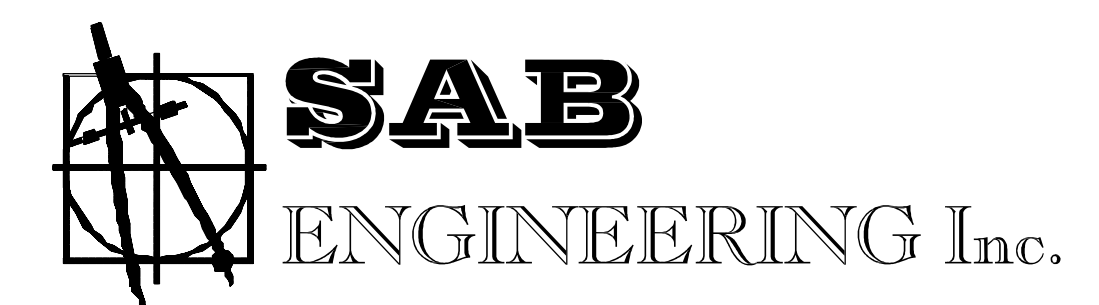
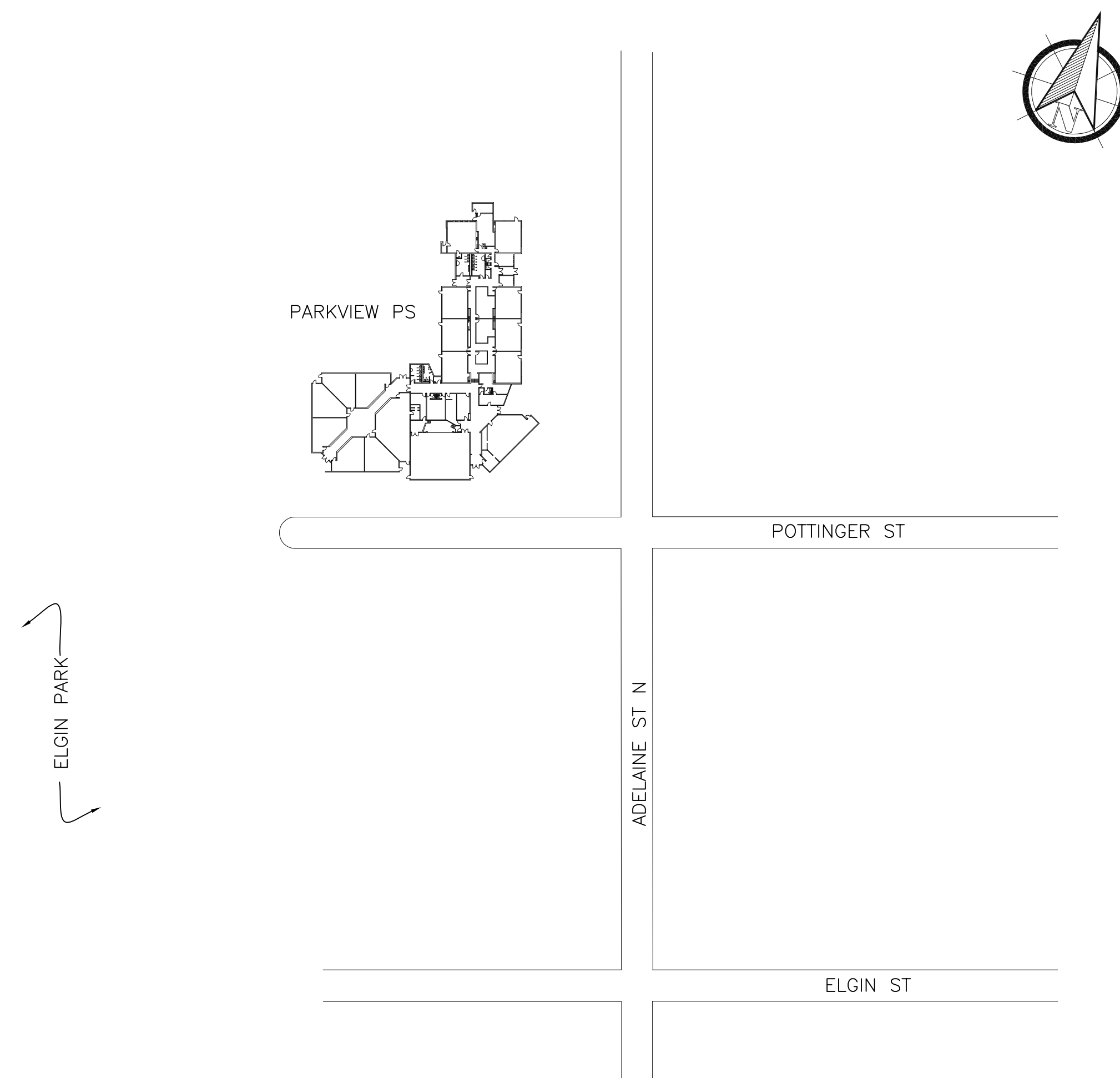
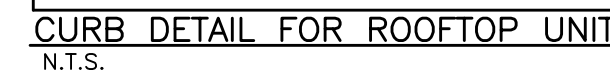
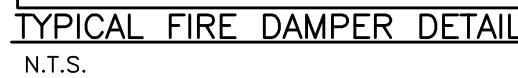


TLDSB
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N,
LINDSAY K9V 4M2


ISSUED FOR TENDER
MAY 2021





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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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SEAL



SYMBOLS, EQUIPMENT
SCHEDULE & DETAILS -
MECHANICAL

DRAWN BY	DWG. No.
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T.N.

