

**CRESTWOOD SECONDARY SCHOOL
MECHANICAL UPGRADE 2021**
1885 SHERBROOKE ST. W., PETERBOROUGH, ONTARIO



KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
PUR 21-067-ITT

Moffet & Duncan Architects Inc.
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DEI Consulting Engineers
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ARCHITECTURAL DRAWINGS

A0	ARCHITECTURAL / STRUCTURAL / MECHANICAL / ELECTRICAL PHASING PLAN
A1	FIRST FLOOR PART 'B', 'C' AND 'D' DEMOLITION AND NEW FLOOR PLAN
A2	ROOF PLAN, DETAILS
A3	FIRST FLOOR PART 'A', 'B' AND 'C' DEMOLITION AND NEW FLOOR PLAN
A4	PAINT SCHEDULE, DIAGRAMS, ROOM FINISH SCHEDULE

STRUCTURAL DRAWINGS

S1.1	PARTIAL EXISTING FRAMING PLANS AND SECTIONS
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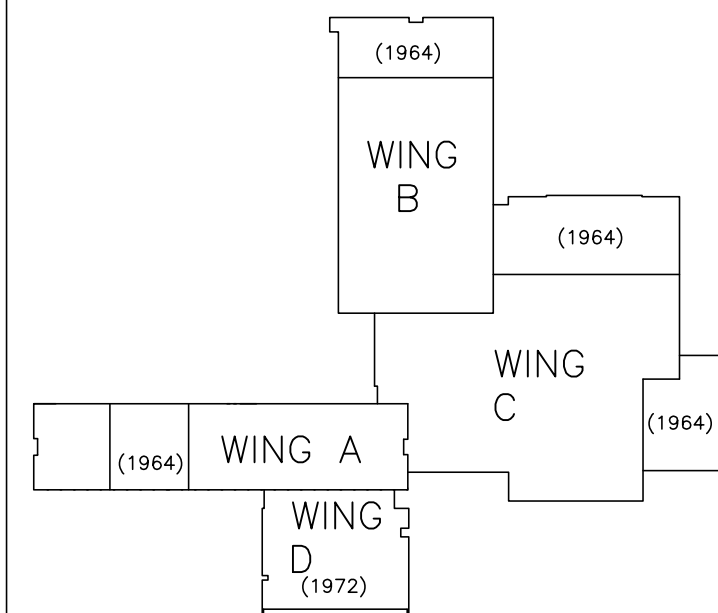
MECHANICAL DRAWINGS

M1.1	LEGEND, SCHEDULES, KEY PLAN AND NOTES
M1.2	FIRST FLOOR PLAN - PART 'A' - DEMOLITION AND RENOVATION
M1.3	FIRST FLOOR PLAN 'B' - DEMOLITION AND RENOVATION
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M2.2	SECTIONS AND DETAILS
M3.1	ROOF PLAN DEMOLITION
M3.2	ROOF PLAN RENOVATION
M4.1	DETAILS

ELECTRICAL DRAWINGS

E1.1	LEGEND, SCHEDULE, RISERS AND DETAILS
E2.1	FIRST FLOOR PLAN 'A' - DEMOLITION AND RENOVATION
E2.2	FIRST FLOOR PLAN 'B' - DEMOLITION
E2.3	FIRST FLOOR PLAN 'B' - RENOVATION
E3.1	ELECTRICAL SPECIFICATIONS

CRESTWOOD S.S. MECHANICAL UPGRADE 2021
1885 SHERBROOK ST. W., PETERBOROUGH, ONTARIO
Moffet & Duncan Architects Inc.



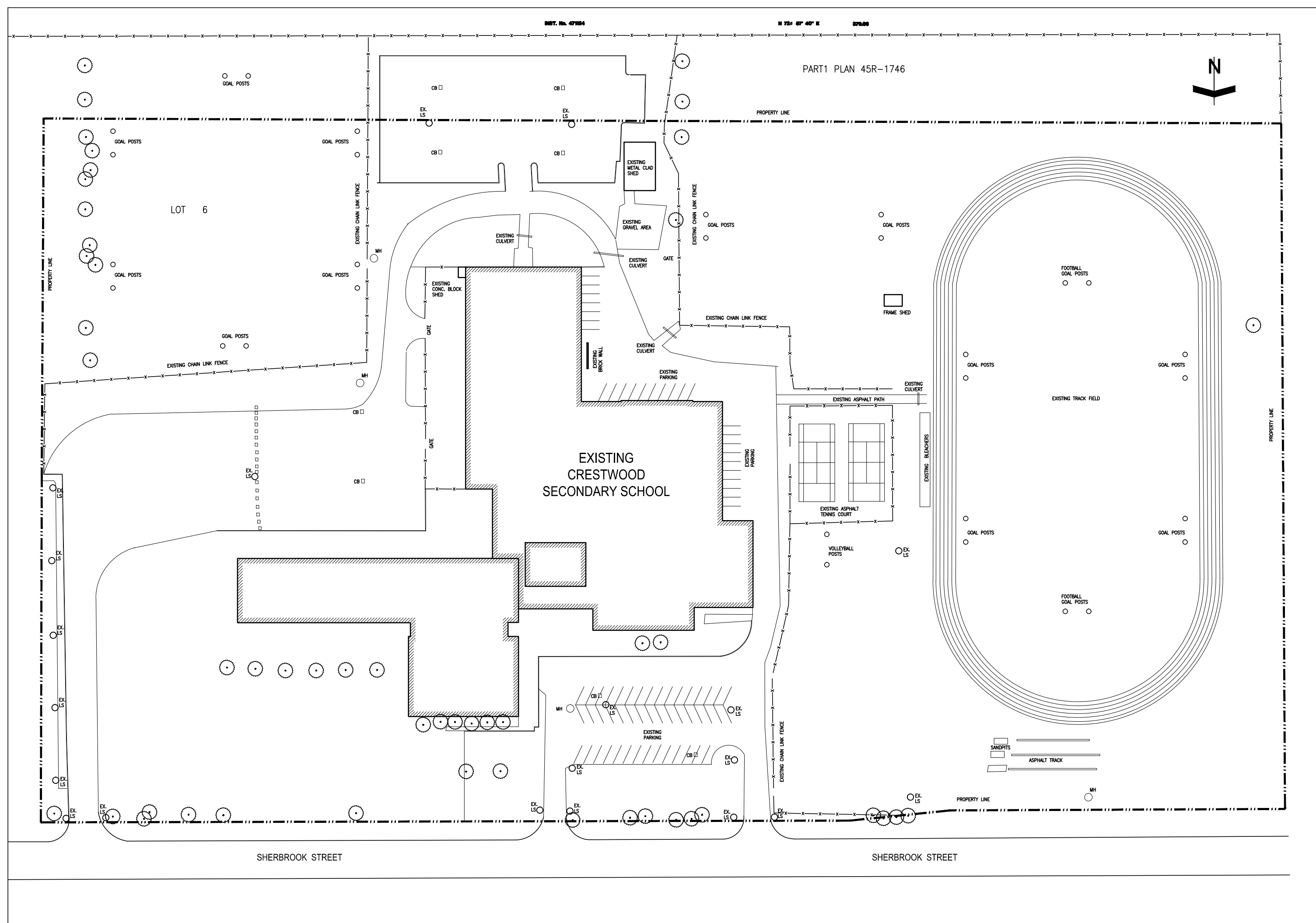
AO

ITEMIZED PRICE NO.1
ALL WORK ASSOCIATED WITH DRAMA ROOM B110
ITEMIZED PRICE NO.2
ALL WORK ASSOCIATED WITH MACHINE SHOP B111
ITEMIZED PRICE NO.3
ALL WORK ASSOCIATED WITH CAFETERIA COOLING

PHASING:

1 CONTRACTOR WILL HAVE ACCESS TO ONE WORK AREA AT A TIME. ALL WORK MUST BE COMPLETED IN EACH WORK AREA BEFORE PROCEEDING TO NEXT WORK AREA.

2 WORK SHALL BE SCHEDULED BASED ON MECHANICAL DELIVERY SCHEDULE BUT MUST BE COMPLETED NO LATER THAN DECEMBER 3, 2021.



1A SITE PLAN
SCALE 1:1000

KEY PLAN LEGEND:

HATCH INDICATES AREA OF RENOVATION WORK

PART D

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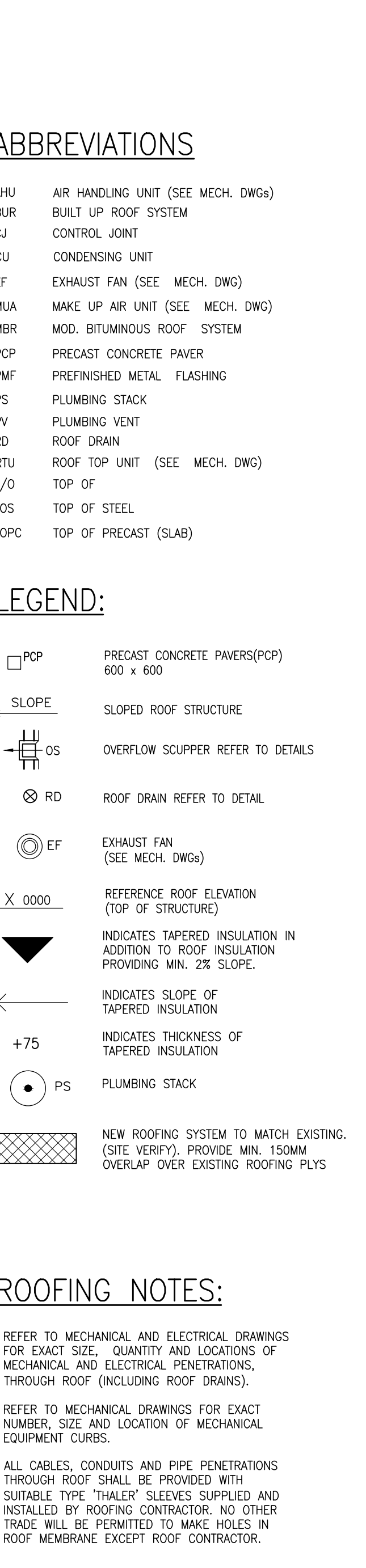
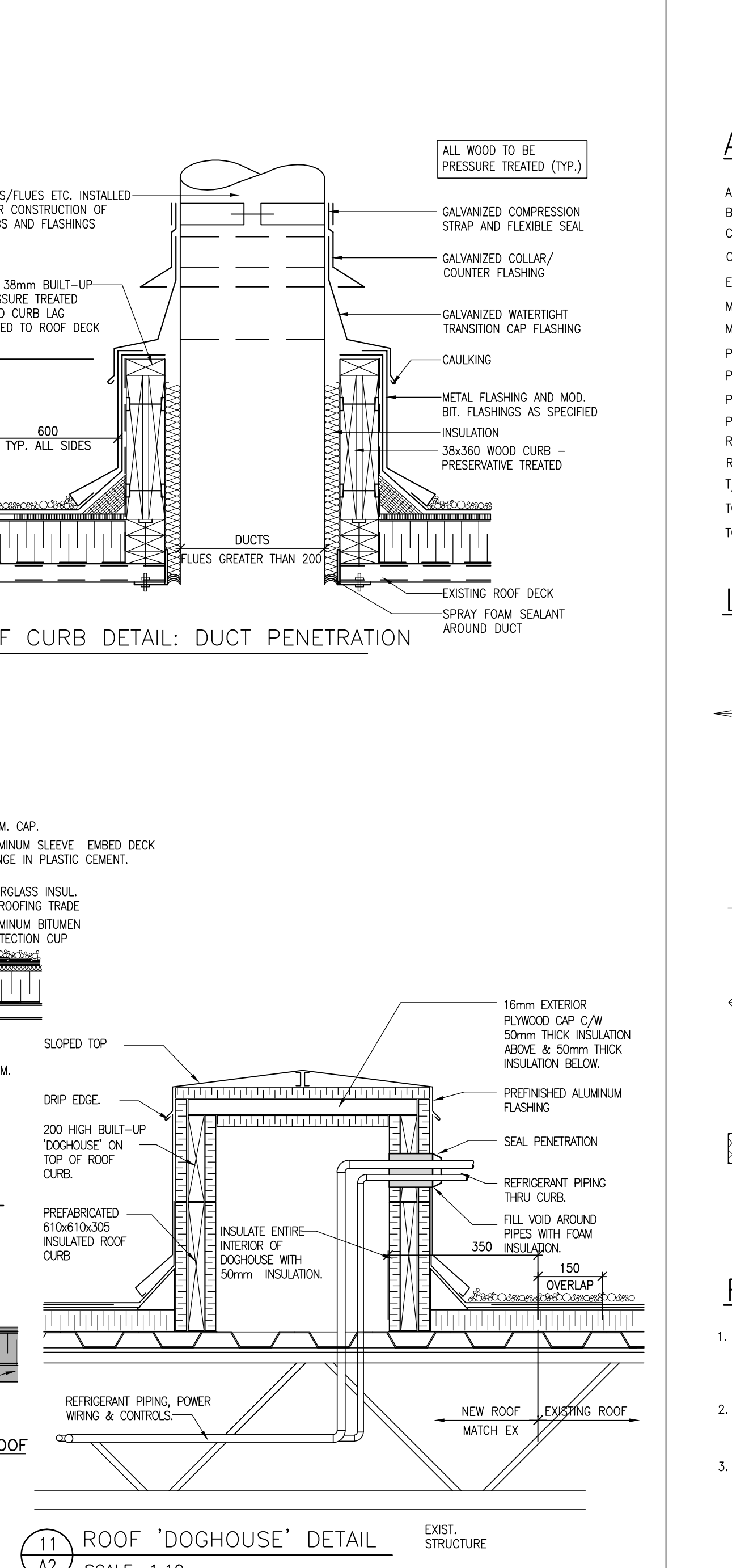
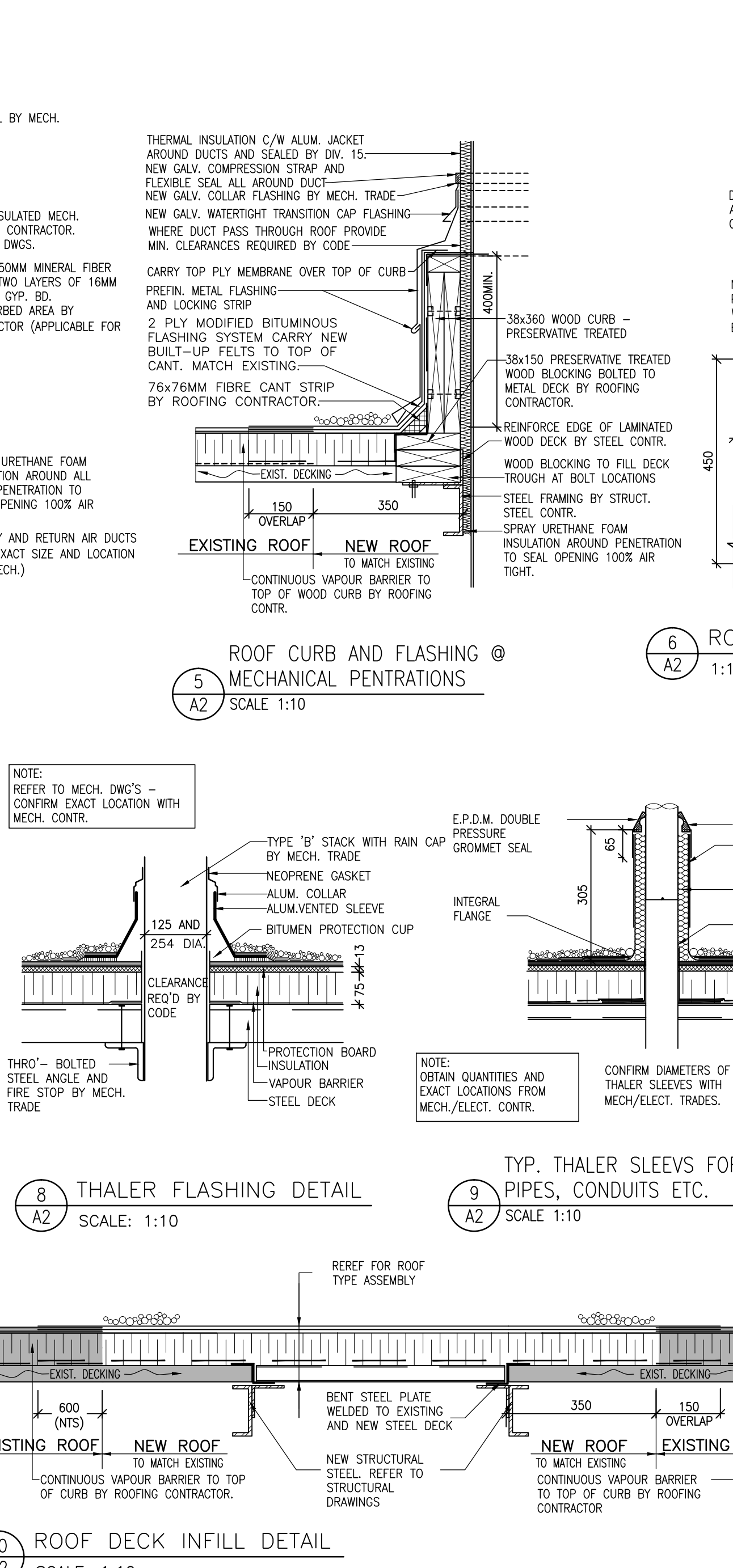
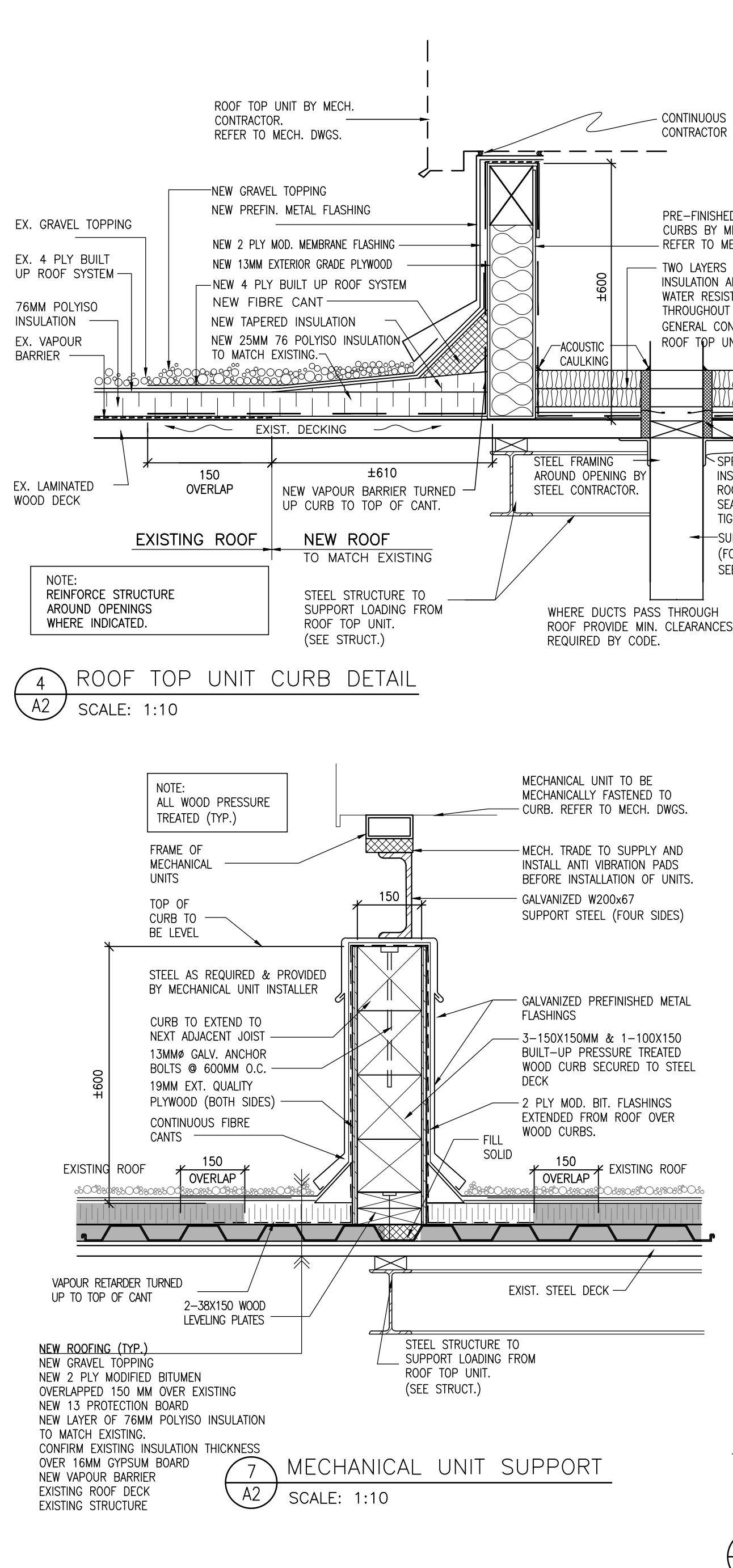
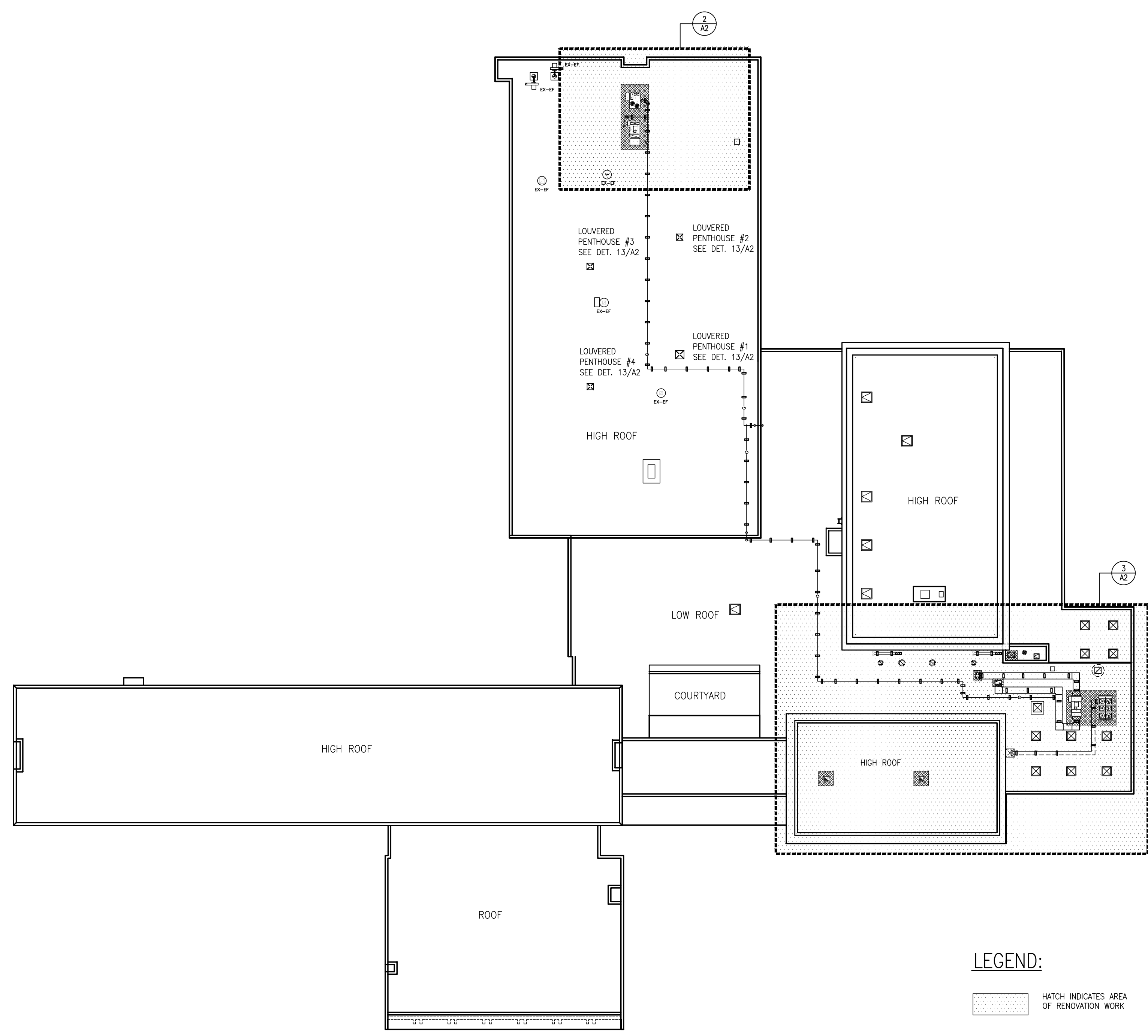
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ABBREVIATIONS

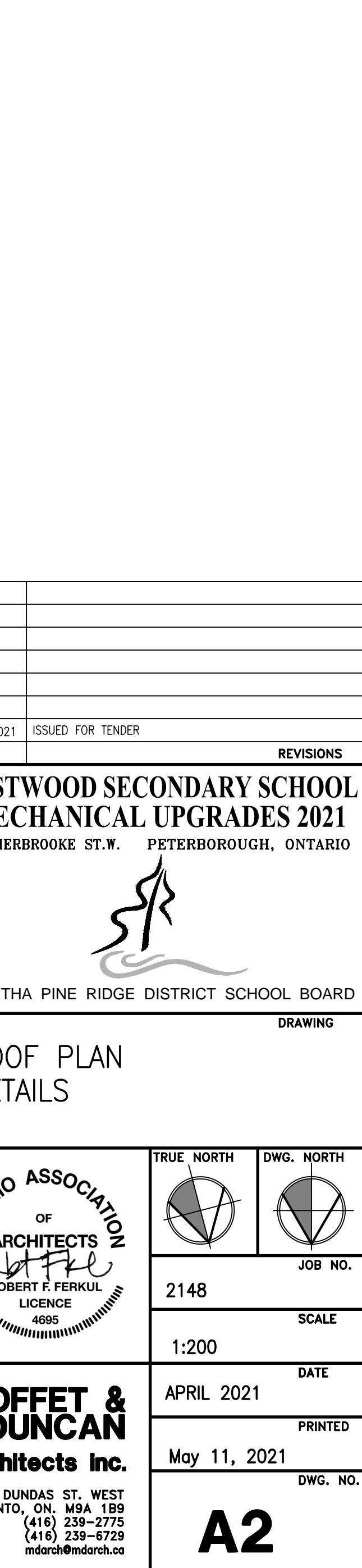
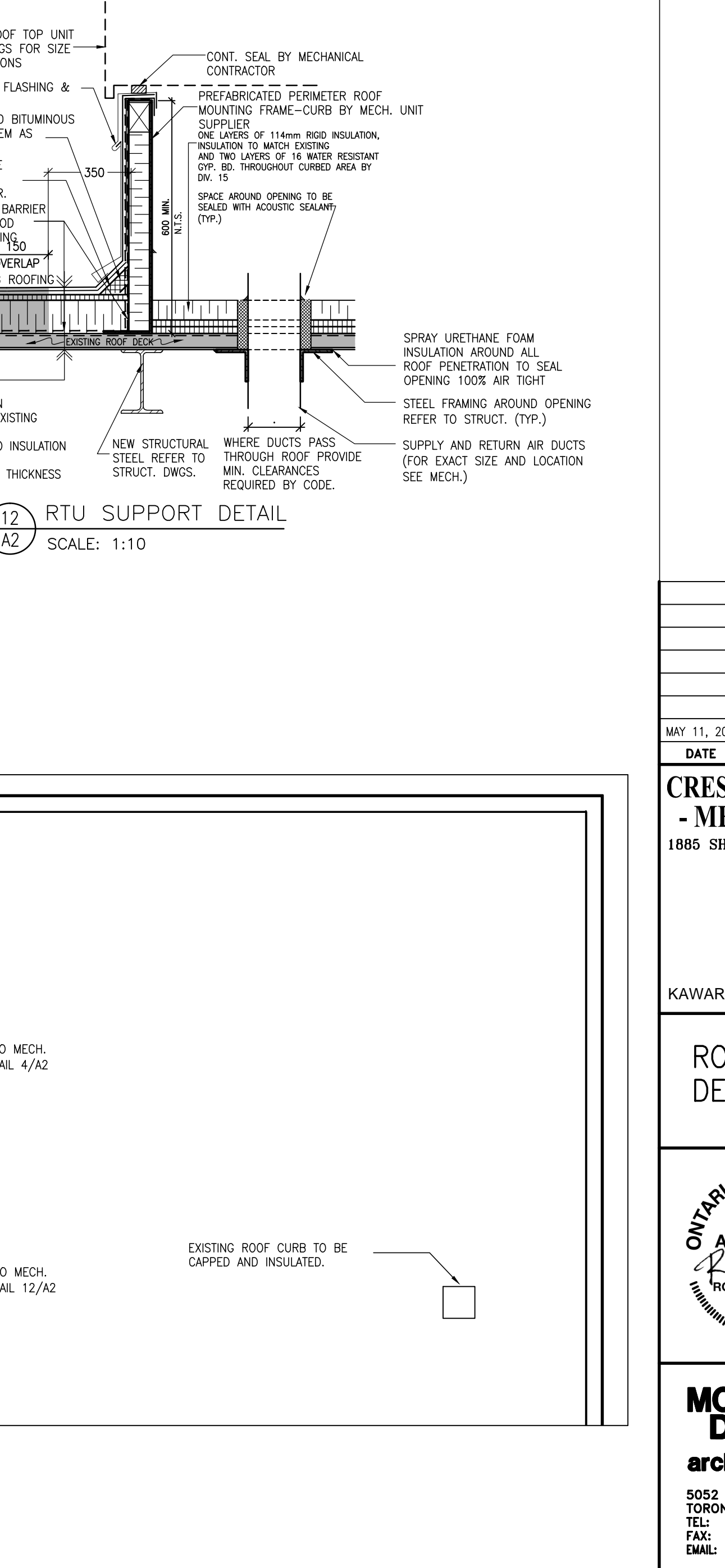
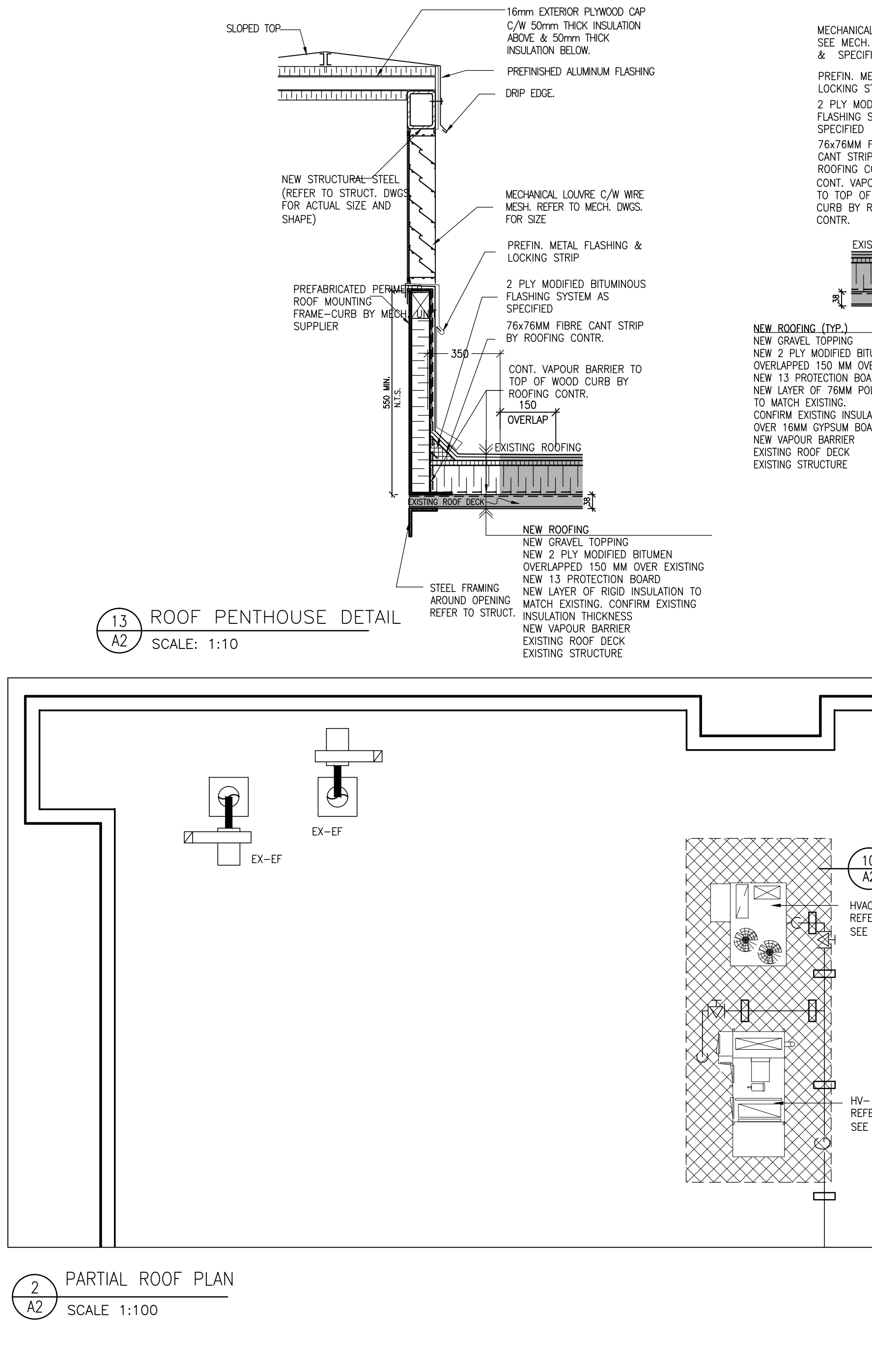
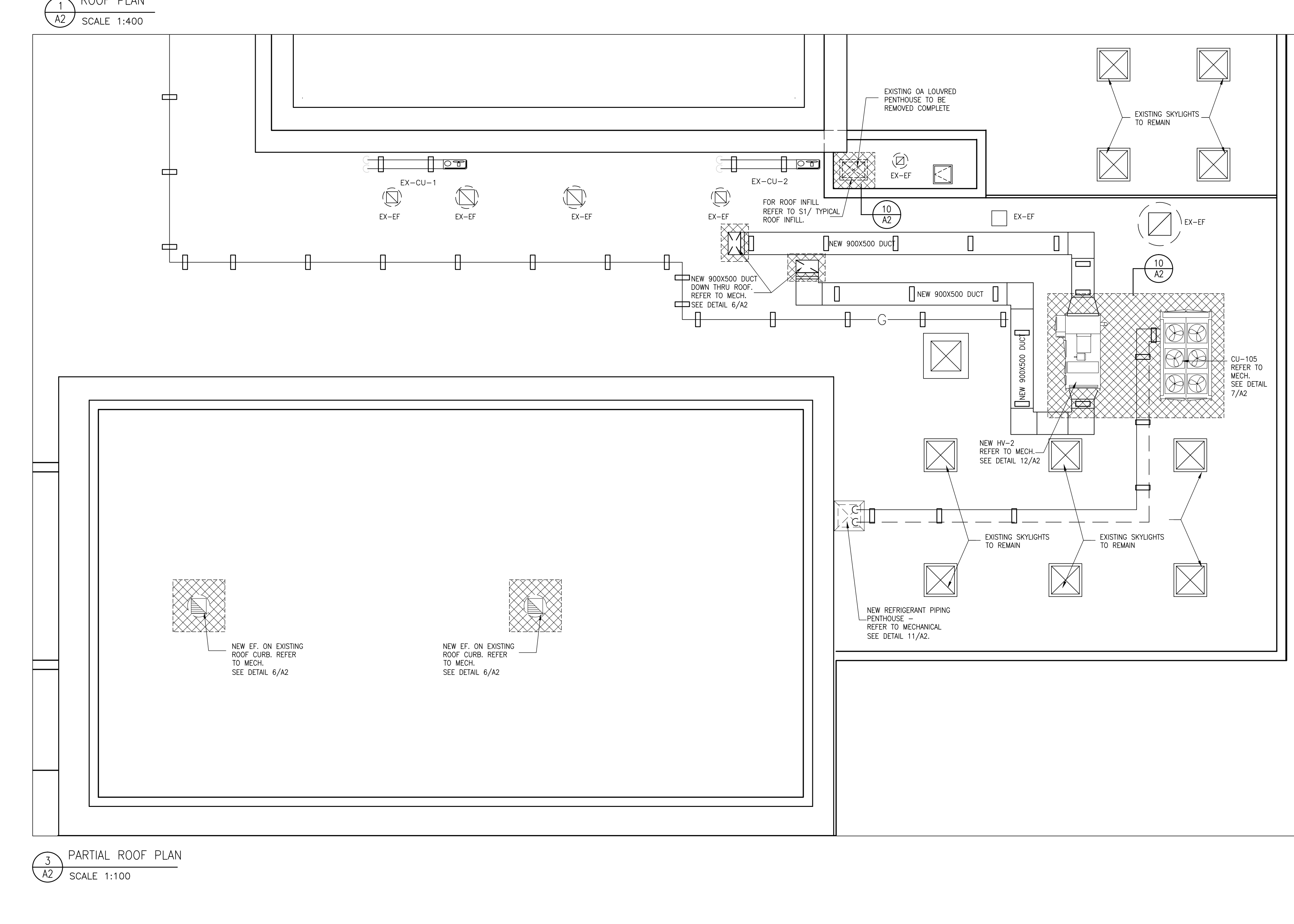
AHU AIR HANDLING UNIT (SEE MECH. DWGS)
BUR BUILT UP ROOF SYSTEM
CJ CONTROL JOINT
CU CONDENSING UNIT
EF EXHAUST FAN (SEE MECH. DWG)
MUA MAKE UP AIR UNIT (SEE MECH. DWG)
MBR MOD. BITUMINOUS ROOF SYSTEM
PCP PRECAST CONCRETE PAVES
PWF PREFINISHED METAL FLASHING
PS PLUMBING STACK
PV ROOF DRAIN
RTU ROOF TOP UNIT (SEE MECH. DWG)
T/O TOP OF
TOS TOP OF STEEL
TPC TOP OF PRECAST (SLAB)

