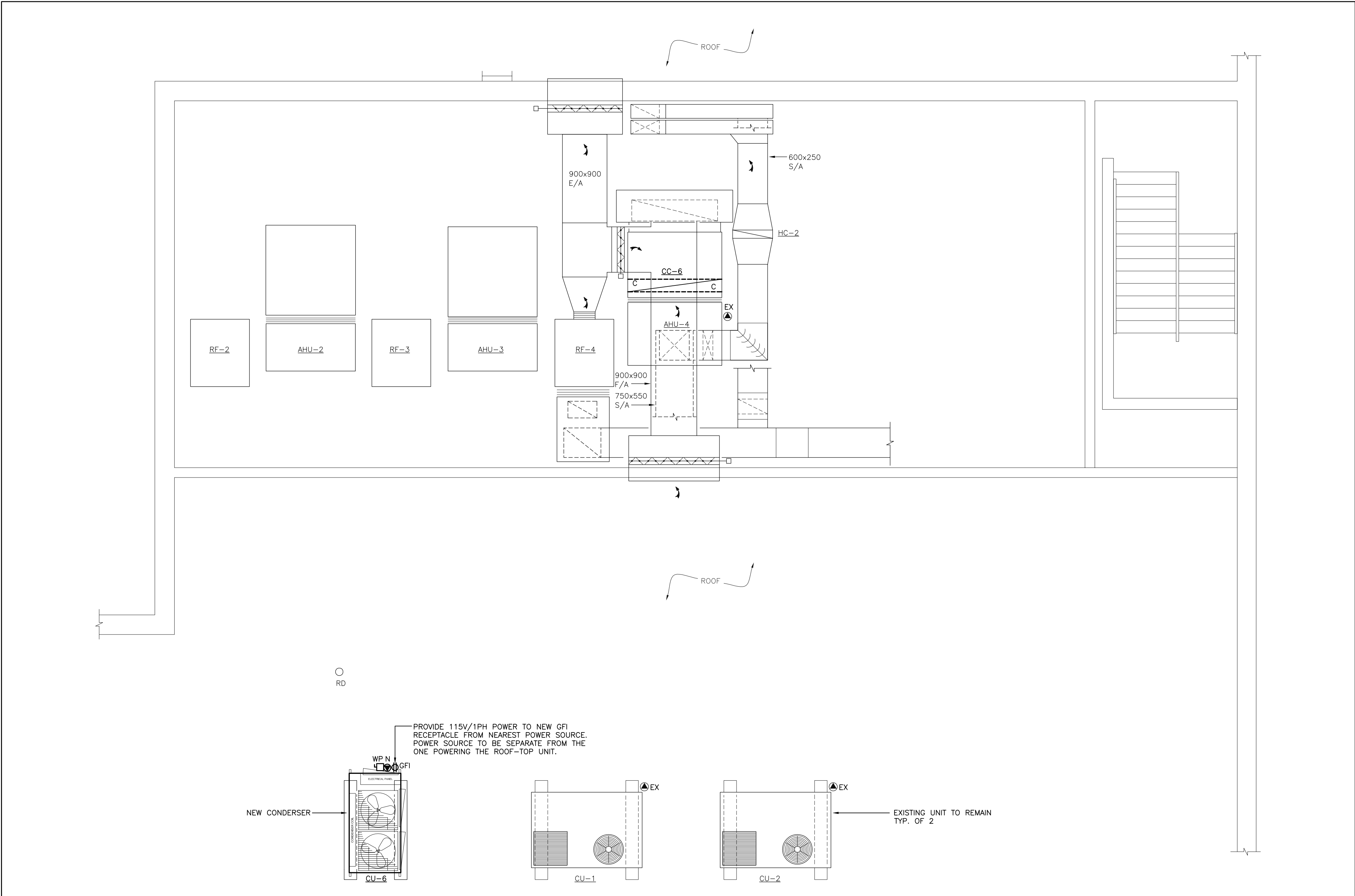
FAN ROOM 235A (WORK AREA #2) – EXISTING & DEMOLITION WORK
SCALE: 1:50



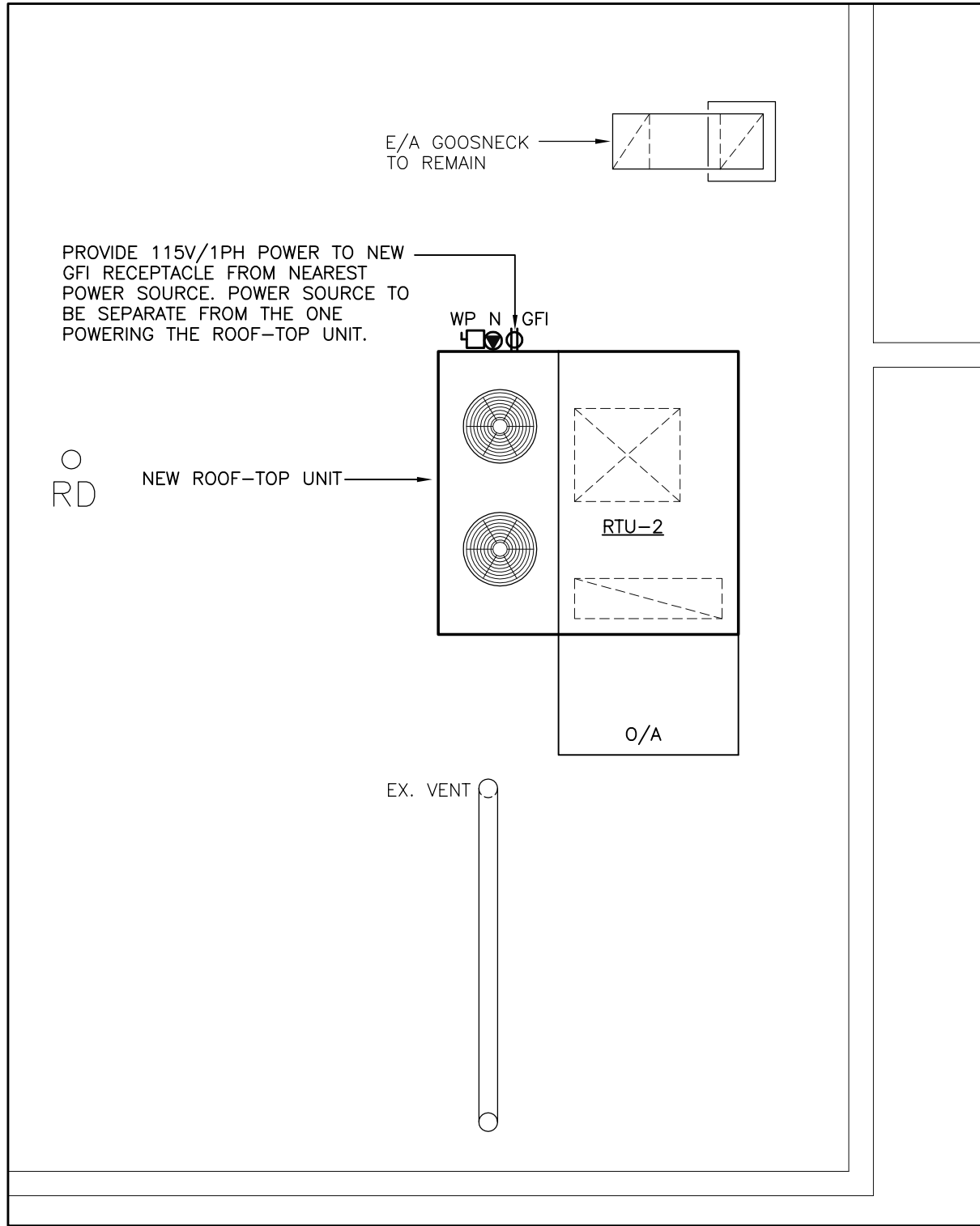
FAN ROOM 241 (WORK AREA #3) – EXISTING & DEMOLITION WORK