JOB No.
2021-53

M-1

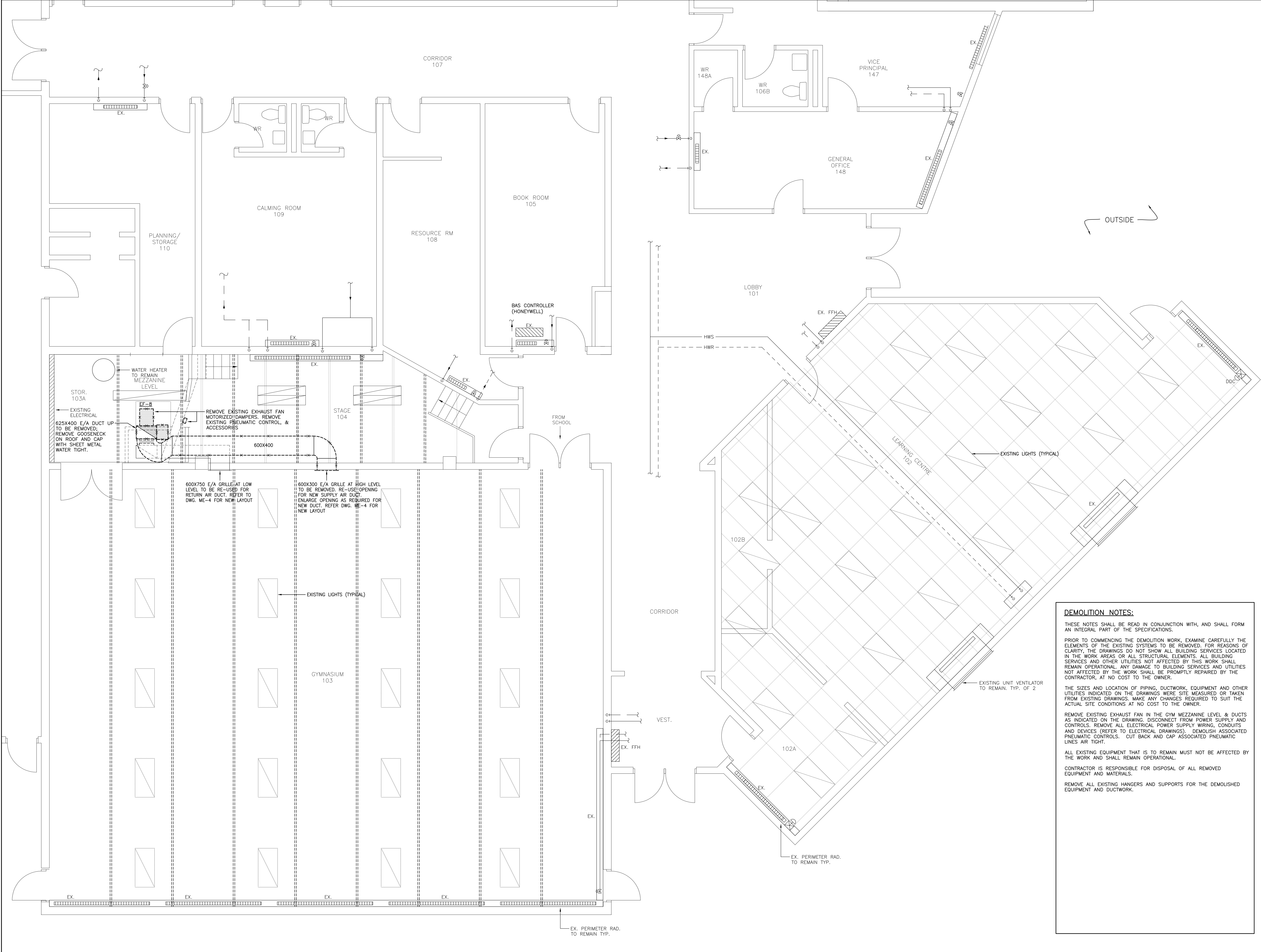
NOTE: 0-100% ECONOMIZER WITH DRY BULB CONTROL; CO2 SENSOR FOR VENTILATION CONTROL

SCHEDULE OF OUTDOOR CONDENSERS

SCHEDULE OF GRILLES & DIFFUSERS

SCHEDULE OF INDOOR A/C UNITS

NOTE: COOLING ONLY. HEATING SHALL BE DISABLED



DEMOLITION 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 EXHAUST FAN IN THE GYM MEZZANINE LEVEL & DUCTS AS INDICATED ON THE DRAWING. DISCONNECT FROM POWER SUPPLY AND CONTROLS. REMOVE ALL ELECTRICAL POWER SUPPLY WIRING, CONDUITS AND DEVICES (REFER TO ELECTRICAL DRAWINGS). DEMOLISH ASSOCIATED PNEUMATIC CONTROLS. CUT BACK AND CAP ASSOCIATED PNEUMATIC LINES AIR TIGHT.

ALL EXISTING EQUIPMENT THAT IS TO REMAIN MUST NOT BE AFFECTED BY THE WORK AND SHALL REMAIN OPERATIONAL.


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

REMOVE ALL EXISTING HANGERS AND SUPPORTS FOR THE DEMOLISHED EQUIPMENT AND DUCTWORK.

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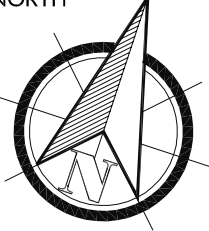
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ENGINEERING Inc.