LEGEND:

PCP PRECAST CONCRETE PAVES(PCP) 600 x 600
SLOPE SLOPED ROOF STRUCTURE
OS OVERFLOW SCUPPER REFER TO DETAILS
RD ROOF DRAIN REFER TO DETAIL
EF EXHAUST FAN (SEE MECH. DWGS)
X 0.000 REFERENCE ROOF ELEVATION (TOP OF STRUCTURE)
INDICATES TAPERED INSULATION IN ADDITION TO ROOF INSULATION PROVIDING MIN. 2% SLOPE
INDICATES SLOPE OF TAPERED INSULATION
+75 INDICATES THICKNESS OF TAPERED INSULATION
PS PLUMBING STACK
NEW ROOFING SYSTEM TO MATCH EXISTING. (SITE VERIFY). PROVIDE MIN. 150MM OVERLAP OVER EXISTING ROOFING PLYS

ROOFING NOTES:

- REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR EXACT SIZE, QUANTITY AND LOCATIONS OF MECHANICAL AND ELECTRICAL PENETRATIONS, THROUGH ROOF (INCLUDING ROOF DRAINS).
- REFER TO MECHANICAL DRAWINGS FOR EXACT NUMBER, SIZE AND LOCATION OF MECHANICAL EQUIPMENT CURBS.
- ALL CABLES, CONDUITS AND PIPE PENETRATIONS THROUGH ROOF SHALL BE PROVIDED WITH SUITABLE TYPE 'THALER' SLEEVES SUPPLIED AND INSTALLED BY ROOFING CONTRACTOR. NO OTHER TRADE WILL BE PERMITTED TO MAKE HOLES IN ROOF MEMBRANE EXCEPT ROOF CONTRACTOR.



MAY 11, 2021 ISSUED FOR TENDER

DATE	REVISIONS

CRESTWOOD SECONDARY SCHOOL - MECHANICAL UPGRADES 2021
1885 SHERBROOKE ST.W. PETERBOROUGH, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

ROOF PLAN DETAILS

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT F. FERKUL
LICENCE 4895

TRUE NORTH DWG. NORTH

2148 JOB NO.

1:200 SCALE

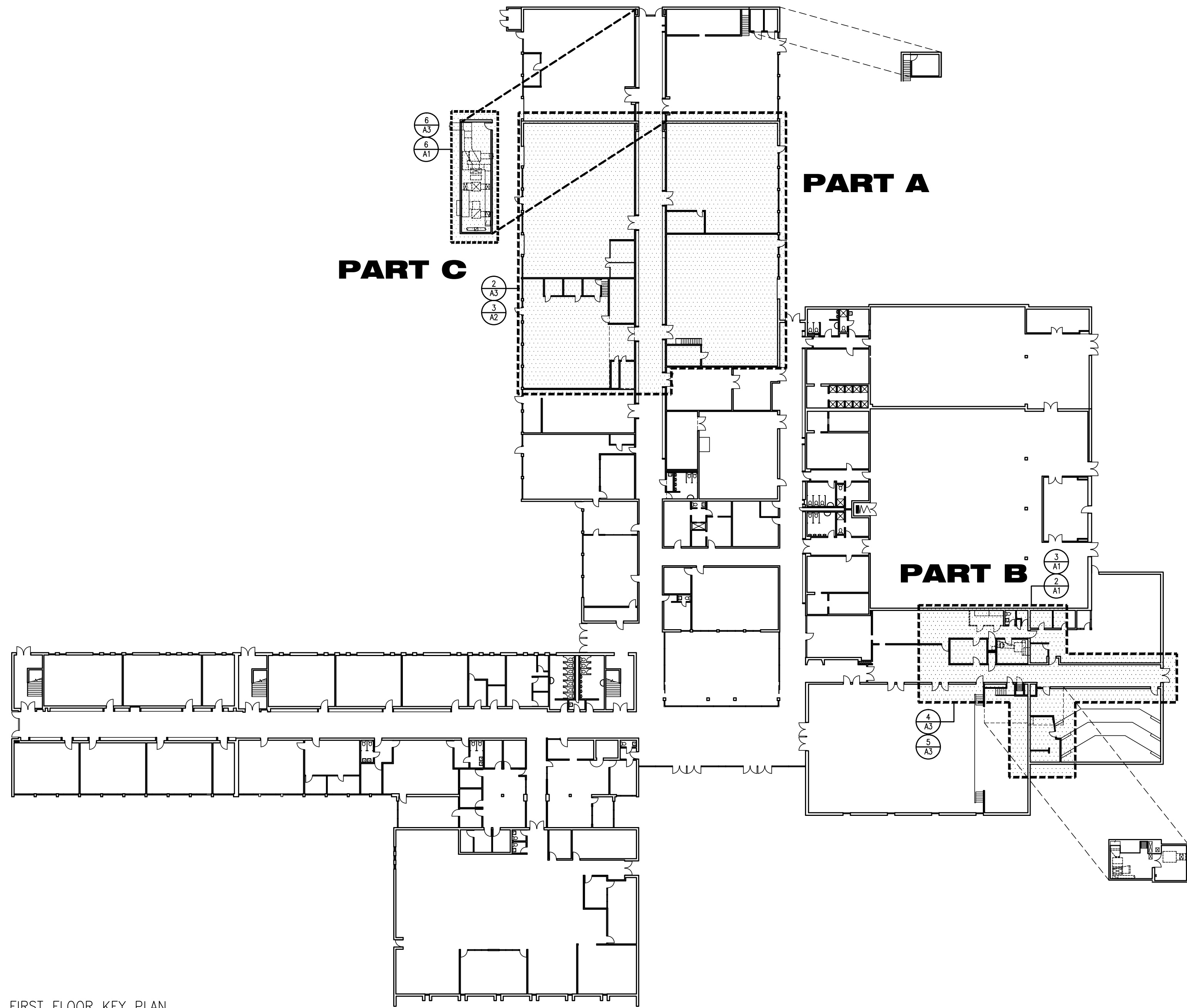
APRIL 2021 DATE

PRINTED

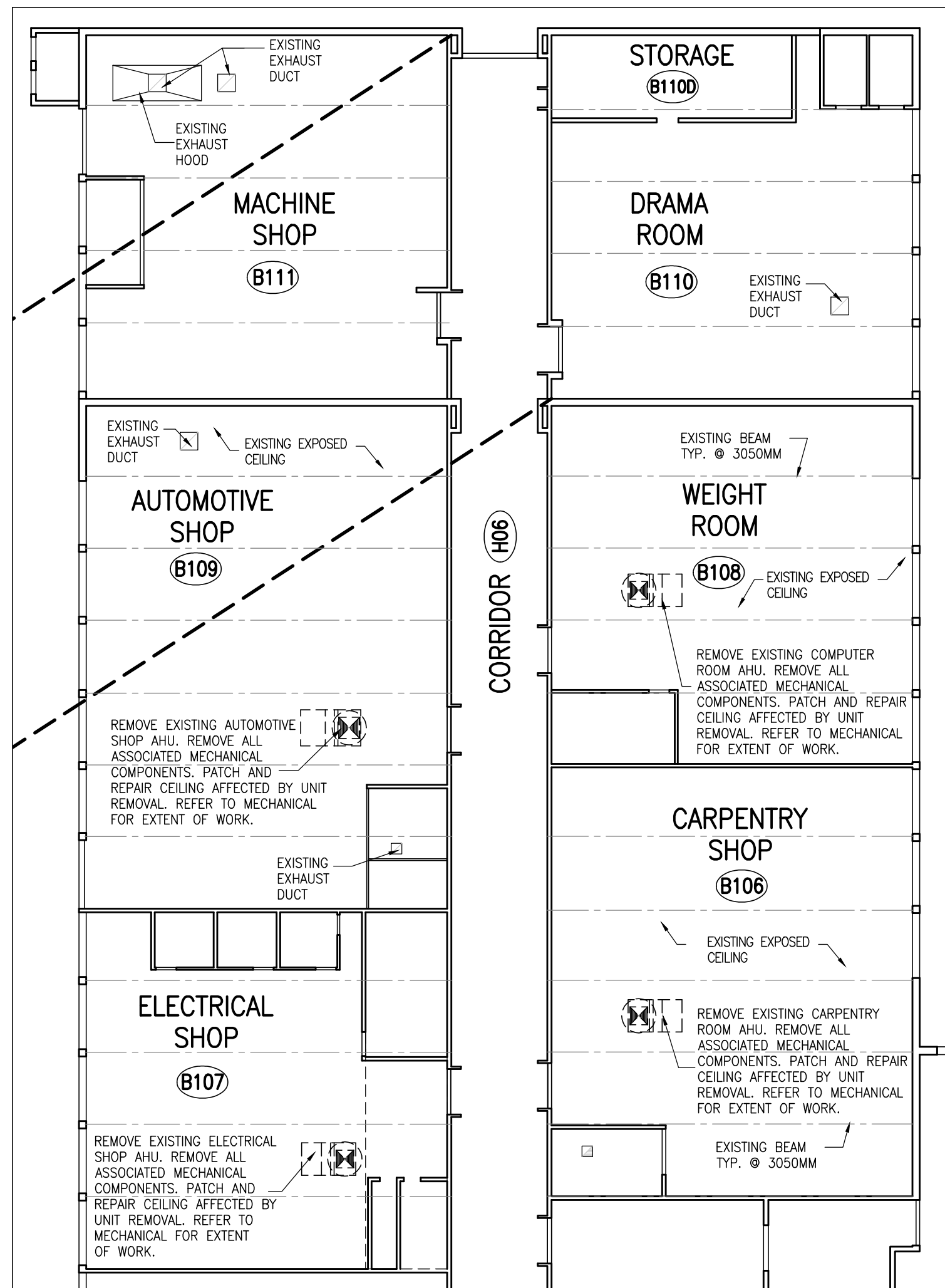
May 11, 2021

DWG. NO. A2

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5052 DUNDAS ST. WEST
TORONTO, ON, M9A 1B9
TEL: (416) 239-2775
FAX: (416) 239-6729
EMAIL: dmarch@mndarch.on.ca

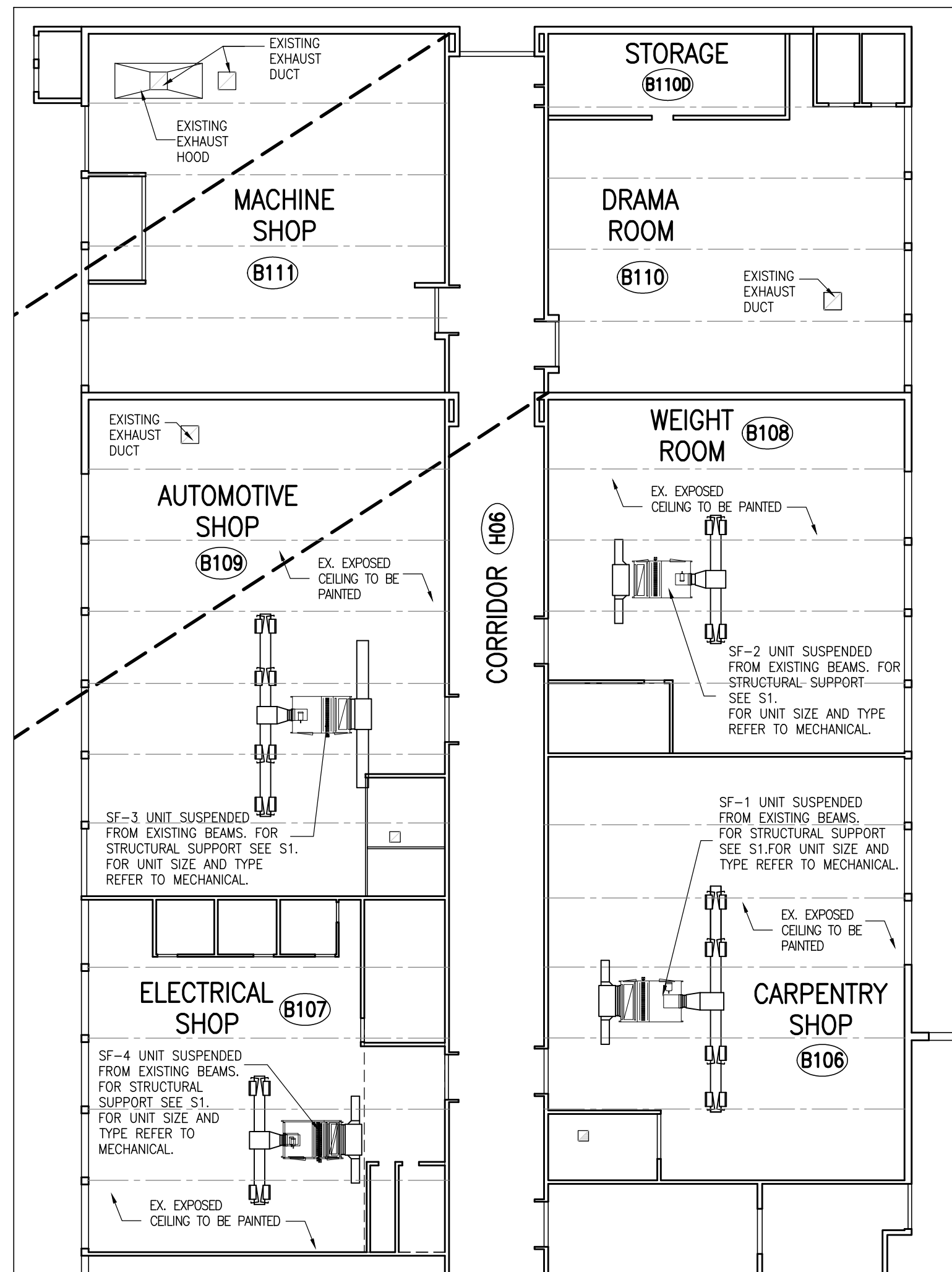


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A3
FIRST FLOOR KEY PLAN
SCALE 1:400

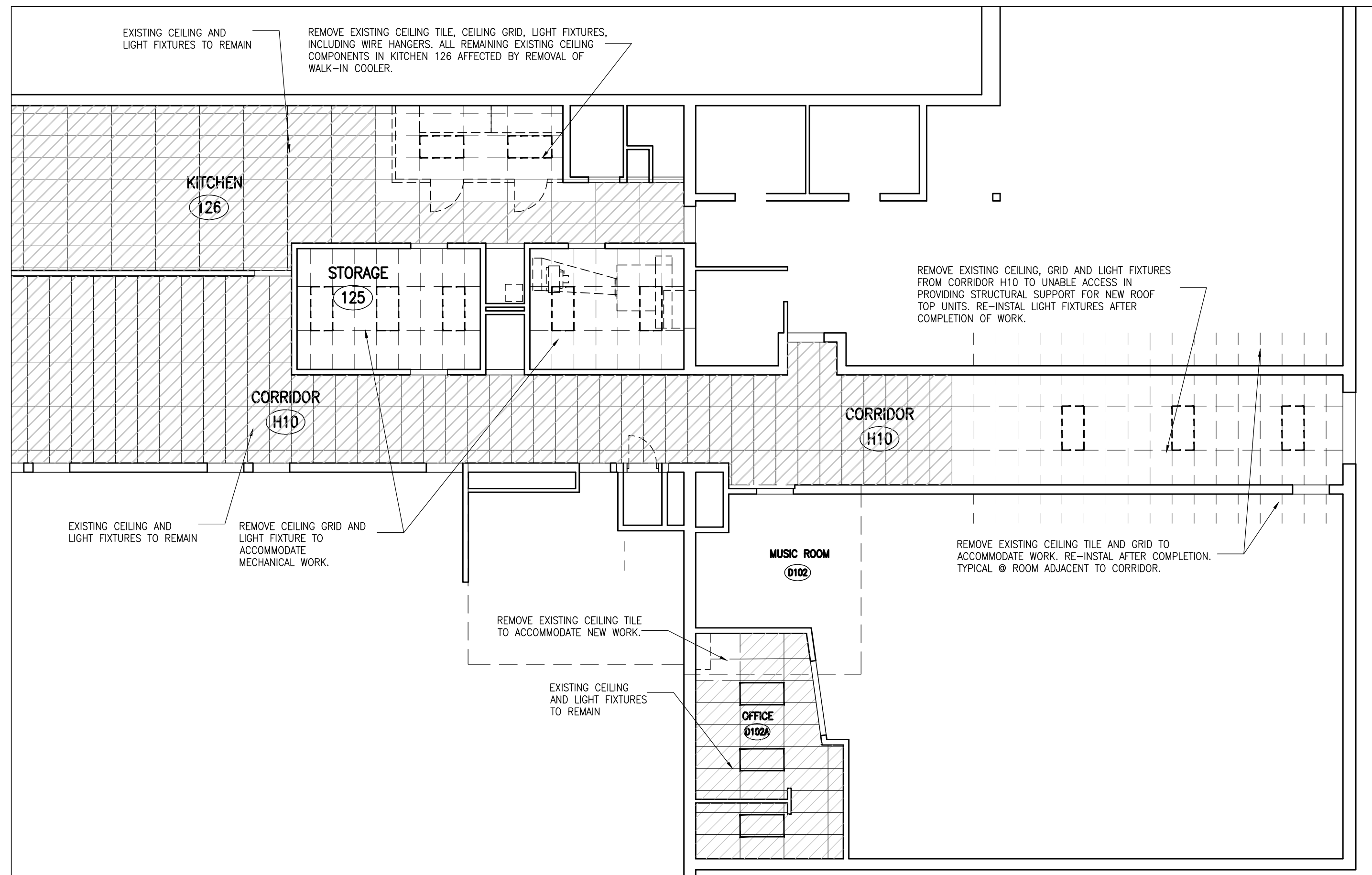


2
A3
FIRST FLOOR PART A - DEMOLITION PLAN
SCALE 1:200

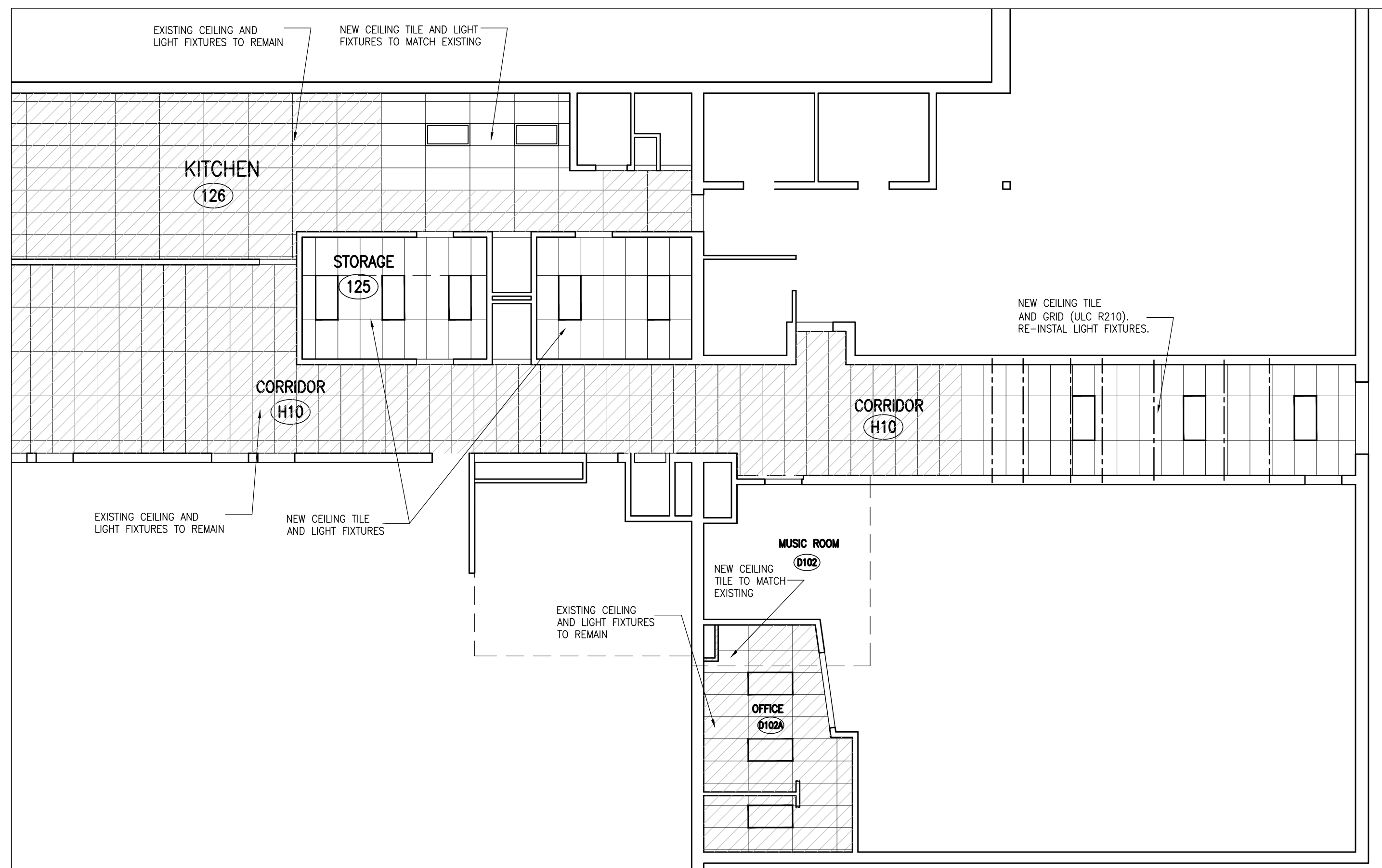
NOTE:
CAREFULLY REMOVE EXISTING SUSPENDED LIGHT FIXTURES AND RE-INSTALL AFTER COMPLETION OF WORK IN FOLLOWING ROOMS:
CARPENTRY SHOP B106, ELECTRICAL SHOP B107, COMPUTER ROOM B108, AUTOMOTIVE SHOP B109.