SCALE: 1:50



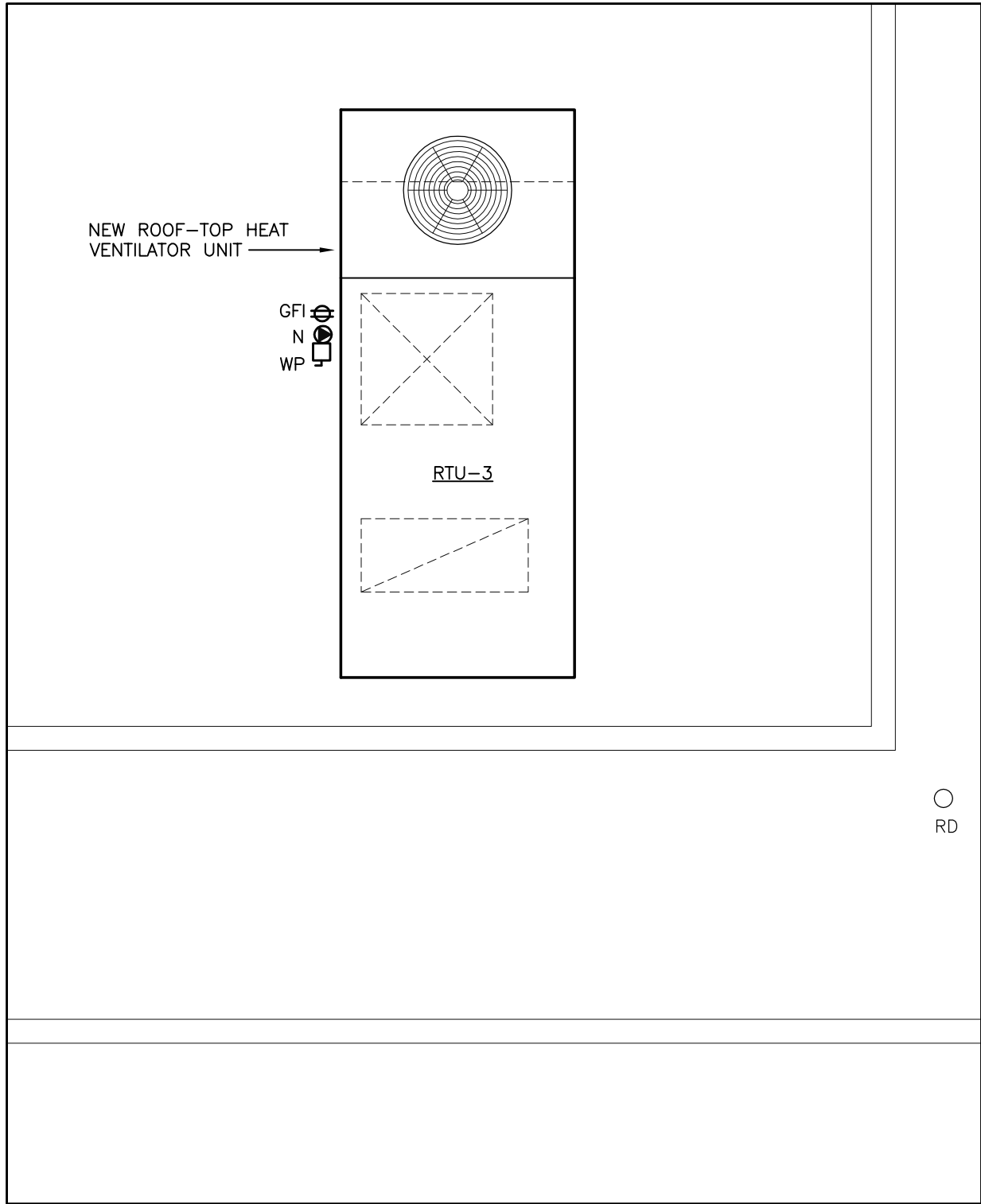
PART OF LIBRARY ROOF (WORK AREA #1) – NEW WORK
SCALE: 1:50



MECHANICAL ROOM 301/PENTHOUSE & PART OF ROOF (WORK AREA #4) – NEW WORK