588 EDWARD AVE., UNIT 25, RICHMOND HILL, ONT., L4C 9Y6
TEL. (905) 787 8885 FAX (905) 787 8771

SEAL



NORTH





PROJECT

PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N. LINDSAY K9V 4M2

DRAWING TITLE

PART OF GROUND FLOOR
LAYOUT – EXISTING &
DEMOLITION WORK –
MECHANICAL

DATE	SCALE
MAY.2021	1:50
DRAWN BY	DWG. No.
T.N.	M-2
JOB No. 2021-53	



ISSUED		
No.	DATE	DESCRIPTION
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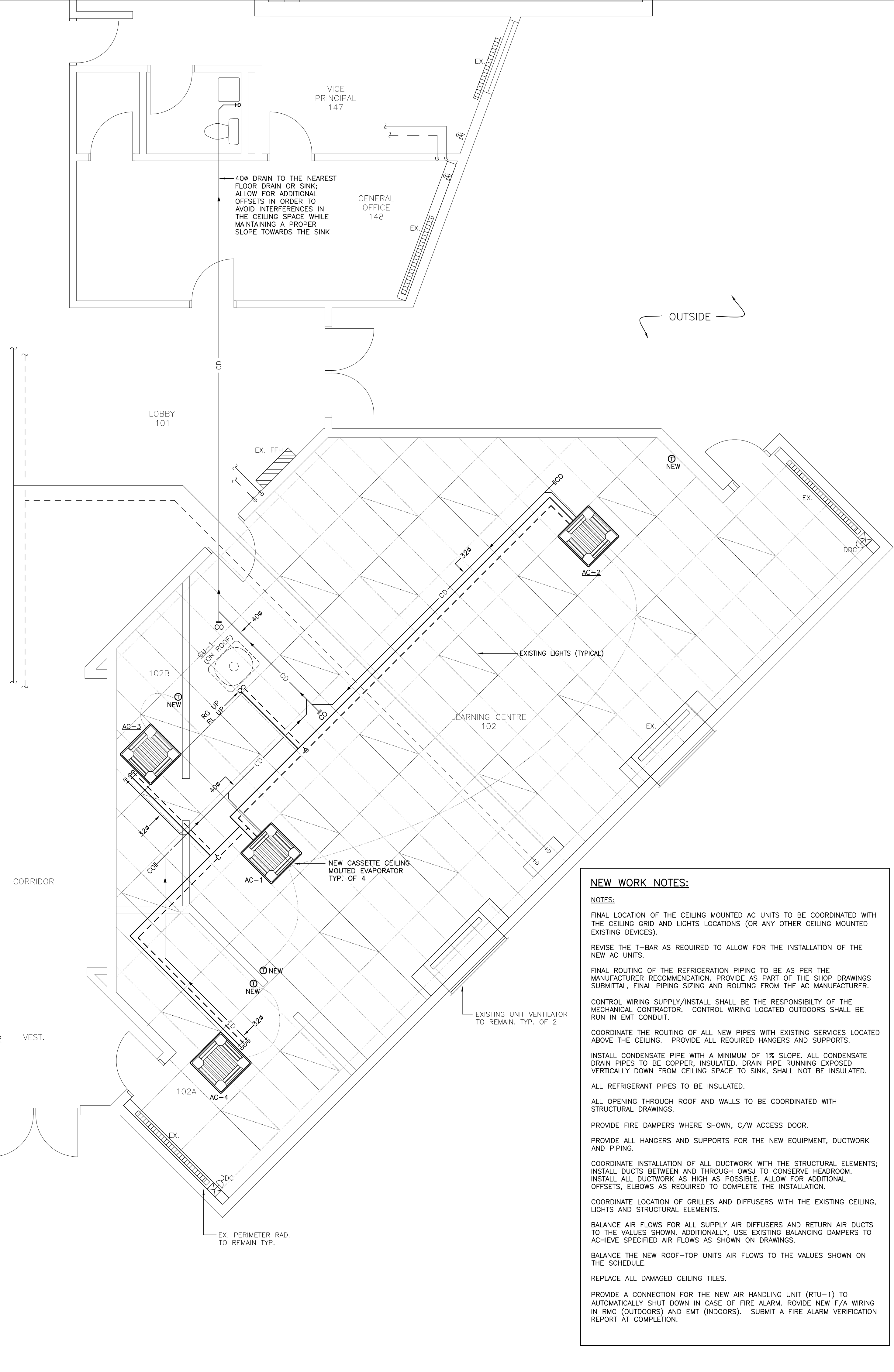
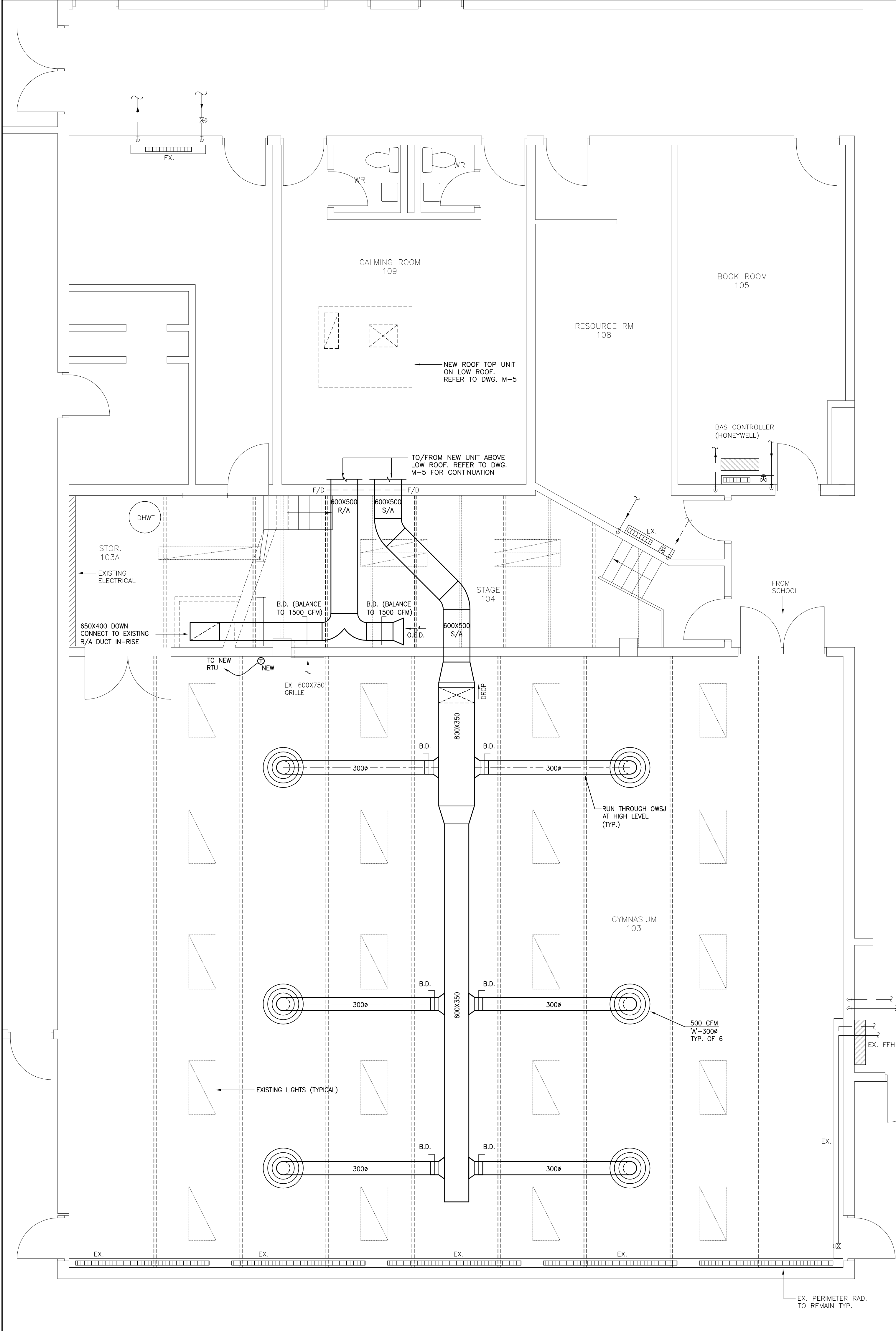


PROJECT
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N. LINDSAY K9V 4M2

DRAWING TITLE
PART OF ROOF PLAN LAYOUT –
EXISTING & DEMOLITION WORK
– MECHANICAL

DATE	SCALE
MAY.2021	1:50
DRAWN BY	DWG. No.
T.N.	M-3
JOB No. 2021–53	



NEW WORK NOTES:

NOTES:

FINAL LOCATION OF THE CEILING MOUNTED AC UNITS TO BE COORDINATED WITH THE CEILING GRID AND LIGHTS LOCATIONS (OR ANY OTHER CEILING MOUNTED EXISTING DEVICES).

REVISE THE T-BAR AS REQUIRED TO ALLOW FOR THE INSTALLATION OF THE NEW AC UNITS.

FINAL ROUTING OF THE REFRIGERATION PIPING TO BE AS PER THE MANUFACTURER RECOMMENDATION. PROVIDE AS PART OF THE SHOP DRAWINGS SUBMITTAL, FINAL PIPING SIZING AND ROUTING FROM THE AC MANUFACTURER.

CONTROL WIRING SUPPLY/INSTALL SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. CONTROL WIRING LOCATED OUTDOORS SHALL BE RUN IN EMT CONDUIT.

COORDINATE THE ROUTING OF ALL NEW PIPES WITH EXISTING SERVICES LOCATED ABOVE THE CEILING. PROVIDE ALL REQUIRED HANGERS AND SUPPORTS.

INSTALL CONDENSATE PIPE WITH A MINIMUM OF 1% SLOPE. ALL CONDENSATE DRAIN PIPES TO BE COPPER, INSULATED. DRAIN PIPE RUNNING EXPOSED VERTICALLY DOWN FROM CEILING SPACE TO SINK, SHALL NOT BE INSULATED.

ALL REFRIGERANT PIPES TO BE INSULATED.

ALL OPENING THROUGH ROOF AND WALLS TO BE COORDINATED WITH STRUCTURAL DRAWINGS.

PROVIDE FIRE DAMPERS WHERE SHOWN, C/W ACCESS DOOR.

PROVIDE ALL HANGERS AND SUPPORTS FOR THE NEW EQUIPMENT, DUCTWORK AND PIPING.

COORDINATE INSTALLATION OF ALL DUCTWORK WITH THE STRUCTURAL ELEMENTS; INSTALL DUCTS BETWEEN AND THROUGH OWSJ TO CONSERVE HEADROOM. INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE. ALLOW FOR ADDITIONAL OFFSETS, ELBOWS AS REQUIRED TO COMPLETE THE INSTALLATION.

COORDINATE LOCATION OF GRILLES AND DIFFUSERS WITH THE EXISTING CEILING, LIGHTS AND STRUCTURAL ELEMENTS.

BALANCE AIR FLOWS FOR ALL SUPPLY AIR DIFFUSERS AND RETURN AIR DUCTS TO THE VALUES SHOWN. ADDITIONALLY, USE EXISTING BALANCING DAMPERS TO ACHIEVE SPECIFIED AIR FLOWS AS SHOWN ON DRAWINGS.