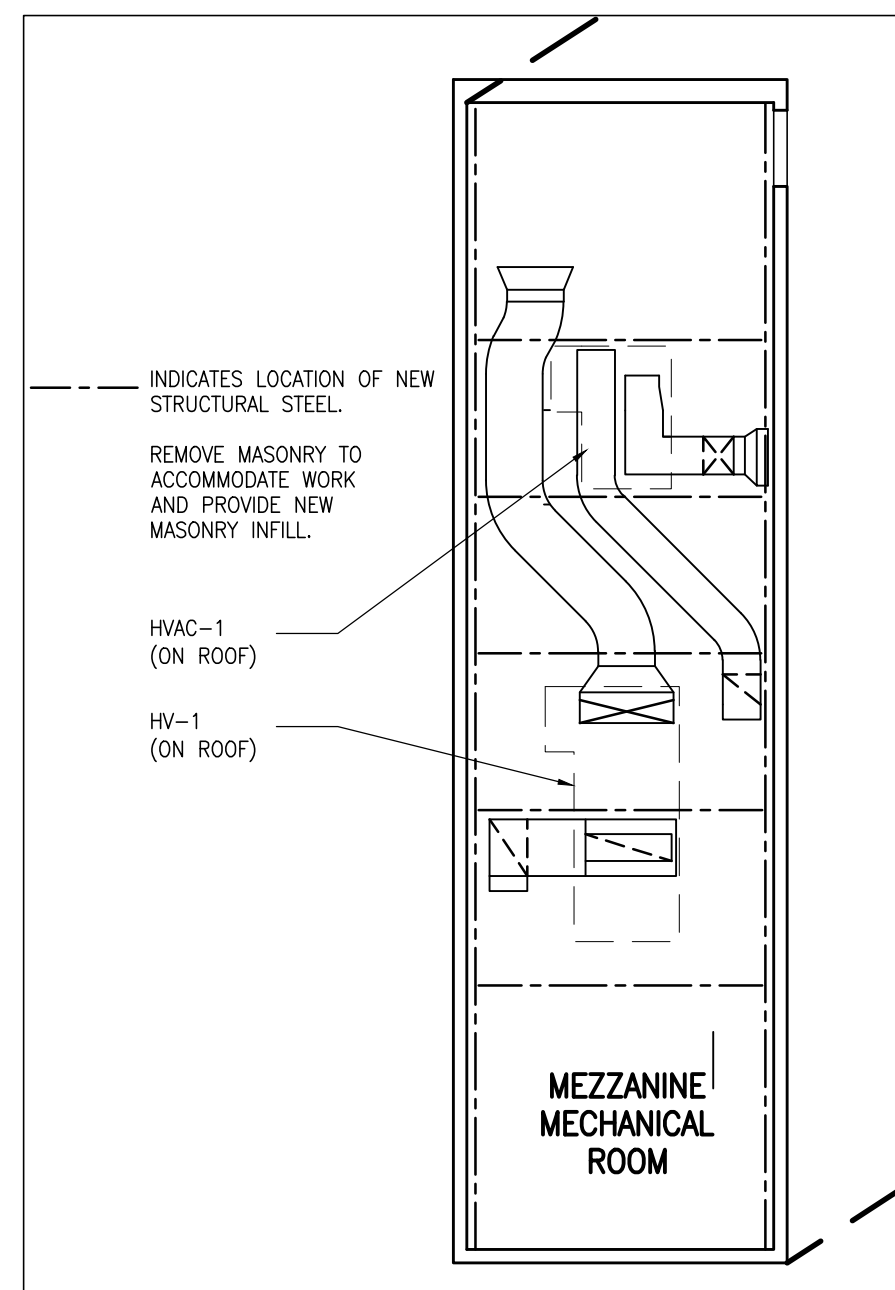
3
A3
FIRST FLOOR PART A - NEW PLAN
SCALE 1:200



4
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FIRST FLOOR PART B - REFLECTED CEILING DEMOLITION PLAN
SCALE 1:100



5
A3
FIRST FLOOR PART B - NEW REFLECTED CEILING PLAN
SCALE 1:100



6
A3
PART C - MEZZANINE MECHANICAL ROOM
SCALE 1:100

REFLECTED CEILING LEGEND:

- HATCH DENOTES EXISTING CEILING
- HATCH DENOTES EX. CEILING TILE AND CEILING FIXTURES TO BE REMOVED
- CEILING FIXTURE TO BE REMOVED
- RECESSED LIGHT FIXTURE 610 x 1220
- RECESSED OR SUSPENDED LIGHT FIXTURE 305 x 1220

NOTES:

- FOR EXACT NUMBER OF PENETRATIONS IN CEILINGS FOR DIFFUSERS, GRILLES, SPRINKLER HEADS, ACCESS OPENINGS, ETC. REFER TO MECHANICAL DRAWINGS
- IN AREAS INDICATED AS EXPOSED STRUCTURE (NO CEILINGS PROVIDED) DUCTWORK/PPEWORK/CONDUIT ETC. SHALL BE MOUNTED TIGHT TO U/S OF SLAB OR DECK, ROUTED PARALLEL AND PERPENDICULAR TO WALLS
- CEILING TILES ARE TO BE FIRE RATED TYPE IN ALL CORRIDORS

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KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING

FIRST FLOOR PART 'A'
'B' & 'C' DEMOLITION AND
NEW FLOOR PLAN

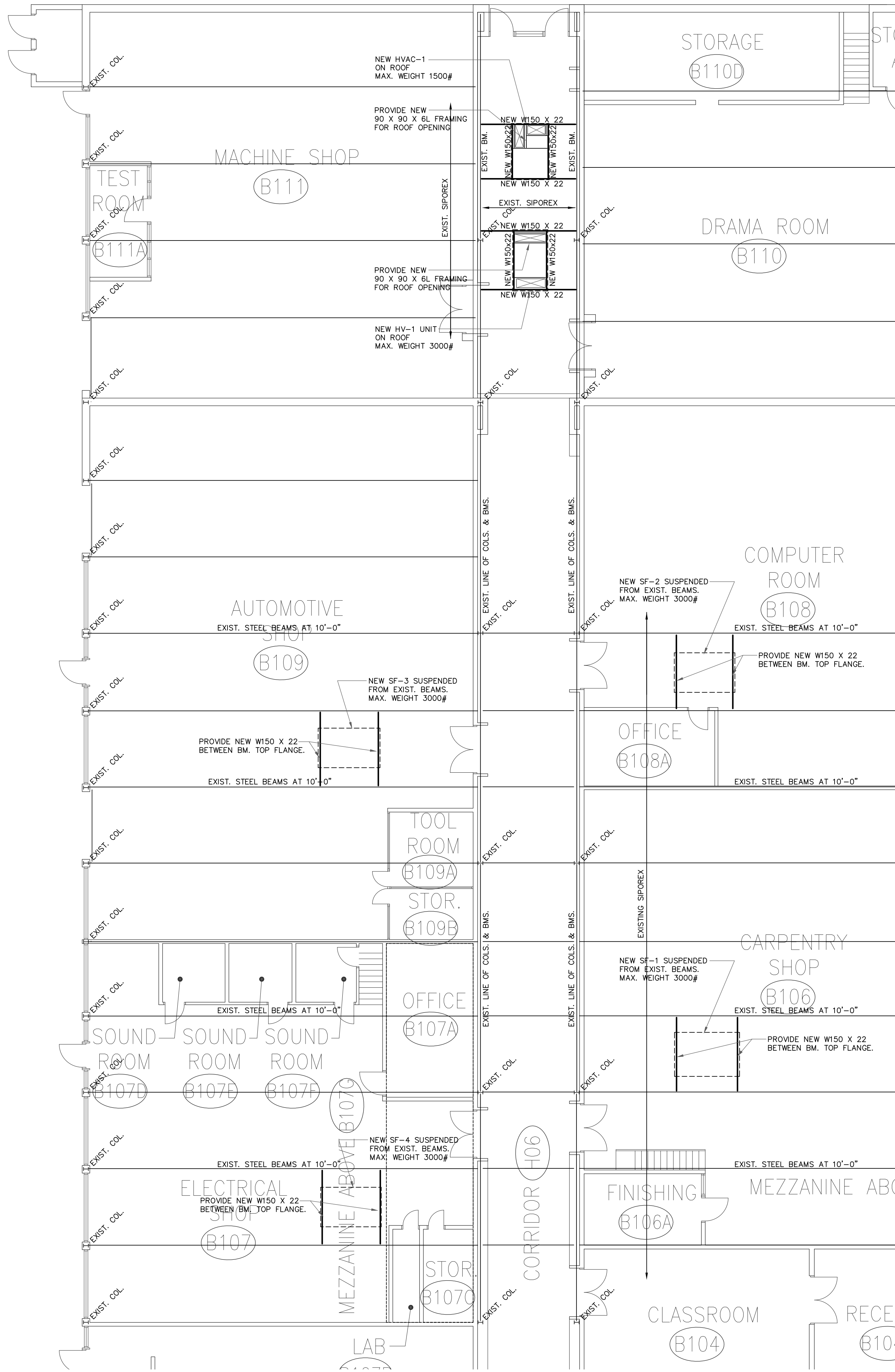
ONTARIO ASSOCIATION
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LICENCE 4895

2148
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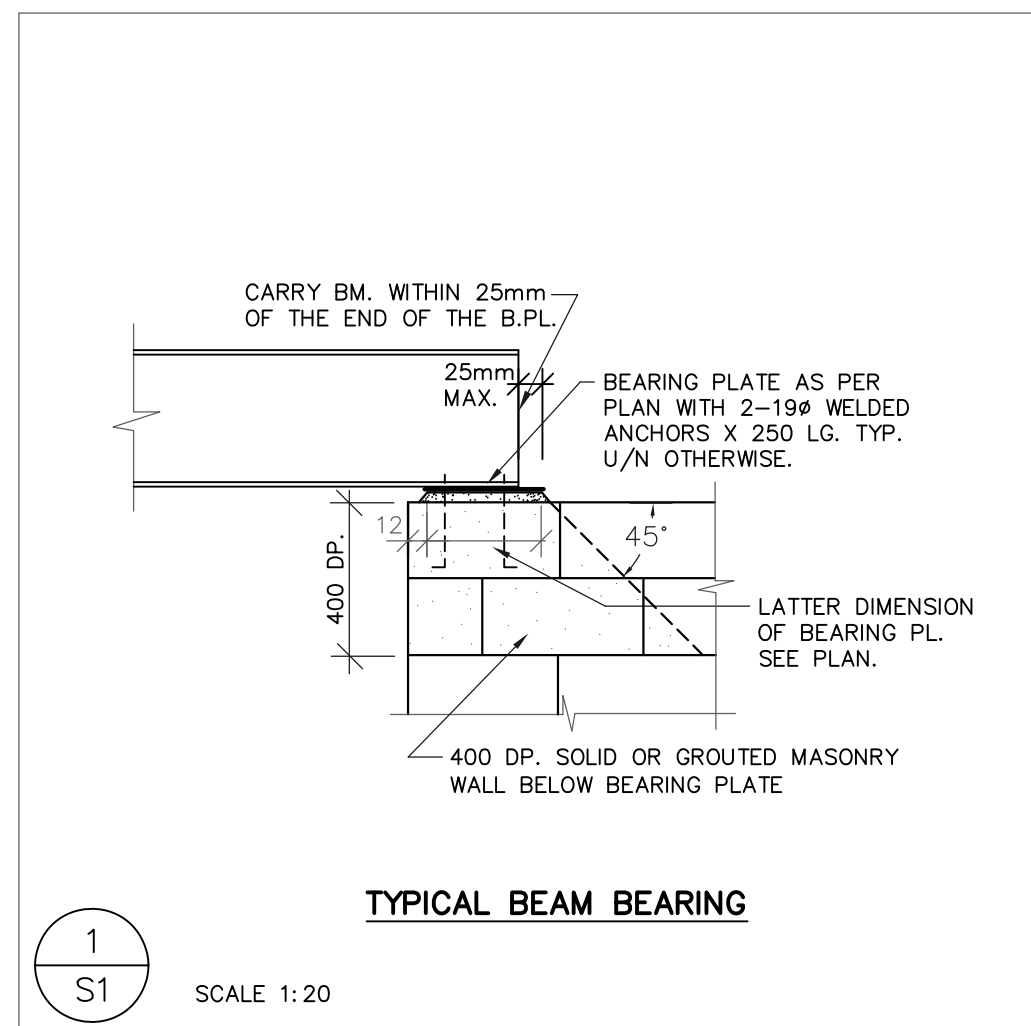
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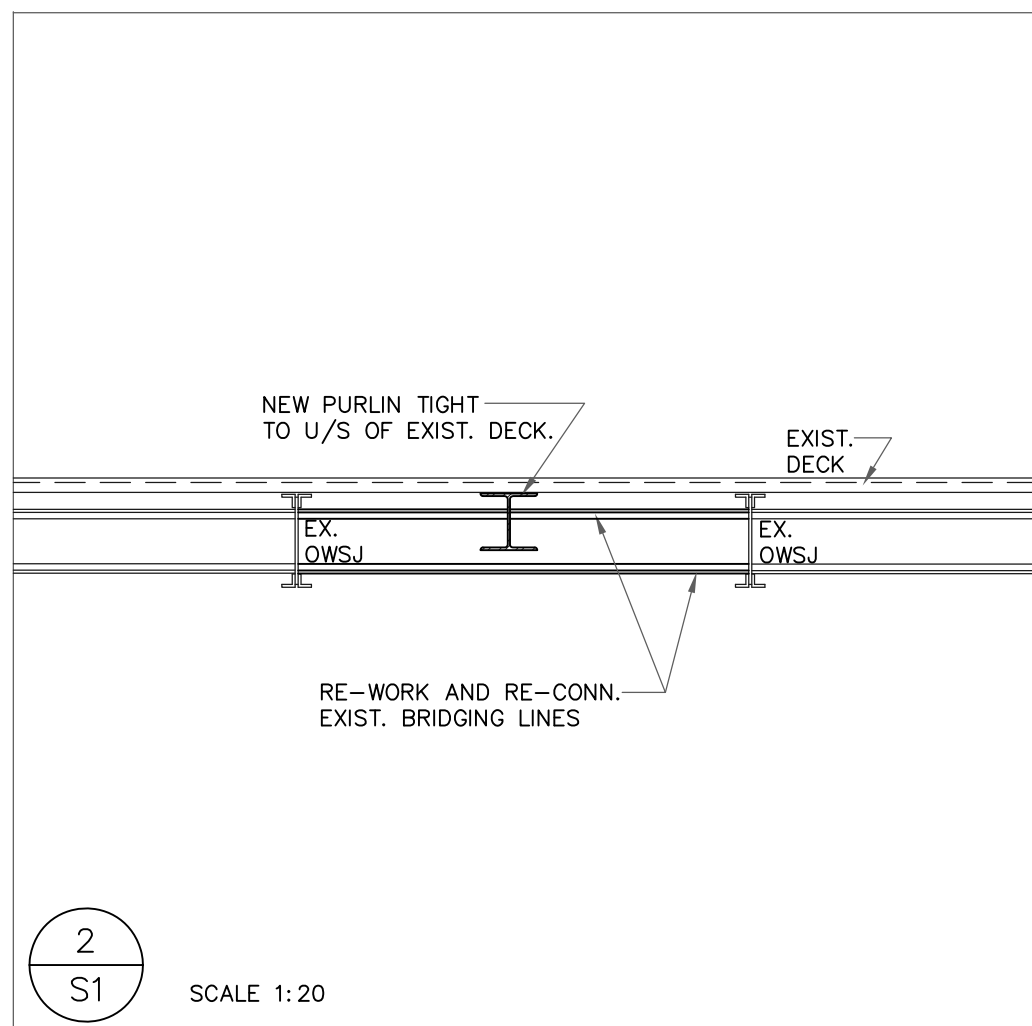
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A3



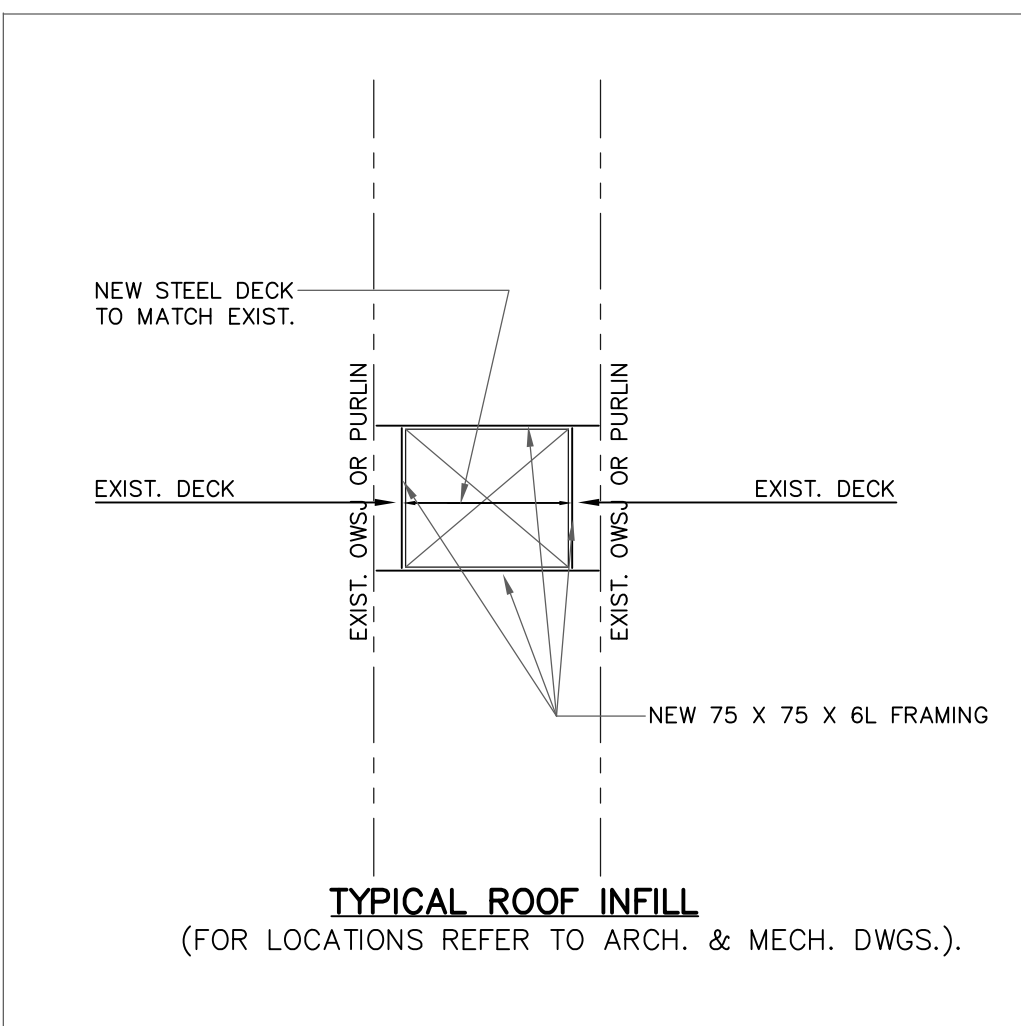
AREA 'A' - EXISTING SHOP WING ROOF PLAN SCALE 1:100



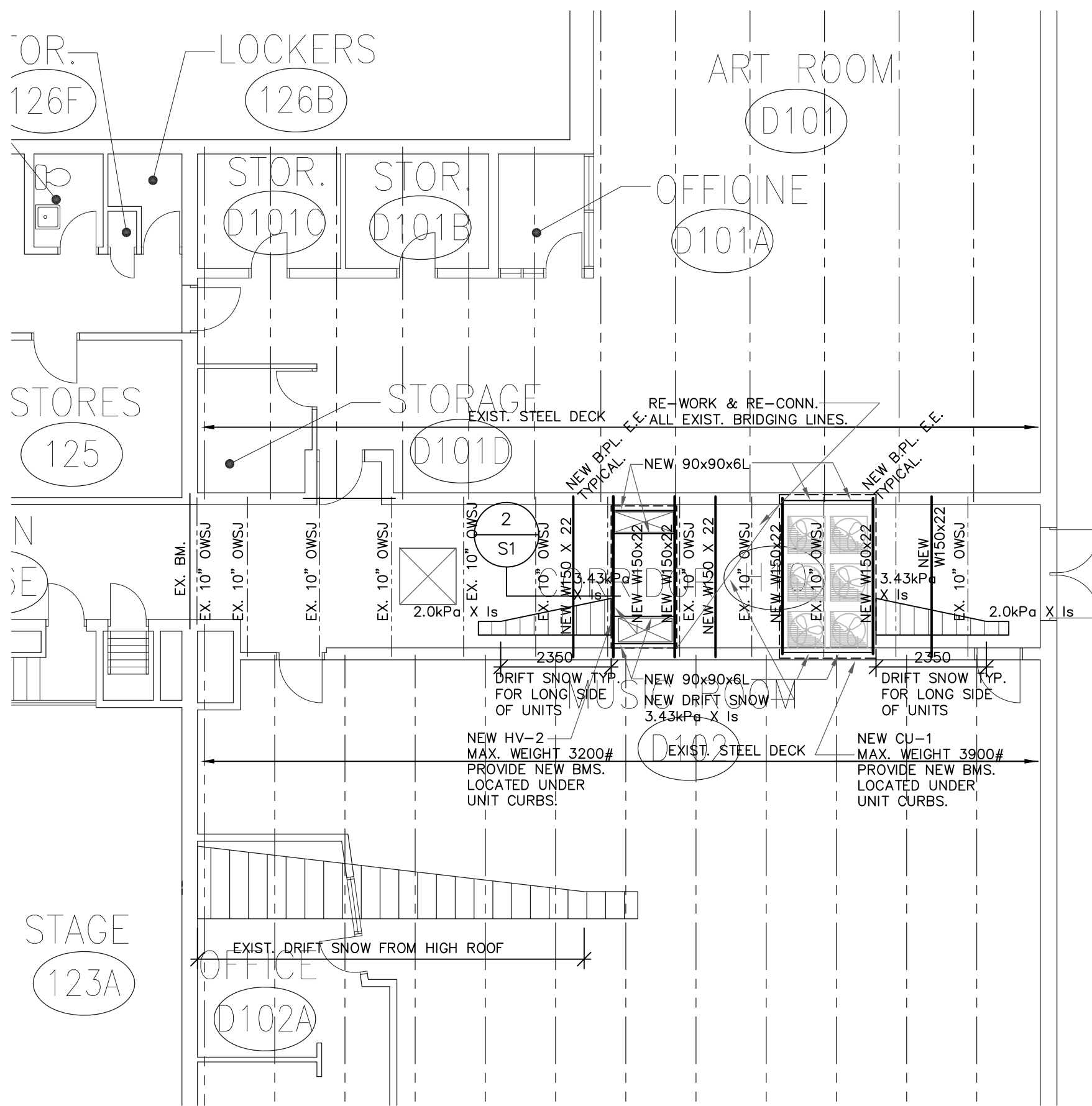
TYPICAL BEAM BEARING



TYPICAL ROOF INFILL



TYPICAL ROOF INFILL (FOR LOCATIONS REFER TO ARCH. & MECH. DWGS.).



AREA 'B' - ROOF PLAN SCALE 1:100

ROOF PLAN NOTES

SCALE 1:100

- ALL ROOF STRUCTURE IS EXISTING UNLESS NOTED OTHERWISE AS 'NEW'.
- ROOF SNOW LOAD BASED ON OBC 2012 IS 2.0kPa X IMPORTANCE FACTOR (1.15).
- PROVIDE 200 X 12 X 170 BEARING PLATES EACH END OF ALL STEEL BEAMS BEARING ON MASONRY WALL. ALL BEARING PLATES SHALL BE WITH 2-19# ANCHORS X 250 LONG. WELD BEAMS TO BEARING PLATES - SEE 1/S1.
- UNLESS NOTED OTHERWISE PROVIDE 75 X 75 X 8 ANGLE REINFORCING AROUND ALL NEW OPENINGS IN ROOF DECK. REFER TO MECHANICAL & ARCHITECTURAL DRAWINGS FOR LOCATIONS.

CONSTRUCTION SCHEDULE PHASING:

- CONTRACTORS WILL HAVE ACCESS TO ONE WORK AREA AT A TIME. ALL WORK MUST BE COMPLETED IN EACH WORK AREA BEFORE PROCEEDING TO NEXT WORK AREA.
- WORK SHALL BE SCHEDULED BASED ON MECHANICAL EQUIPMENT DELIVERY SCHEDULE BUT MUST BE COMPLETED NO LATER THAN DECEMBER 3, 2021.

CHECK ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS AND REPORT DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

DO NOT EXCEED THE DESIGN LIVE LOADS SHOWN DURING CONSTRUCTION.

NEW STRUCTURAL ELEMENTS HAVE BEEN DESIGNED TO COMPLY WITH O.B.C. 2012 INCLUDING JANUARY 2020 AMENDMENTS.

THE GENERAL CONTRACTOR SHALL EXAMINE EXISTING SITE CONDITIONS AND REPORT ANY INCONSISTENCIES TO THE ARCHITECT BEFORE STARTING ANY WORK.

STRUCTURAL STEEL NOTES:

CENTRE BEARING PLATES UNDER BEAMS OF AS NOTED. BEARING PLATE DIMENSION GIVEN LAST INDICATES SIDE PARALLEL TO BEAM WEB.

STRUCTURAL STEEL SHALL BE GRADE 40.21M 350W, HOLLOW STRUCTURAL SECTIONS SHALL BE 40.21M 350W CLASS C.

UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATIONS, THE ULTIMATE 28 DAY STRENGTH OF CONCRETE SHALL BE 25MPa; REINFORCING STEEL SHALL BE DEFORMED BARS OF 400MPa YIELD STRENGTH.

MASONRY NOTES:

PROVIDE MINIMUM 200mm OF BEARING FOR STEEL BEAMS SUPPORTED ON MASONRY. REFER TO DRAWINGS FOR SIZES OF BEARING PLATES. BEARING SHALL BE OF SOLID BLOCK OR BLOCK FILLED SOLID WITH 20MPa CONCRETE 400mm DEEP AND PROJECTING 200mm EACH SIDE OF BEAM BEARING PLATE, BASE PLATE OR CONCRETE PAD. REFER ALSO TO TYPICAL DETAIL.

BUILD MASONRY TIGHT INTO WEBS OF BEAMS AT THEIR BEARINGS.

STRUCTURAL STEEL SHALL BE GRADE 40.21M 350W, HOLLOW STRUCTURAL SECTIONS SHALL BE 40.21M 350W CLASS C.

UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATIONS, THE ULTIMATE 28 DAY STRENGTH OF CONCRETE SHALL BE 25MPa; REINFORCING STEEL SHALL BE DEFORMED BARS OF 400MPa YIELD STRENGTH.

STRUCTURAL STEEL SPECIFICATION:

SUBMIT SHOP DRAWINGS TO THE CONTRACTOR BEFORE FABRICATION IS STARTED.

FABRICATE, SUPPLY AND ERECT STRUCTURAL STEEL WORK IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

DESIGN, FABRICATE AND ERECTION CSA-S16

WELDING CSA-W47 & W59

CLEANING COSB-31-GP-402

BOLTS ASTM-A325

PAINT COSB-1-GP-40d

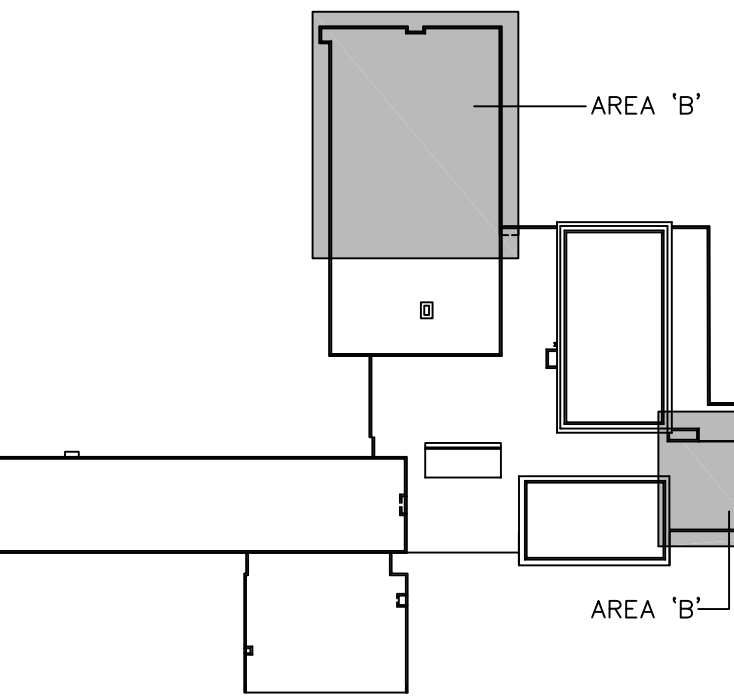
CONNECTIONS SHALL BE DESIGNED FOR THE REACTIONS PRODUCED BY LOADING CONDITIONS. ALL CONNECTIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN ONTARIO.

THE SEAL SHALL BE ON SHOP DRAWINGS.

WELDING OR BOLTS TO ASTM A325 IN BEARING TYPE CONNECTIONS ONLY MAY BE USED.

ALL STRUCTURAL STEEL SHALL BE ERECTED WITHIN TOLERANCES AS PER CSA - S16.1.

GENERAL NOTES & SPECIFICATIONS



KEY PLAN

DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE FOR USE ON THIS PROJECT ONLY AND ARE NOT TO BE REPRODUCED OR PART OR WHOLE IS FORBIDDEN WITHOUT THE CONSULTANT'S WRITTEN PERMISSION.

DO NOT SCALE DRAWINGS. REFER TO ARCHITECT'S FOR DIMENSIONS. ALL DIMENSIONS/ELEVATIONS INDICATED ON STRUCTURAL DRAWINGS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS AND ANY DISCREPANCY REPORTED TO CONSULTANT.

May 10, 2021 Issued for Tender

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- MECHANICAL UPGRADES 2021

1885 SHERBROOKE ST.W. PETERBOROUGH, ONTARIO



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DRAWING

PARTIAL EXISTING FRAMING PLANS & SECTIONS

TRUE NORTH DWG. NORTH

2148 JOB NO.

2109 SCALE

AS NOTED DATE

May, 2021 PRINTED

DWG. NO.