SCALE: 1:50

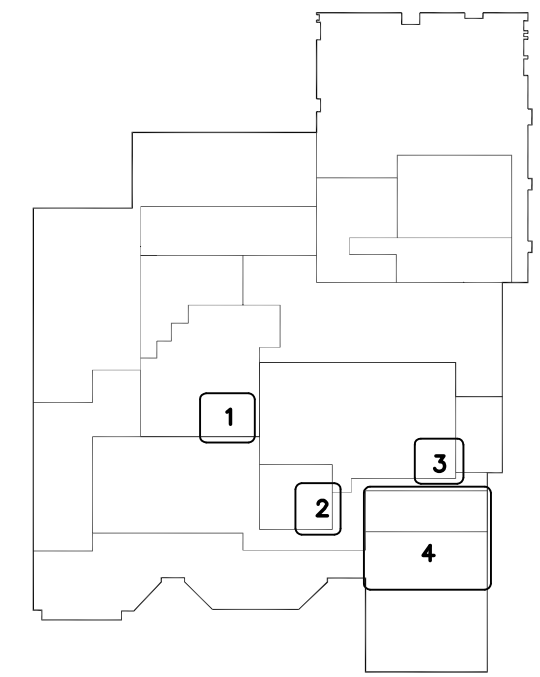


PART OF ROOF ABOVE FAN ROOM 235A (AREA #2) – NEW WORK
SCALE: 1:50



PART OF ROOF ABOVE FAN ROOM 241 (AREA #3) – NEW WORK