BALANCE THE NEW ROOF-TOP UNITS AIR FLOWS TO THE VALUES SHOWN ON THE SCHEDULE.

REPLACE ALL DAMAGED CEILING TILES.

PROVIDE A CONNECTION FOR THE NEW AIR HANDLING UNIT (RTU-1) TO AUTOMATICALLY SHUT DOWN IN CASE OF FIRE ALARM. PROVIDE NEW F/A WIRING IN RMC (OUTDOORS) AND EMT (INDOORS). SUBMIT A FIRE ALARM VERIFICATION REPORT AT COMPLETION.

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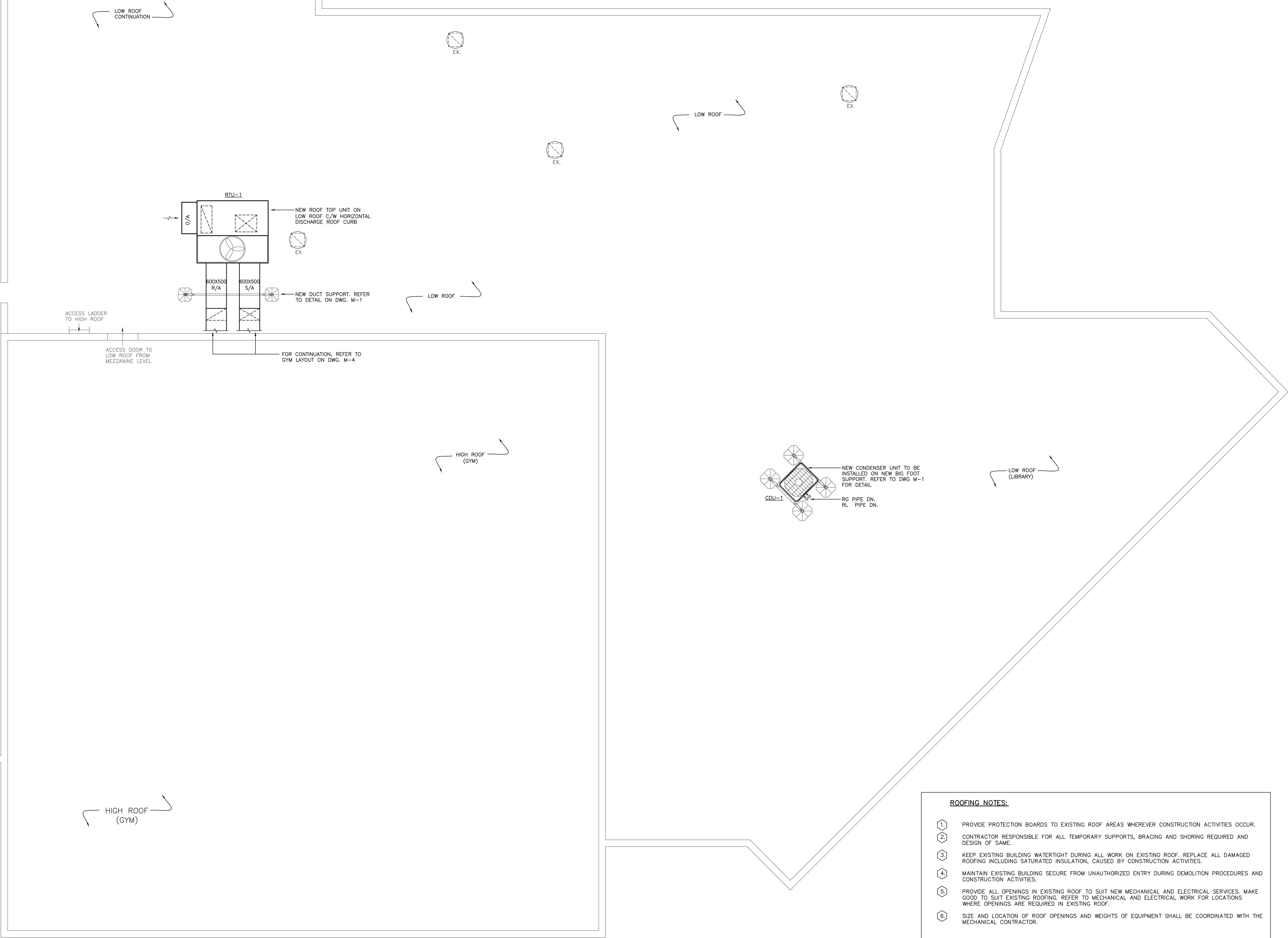
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PROJECT
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N. LINDSAY K9V 4M2

DRAWING TITLE
PART OF GROUND FLOOR (GYM & LIBRARY) LAYOUT – NEW WORK – MECHANICAL

DATE	SCALE
MAY.2021	1:50
DRAWN BY T.N.	DWG. No.
JOB No. 2021-53	




ROOFING NOTES:

1. PROVIDE PROTECTION BOARDS TO EXISTING ROOF AREAS WHEREVER CONSTRUCTION ACTIVITIES OCCUR.
2. CONTRACTOR RESPONSIBLE FOR ALL TEMPORARY SUPPORTS, BRACING AND SHORING REQUIRED AND DESIGN OF SAME.
3. KEEP EXISTING BUILDING WATERTIGHT DURING ALL WORK ON EXISTING ROOF. REPLACE ALL DAMAGED ROOFING INCLUDING SATURATED INSULATION, CAUSED BY CONSTRUCTION ACTIVITIES.
4. MAINTAIN EXISTING BUILDING SECURE FROM UNAUTHORIZED ENTRY DURING DEMOLITION PROCEDURES AND CONSTRUCTION ACTIVITIES.
5. PROVIDE ALL OPENINGS IN EXISTING ROOF TO SUIT NEW MECHANICAL AND ELECTRICAL SERVICES. MAKE GOOD TO SUIT EXISTING ROOFING. REFER TO MECHANICAL AND ELECTRICAL WORK FOR LOCATIONS WHERE OPENINGS ARE REQUIRED IN EXISTING ROOF.
6. SIZE AND LOCATION OF ROOF OPENINGS AND WEIGHTS OF EQUIPMENT SHALL BE COORDINATED WITH THE MECHANICAL CONTRACTOR.