S1

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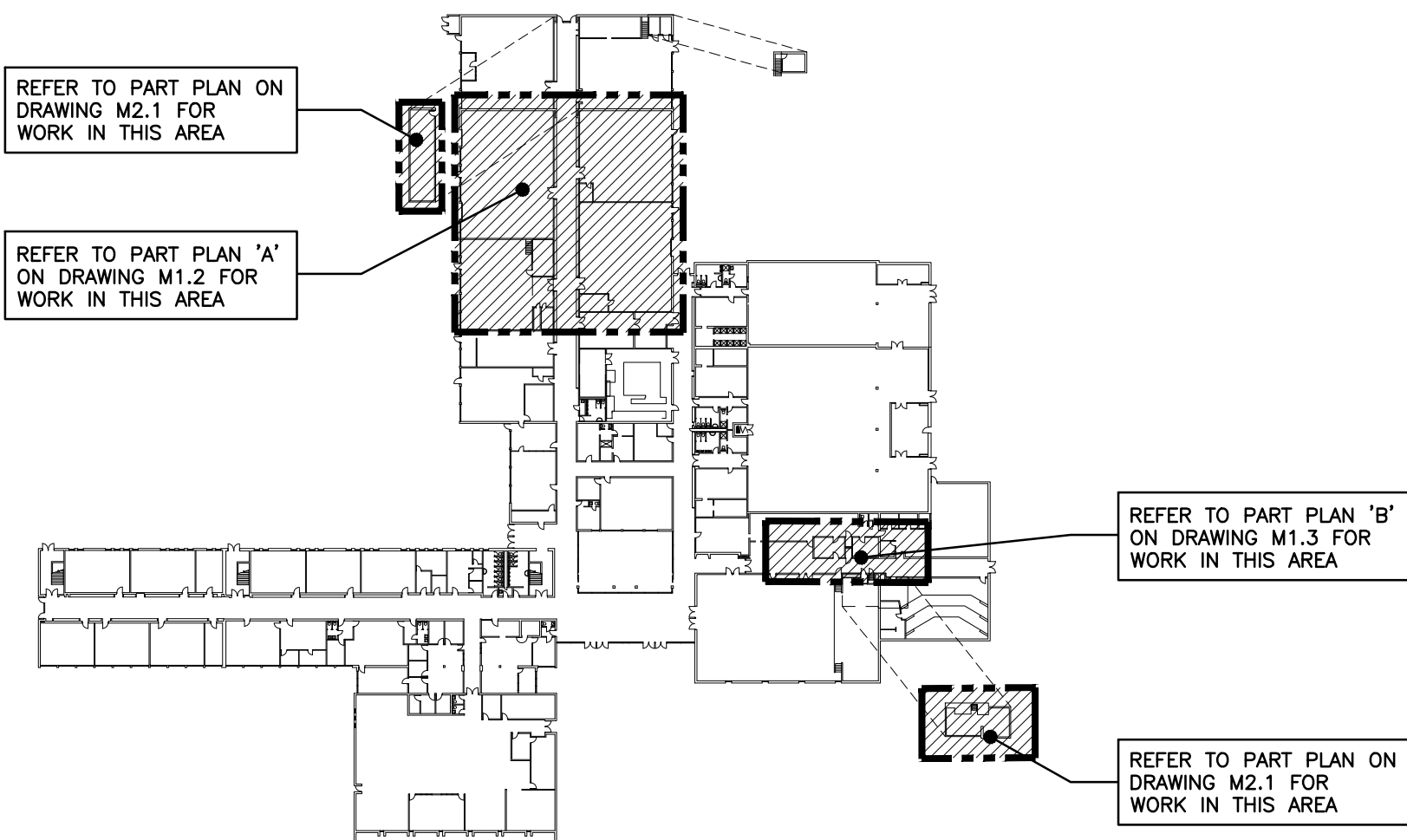
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FIRST FLOOR AND BASEMENT

KEY PLAN
SCALE: NTS

FAN SCHEDULE

New Item	Existing Item	Type	Service	Capacity cfm	Exhaust Air Data	SP in. wc	Voltage	Manufacturer	Model	Remarks
*EF-01	EX-EF	ROOF MOUNTED EXHAUST	GYM	3500	3/4	0.125	208/3/60	PENN BARRY	DX188	C/W NEW TRANSITION CURB (FAN TO SIT 24" AFR) AND BACKDRAFT DAMPER. DVR BY BAS CONTRACTOR
*EF-02	EX-EF	ROOF MOUNTED EXHAUST	GYM	3500	3/4	0.125	208/3/60	PENN BARRY	DX188	C/W NEW TRANSITION CURB (FAN TO SIT 24" AFR) AND BACKDRAFT DAMPER. DVR BY BAS CONTRACTOR
-	EX-EF-17	ROOF MOUNTED EXHAUST	KITCHEN	1000	FHP	0.25	120/1/60	-	-	REBALANCE AND REFURBISH AS SPECIFIED
-	EX-EF-22	ROOF MOUNTED EXHAUST	KITCHEN	2000	FHP	0.375	120/1/60	-	-	REBALANCE AND REFURBISH AS SPECIFIED
-	EX-EF-24	ROOF MOUNTED EXHAUST	KITCHEN	2500	1/2	0.50	208/1/60	-	-	REBALANCE AND REFURBISH AS SPECIFIED

*PRIOR TO DEMOLITION, THIS CONTRACT TO PROVIDE EXISTING BALANCING FOR FAN

AIR HANDLING UNIT SCHEDULE

Existing Item	New Item	Type	Location	Service	Capacity cfm	Size hp	Supply Air Fan Data	Drive	ESP in. wc	Min. Position Outdoor Air %	Electrical Data	MCA	MOCP	Medium	Sera. Cap. MBH	Total Cap. MBH	Cooling Rows Fins/in	Entering db/wb	Leaving db/wb	Face Vel. fpm	P.D. Air In.	Medium	Capacity MBH	Capacity GPM	EAT db °F	LAT db °F	Manufacturer & Model	Weight lbs	Remarks
EX-A-1	SF-1	BUILT-UP INDOOR AIR HANDLING UNIT	B106 CARPENTRY SHOP	B106 CARPENTRY SHOP	7000	5	VARIABLE FREQUENCY DRIVE		1.0	40	208/3/60	22	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	415	41.0	35	95	ENGINEERED AIR LMBC	2750±	UNIT HUNG FROM STRUCTURE. C/W FACE & BYPASS HEATING COIL, HORIZONTAL DISCHARGE, MIXED AIR PLENUM WITH TOP DA & REAR RA DUCT OPENINGS AND MOTOR SUITABLE FOR REMOTE VFD
EX-A-2	SF-2	BUILT-UP INDOOR AIR HANDLING UNIT	B108 WEIGHT ROOM	B108 WEIGHT ROOM	4500	3	VARIABLE FREQUENCY DRIVE		1.0	20	208/3/60	15	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	155	15.5	53	85	ENGINEERED AIR LMBC	2500±	UNIT HUNG FROM STRUCTURE. C/W FACE & BYPASS HEATING COIL, HORIZONTAL DISCHARGE, MIXED AIR PLENUM WITH TOP DA & REAR RA DUCT OPENINGS AND MOTOR SUITABLE FOR REMOTE VFD
EX-A-3	SF-3	BUILT-UP INDOOR AIR HANDLING UNIT	B109 AUTOMOTIVE SHOP	B109 AUTOMOTIVE SHOP	5600	5	VARIABLE FREQUENCY DRIVE		1.0	40	208/3/60	22	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	362	36.2	35	95	ENGINEERED AIR LMBC	2500±	UNIT HUNG FROM STRUCTURE. C/W FACE & BYPASS HEATING COIL, HORIZONTAL DISCHARGE, MIXED AIR PLENUM WITH TOP DA & REAR RA DUCT OPENINGS AND MOTOR SUITABLE FOR REMOTE VFD
EX-A-4	SF-4	BUILT-UP INDOOR AIR HANDLING UNIT	B107 ELECTRICAL SHOP	B107 ELECTRICAL SHOP	4500	3	VARIABLE FREQUENCY DRIVE		1.0	20	208/3/60	15	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	155	15.5	53	85	ENGINEERED AIR LMBC	2500±	UNIT HUNG FROM STRUCTURE. C/W FACE & BYPASS HEATING COIL, HORIZONTAL DISCHARGE, MIXED AIR PLENUM WITH TOP DA & REAR RA DUCT OPENINGS AND MOTOR SUITABLE FOR REMOTE VFD
EX-A-6	SF-5	HORIZONTAL FLOOR MOUNTED AIR HANDLING UNIT	FAN ROOM 124	123 CAFETERIA	7500	10	VARIABLE FREQUENCY DRIVE		1.5	25	208/3/60	40	70	DX	253	494	6/10	86/73	54/54	536	1.0	WATER	330	33.0	50	90	ENGINEERED AIR LMBC	3800±	C/W FACE & BYPASS HEATING COIL, HORIZONTAL DISCHARGE, MIXED AIR PLENUM WITH TOP DA & REAR RA DUCT OPENINGS AND MOTOR SUITABLE FOR REMOTE VFD. UNIT TO BE SHIPPED IN SECTIONS
EX-H-4	SF-6	HORIZONTAL FLOOR MOUNTED AIR HANDLING UNIT	FAN ROOM 124A	D102 MUSIC ROOM	4000	5	VARIABLE FREQUENCY DRIVE		1.0	20	208/3/60	22	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	130	13.0	55	85	ENGINEERED AIR LMBC	1800±	C/W FACE & BYPASS HEATING COIL, HORIZONTAL DISCHARGE, MIXED AIR PLENUM WITH TOP DA & REAR RA DUCT OPENINGS AND MOTOR SUITABLE FOR REMOTE VFD. UNIT TO BE SHIPPED IN SECTIONS
EX-H-1	HV-1	GAS FIRED INDIRECT HEAT VENT ROOFTOP UNIT	SHOP WING ROOF	B111 MACHINE SHOP	4500	5	VARIABLE FREQUENCY DRIVE		1.0	40	208/3/60	27	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	400	-	35	95	ENGINEERED AIR DJE40	2400±	C/W 600mm HIGH ROOF CURB & MOTOR SUITABLE FOR REMOTE VFD. REFER TO ITEMIZED PRICE IN DIVISION 1 SPECIFICATION
EX-A-6	HV-2	GAS FIRED INDIRECT HEAT VENT ROOFTOP UNIT	ROOF	C126 KITCHEN	6500	7.5	VARIABLE FREQUENCY DRIVE		1.0	50	208/3/60	36	60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	400	-	33	80	ENGINEERED AIR DJE40	2800±	C/W HORIZONTAL DUCT CONNECTIONS, 600mm HIGH ROOF CURB & MOTOR SUITABLE FOR REMOTE VFD.



AIR HANDLING UNIT DETAILS
SCALE: NTS

VIBRATION ISOLATION SCHEDULE

Item	Base Type	Isolator Series	Static Deflection	Isolator Category	Remarks
CU-105	-	VSV	0.7	3	PROVIDE CONTINUOUS SUPPORT, REFER TO ITEMIZED PRICE IN DIVISION 1 SPECIFICATION

CONDENSING UNIT SCHEDULE (REFER TO IDENTIFIED PRICE)

Item	Type	Capacity MBH	Unit Weight lbs	MCA	MOCP	Voltage	Manufacturer	Model	Remarks
CU-105	OUTDOOR ROOF MOUNTED	494	3900±	203	250	208/3/60	ENGINEERED AIR	CU453	PROVIDE HOT GAS BYPASS ON LEAD COMPRESSOR & VIBRATION ISOLATION. CONNECT TO SF-S. REFER TO ITEMIZED PRICE IN DIVISION 1 SPECIFICATION

CIRCULATION PUMP SCHEDULE

No.	Service	Type	Voltage	GPM	Head	Hp	RPM	Minimum Pump Inlet Size	Manufacturer	Model	Remarks
P-101	SF-5 HEATING COIL	INLINE	120/1/60	33	15	1/3	1750	1.25"	B&G	E90 1.25AAB	
P-102	SF-6 HEATING COIL	INLINE	120/1/60	13	15	FHP	1750	1"	B&G	E90	

REHEAT COIL SCHEDULE

Item	Size	New cfm	EWI °F	LWT °F	EAT °F	LAT °F	New Capacity MBH	New Flow gpm	Manufacturer	Remarks
RH-101	1000x550	4500	180	160	55	95	194.4	20	ENGINEERED AIR	PROVIDE MIN. 2 ROW COIL. SIZE INDICATES FACE SIZE. SUPPORT UNIT FROM STRUCTURE
RH-102	500x500	2000	180	160	55	95	86.4	8.6	ENGINEERED AIR	PROVIDE MIN. 2 ROW COIL. SIZE INDICATES FACE SIZE. SUPPORT UNIT FROM STRUCTURE

PACKAGED HVAC UNIT SCHEDULE

Item	Type	tons	Nominal Capacity cfm	Heat MBH	Cool MBH	ESP in wc	Motor hp	Electrical Data	Acceptable Manufacturer	Notes
HVAC-1	PACKAGED ROOFTOP HVAC UNIT	5	2000	115	60	1.0	2	208/3/60, 208.8	CARRIER 48HC06, LENNOX K08000, TRANE YHC060	MED HEAT, POWER EXHAUST, DOWN DISCHARGE & RETURN. REFER TO ITEMIZED PRICE IN DIVISION 1 SPECIFICATION

GENERAL HVAC UNIT NOTES:
1. ACCEPTABLE MANUFACTURERS: CARRIER, LENNOX, TRANE
2. UNITS HAVE 2 STAGE NATURAL GAS/PROPANE HEAT, 2 STAGE DX COOLING PLUS ECONOMIZER (1 STAGE ON SMALLER UNITS), BELT DRIVE FANS, VFD FAN MOTOR CONTROL
3. PROVIDE STANDARD INSULATED 24" HIGH ROOF CURB, ADDITIONAL ISOLATION/VIBRATION RAIL/CURB, STAINLESS STEEL GAS HEAT EXCHANGER, CONDENSER COIL GUARD, STAINLESS STEEL FLUE GAS EXTENSION, POWER EXHAUST, ECONOMIZER, AND ALL HOODS & INLET SCREENS, DEHUMIDIFICATION PACKAGE WHERE INDICATED, AND 2 SETS MERV 13 DISPOSABLE FILTERS
4. CONTROLS: SYSTEM CONTROLS BY BAS CONTRACTOR, PROVIDE INTEGRAL CONTROLLER MATCHED TO BAS MANUFACTURER.

MECHANICAL LEGEND

Item	Description	Item	Description
—+—	CUT EXISTING & CONNECT NEW PIPING	—M—	MOTORIZED VALVE ACTUATOR
—▶—	FLOW DIRECTION	—S—	SOLENOID VALVE
—	DOMESTIC COLD WATER PIPING	—R—	RISER VALVE
—	DOMESTIC HOT WATER PIPING	—BV—	BALANCING VALVE
—	DOMESTIC HOT WATER RECYCLING PIPING	—P—	INLINE PUMP
—EX-SAN—	EXISTING SANITARY PIPING ABOVE FLOOR	—TCV—	TEMPERATURE CONTROL VALVE
—EX-SAN—	EXISTING SANITARY PIPING BELOW FLOOR	—DEC—	RECESSED CABINET MOUNTED FIRE EXTINGUISHER
—EX-ST—	EXISTING STORM PIPING ABOVE FLOOR	—FE—	WALL MOUNTED FIRE EXTINGUISHER
—CD—	CONDENSATE PIPING	—CO—	FLOOR CLEANOUT
—HWS—	HEATING WATER SUPPLY PIPING	—G—	TEMPERATURE GAUGE
—HWR—	HEATING WATER RETURN PIPING	—T—	THERMOMETER
—G—	NATURAL GAS PIPING	—FS—	FLOW SWITCH
FD —+—	FLOOR DRAIN	—PRV—	PRESSURE REDUCING VALVE
—	TRAP PRIMER	—	THERMOSTAT (WITH OR WITHOUT GUARD)
—	TEE CONNECTION	—>>>>	TURNING VANES
—	PIPE DOWN	—	SUPPLY AIR DUCT
—	PIPE UP	—	RETURN/EXHAUST AIR DUCT
—	REDUCER/INCREASER	—	ACOUSTIC DUCT LINING
—	CHECK VALVE	—	BRANCH LINE SPIN-IN COLLAR C/W BALANCING DAMPER
—	UNION	—	BALANCING DAMPER
—	STRAINER	—BD	OPPOSED BLADE DAMPER
—Y—	PRESSURE & TEMPERATURE TEST STATION	—OBD	OPPOSED BLADE DAMPER
—	DRAIN (SCHEMATICS)	—	MOTORIZED DAMPER (OPPOSED BLADE)
—VB	VACUUM BREAKER	—FD	FIRE DAMPER
—	SCREWED OR WELDED PIPE CAP	—BDD	BACKDRAFT DAMPER
—	PLUG VALVE	—	FLEXIBLE ROUND DUCT
—Bt	BALL VALVE	—	RIGID ROUND DUCT
—Bf	BUTTERFLY VALVE	—Type Size Cap	DIFFUSER/GRILLE SIZE (Imp), TYPE & CAPACITY (cfm)
—	GATE VALVE	—AFF	ABOVE FINISHED FLOOR
—AV	AIR VENT	—AFR	ABOVE FINISHED ROOF
—	3-WAY MIXING VALVE	—EX	EXISTING DUCT (SIZE AS INDICATED)

LOUVERED PENTHOUSE SCHEDULE

No.	Type	CFM	SP	Throat in.	Dimensions (LxWxH) in.	# of Louvers
1	INTAKE	7000	0.12	48x48	56x56x24	7
2	INTAKE	4500	0.12	36x36	44x44x24	7
3	INTAKE	5600	0.12	36x36	44x44x24	7
4	INTAKE	4500	0.12	36x36	44x44x24	7

WT CONTROL DAMPER SCHEDULE

Item	Room	Capacity cfm	Size
WT-5.1	TEACHER'S DINING	225	200#
WT-5.2	TEACHER'S DINING	225	200#

GENERAL NOTES

- ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PREPARED SPECIFICATION.
- ALL PIPING, DUCTWORK, AND EQUIPMENT IS TO BE RESTRAINED TO MEET SEISMIC CODE REQUIREMENTS. SUPPLY AND INSTALL ALL SEISMIC RESTRAINT MATERIALS TO MANUFACTURER'S WRITTEN INSTRUCTIONS. REFER TO SPECIFICATION.
- UPON COMPLETION OF THE PROJECT OR UPON COMPLETION OF EACH INDIVIDUAL PHASE OF THE PROJECT THE CONTRACTORS SHALL PROVIDE THE FOLLOWING CERTIFICATES BEFORE CONFORMANCE LETTERS ARE ISSUED BY THE CONSULTANT:
 - TSSA CERTIFICATE OF AUTHORIZATION FOR SPLIT REFRIGERATION SYSTEMS (EXCEEDING 5 TONS)
 - COPY OF MANDATORY TSSA/CSA-8149 GAS PRESSURE TEST TAG

ALL CERTIFICATES ARE TO BE SUBMITTED TOGETHER IN A SINGLE PACKAGE.

UNIT DETAIL NOTES:

- NOTED "MAX" DIMENSIONS ARE THE APPROXIMATE LARGEST DIMENSION PERMITTED TO ALLOW FOR SUITABLE CLEARANCE/SERVICE SPACE AROUND THE UNIT. IF AN "ALTERNATE" UNIT IS SELECTED IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THAT THE UNIT FITS IN THE ALLOCATED SPACE AND WORKS WITH THE DESIGN AS SHOWN. THE PROPOSED LAYOUT ADDRESSES THE SPECIFIC SERVICE/REQUIRED CLEARANCES OF THAT ALTERNATE UNIT AND THAT THE ALTERNATE UNIT DOES NOT EXCEED THE NOTED "MAX" DIMENSION.
- DAMPERS ARE SUPPLIED AND INSTALLED BY THE AHU MANUFACTURER. DAMPER OPERATORS ARE SUPPLIED AND INSTALLED BY THE BAS CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE AIR HANDLING UNIT MANUFACTURER TO DETERMINE WHICH UNITS SHALL BE DELIVERED IN SECTIONS AND ASSEMBLED ON SITE IN PLACE. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL THE UNIT IN PLACE TO THE STANDARDS OF THE MANUFACTURER.

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2021 DEI & Associates Inc.

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Project Number: 21056

MAY 11, 2021 ISSUED FOR PERMIT AND TENDER

DATE REVISIONS

CRESTWOOD SECONDARY SCHOOL - MECHANICAL UPGRADES 2021
1885 SHERBOROKE ST.W. PETERBOROUGH, ONTARIO

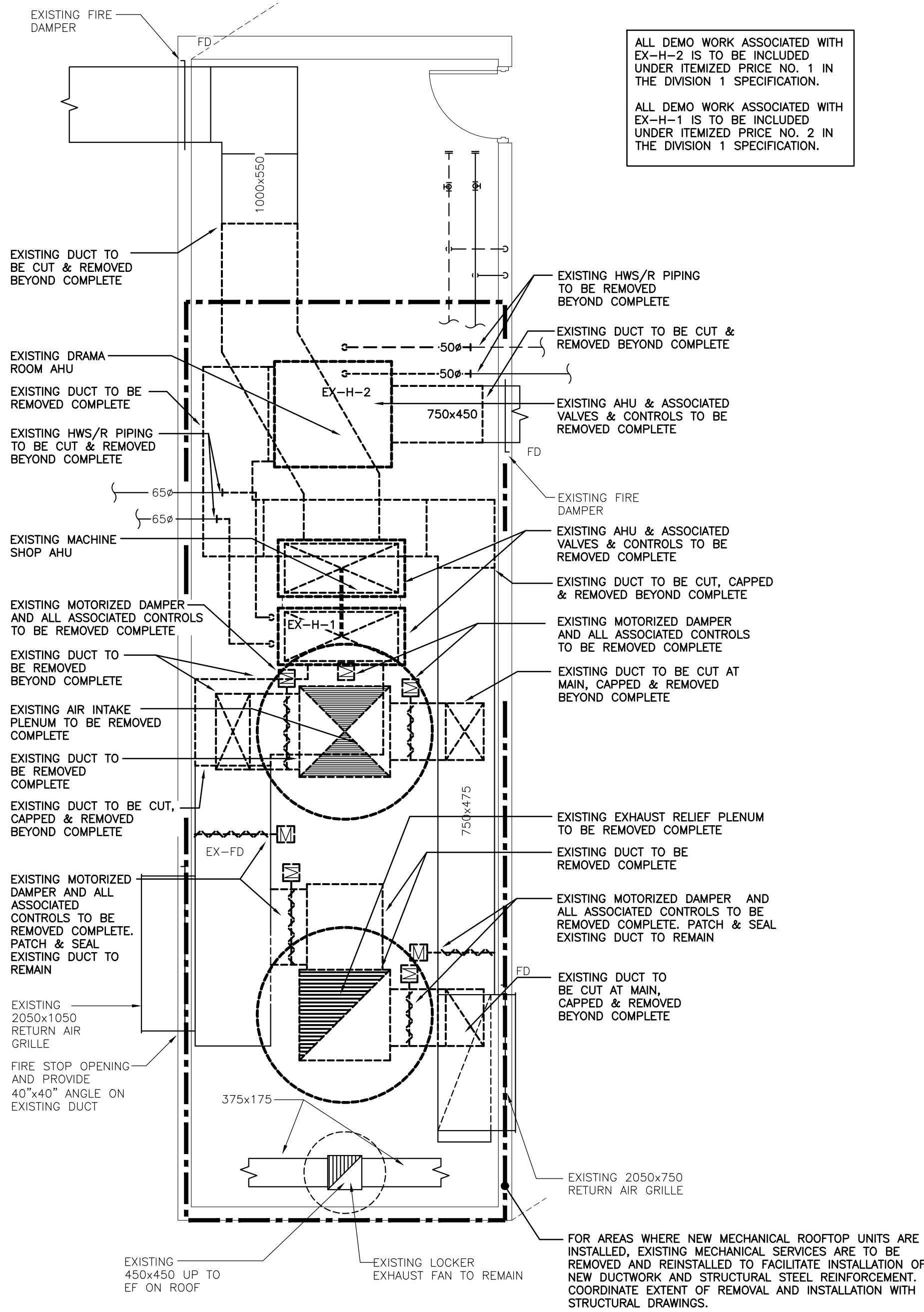


KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

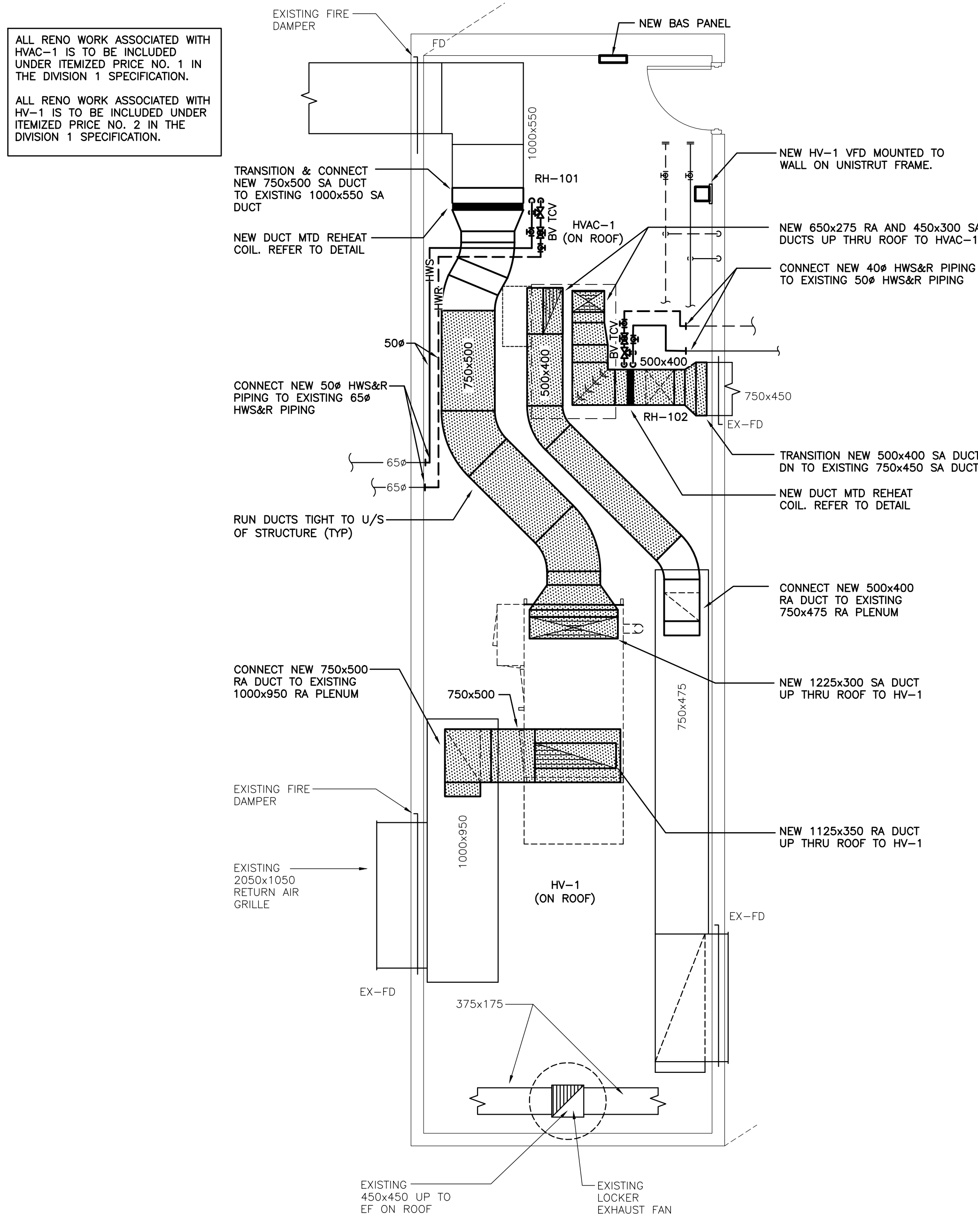
LEGEND, SCHEDULES, KEY PLAN, AND NOTES

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	2148	JOB NO.
	AS NOTED	SCALE
	APRIL 2021	DATE
MOFFET & DUNCAN architects inc. 5052 DUNDAS ST. WEST TORONTO, ON, M9A 1B9 TEL: (416) 239-0778 FAX: (416) 239-6729 EMAIL: mduffy@moffetduncan.ca		DWG. NO. M1.1

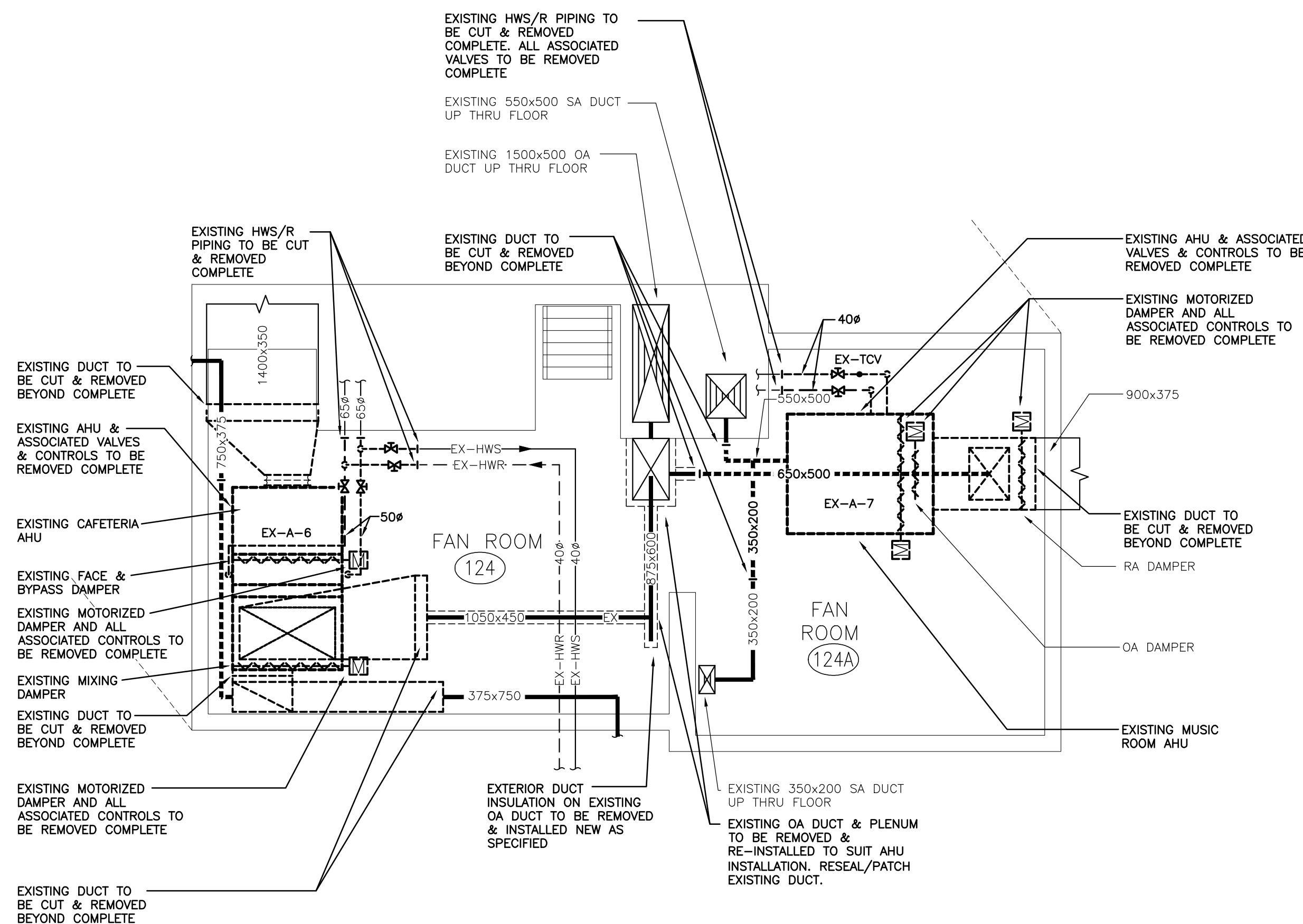
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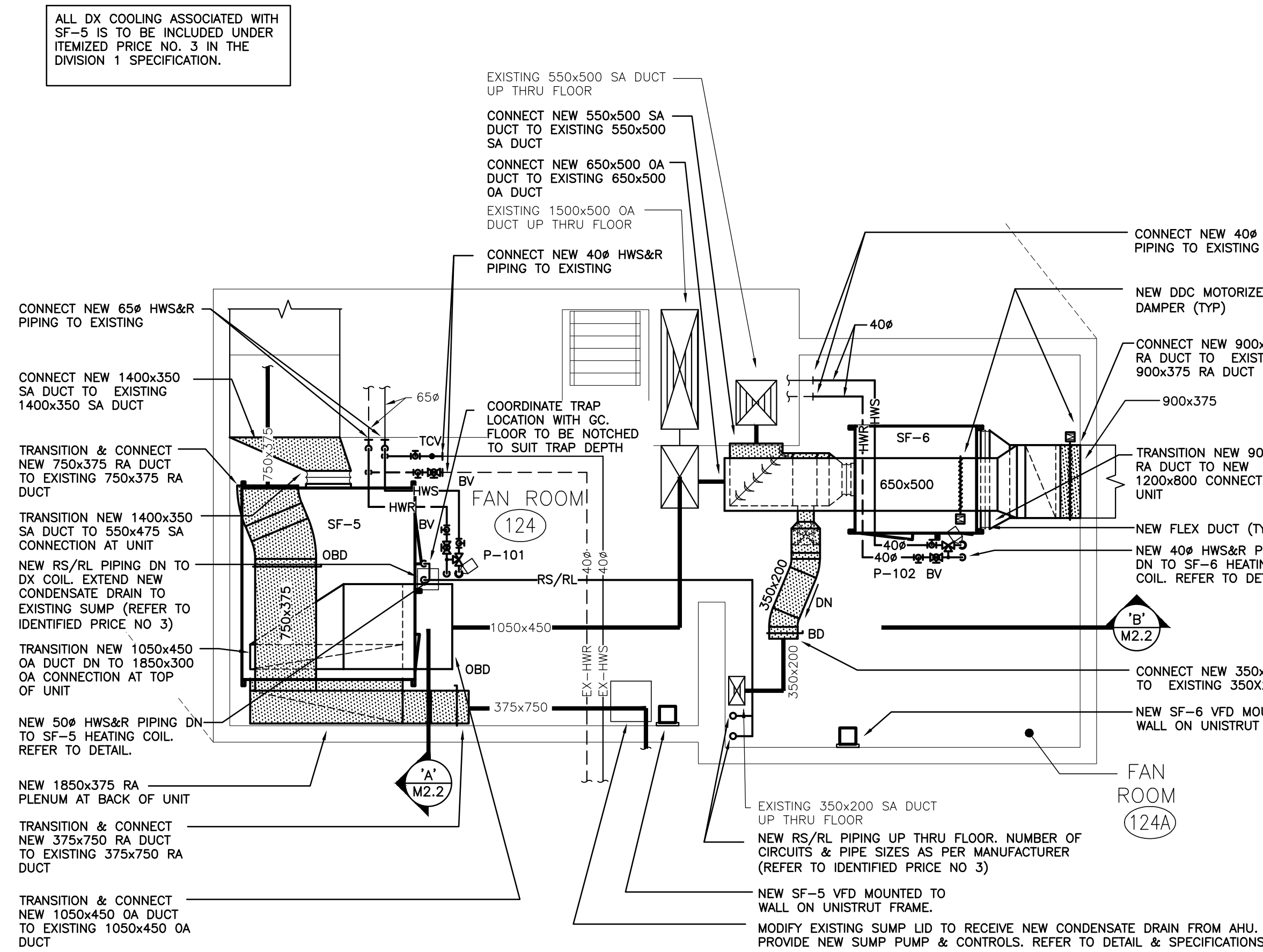
SHOP WING MECHANICAL ROOM — DEMOLITION
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SHOP WING MECHANICAL ROOM — RENOVATION
SCALE: 1:50