SCALE: 1:50

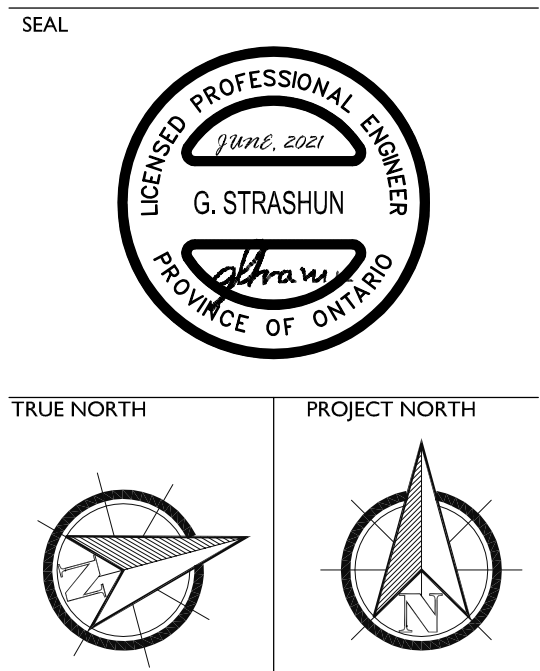
ISSUED		
No.	DATE	DESCRIPTION
I.	01/06/2021	ISSUED FOR TENDER



KEY MAP

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE DRAWINGS.