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G. STRASHUN
PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

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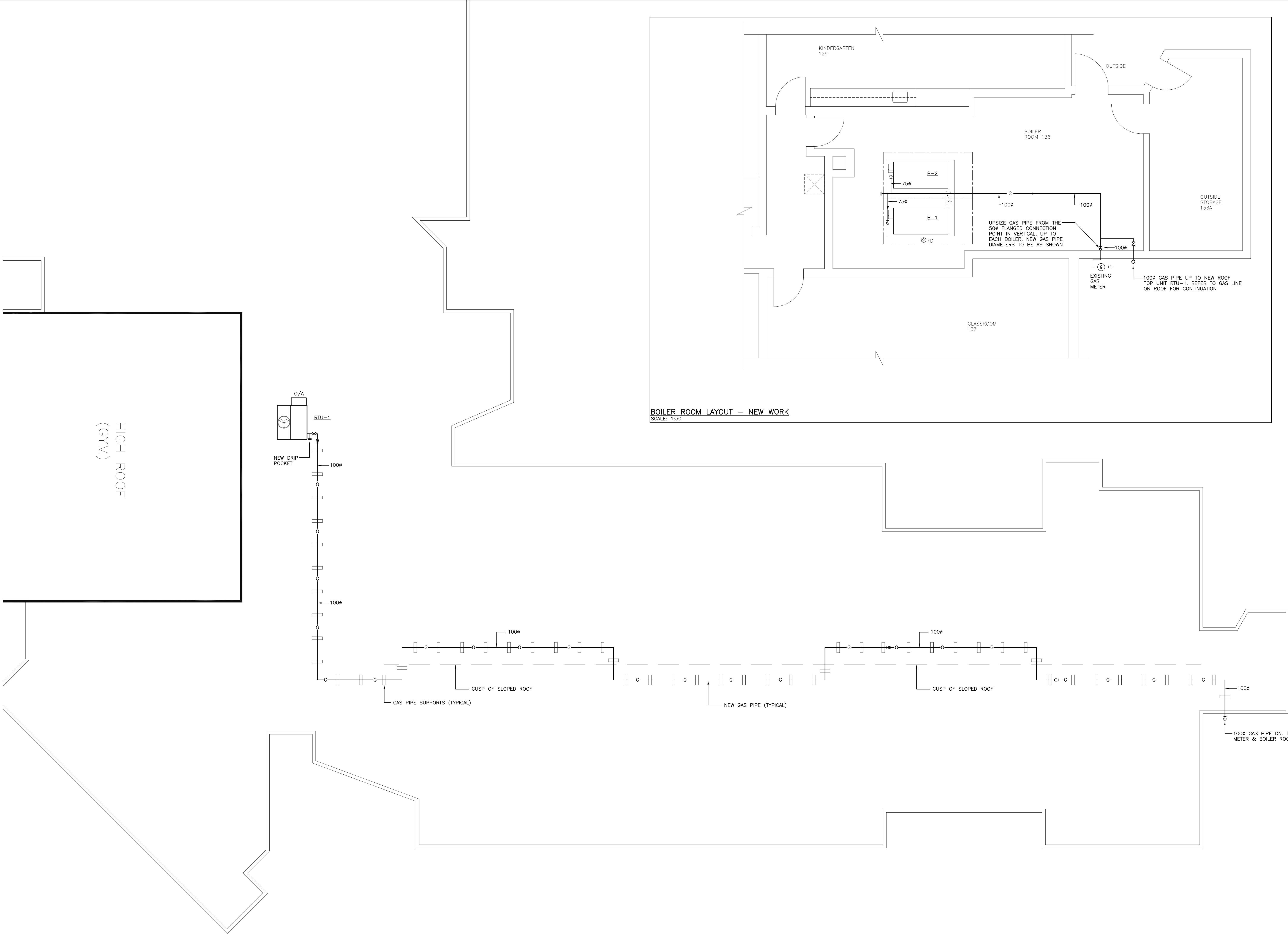


PROJECT
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N. LINDSAY K9V 4M2

DRAWING TITLE
PART OF ROOF LAYOUT – NEW
WORK – MECHANICAL

DATE	SCALE
MAY.2021	1:50
DRAWN BY	DWG. No.
T.N.	M-5
JOB No. 2021–53	



PARTIAL ROOF PLAN – NEW GAS PIPE LAYOUT
SCALE: 1:100

BOILER ROOM LAYOUT – NEW WORK
SCALE: 1:50

ISSUED		
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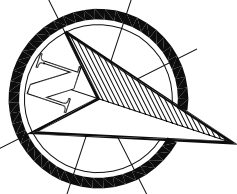
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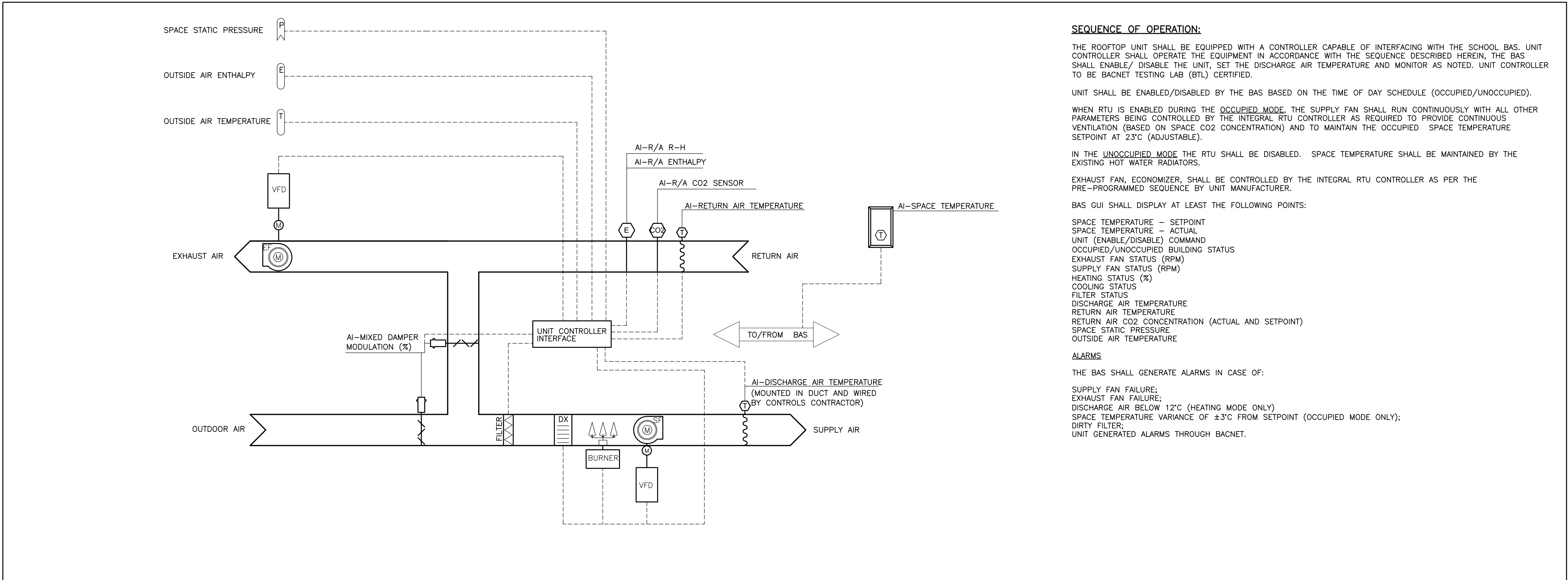


PROJECT
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N. LINDSAY K9V 4M2

DRAWING TITLE
GAS PIPING LAYOUT – NEW WORK

DATE	SCALE
MAY.2021	AS SHOWN
DRAWN BY T.N.	DWG. No.
JOB No. 2021-53	M-6



CONTROL DIAGRAM FOR GYMNASIUM'S ROOFTOP UNIT – 'RTU-1'
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 RTU SHALL BE DISABLED. SPACE TEMPERATURE SHALL BE MAINTAINED BY THE EXISTING HOT WATER RADIATORS.