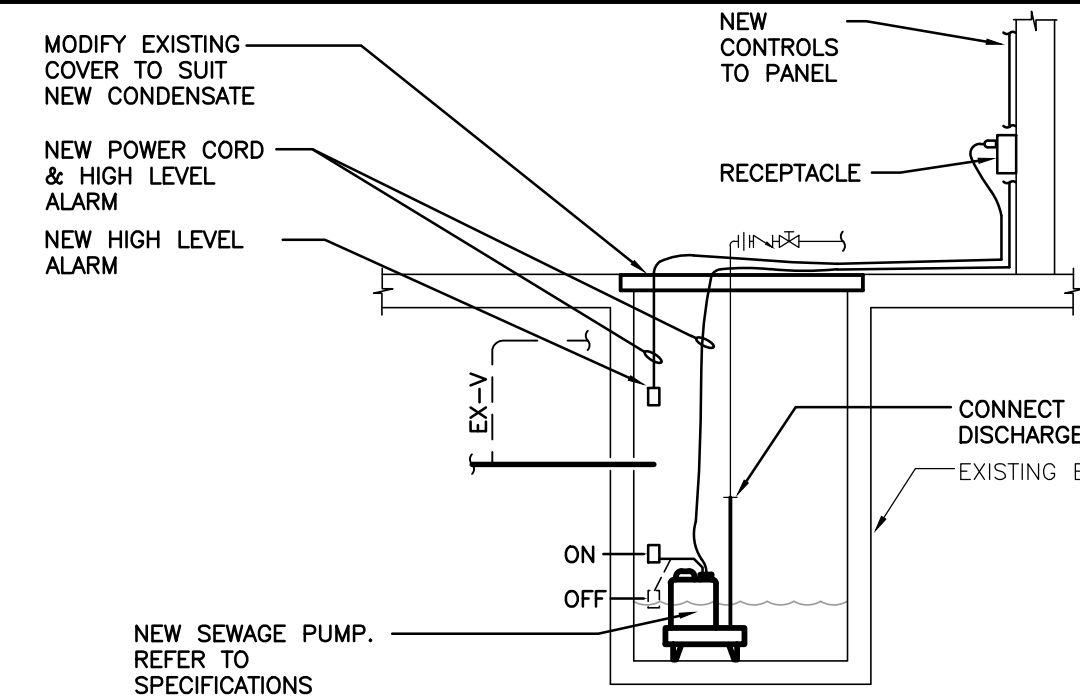
BASEMENT MECHANICAL ROOM — DEMOLITION
SCALE: 1:50



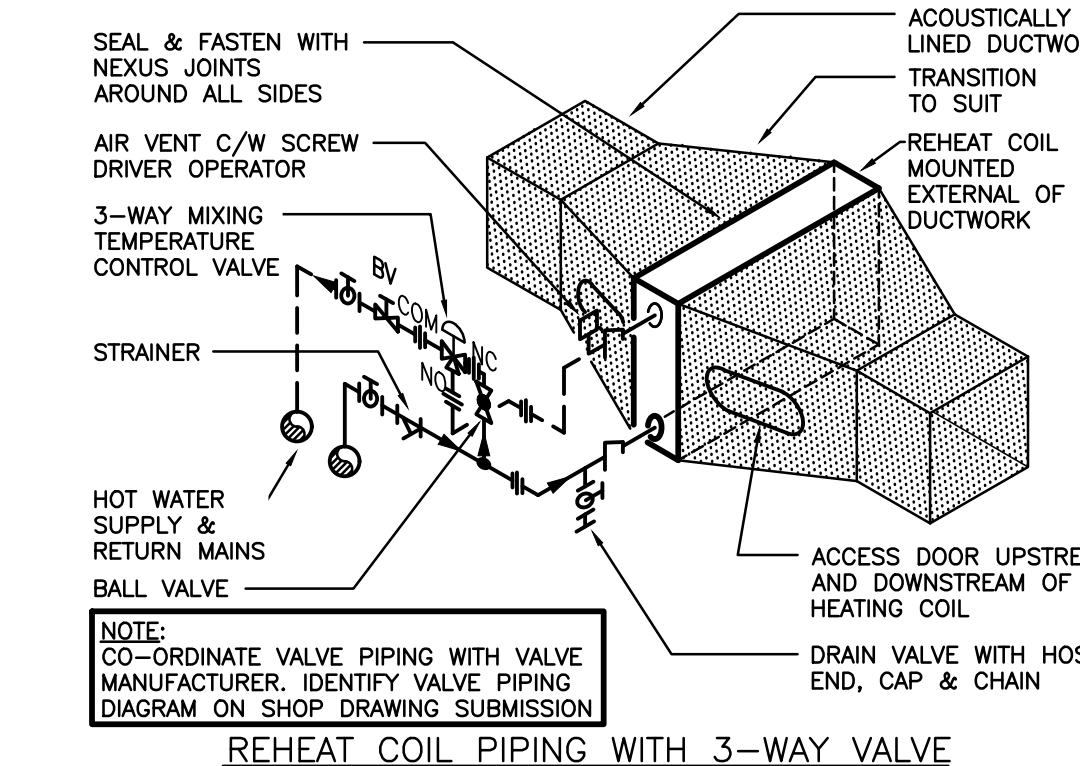
BASEMENT MECHANICAL ROOM — RENOVATION
SCALE: 1:50

GENERAL DEMOLITION NOTES

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- EXISTING MECHANICAL ITEMS SHOWN BUT NOT NOTED AS BEING REMOVED OR RENOVATED SHALL REMAIN AS PRESENTLY INSTALLED AND OPERATING.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ON SITE ALL LOCATIONS AND SIZES OF ALL SERVICES & EQUIPMENT PRIOR TO THE COMMENCEMENT OF WORK.
- ALL OPENINGS THAT RESULT FROM THE REMOVAL OF EQUIPMENT OR SERVICES SHALL BE NEATLY PATCHED WITH SUITABLE NEW MATERIALS TO SUIT EXISTING CONSTRUCTION.
- PLUMBING VENTS ARE NOT INDICATED OR IDENTIFIED. REMOVE ALL REDUNDANT VENTS WHILE MAINTAINING INTEGRITY OF EXISTING SYSTEMS TO REMAIN.
- REMOVAL OF EXISTING PIPING, OR DUCT SYSTEMS INCLUDES REMOVAL OF ALL HANGERS, INSULATION, FITTINGS, ETC.
- MAINTAIN INTEGRITY OF EXISTING SYSTEMS THAT ARE TO REMAIN OR BE MODIFIED.
- INSTALL NEW SYSTEM OR SERVICES WHERE REQUIRED TO MAINTAIN SYSTEM OPERATION PRIOR TO DEMOLITION OF EXISTING SERVICES.
- THIS CONTRACTOR IS TO REMOVE & REPLACE CEILINGS AS REQUIRED FOR REMOVAL/REPLACEMENT OF SERVICES.



EXISTING WEEPING TILE SUMP PUMP WITH RECEPTACLE



REHEAT COIL PIPING WITH 3-WAY VALVE

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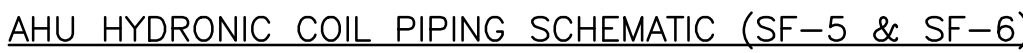
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CRESTWOOD SECONDARY SCHOOL
- MECHANICAL UPGRADES 2021
1885 SHERRBOOKE ST.W. PETERBOROUGH, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
DRAWING






SHOP WING AND BASEMENT MECHANICAL ROOM PLANS

TRUE NORTH DWG. NORTH
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 <h1 style="margin: 0;">DEI</h1> <p>Consulting Engineers</p> <p>MECHANICAL ELECTRICAL AQUATIC</p> <p>55 Northland Road, Waterloo, ON N2V 4Y8 Phone: 519-725-3555 Fax: 519-725-2515 Website: deiassociates.ca Project Number: 23056</p>	
MAY 11, 2021	ISSUED FOR PERMIT AND TENDER
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CRESTWOOD SECONDARY SCHOOL - MECHANICAL UPGRADES 2021 1885 SHERBROOKE ST.W. PETERBOROUGH, ONTARIO	
	
KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD	
DRAWING	
SECTIONS & DETAILS	
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MOFFET & DUNCAN architects inc. 5052 DUNDAS ST. WEST TORONTO, ON. M6A 1B9 TEL: (416) 235-2775 FAX: (416) 235-6729 EMAIL: mofor@mofford.ca	DATE
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DATE	REVISIONS
MAY 11, 2021	ISSUED FOR PERMIT AND TENDER