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PROJECT FENELON FALLS SECONDARY SCHOOL H.V.A.C. UPGRADE		
66 LINDSAY ST., FENELON FALLS, ON K0M 1N0		
DRAWING TITLE PART OF LIBRARY ROOF, FAN RM. 235A, 241, MECHANICAL RM. 301/PENTHOUSE - EXISTING, DEMOLITION & NEW WORK - ELECTRICAL		
DATE MAY 2021	SCALE 1: 50	E-2
DRAWN BY T.N.	DWG. No.	
JOB No. 2021-44		

EXISTING DP-1 (ELECTRICAL ROOM 136) 800 A, 120/208V, 3Ø, 4W			
DP-2			MSP 2
MSP 1			
FIRE PUMP			MSP 3
LP-2G			LP-1C
ELEVATOR			EXISTING LOAD
LP-1B			SPARE
LP-1A			SPARE
SPARE			SPARE

GIRL'S CR PANEL 120V/240V, 1PH, 3W				TYPE: NBLP, EXISTING MAINS: 100 A MAIN BKR: —		MOUNTING: WALL-MOUNTED LOCATION: GIRL'S CHANGE RM.	
WATTS	DESCRIPTION	PROT.	CIRCUITS	PROT.	DESCRIPTION	WATTS	
	UPSTAIR INSTR. ROOM	15A	1	2	15A DOWNSTAIR INSTR. ROOM		
	STAIRWAY LIGHTS	15A	3	4	15A HAND DRYER		
	LIGHT	15A	5	6	15A 1ST GYM E. WALL REC.		
	EXISTING LOAD	15A	7	8	15A AIR COMPRESSOR		
	EXISTING LOAD	30A	9	10	20A		
	SPARE	15A	11	12	HV-5		
	SPARE	15A	13	14	SPARE		
	SPARE	15A	15	16	SPARE		
	SPARE	15A	17	18	SPARE		

REMOVE

EX. PANEL DP-2 120V/208V, 3PH, 4W			TYPE: NBLP, EXISTING MAINS: 400 A MAIN BKR: FROM EX. DP-1			MOUNTING: WALL-MOUNTED LOCATION: ELECTRICAL ROOM 136		
WATTS	DESCRIPTION	PROT.	CIRCUITS			PROT.	DESCRIPTION	WATTS
	CU-5	40A	1	2	40A		CU-1	
		3P	3	4				
		3P	5	6	3P			
	CU-2	25A	7	8	20A		CU-4	
		3P	9	10				
		3P	11	12	3P			
	CU-3	30A	13	14			SPARE	
		3P	15	16			SPARE	
			17	18			SPARE	
			19	20			SPARE	
			21	22			SPARE	
			23	24			SPARE	
			25	26			SPARE	
			27	28			SPARE	
			29	30			SPARE	
			31	32			SPARE	
			33	34			SPARE	
			35	36			SPARE	
			37	38			SPARE	
			39	40			SPARE	
			41	42			SPARE	

DISTRIBUTION POWER PLAN – EXISTING & DEMOLITION WORK
SCALE: N.T.S.

EXISTING DP-1 (ELECTRICAL ROOM 136) 800 A, 120/208V, 3Ø, 4W			
DP-2			MSP 2
MSP 1			
FIRE PUMP			MSP 3
LP-2G			LP-1C
ELEVATOR			EXISTING LOAD
LP-1B			SPARE
LP-1A			SPARE
SPARE			SPARE

GIRL'S CR PANEL				TYPE: NBLP, EXISTING MAINS: 100 A MAIN BKR: —		MOUNTING: WALL-MOUNTED LOCATION: GIRL'S CHANGE RM.	
WATTS	DESCRIPTION	PROT.	CIRCUITS	PROT.	DESCRIPTION	WATTS	
	UPSTAIR INSTR. ROOM	15A	1	2	15A DOWNSTAIR INSTR. ROOM		
	STAIRWAY LIGHTS	15A	3	4	15A HAND DRYER		
	LIGHT	15A	5	6	15A 1ST GYM E. WALL REC.		
	EXISTING LOAD	15A	7	8	15A AIR COMPRESSOR		
	EXISTING LOAD	30A	9	10	SPARE		
	SPARE	15A	11	12	SPARE		
	SPARE	15A	13	14	SPARE		
	SPARE	15A	15	16	SPARE		
	SPARE	15A	17	18	SPARE		