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

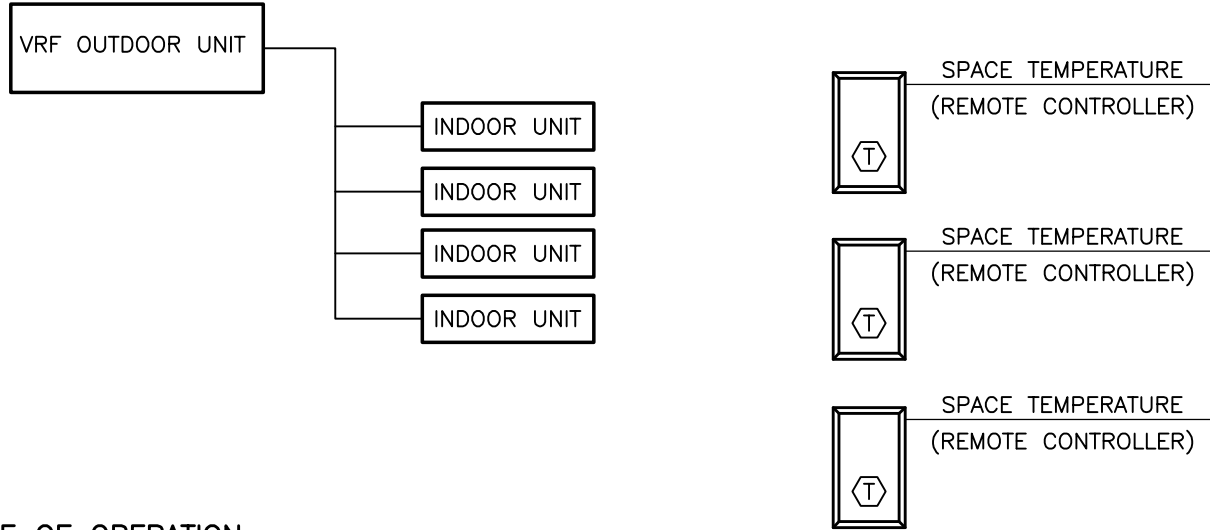
BAS GUI SHALL DISPLAY AT LEAST THE FOLLOWING POINTS:

- SPACE TEMPERATURE – SETPOINT
- SPACE TEMPERATURE – ACTUAL
- UNIT (ENABLE/DISABLE) COMMAND
- OCCUPIED/UNOCCUPIED BUILDING STATUS
- EXHAUST FAN STATUS (RPM)
- SUPPLY FAN STATUS (RPM)
- HEATING STATUS (%)
- COOLING STATUS
- FILTER STATUS
- DISCHARGE AIR TEMPERATURE
- RETURN AIR TEMPERATURE
- RETURN AIR CO2 CONCENTRATION (ACTUAL AND SETPOINT)
- SPACE STATIC PRESSURE
- 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 ±3°C FROM SETPOINT (OCCUPIED MODE ONLY);
- DIRTY FILTER;
- UNIT GENERATED ALARMS THROUGH BACNET.



SEQUENCE OF OPERATION

MULTI-SPLIT AIR CONDITIONING SYSTEMS

THE MULTI-SPLIT AIR CONDITIONING SYSTEMS SHALL BE ENERGIZED DURING THE COOLING/OCCUPIED PERIODS ONLY. WHEN THE SYSTEMS ARE ENERGIZED, THE INDOOR EVAPORATOR FANS SHALL RUN AS REQUIRED TO MAINTAIN THE COOLING/OCCUPIED SPACE SETPOINTS (DEFAULT: 25°C). THE OUTDOOR CONDENSING UNIT SHALL MODULATE AS REQUIRED TO REJECT THE HEAT FROM THE BUILDING AND COLLECTED BY THE MULTIPLE EVAPORATORS. DURING COOLING/UNOCCUPIED PERIODS, THE MULTI-SPLIT AIR CONDITIONING SYSTEMS SHALL SHUT DOWN.

EVAPORATORS AC-1,2 SHALL MAINTAIN SPACE TEMPERATURE SETPOINT IN THE LIBRARY
EVAPORATOR AC-3 SHALL MAINTAIN SPACE TEMPERATURE SETPOINT IN ROOM 102B
EVAPORATORS AC-4 SHALL MAINTAIN SPACE TEMPERATURE SETPOINT IN ROOM 102A

BAS TO ENSURE THAT HEATING AND COOLING SHALL NOT OPERATE AT THE SAME TIME.

ALARMS

THE BAS SHALL GENERATE ALARMS IN ADDITION TO THOSE INCLUDED IN SECTION 23 09 23 AS FOLLOWS:

- SPACE TEMPERATURE IN ANY CONTROLLED AREA VARIES ±2°C FROM SETPOINT FOR MORE THAN 15 MINUTES.
- ANY MULTI-SPLIT CONDENSING UNIT FAILURE

REFER TO SPECIFICATIONS SECTION FOR THE CONTROL OF THE A/C VRF SYSTEM.

CONTROLS SUB-CONTRACTOR TO CONNECT TO THE VRF SYSTEM VIA BACNET AND PROVIDE MINIMUM REQUIRED POINTS. PROVIDE ALL REQUIRED WIRING AND CONDUITS BETWEEN INDOOR AND OUTDOOR UNITS AND CONTROLLERS. COORDINATE WITH THE VRF SYSTEM MANUFACTURER.

FOR EACH INDOOR UNIT PROVIDE AT LEAST:

- ROOM TEMPERATURE SETTING
- ROOM TEMPERATURE RESETTING
- ROOM TEMPERATURE
- INDOOR UNIT START/STOP
- OPERATING MODE
- INDOOR UNIT STATUS

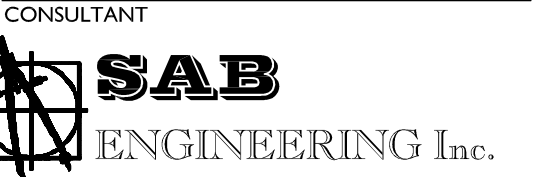
FOR EACH OUTDOOR UNIT:

- OUTDOOR UNIT START/STOP
- OUTDOOR UNIT STATUS

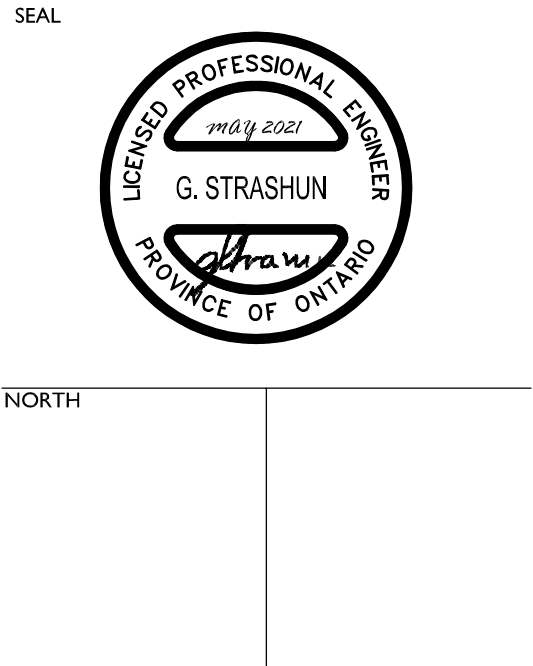
AC UNIT CONTROL DIAGRAM
N.T.S.