**CRESTWOOD SECONDARY SCHOOL
- MECHANICAL UPGRADES 2021**
1885 SHERBROOKE ST.W. PETERBOROUGH, ONTARIO



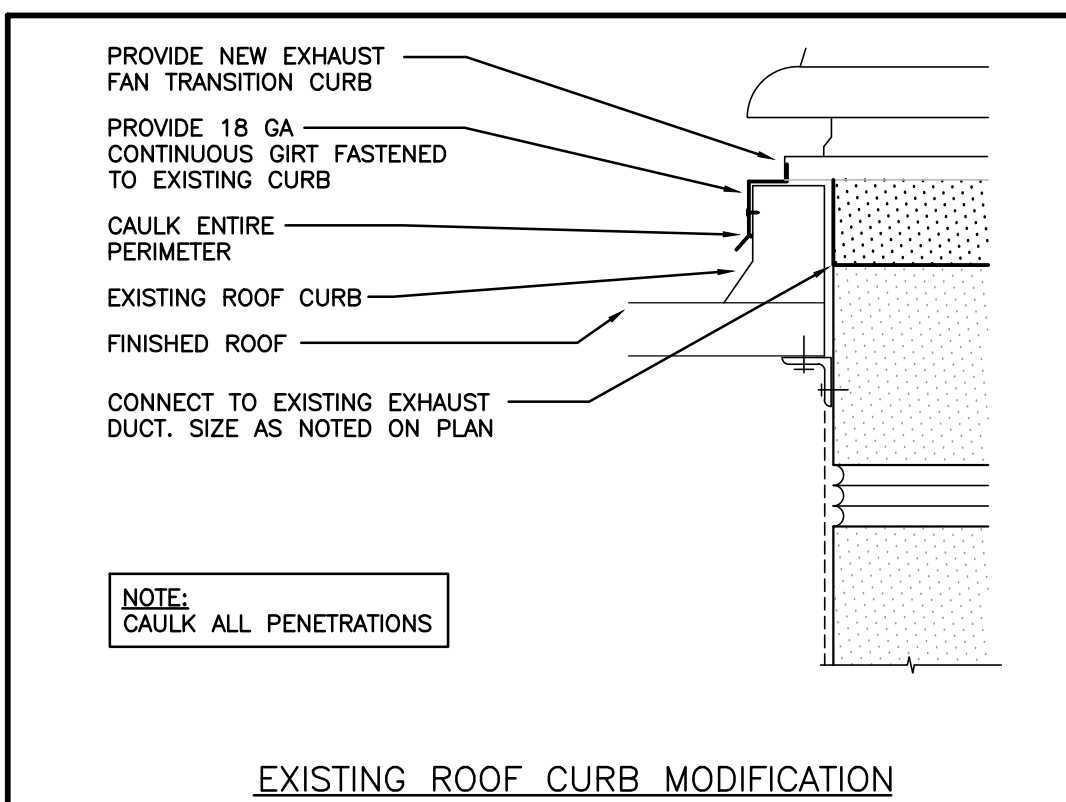
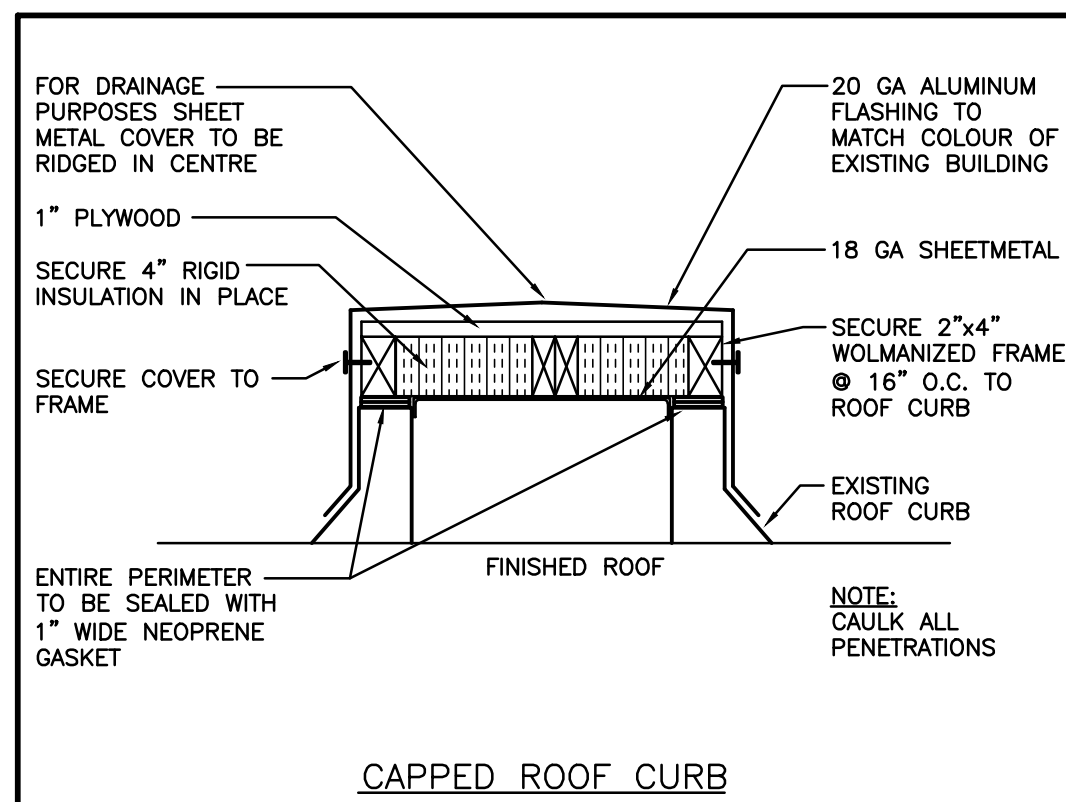
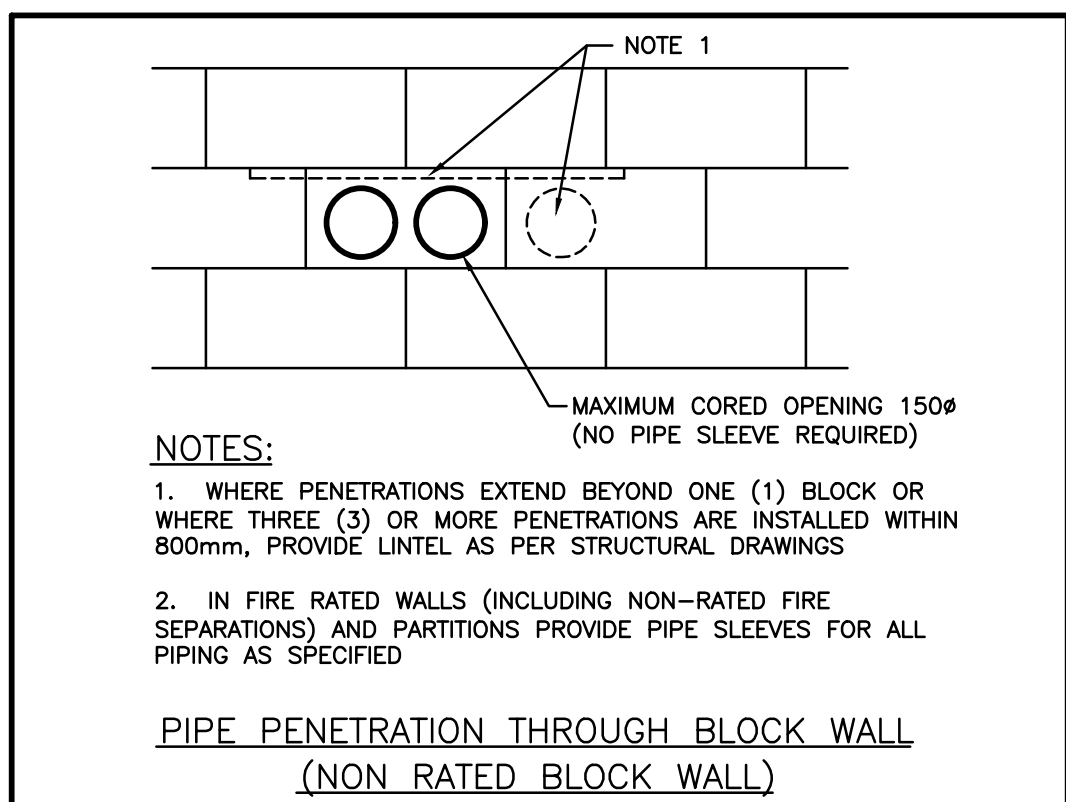
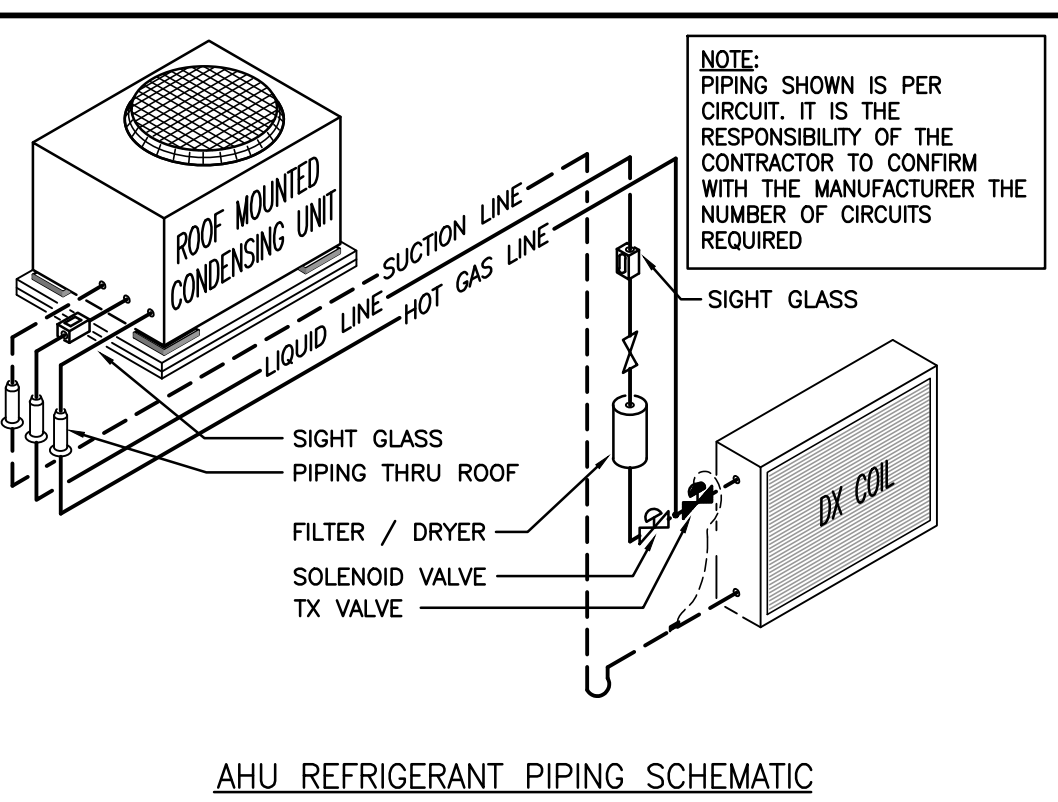
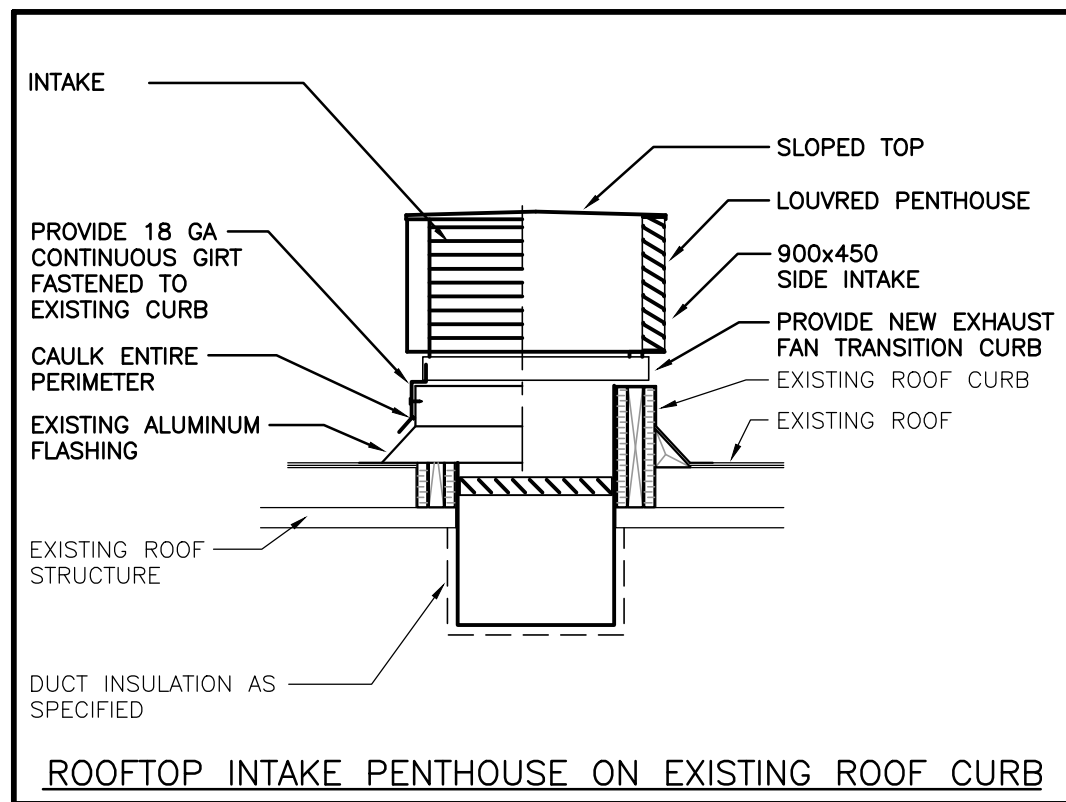
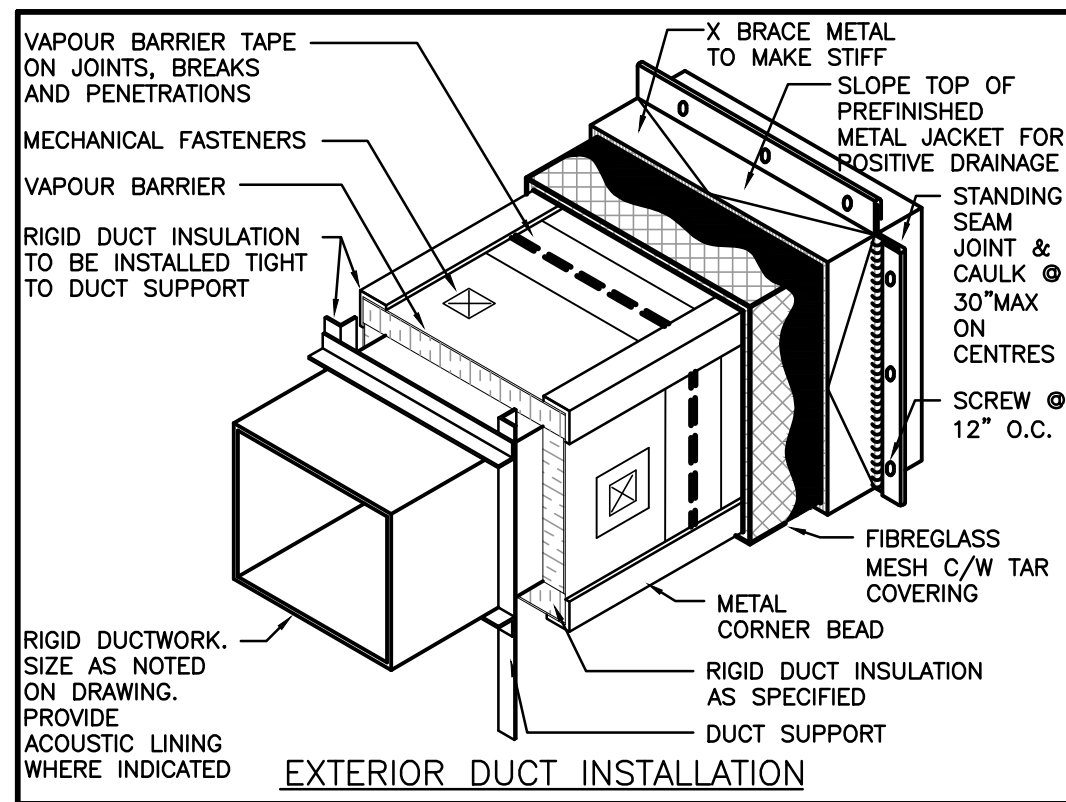
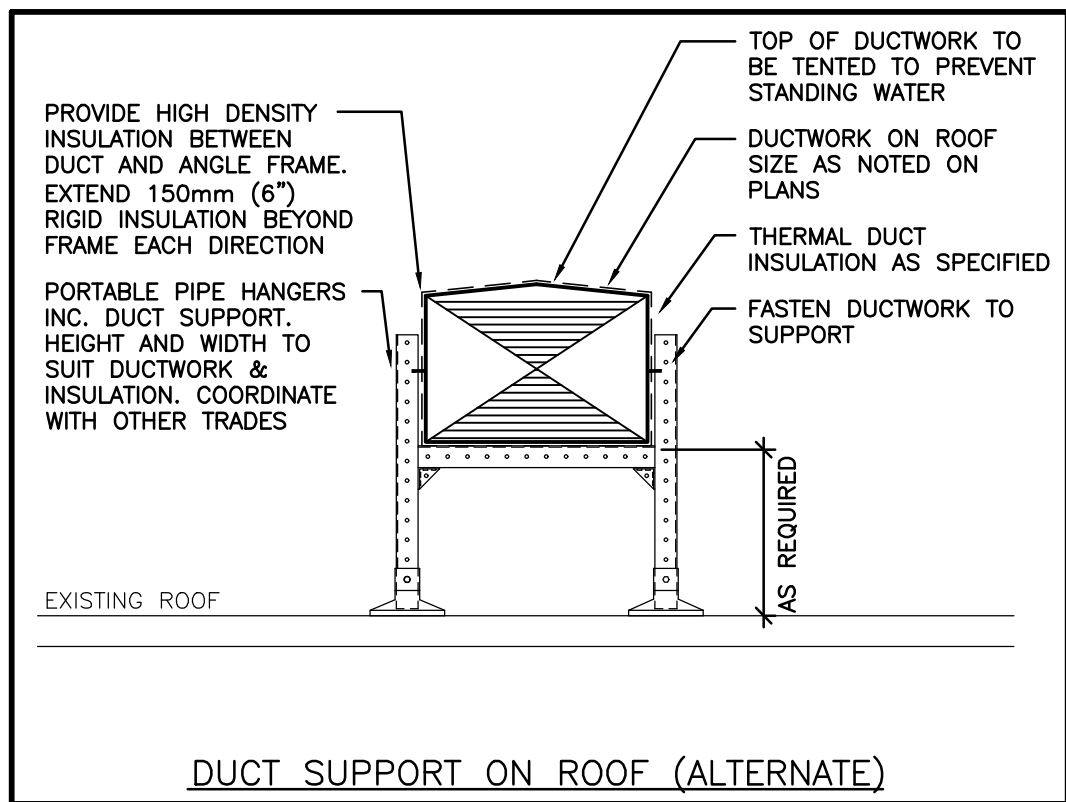
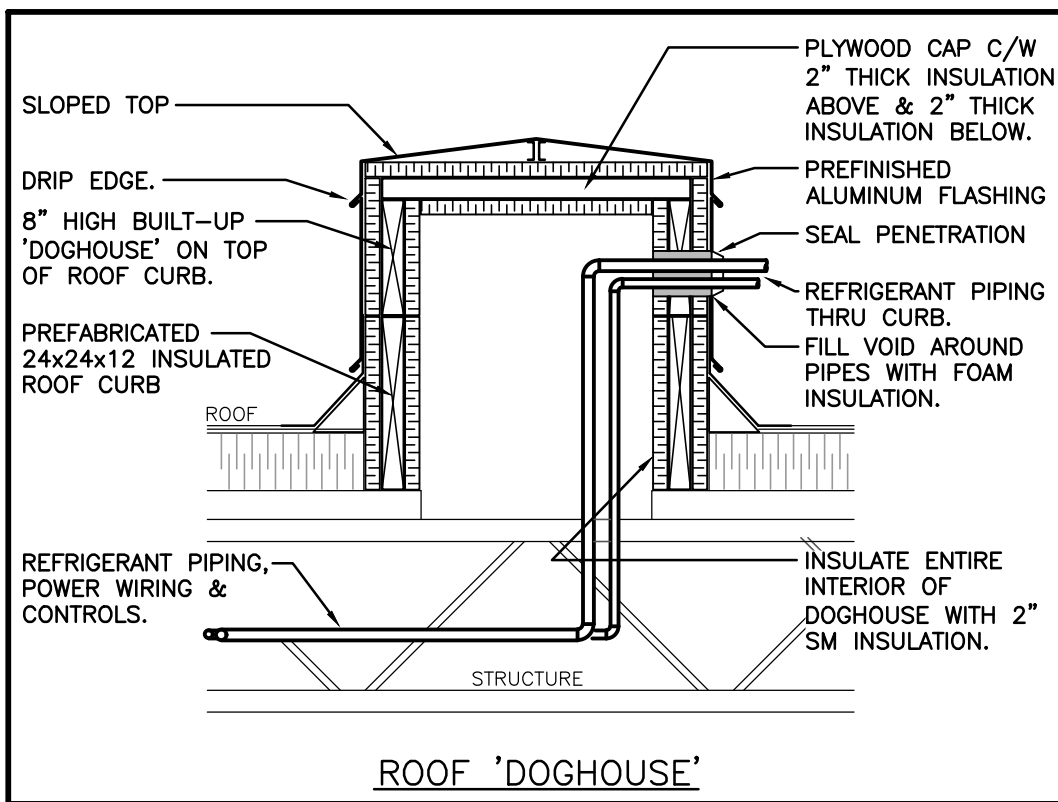
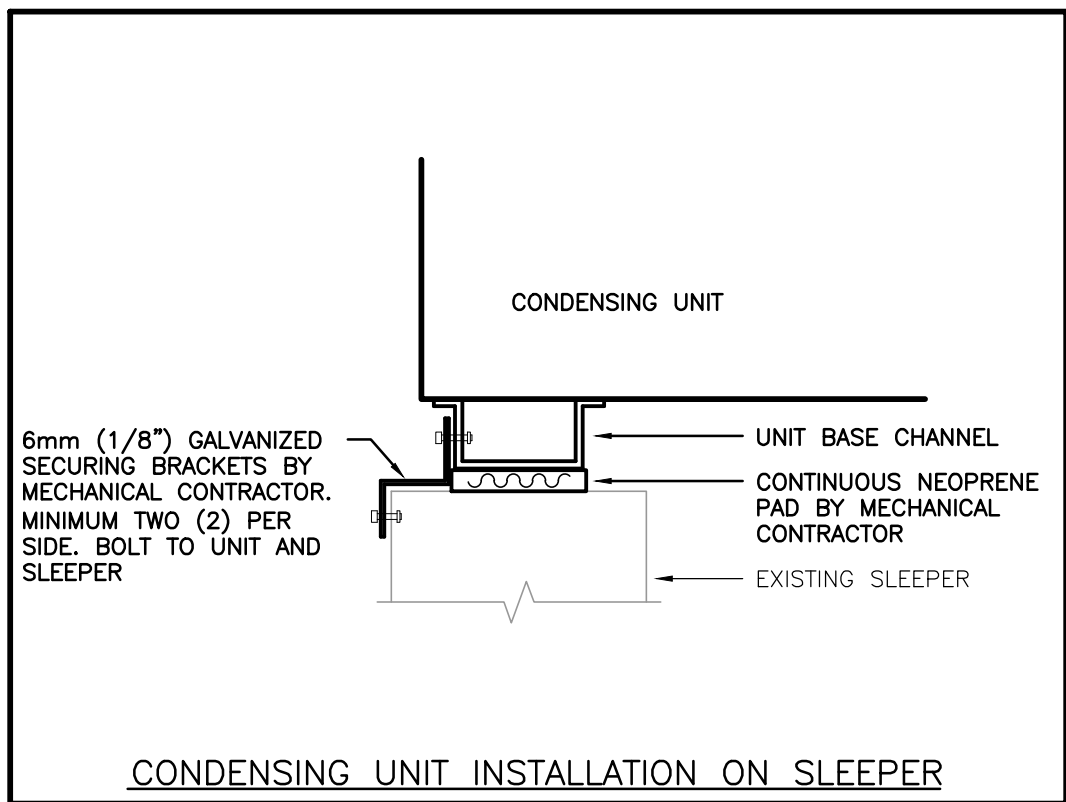
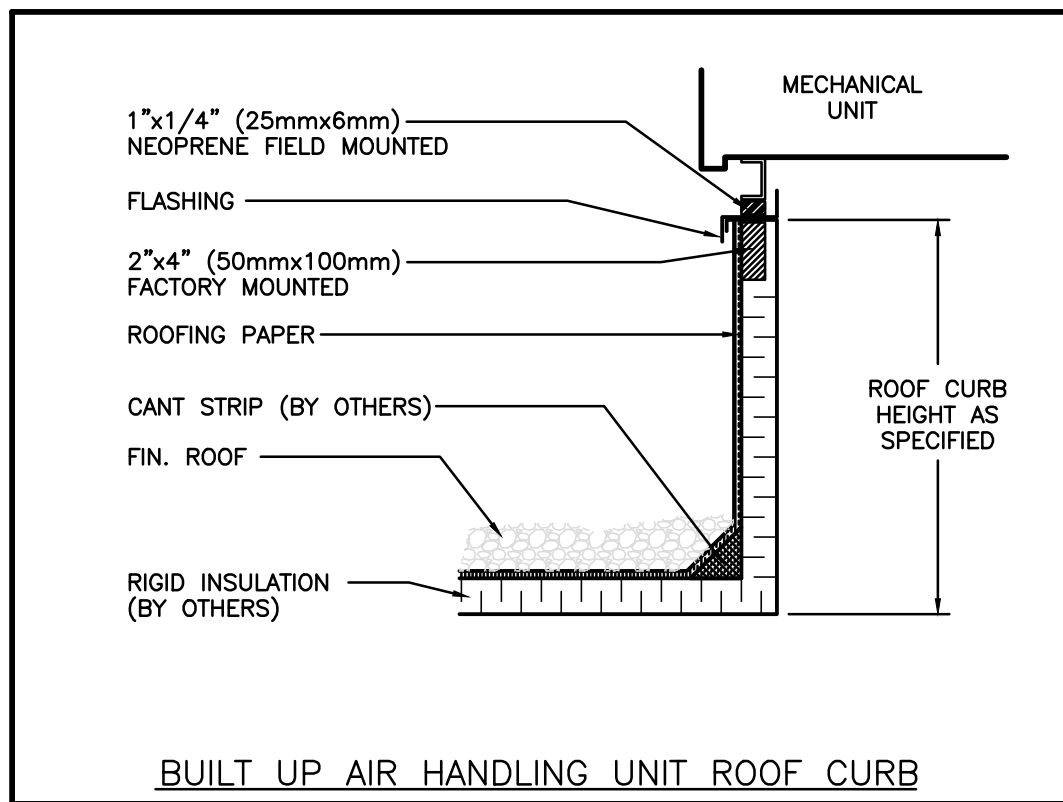
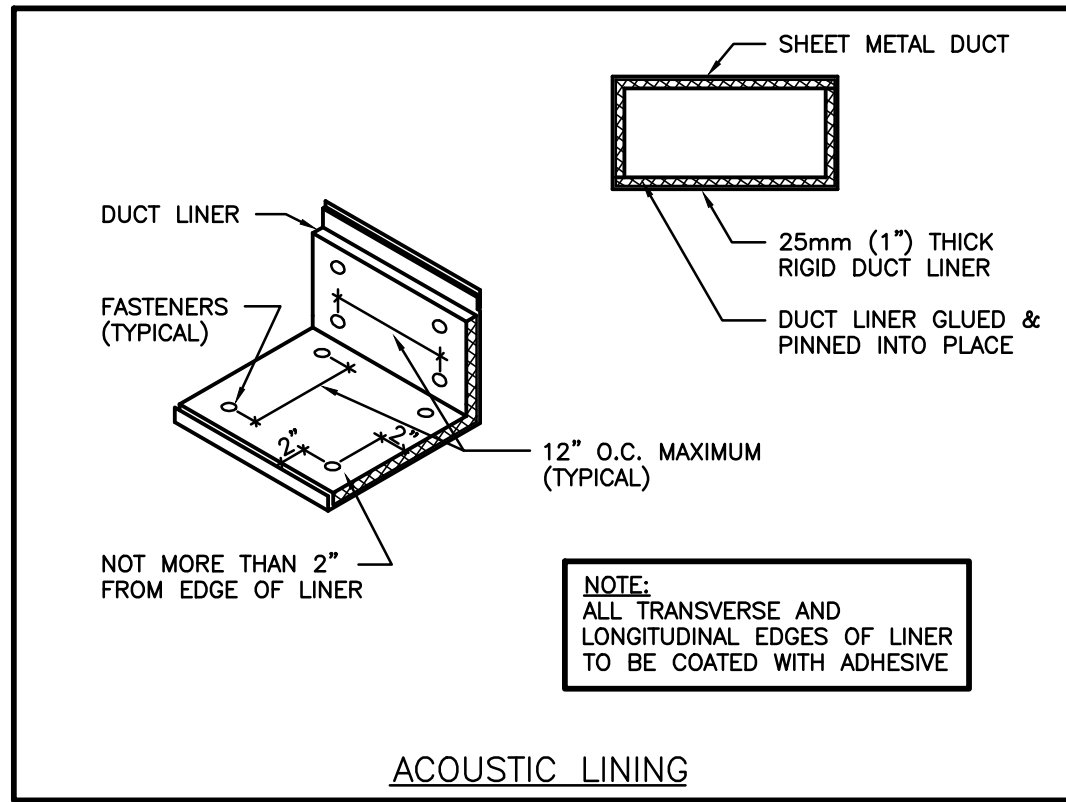
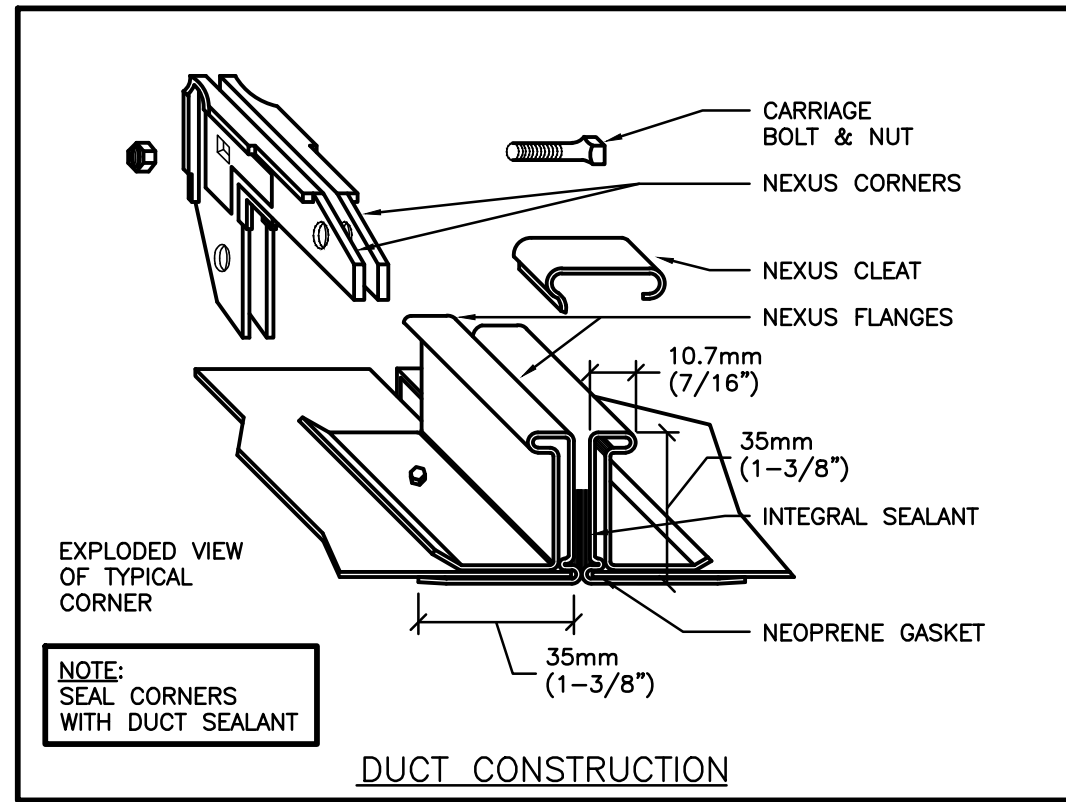
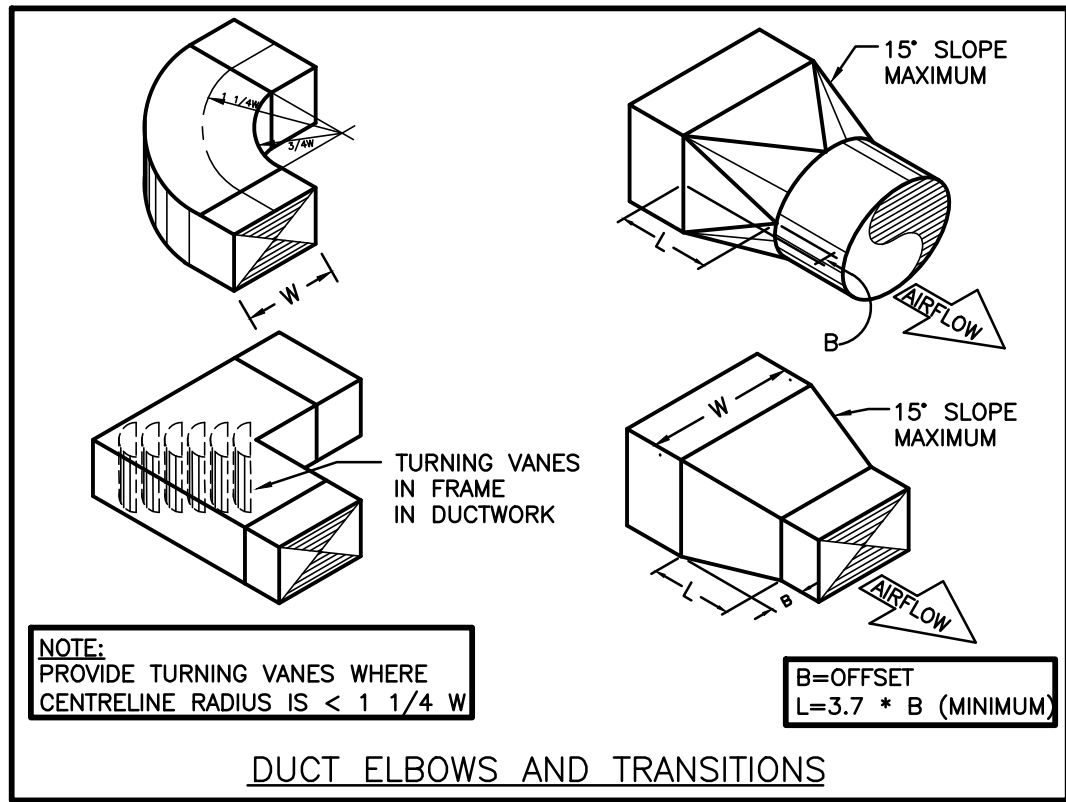
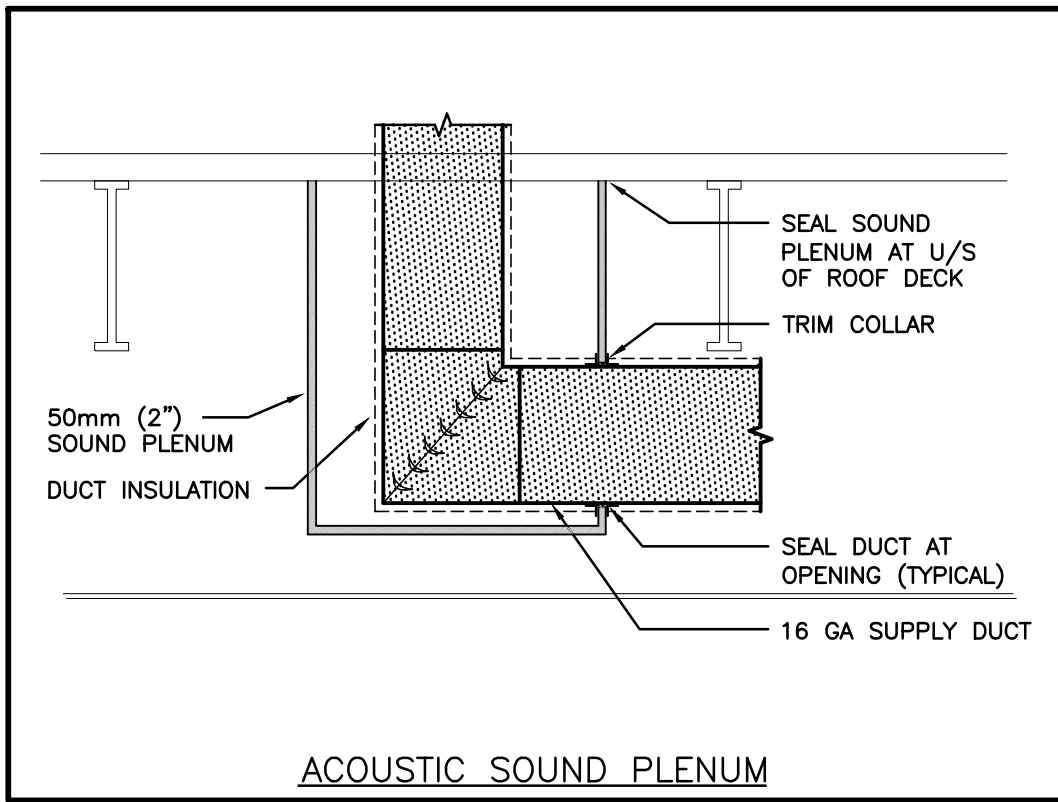
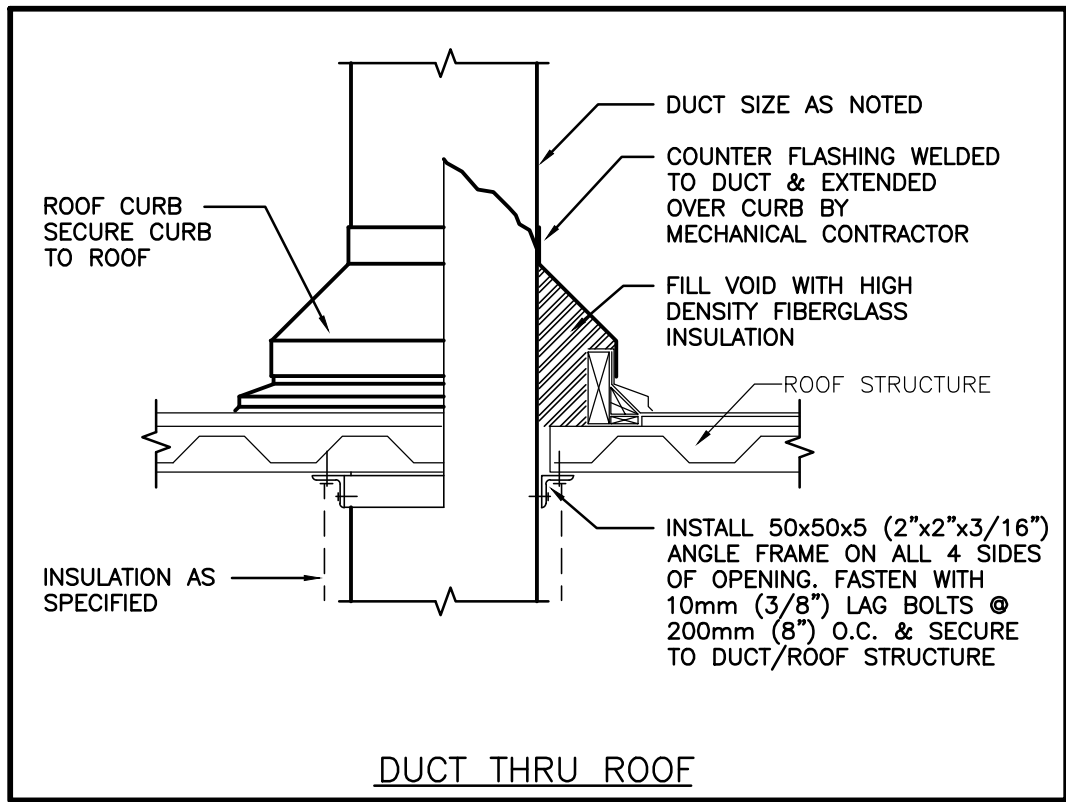
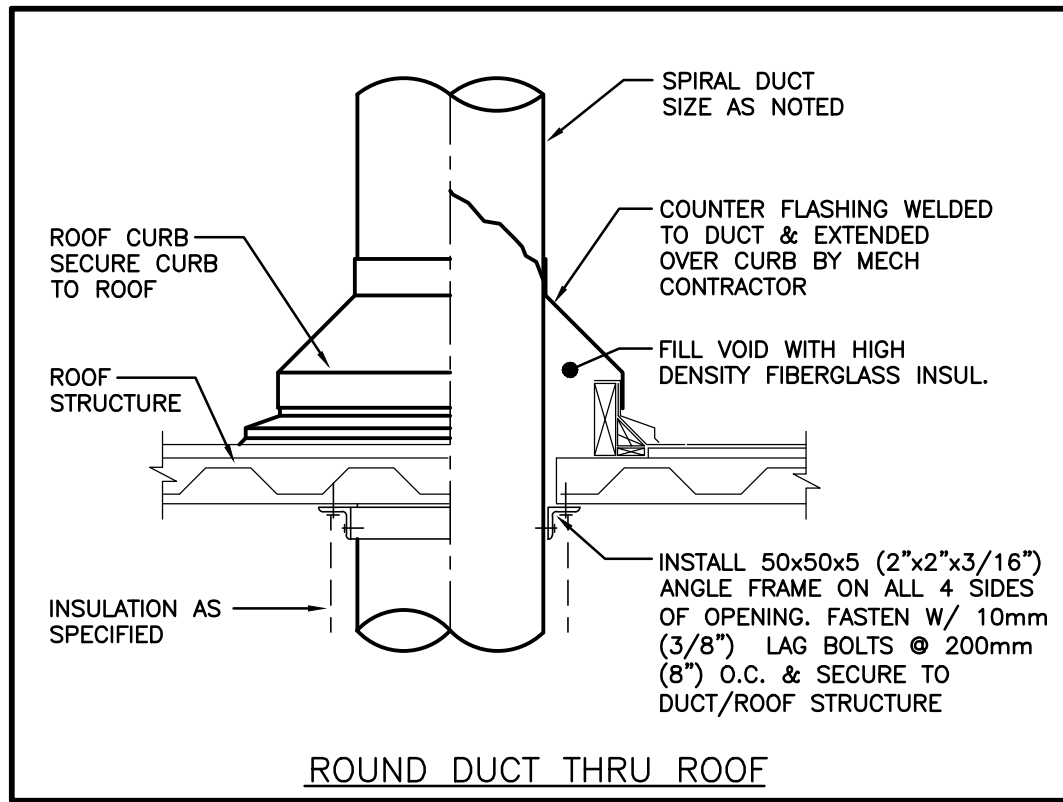
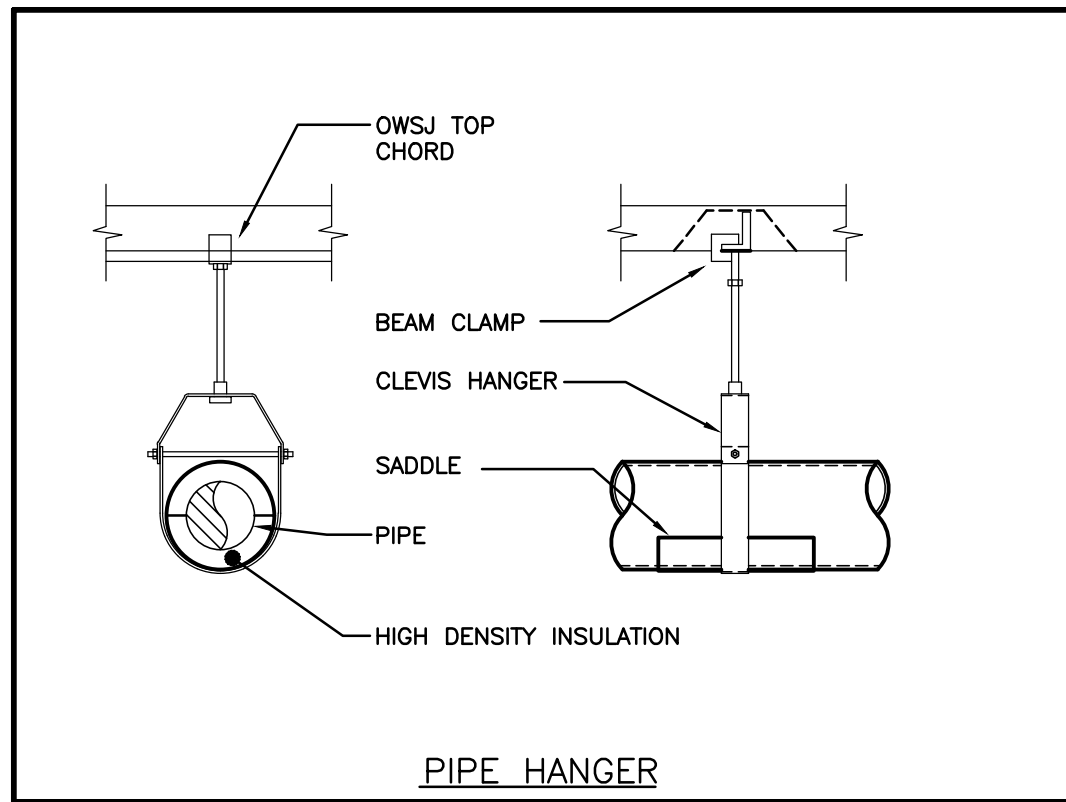
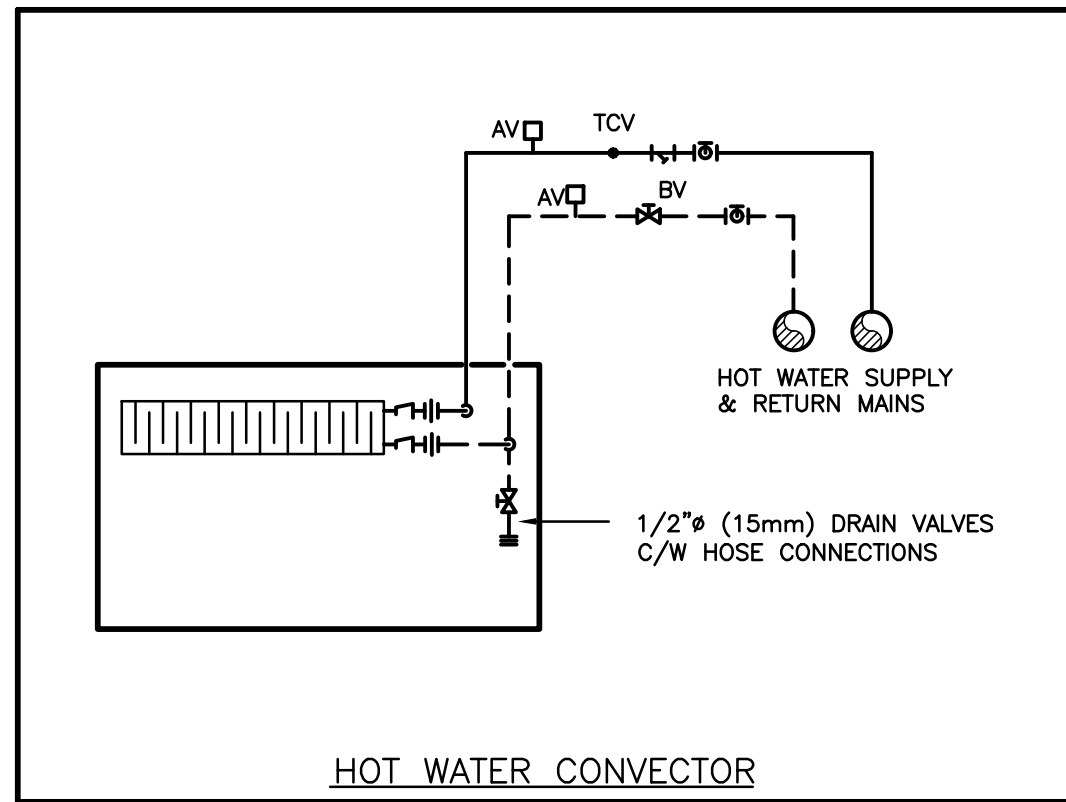
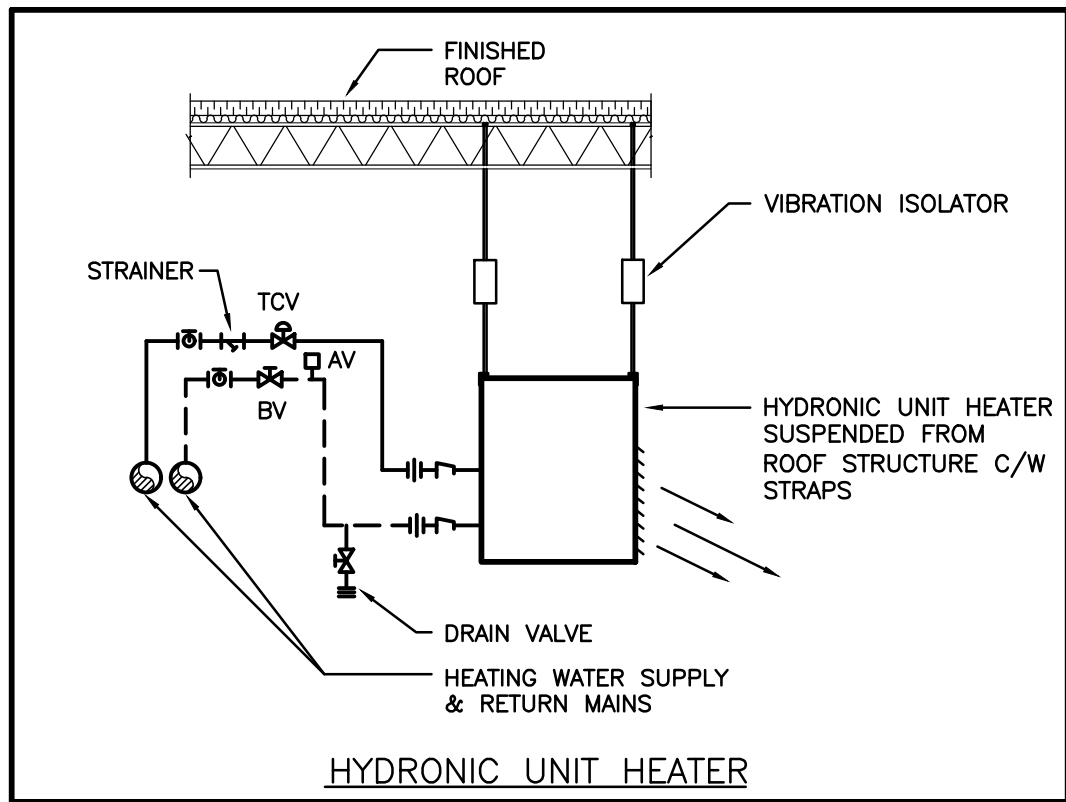
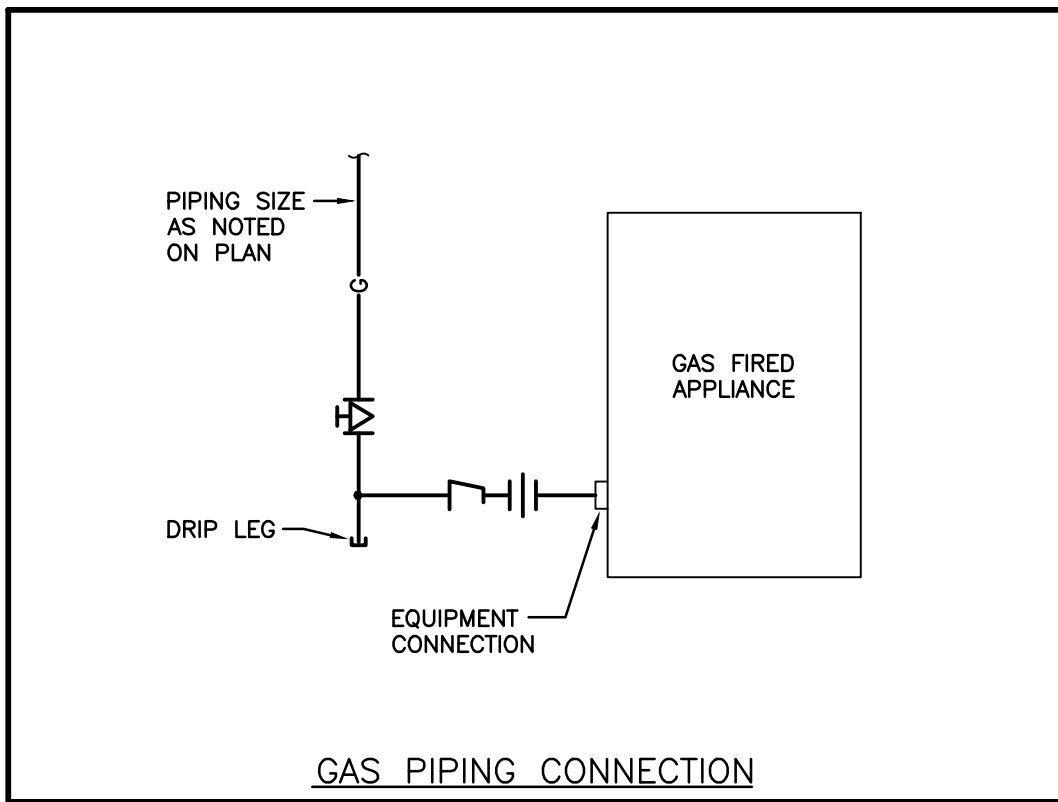
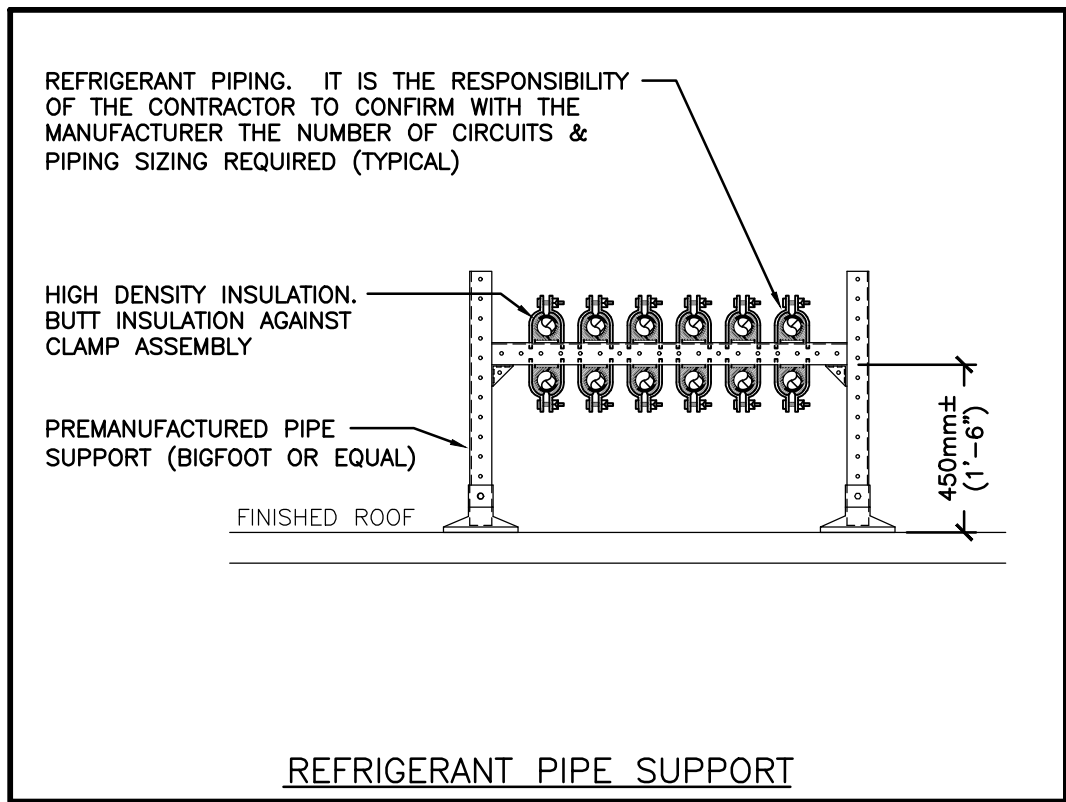
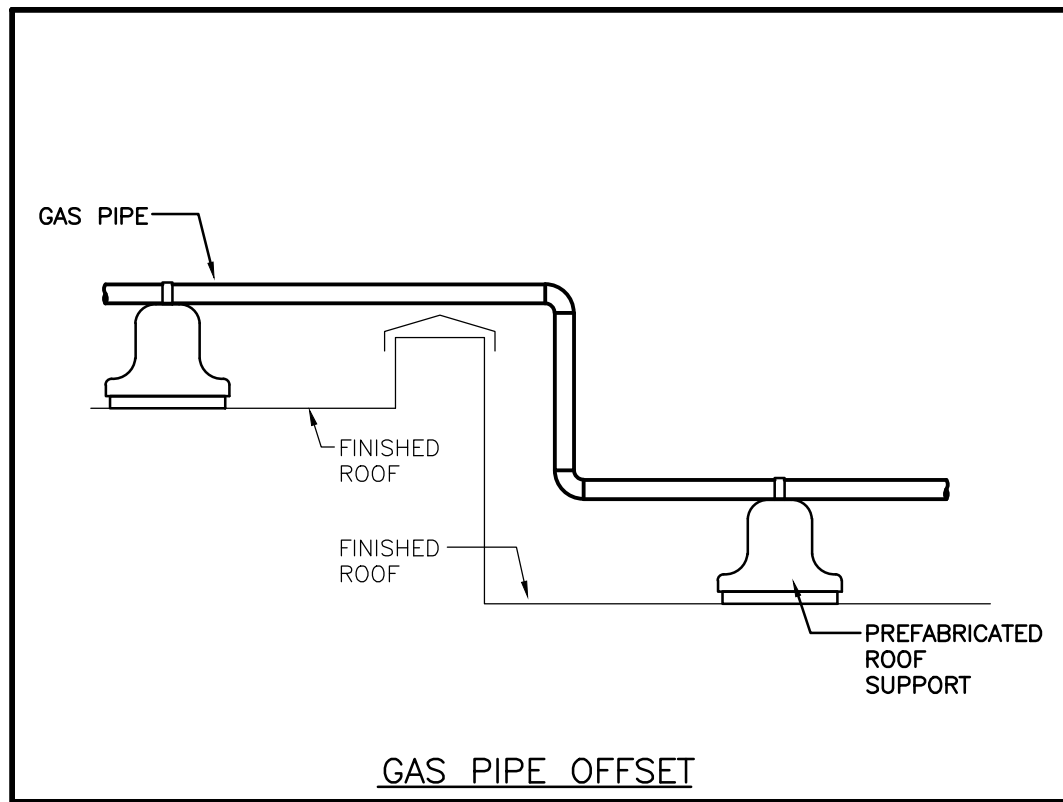
KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING
ROOF PLAN DEMOLITION