NEW

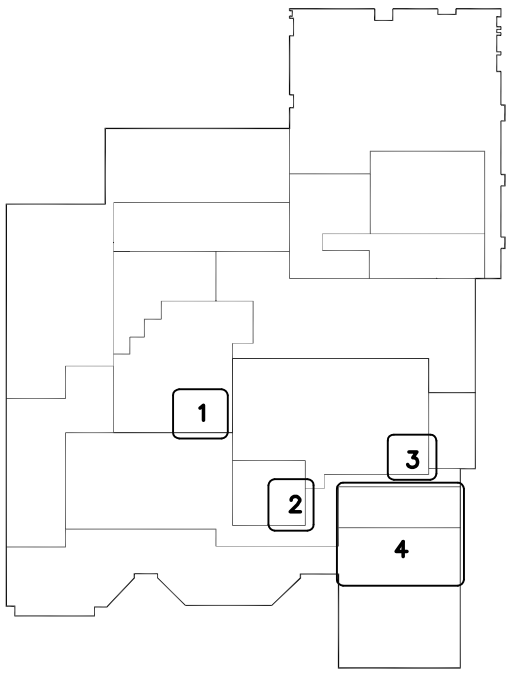
EX. PANEL DP-2 120V/208V, 3PH, 4W			TYPE: NBLP, EXISTING MAINS: 400 A MAIN BKR: FROM EX. DP-1			MOUNTING: WALL-MOUNTED LOCATION: ELECTRICAL ROOM 136		
WATTS	DESCRIPTION	PROT.	CIRCUITS	PROT.	DESCRIPTION	WATTS		
	CU-5	40A 3P	1 3 5	2 4 6	40A 3P	CU-1		
	CU-2	25A 3P	7 9 11	8 10 12	20A 3P	CU-4		
	CU-3	30A 3P	13 15 17	14 16 18	100-A 3P	CU-6		
	RTU-2	100A 2P	19 21	20 22	SPARE			
	RTU-3	150A 2P	23 25	24 26	SPARE			
	SPARE		27	28	SPARE			
	SPARE		29	30	SPARE			
	SPARE		31	32	SPARE			
	SPARE		33	34	SPARE			
	SPARE		35	36	SPARE			
	SPARE		37	38	SPARE			
	SPARE		39	40	SPARE			
	SPARE		41	42	SPARE			

NEW

DISTRIBUTION POWER PLAN – NEW WORK
SCALE: N.T.S.

ISSUED

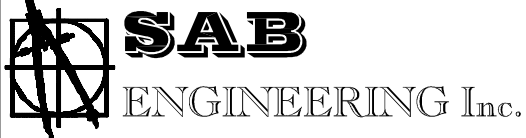
No.	DATE	DESCRIPTION
I.	01/06/2021	ISSUED FOR TENDER



KEY MAP

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
DO NOT SCALE DRAWINGS.

CONSULTANT

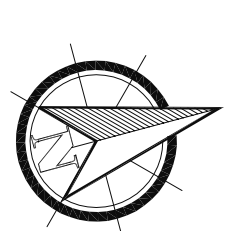


588 EDWARD AVE., UNIT 25, RICHMOND HILL, ONT., L4C 0Y6
TEL. (905)-787 8885 FAX (905)-787 8771

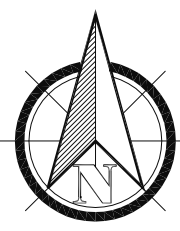
SEAL



TRUE NORTH



PROJECT NORTH



PROJECT
FENELON FALLS SECONDARY SCHOOL
H.V.A.C. UPGRADE

66 LINDSAY ST., FENELON FALLS, ON K0M 1N0

DRAWING TITLE

DISTRIBUTION POWER PLAN -
ELECTRICAL

DATE

MAY 2021

SCALE

N.T.S.

DRAWN BY

T.N.

DWG. No.

JOB No.

2021-44

E-3