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No.	DATE	DESCRIPTION
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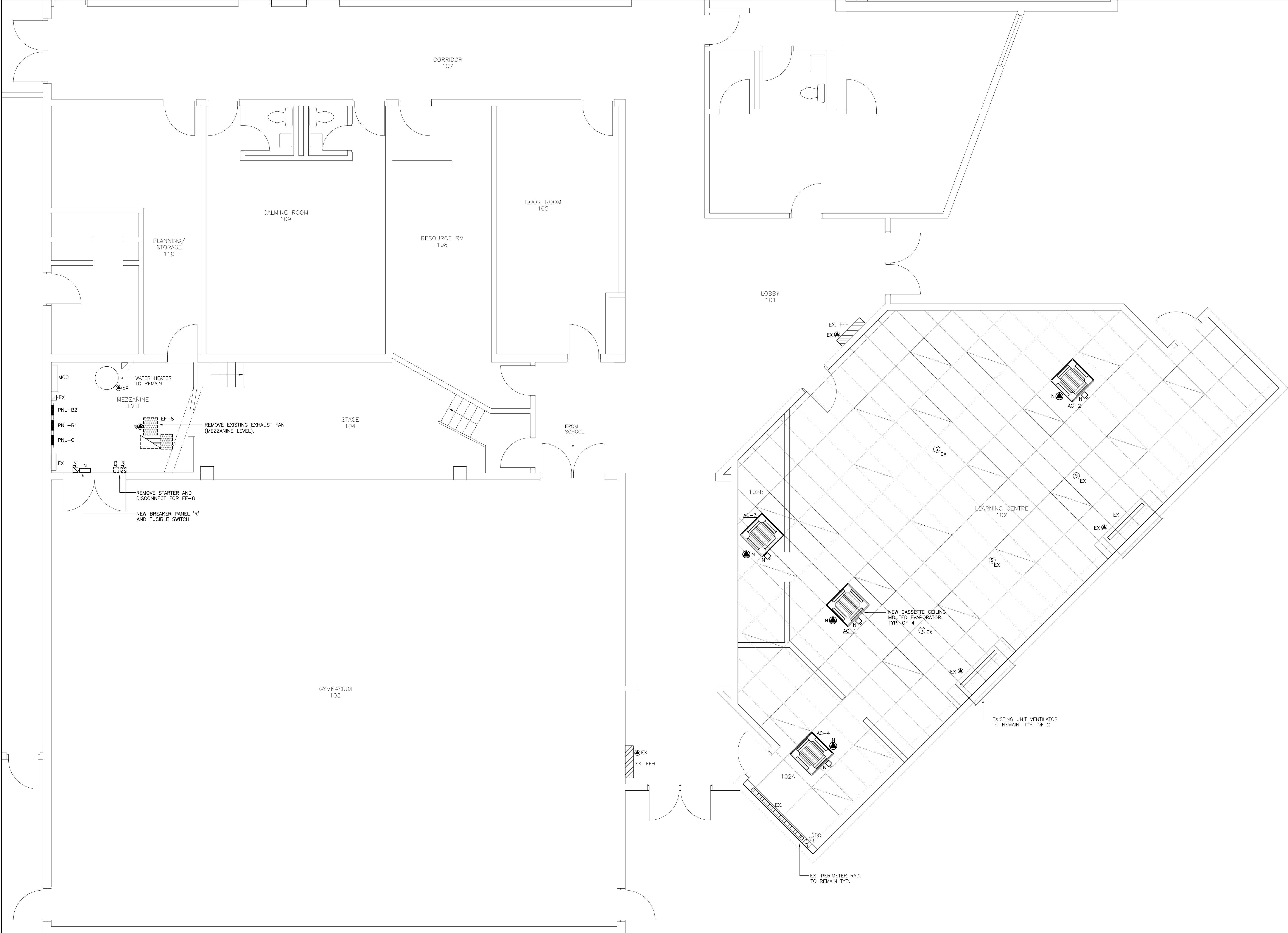


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PROJECT
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES
133 ADELAIDE ST. N. LINDSAY K9V 4M2
DRAWING TITLE
CONTROLS (BAS)

DATE	SCALE
MAY.2021	N.T.S.
DRAWN BY	DWG. No.
T.N.	M-7
JOB No. 2021-53	



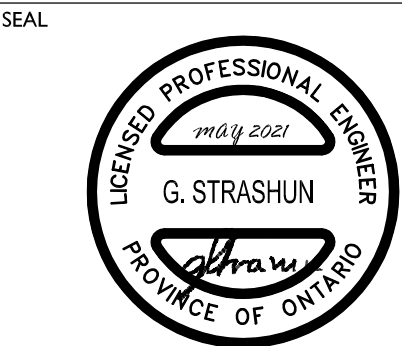
LIBRARY & GYM MEZZANINE – EXISTING, DEMOLITION & NEW WORK – ELECTRICAL
SCALE: 1:50

ISSUED		
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PROJECT
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N. LINDSAY K9V 4M2

DRAWING TITLE
PARTIAL GROUND FLOOR –
EXISTING, DEMOLITION & NEW
WORK – ELECTRICAL

DATE	SCALE
MAY.2021	1:50
DRAWN BY T.N.	DWG. No.
JOB No. 2021-53	E-2

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 WR90 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 SPLICES AND JOINTS WITH MATERIALS APPROVED FOR THE PARTICULAR USE, LOCATION, VOLTAGE, AND TEMPERATURE. SPLICE 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 KS1, 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.

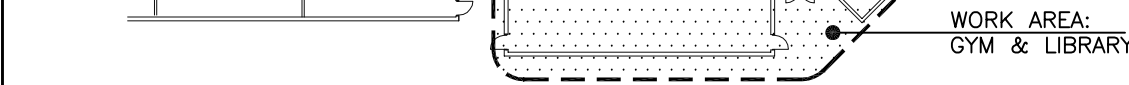
LOCATE IN THE PROXIMITY OF THE EQUIPMENT SERVED, IN ACCORDANCE WITH NEC REQUIREMENTS.

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).



SCALE: N.T.S.

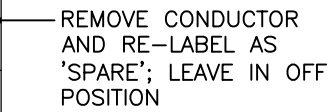
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LEGEND	
	DIRECT POWER OUTLET FOR USE AS NOTED INCLUDING FINAL CONNECTION.
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION MAGNETIC MOTOR STARTER WITH DISCONNECT SWITCH & OVERCURRENT PROTECTION
	MUSHROOM STYLE PUSH BUTTON
	ELECTRICAL PANEL, SURFACE OR FLUSH RESPECTIVELY.
	CEILING SPEAKER
4. 	VARIABLE FREQUENCY DRIVE
	SINGLE POLE TOGGLE SWITCH
EX	DENOTES EXISTING TO REMAIN
R	DENOTES EXISTING TO BE REMOVED ENTIRELY U.N.O.
N	DENOTES NEW EQUIPMENT

GENERAL NOTES

1. IT IS MANDATORY FOR THE ELECTRICAL CONTRACTOR TO VISIT SITE AND EXISTING ELECTRICAL 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.

LOCATIONS OF ALL NEW DISCONNECT SWITCHES, VFDS AND STARTERS SHALL BE CONFIRMED WITH DIVISION 15 PRIOR TO INSTALLATION.