	TRUE NORTH	DWG. NORTH
	JOB NO.	
	2148	SCALE
	AS NOTED	DATE
	APRIL 2021	PRINTED
		DWG. NO.
		M3.1

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The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2021 DEI & Associates Inc.

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Project Number: 21056

MAY 11, 2021 ISSUED FOR PERMIT AND TENDER

DATE REVISIONS

CRESTWOOD SECONDARY SCHOOL - MECHANICAL UPGRADES 2021

1885 SHERBROOKE ST.W. PETERBOROUGH, ONTARIO



KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DETAILS

	TRUE NORTH	DWG. NORTH
	N	N
	JOB NO.	
	2148	SCALE
AS NOTED	DATE	
	PRINTED	
	DWG. NO.	

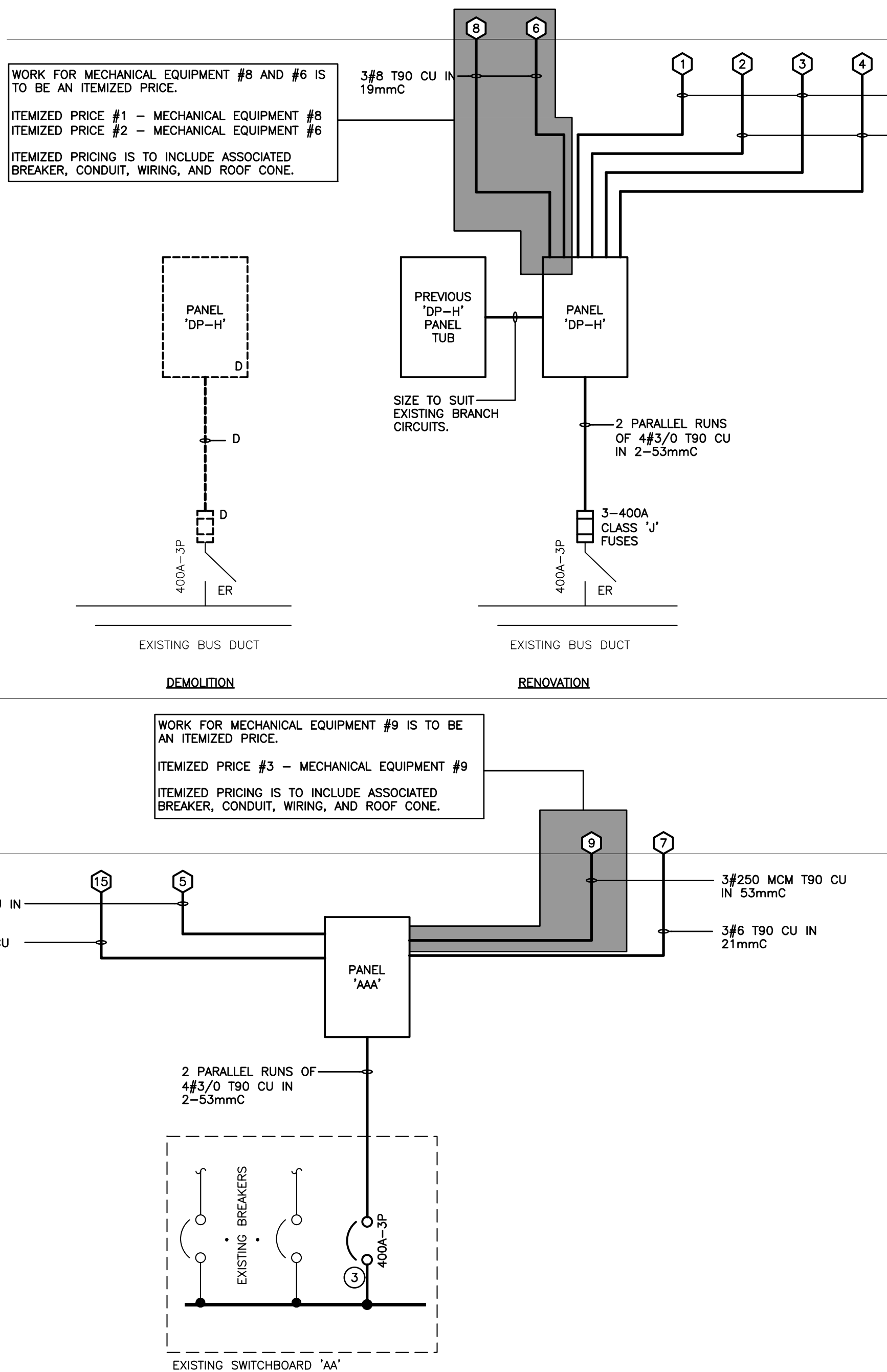
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M4.1

EQUIPMENT WIRING SCHEDULE																	E=ELECTRICAL M=MECHANICAL O=OTHERS												
Description		Data		Starter		Control Device		Isolating Device		Remote Items						Interlock		Remarks											
Electrical Item	Description	Provided by	Voltage	Size SFS/MCA SFS/MCA/amps Phase	Magnetic	Manual	Combination	Variable Frequency Drive	Hand/Off/Auto	On/Off	Start/Stop	High/Low/Off	Pilot Light	Disconnect WP	Disconnect B	Start/Device Wired By	Thermostat	Time Clock	Voc/Speed Ctrl	Refriger S/c	L/w Pilot Light	Dual Voltage Ready	Control Panel	Wired by Bldg Auto Sys	Wired by	Interlock To	Interlock By	Description	
1	SUPPLY FAN SF-1	M	208	22 MCA	3											E	E	E											CARPENTRY SHOP AHU
2	SUPPLY FAN SF-2	M	208	15 MCA	3											E	E	E							M	M			COMPUTER ROOM AHU
3	SUPPLY FAN SF-3	M	208	22 MCA	3											E	E	E							M	M			AUTOMOTIVE SHOP AHU
4	SUPPLY FAN SF-4	M	208	15 MCA	3											E	E	E							M	M			ELECTRONICS SHOP AHU
5	SUPPLY FAN SF-5	M	208	40 MCA	3											E	E	E							M	M			IN FAN RM. '124'. SERVES CAFETERIA
6	HEAT VENT HV-1	M	208	26 MCA	3											E	E	E							M	M			ON ROOF SERVES MACHINE SHOP
7	HEAT VENT HV-2	M	208	36 MCA	3											E	E	E							M	M			ON ROOF SERVES KITCHEN
8	HVAC-1	M	208	28.9 MCA	3											E	E	E							M	M			ON ROOF SERVES DRAMA ROOM
9	CONDENSING UNIT CU-105	M	208	203 MCA	3											E	E	E							M	M			
10	EF-01	M	208	3/4 HP	3					E	E	E				E	E	E							M	M			
11	EF-02	M	208	3/4 HP	3					E	E	E				E	E	E							M	M			
12	PUMP P-101	M	120	1/3 HP	1											E	E	E					M		M	M			SERVES SF-5 HEATING COIL
13	PUMP P-102	M	120	FHP	1											E	E	E					M		M	M			SERVES SF-6 HEATING COIL
14	BAS PANEL	M	120	FHP	1											E	E	E							M	M			PROVIDE DATA DROP
15	SUPPLY FAN SF-6	M	208	22 MCA	3											E	E	E							M	M			IN FAN RM. '124A'. SERVES MUSIC RM
NOTES:																													
1. PROVIDE MAIN FEED TO UNIT. PROVIDE ADDITIONAL FEED FROM TERMINAL STRIPS WITHIN UNIT TO VARIABLE FREQUENCY DRIVE AND BACK TO UNIT (IN SEPARATE CONDUITS).																													
COORDINATE CONDUCTOR SIZE TO AND FROM VARIABLE FREQUENCY DRIVE WITH MECHANICAL SHOP DRAWINGS.																													

DISTRIBUTION RISER NOTES

- REFER TO SPECIFICATION FOR INFORMATION REGARDING MOULDED CASE CIRCUIT BREAKERS.
- ALL DISTRIBUTION EQUIPMENT ARE TO BE PROVIDED WITH WARNING LABELS CONFORMING TO THE ONTARIO ELECTRICAL SAFETY CODE RULE #2-306(1),(2)
- INSTALL GROUND WIRE TO SUIT THE ELECTRICAL SAFETY CODE IN ALL CONDUIT.
- ALL LIGHTING CIRCUITS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS. SIZE BRANCH CONDUITS ACCORDINGLY.
- ALL BRANCH CIRCUITS FROM TVSS PROTECTED PANELS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS. SIZE BRANCH CONDUITS ACCORDINGLY.



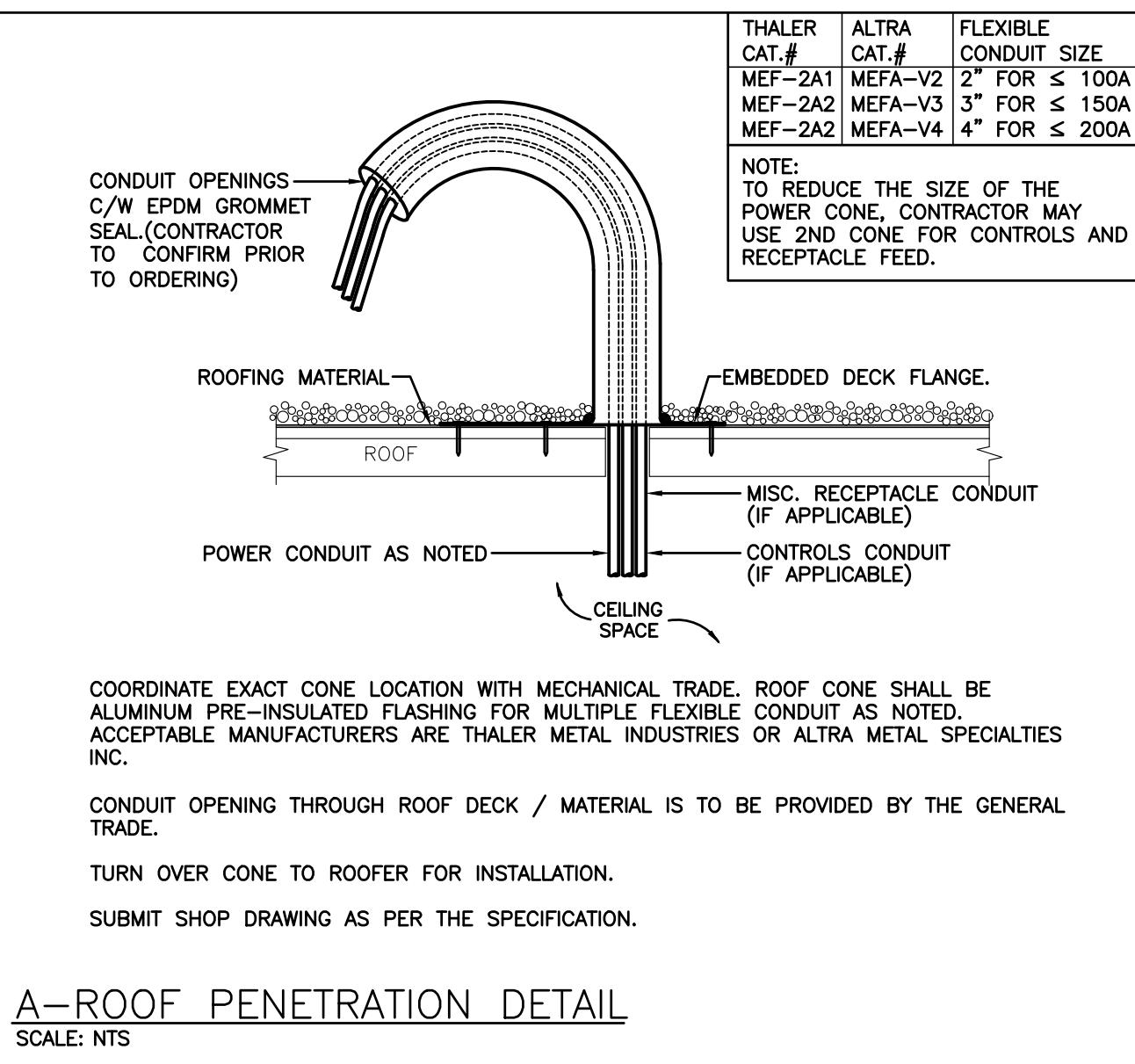
DISTRIBUTION RISER DIAGRAM

LED LIGHT FIXTURE SCHEDULE

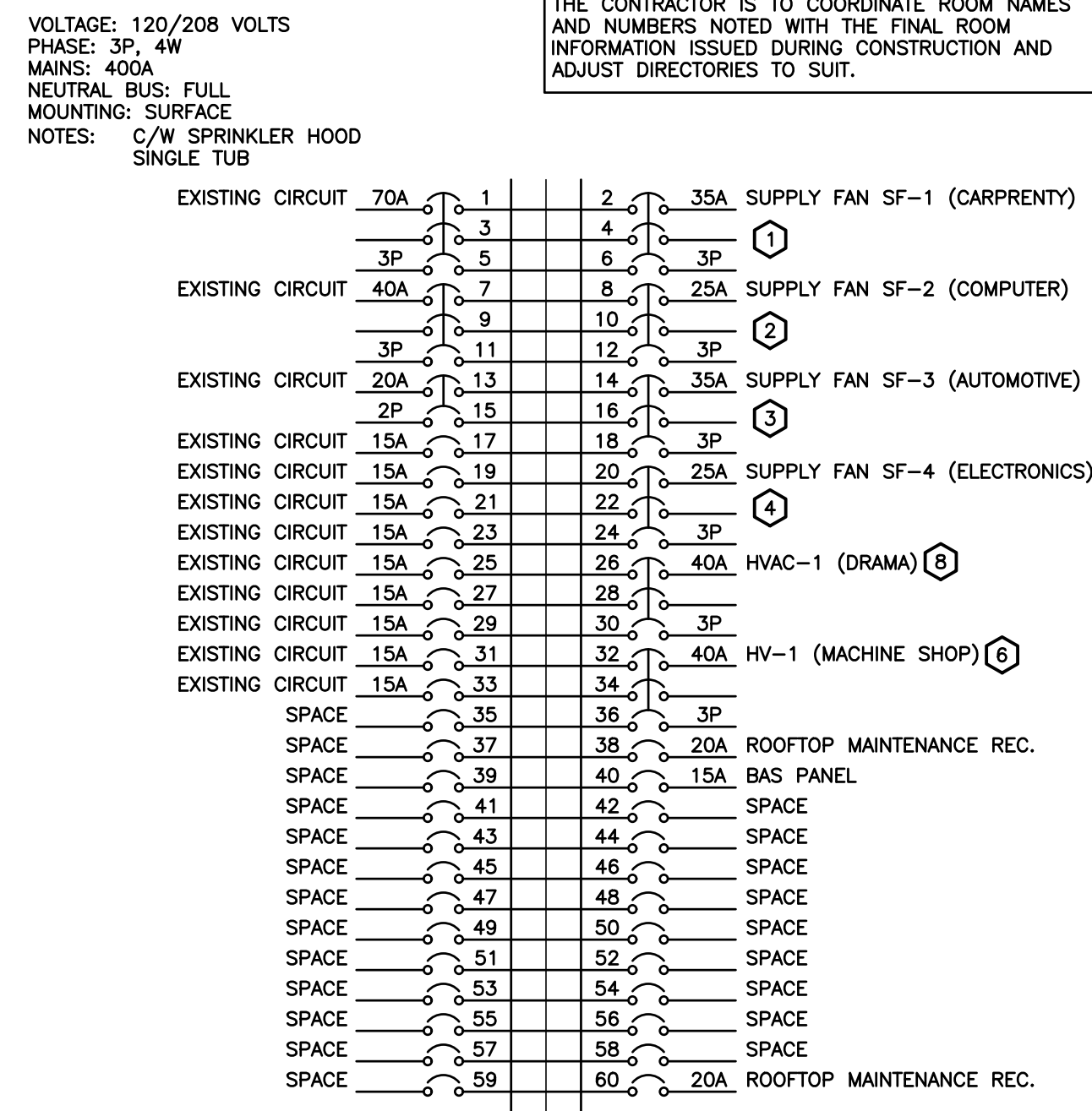
Item	Manufacturer/Catalog Number	Voltage	Lamp	Mounting	Description
A	COOPER CAT. #24-GR-LIS-38-A125-UNV-L840-CD-1 LITHONIA CAT. #20TL-4-40L-EZ1-LP840 COLUMBIA CAT. #LIT-24-40-LW-G-FS-A12F-E-U-SLL VISIONEERING CAT. #LRTA-2X4-LED-8-40K-040L-UNV CFI CAT. #2TG42L840-4-FS-02F-UNV-DIM	120V	LED 3800 LUMENS 4000K 35W	RECESSED	2x4 (610mmX1220mm) LED TROFFER C/W PATTERN 12 LENS AND WHITE FINISH

NOTES: ① LED LUMEN VALUES QUOTED FOR FIXTURES ARE TO BE CONSIDERED MINIMUM, AND AS ABSOLUTE OR DELIVERED LUMENS. LUMEN VALUES SHOULD NOT EXCEED MORE THAN 10% OF SPECIFIED OUTPUT.

② EQUAL MANUFACTURERS/SUPPLIERS MUST CONFIRM THE PROPOSED FIXTURE BY EMAIL WITH CONSULTANTS OFFICE A MINIMUM OF 10 DAYS PRIOR TO TENDER CLOSE.

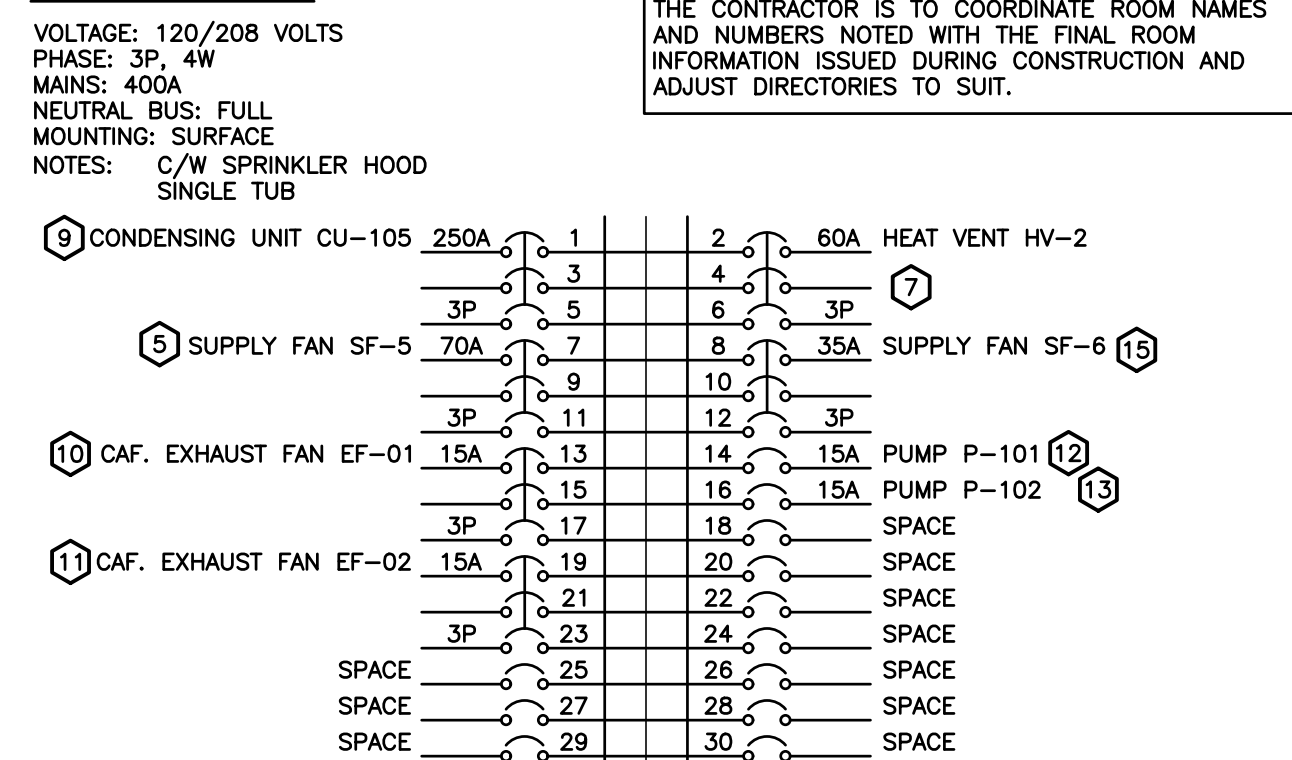


PANEL 'DP-H'



NOTE: THE INDICATED PANEL ASSEMBLY MUST HAVE AN INTERRUPTING CAPACITY OF 22000 A. PROVIDE BY EITHER FULLY RATED BREAKERS OR INTEGRATED EQUIPMENT RATING WITH THE UPSTREAM BREAKER.

PANEL 'AAA'



NOTE: THE INDICATED PANEL ASSEMBLY MUST HAVE AN INTERRUPTING CAPACITY OF 35000 A. PROVIDE BY EITHER FULLY RATED BREAKERS OR INTEGRATED EQUIPMENT RATING WITH THE UPSTREAM BREAKER.

ELECTRICAL SYMBOLS

NOTE: ALL SYMBOLS MAY NOT BE USED

LIGHTING		POWER	
	LIGHT FIXTURE TYPE AS INDICATED		WALL MOUNTED RECEPTACLE (15A-120V)
	COMBINATION EMERGENCY/EXIT TYPE		WALL MOUNTED T-SLOT RECEPTACLE (20A-120V)
	CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED		T-SLOT RECEPTACLE MTD. ABOVE COUNTER (20A-120V)
	WALL MOUNTED EXIT LIGHT SHADING INDICATES FACE		RECEPTACLE MTD. ABOVE COUNTER S=SPILT (15A-120V)
	CEILING MOUNTED EXIT LIGHT SHADING INDICATES FACE		DIRECT CONNECTION
	SINGLE OR TWIN EMERGENCY LIGHTING FIXTURE		JUNCTION BOX
	BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT, AND X-X INDICATES AC SOURCE CIRCUIT)		PANEL AS INDICATED
	SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)		FUSED DISCONNECT
	OCCUPANCY SENSOR (PASSIVE)		UNFUSED DISCONNECT
	OCCUPANCY SENSOR (PASSIVE)		VARIABLE FREQUENCY DRIVE
	OCCUPANCY SENSOR (PASSIVE)		DUAL VOLTAGE RELAY
	DIGITAL CEILING MOUNTED MOTION SENSOR		MANUAL STARTER
	DIGITAL WALL MOUNTED MOTION SENSOR		MAGNETIC STARTER
	DIGITAL ROOM CONTROLLER		COMBINATION MAGNETIC STARTER
	DIGITAL WALL STATION, 'X' DENOTES NUMBER OF CONTROL BUTTONS IN SINGLE GANG		EXHAUST FAN

GENERAL

ER	INDICATED EXISTING ITEM TO REMAIN	CLG	CEILING MOUNTED
D	INDICATES EXISTING ITEM TO BE DELETED		NOTE INDICATOR
R	INDICATES EXISTING ITEM TO BE RELOCATED/IN RELOCATED POSITION		MECHANICAL ITEM NO.
WG	WIREGUARD	STANDARD CIRCUITING LABELING	
GF	GROUND FAULT	POWER PANEL LABEL CIRCUIT INDICATION SWITCH LEG (IF APPLICABLE)	
WP	WEATHERPROOF		

THIS WORK IS TO BE PHASED. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING PHASING OF WORK. INCLUDE FOR THREE PARTIAL FIRE ALARM VERIFICATIONS AND TWO INTEGRATED LIFE SAFETY SYSTEM TESTS.