TAP OFF THE MAIN BUS OF MCC TO
A NEW FUSIBLE SWITCH AS SHOWN

NEW PANEL R 120V/208V, 3PH, 4W			TYPE: _____ — 125 A MAINS: _____ MAIN BKR: _____ FROM: MCC		MOUNTING: WALL—MOUNTED LOCATION: GYM MEZZANINE	
WATTS	DESCRIPTION	PROT.	CIRCUITS	PROT.	DESCRIPTION	WATTS
RTU—1		80A	1	2	30A	CDU—1
			3	4		
		3P	5	6	3P	
AC—1		15A	7	8	15A	AC—2
		2P	9	10	2P	
AC—3		15A	11	12	15A	AC—4
		2P	13	14	2P	
SPACE			15	16	20A	ROOF GFI SERVICE RECEPTACLE
SPACE			17	18	20A	ROOF GFI SERVICE RECEPTACLE
SPACE			19	20		SPACE
SPACE			21	22		SPACE
SPACE			23	24		SPACE
SPACE			25	26		SPACE
SPACE			27	28		SPACE
SPACE			29	30		SPACE

DISTRIBUTION POWER PLAN

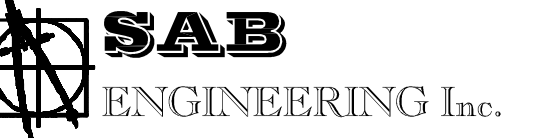
MECHANICAL EQUIPMENT WIRING SCHEDULE								
EQUIPMENT	POWER SOURCE	UNIT			STARTER TYPE	BREAKER SIZE OR FUSE SIZE	FEEDER SIZE	REMARKS
		MCA/FLA MOC/ HP	PHASE	VOLTAGE				
RTU-1	PANEL 'R' (GYM MEZZANINE)	58 MCA 80 MOC/	3	208	INTEGRAL	80A-3P	3-AWG#6+G-35mmC	PROVIDE POWER FROM NEW BREAKER PANEL 'R' THROUGH A NEW 80A-3P BREAKER. PROVIDE ALL NEW WIRING FROM PANEL 'R' TO THE NEW ROOF TOP UNIT. ALL WIRING TO BE IN EMT CONDUIT (INDOORS) AND RMC CONDUIT (OUTDOORS). USE NON-PENETRATING ROOF SUPPORTS FOR THE CONDUIT ON THE ROOF. PROVIDE FLEXIBLE LIQUID TIGHT CONDUIT FOR THE LAST 900 MM.
CDU-1	PANEL 'R' (GYM MEZZANINE)	25 MCA 30 MOC/	3	208	MAGNETIC	30A-3P	3-AWG#10+G-21mmC	
AC-1	PANEL 'R' (GYM MEZZANINE)	0.51 MCA 15 MOC/	1	208	INTEGRAL	15A-2P	2-AWG#12+G-16mmC	PROVIDE POWER TO EACH EVAPORATOR FROM NEW BREAKER PANEL 'R' THROUGH NEW DEDICATED 15A-2P BREAKERS. PROVIDE ALL NEW WIRING FROM PANEL 'R' TO THE NEW EVAPORATORS. ALL WIRING TO BE IN EMT CONDUIT (INDOORS).
AC-2						15A-2P	2-AWG#12+G-16mmC	
AC-3	PANEL 'R' (GYM MEZZANINE)	0.28 MCA 15 MOC/	1	208	INTEGRAL	15A-2P	2-AWG#12+G-16mmC	
AC-4						15A-2P	2-AWG#12+G-16mmC	

ISSUED

[illegible]

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

CONSULTANT



38 EDWARD AVE., UNIT 25, RICHMOND HILL, ONT., L4C 9Y6
TEL. (905)-787 8885 FAX (905)-787 8771

SEAL



NORTH	
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PROJECT

PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES

133 ADELAIDE ST. N, LINDSAY K9V 4M2

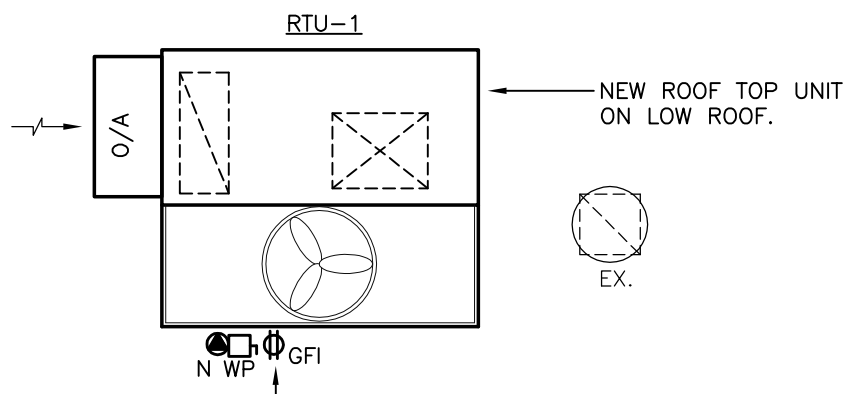
LEGEND, NOTES & EQUIPMENT
WIRING SCHEDULE –
ELECTRICAL

DATE MAY.2021	SCALE N.T.S.
DRAWN BY T.N.	DWG. No.
JOB No. 2021-53	E-1

E-1

LOW ROOF
CONTINUATION

NOTE:
PROVIDE A CONNECTION FOR THE NEW AIR HANDLING UNIT (RTU-1) TO AUTOMATICALLY SHUT DOWN IN CASE OF FIRE ALARM. PROVIDE NEW F/A WIRING IN RMC (OUTDOORS) AND EMT (INDOORS). SUBMIT A FIRE ALARM VERIFICATION REPORT AT COMPLETION.



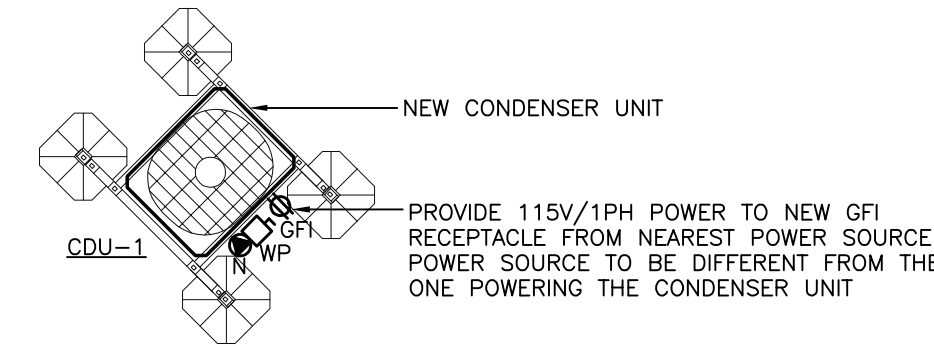
ACCESS LADDER
TO HIGH ROOF

ACCESS DOOR TO
LOW ROOF FROM
MEZZANINE LEVEL

LOW ROOF

HIGH ROOF
(GYM)

HIGH ROOF
(GYM)



LOW ROOF
(LIBRARY)

GYM & LIBRARY LOW ROOF — EXISTING & NEW WORK — ELECTRICAL

SCALE: 1:50

ISSUED

No.	DATE	DESCRIPTION
I.	21/05/2021	ISSUED FOR TENDER

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

CONSULTANT
SAB
ENGINEERING Inc.
588 EDWARD AVE., UNIT 25, RICHMOND HILL, ONT., L4C 9Y6
TEL. (905)-787 8865 FAX (905)-787 8771



NORTH



PROJECT
PARKVIEW PUBLIC SCHOOL
HVAC UPGRADES
133 ADELAIDE ST. N. LINDSAY K9V 4M2
DRAWING TITLE
PARTIAL ROOF LAYOUT — NEW
WORK — ELECTRICAL

DATE	SCALE
MAY.2021	1:50
DRAWN BY	DWG. No.
T.N.	
JOB No.	
2021-53	