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- MECHANICAL UPGRADES 2021
1885 SHERBROOKE ST.W. PETERBOROUGH, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING

LEGEND, SCHEDULES, RISERS, AND DETAILS

TRUE NORTH DWG. NORTH

2148

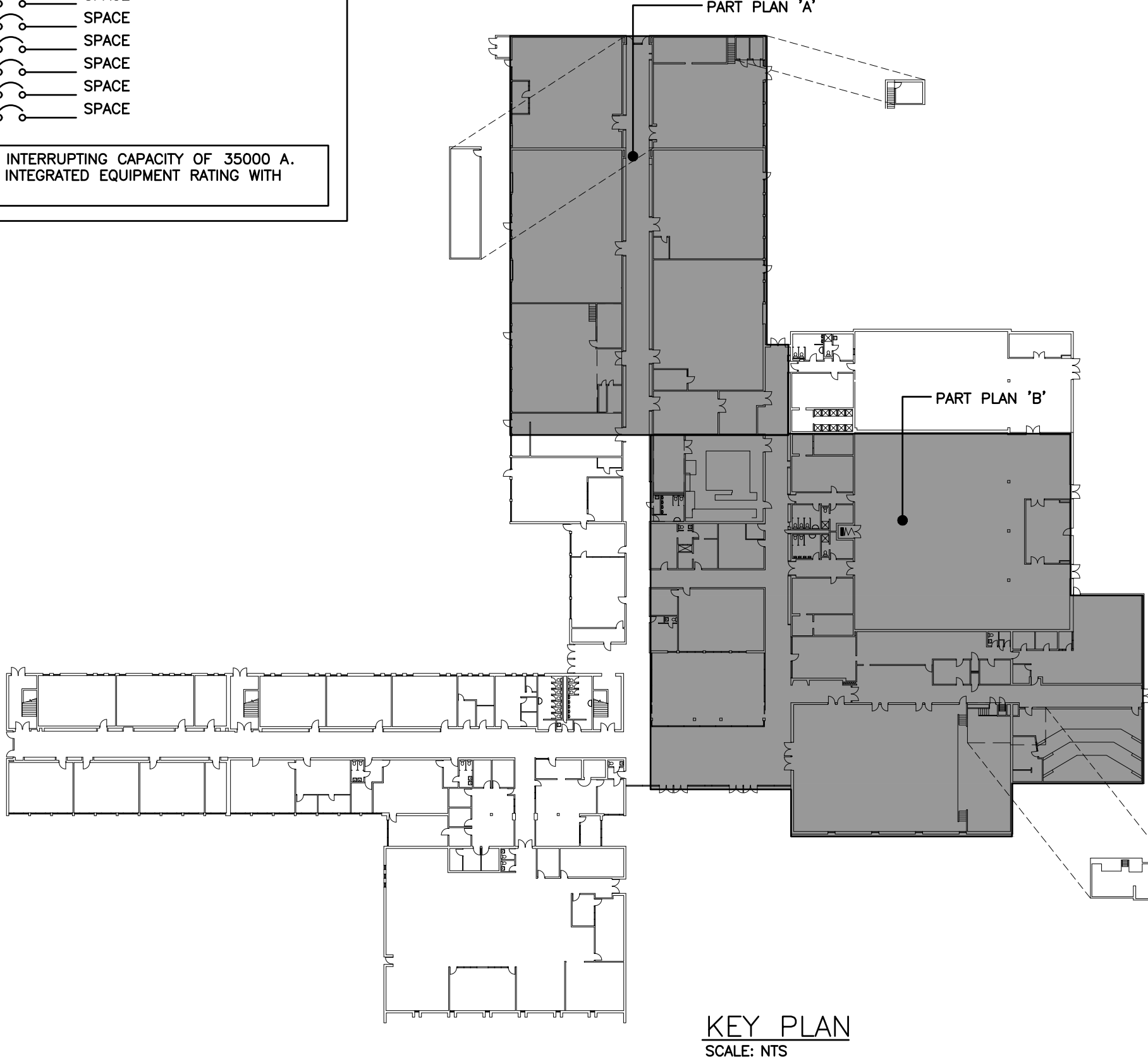
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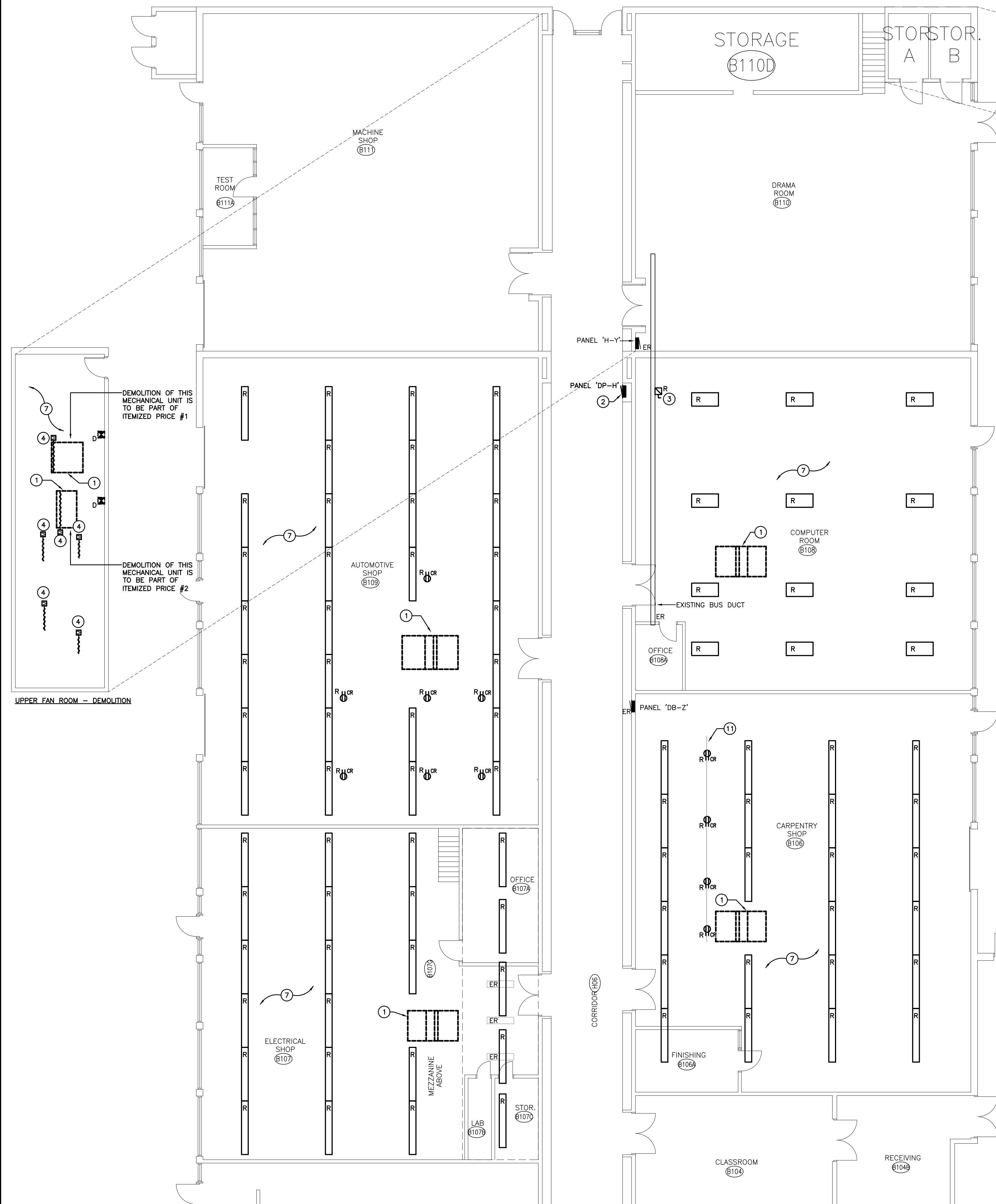
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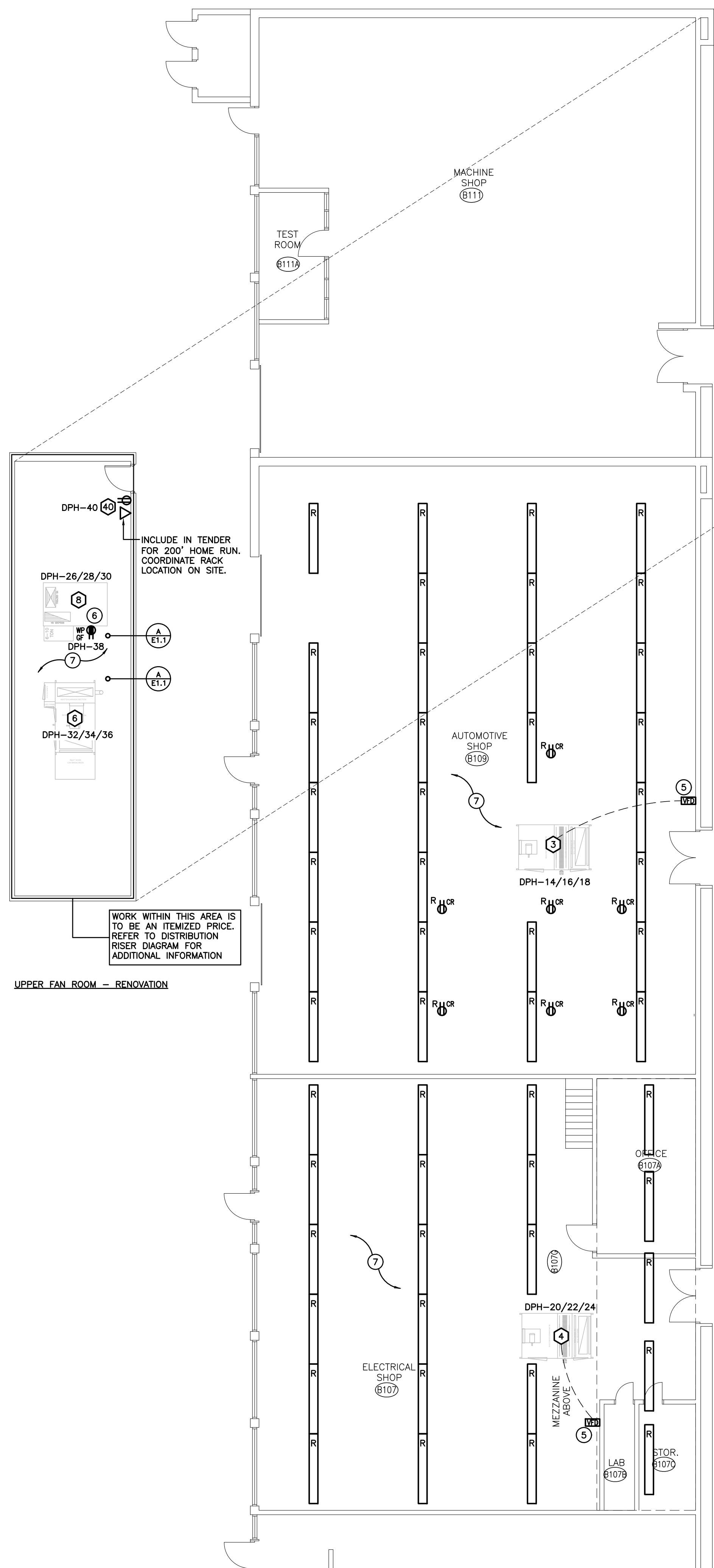
DWG. NO.

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SOUTH SHOP WING — DEMOLITION
SCALE: 1:100



SOUTH SHOP WING — RENOVATION
SCALE: 1:100

GENERAL NOTES

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).

SPECIFIC NOTES

- INDICATES MECHANICAL UNIT BEING REMOVED BY. REFER TO MECHANICAL DRAWINGS. ELECTRICAL TRADE SHALL DISCONNECT AND REMOVE FEEDER BACK TO SOURCE. DISCONNECT AND REMOVE ALL CONTROL DEVICES. LABEL SOURCE BREAKER AS SPARE.
- EXISTING PANEL IS TO BE REMOVED. REMOVE MAIN FEEDER AND CONDUIT BACK TO SOURCE DISCONNECTION. REMOVE EXISTING PANEL BUS BARS AND LUGS. MAINTAIN TUB AND BRANCH CIRCUIT WIRING. REFER TO RENOVATION PLANS FOR CONTINUATION.

- INDICATES EXISTING FUSED DISCONNECT FEEDING PANEL 'DP-H'. REFER TO PARTIAL DISTRIBUTION RISER DIAGRAM FOR ASSOCIATED WORK.
- REMOVE EXISTING MOTORIZED DAMPER POWER CONNECTIONS. PROVIDE LOCAL JUNCTION BOX AND CAP CIRCUITS AND WIRING WITHIN.
- INSTALL VFD AT HIGH LEVEL ON WALL. COORDINATE EXACT LOCATION WITH MECHANICAL TRADE. PRIOR TO ROUGH-IN, REFER TO EQUIPMENT WIRING SCHEDULE FOR ADDITIONAL CONDUIT AND WIRING REQUIREMENTS.
- PROVIDE T-SLOT GROUND FAULT RECEPTACLE COMPLETE WITH "HEAVY DUTY IN-USE" WEATHER-PROOF COVER. COORDINATE PLACEMENT WITH MECHANICAL TRADE. INDICATED DEVICE IS TO BE MOUNTED ±36" (900mm) ABOVE FINISHED ROOF LEVEL.
- REMOVE AND REINSTALL EXISTING CEILING DEVICES TO SUIT OTHER TRADES WORK. PROTECT EXISTING BACKBOXES FOR PAINTING SCOPE. REFER TO MECHANICAL, STRUCTURAL, AND ARCHITECTURAL DRAWINGS.
- REWORK EXISTING LIGHTING CIRCUIT TO SUIT NEW LOCATION OF LIGHT FIXTURES TO AVOID INTERFERENCES WITH MECHANICAL TRADE. COORDINATE EXACT LOCATION ON SITE WITH OTHER TRADES.
- REFER TO DISTRIBUTION RISER DIAGRAM FOR SCOPE OF WORK.
- PROVIDE 16ga STEEL COVERPLATE TO SUIT EXISTING PANEL TUB TURNED INTO JUNCTION BOX. PRIME AND PAINT TO MATCH EXISTING SURFACES.
- EXISTING CABLE REELS AND ASSOCIATED SUPPORT IS TO BE RELOCATED TO SUIT NEW MECHANICAL UNIT. REWORK EXISTING CONDUIT TO SUIT. CABLE REELS AND RECEPTACLES ARE TO BE REMOVED FOR PAINTING AS PER NOTE #4.
- INDICATES CABLE REEL SUPPORT AND ASSOCIATED DEVICES IN NEW LOCATION.

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KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

FIRST FLOOR PART
PLAN 'A' — DEMOLITION
AND RENOVATION



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TRUE NORTH DWG. NORTH
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JOB NO.

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DATE

APRIL 2021

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DWG. NO.

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PART PLAN 'B' – DEMOLITION
SCALE: 1:100

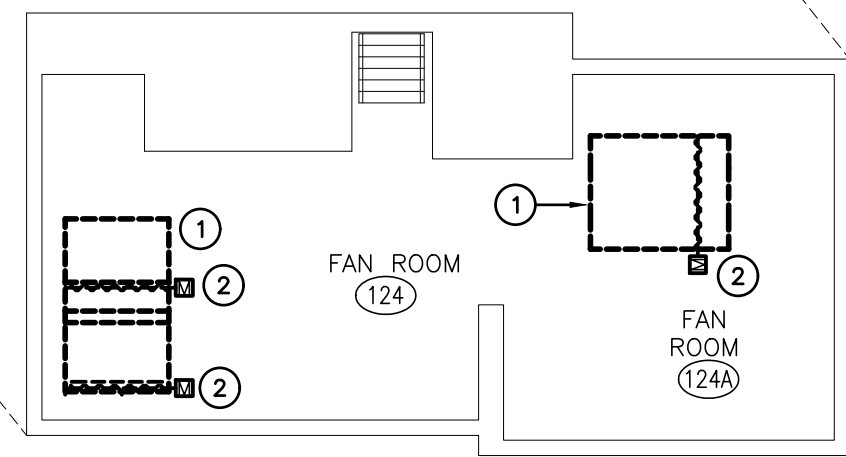
GENERAL NOTES

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- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- "R" INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- "D" INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).

SPECIFIC NOTES

- 1 INDICATES MECHANICAL UNIT BEING REMOVED BY MECHANICAL TRADE. REFER TO MECHANICAL DRAWINGS. ELECTRICAL TRADE SHALL DISCONNECT AND REMOVE FEEDER BACK TO SOURCE. DISCONNECT AND REMOVE ALL CONTROL DEVICES. LABEL SOURCE BREAKER AS SPARE.
- 2 REMOVE EXISTING MOTORIZED DAMPER POWER CONNECTIONS. PROVIDE LOCAL JUNCTION BOX AND CAP CIRCUITS AND WIRING WITHIN.

- 3 EXISTING WALK IN COOLERS ARE TO BE REMOVED COMPLETE. REFER TO ARCHITECTURAL DRAWINGS. THIS CONTRACTOR IS TO DISCONNECT AND REMOVE ALL ASSOCIATED WIRING, CONDUIT, AND DEVICES (HEAT TRACING, LIGHTING, JUNCTION BOXES, ETC.). DISCONNECT EXISTING COMPRESSOR LOCATED WITHIN JAN. 126D.
- 4 REMOVE AND REINSTALL EXISTING CEILING DEVICES TO SUIT OTHER TRADES WORK. REFER TO MECHANICAL, STRUCTURAL, AND ARCHITECTURAL DRAWINGS. COORDINATE WITH MECHANICAL TRADES FOR AREAS OF INTERFERENCE BETWEEN NEW DUCTWORK AND EXISTING ELECTRICAL SERVICES. THIS CONTRACTOR SHALL REMOVE, REINSTALL, REROUTE EXISTING BRANCH CIRCUITS, BRANCH FEEDERS, PA CABLING, SECURITY CABLING, FIRE ALARM, ETC. TO SUIT. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 5 MAINTAIN EXISTING LIGHTING CIRCUIT AND CONTROLS FOR RE-CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS FOR CONTINUATION.
- 6 EXISTING HVAC UNIT SERVING THE KITCHEN AREA IS TO BE DISCONNECTED AND REMOVED TO SUIT STRUCTURAL RE-INFORCING. UPON COMPLETION OF STRUCTURAL WORK UNIT IS TO BE RE-INSTALLED. PRIOR TO INSTALLATION OF NEW HVAC UNIT SERVING THIS AREA THE UNIT IS TO BE DISCONNECTED AND REMOVED COMPLETE. REMOVE CONDUIT AND WIRING BACK TO SOURCE. REFER TO ARCHITECTURAL DRAWINGS FOR PHASING.



FAN ROOM 124 DEMOLITION PLAN
SCALE: 1:100

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2021 DEI & Associates Inc.

THIS WORK FOR THIS PROJECT SHALL BE CONSTRUCTED IN PHASES. REFER TO ARCHITECTURAL DRAWINGS FOR PHASING INFORMATION AND DETAILS. MISINTERPRETATION OF THE DRAWINGS WITH RESPECT TO THE EXTENT OF THE PHASING OF THE WORK SHALL NOT RELIEVE THE CONTRACTOR OF THE WORK REQUIRED TO COMPLETE THE ENTIRE CONTRACT.

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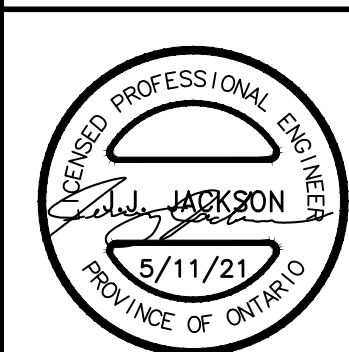
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**CRESTWOOD SECONDARY SCHOOL
- MECHANICAL UPGRADES 2021**
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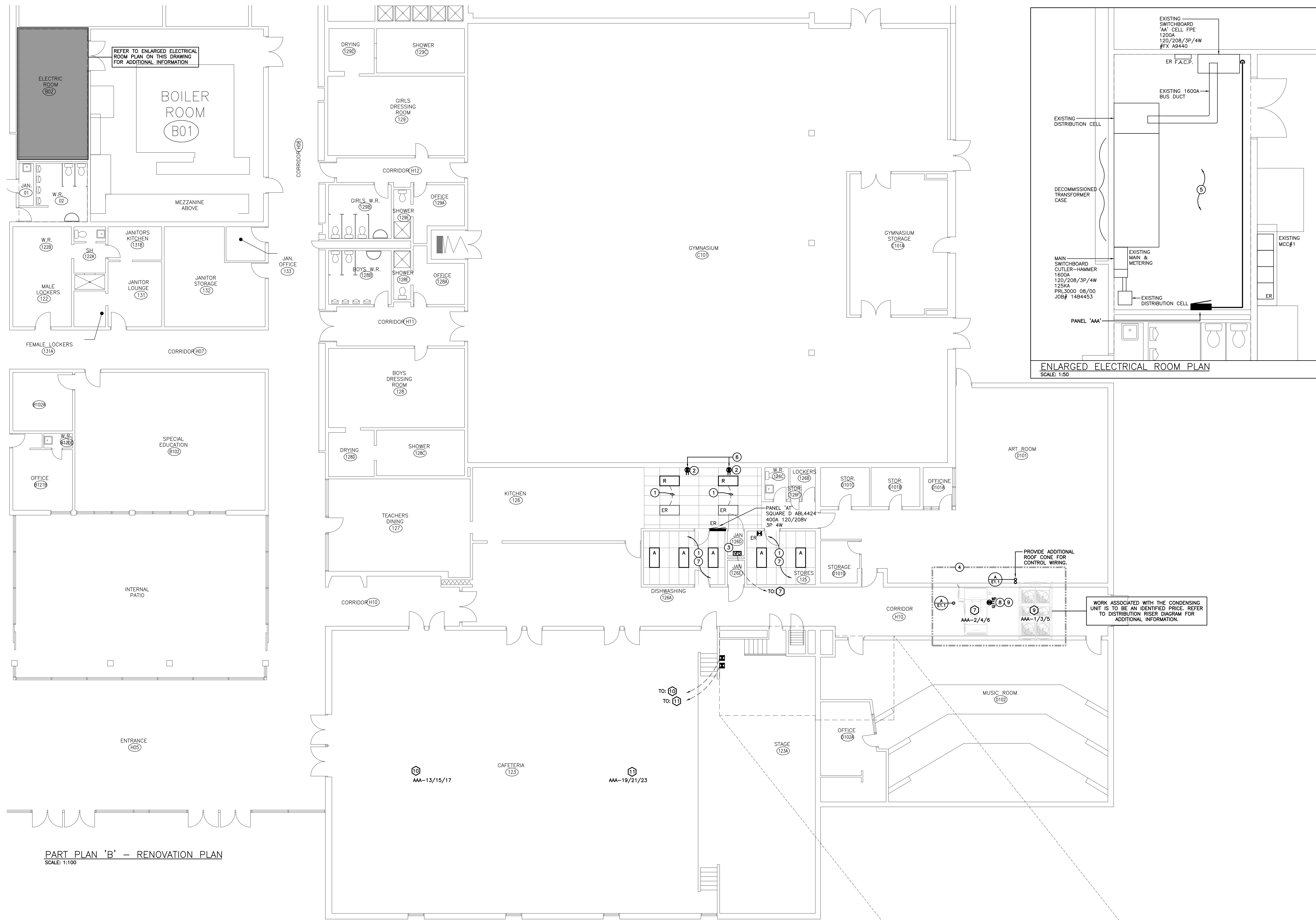
KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING
FIRST FLOOR PART
PLAN 'B' – DEMOLITION



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SCALE	AS NOTED
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PART PLAN 'B' - RENOVATION PLAN
SCALE: 1:100

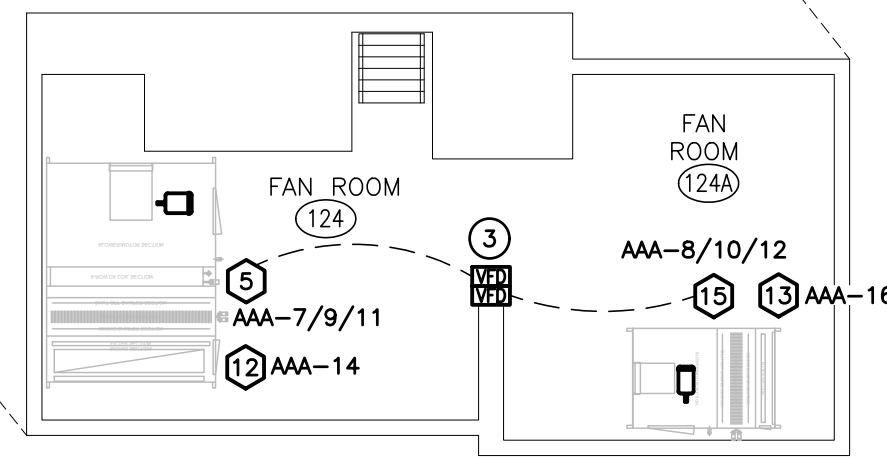
GENERAL NOTES

- "ER" DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- "R" INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- "D" INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).

SPECIFIC NOTES

1. CONNECT NEW/RELOCATED LIGHTING FIXTURES TO EXISTING LIGHTING CIRCUIT AND EXISTING CONTROL.
2. FEED INDICATED DEVICE USING SURFACE METAL RACEWAY EQUAL TO WIREMOLD SERIES 500.

3. INSTALL VFD AT HIGH LEVEL ON WALL. COORDINATE EXACT LOCATION WITH MECHANICAL TRADE PRIOR TO ROUGH-IN. REFER TO EQUIPMENT WIRING SCHEDULE FOR ADDITIONAL CONDUIT AND WIRING REQUIREMENTS.
4. INDICATES APPROXIMATE AREA OF NEW ROOF TOP UNITS. COORDINATE WITH MECHANICAL AND STRUCTURAL TRADES FOR AREAS OF INTERFERENCE WITH EXISTING ELECTRICAL SERVICES. THIS CONTRACTOR SHALL REMOVE, REINSTALL, REROUTE EXISTING BRANCH CIRCUITS, BRANCH FEEDERS, PA CABLING, SECURITY CABLING, FIRE ALARM, ETC. TO SUIT. REFER TO MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING NEW SUPPORTS, ROOF OPENINGS, AND DUCTWORK. INCLUDE IN TENDER TO REMOVE AND REINSTALL THE FOLLOWING:
 - 1 SMOKE DETECTOR
 - 1 PUBLIC ADDRESS SPEAKER
 - 4 LIGHT FIXTURES
 - ALL ABOVE CEILING CONDUIT AND JUNCTION BOXES TO SUIT THE ABOVE SERVICES.
5. REFER TO DISTRIBUTION RISER DIAGRAM FOR DETAILED SCOPE OF WORK WITHIN THIS AREA.
6. WITHIN LOCALLY AVAILABLE 120/208V 3P 4W PANEL "AT" AT AVAILABLE SPACE PROVIDE 2x20A-1P BREAKERS AND FEED NEW RECEPTACLES.
7. REINSTALL CEILING DEVICES TO SUIT NEW CEILING.
8. WITHIN LOCALLY AVAILABLE 120/208V 3P 4W PANEL "AT" AT AVAILABLE SPACE PROVIDE 1x20A-1P BREAKERS AND FEED NEW ROOFTOP MAINTENANCE RECEPTACLES.
9. PROVIDE T-SLOT GROUND FAULT RECEPTACLE COMPLETE WITH "HEAVY DUTY IN-US" WEATHER-PROOF COVER. COORDINATE PLACEMENT WITH MECHANICAL TRADE. INDICATED DEVICE IS TO BE MOUNTED ±36" (900mm) ABOVE FINISHED ROOF LEVEL.



FAN ROOM 124 RENOVATION PLAN
SCALE: 1:100

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<div><div>GENERAL SPECIFICATION</div><div>GENERAL NOTES</div><div><div><div><div>1. PROVIDE LABOUR MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKSMANSHIP ACCEPTABLE TO THE OWNER, ARCHITECT AND CONSULTANT.</div><div>2. OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS. OBTAIN NECESSARY APPROVALS, CERTIFICATES AND INSPECTIONS. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT.</div><div>3. COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF UNDERWRITERS, ELECTRICAL SAFETY AUTHORITY, THE CANADIAN STANDARDS ASSOCIATION AND ALL REQUIREMENTS OF THE LOCAL UTILITY.</div><div>4. VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND CONSULTANT.</div><div>5. CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRING TO INSTALL THE SERVICE.</div><div>6. THE DRAWINGS ARE DIAGRAMMATIC, THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE, WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.</div><div>7. SUBMIT COPIES OF SHOP DRAWINGS AS PDF FILES VIA EMAIL FOR ALL MAJOR EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY.</div><div>8. PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN CONDUITS, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.</div><div>9. MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKMEN'S COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR REQUIREMENTS.</div><div>10. PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.</div><div>11. INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.</div><div>12. WARRANTY ALL LABOUR, MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF SYSTEM.</div><div>13. COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH APPARATUS OF ALL OTHER TRADES.</div><div>14. PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.</div><div>15. MOUNTING HEIGHTS SHALL BE AS FOLLOWS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE/EQUIPMENT (UNLESS OTHERWISE NOTED).<div><div>WALL RECEPTACLES:</div><div><div>GENERAL: 400mm (16")</div><div>PANEL BOARDS: 1400mm (4'-8") OR AS REQUIRED BY CODE.</div></div></div><div>16. ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS OTHERWISE NOTED.</div><div>17. ALL EXISTING ELECTRICAL DEVICES, OUTLET BOXES, ETC., NOT SHOWN ON DRAWINGS OR MENTIONED IN THE FOLLOWING NOTES AND INSTALLED IN WALLS SLATED FOR DEMOLITION, SHALL BE DISCONNECTED AND REMOVED COMPLETELY IN ALL RESPECTS.</div><div>19. SUBMIT ONE COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A THREE RING BINDER LABELED FOR THE PROJECT COMPLETE WITH TENDERS SECTIONS CONTAINING PROJECT DATA, SHOP DRAWINGS, ETC. UPON ACCEPTANCE OF THE OPERATION AND MAINTENANCE MANUAL BY THE CONSULTANT PROVIDE TWO ADDITIONAL COPIES BOUND IN SEPARATE THREE RING BINDERS. A PDF FILE OF THE ENTIRE MANUAL IS TO BE PROVIDED ON A USB STICK. ONLY ONE USB STICK IS TO BE PROVIDED CONTAINING BOTH THE APPROVED MANUALS AND RECORD DRAWINGS.</div><div>20. CONTRACTOR SHALL PROVIDE 2 SETS OF REPRODUCIBLE ELECTRICAL DRAWINGS, MARK THEREON ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR. THIS SHALL INCLUDE FIELD AND CONTRACT CHANGES TO ELECTRICAL SYSTEMS. IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 5mm (1/8") HIGH AS FOLLOWS: - "RECORD DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW ELECTRICAL SYSTEMS AS INSTALLED. (SIGNATURE OF CONTRACTOR/OWNER)". SUBMIT HARD COPY TO CONSULTANT FOR APPROVAL. WHEN RETURNED, MAKE CORRECTIONS (IF ANY) AS DIRECTED. ONCE APPROVED, SUBMIT COMPLETED REPRODUCIBLE PAPER RECORD DRAWINGS AS WELL AS A SCANNED PDF COPY FILE ON USB STICK WITH OPERATING AND MAINTENANCE MANUALS.</div><div>21. CONTRACTOR SHALL PROVIDE RED LINE RECORD DRAWINGS OF EACH AND EVERY ELECTRICAL DRAWING FOR DEI & ASSOCIATES INC. TO CAD THE RECORD DRAWINGS. THE CAD DRAWING FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.</div><div>22. THE CONTRACTOR SHALL BE DETERMINE GENERAL INSPECTION FEES WITH THE ELECTRICAL SAFETY AUTHORITY AND INCLUDE AS PART OF TENDER.</div></div><div><div>IDENTIFIED PRICING</div><div><div>1. THIS CONTRACTOR IS TO INCLUDE ON THEIR TENDER SUBMISSION THE FOLLOWING IDENTIFIED PRICES.</div><div>1.0 ITEMIZED PRICES (FOR WORK WHICH IS INCLUDED IN THE TENDER PRICE)</div><div>PRICE #1 – DRAMA ROOM: A LUMP SUM COST FOR THE NECESSARY WORK REQUIRED FOR THE REPLACEMENT OF THE EXISTING DRAMA ROOM MECHANICAL UNIT.</div><div>PRICE #2 – MACHINE SHOP: A LUMP SUM COST FOR THE NECESSARY WORK REQUIRED FOR THE REPLACEMENT OF THE EXISTING MACHINE SHOP MECHANICAL UNIT.</div><div>PRICE #3 – CAFETERIA CONDENSING UNIT: A LUMP SUM COST FOR THE NECESSARY WORK REQUIRED FOR THE ADDITION OF THE CONDENSING UNIT.</div></div><div>REFER TO DISTRIBUTION RISER DIAGRAM AND DRAWINGS FOR ADDITIONAL INFORMATION.</div><div>CASH ALLOWANCE</div><div><div>1. PROVIDE A CASH ALLOWANCE OF \$5000.00 IN THE TENDER PRICE FOR THE FOLLOWING WORK:<div><div>1. SUPPLY AND INSTALLATION OF CONTROL CABLING REQUIRED FOR NEW KITCHEN MAKE-UP AIR UNIT INTERLOCK TO EXISTING NFPA HOOD CONTROL SYSTEM.</div></div></div></div></div><div><div>BASIC MATERIALS</div><div><div>1. JUNCTION, OUTLET AND PULL BOXES MUST BE APPROVED TO SUIT INSTALLATION METHODS AND ENVIRONMENT.</div><div>2. CONDUIT MUST BE CONCEALED UNLESS INSTALLED IN SERVICE OR STORAGE ROOMS.</div><div>3. CONDUIT MUST BE INSTALLED PARALLEL AND PERPENDICULAR TO BUILDING LINES IN A NEAT AND WORKMANLIKE MANNER.</div><div>4. ALL FEEDER AND BRANCH CIRCUIT WIRING MUST BE COPPER, 750 RATING/STYLE RUN IN EMT CONDUIT WITH INTERNAL INSULATED GREEN GROUND WIRE UNLESS NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AND MINIMUM CONDUIT SIZE SHALL BE 3/4" (19mm).</div><div>5. AC90 CABLE MAY BE USED FOR BRANCH CIRCUIT WIRING IN STEEL STUD WALLS AND "DROPS" IN T-BAR CEILING AREAS TO LIGHT FIXTURES AND FIRE ALARM DEVICES. LENGTH OF DROP MUST BE LIMITED TO 8'-0" (2400mm).</div><div>6. COLOUR CODE CONDUITS, BOXES AND METALLIC SHEATHED CABLES.</div><div>7. CODE WITH PLASTIC TAPE OR PAINT AT POINTS WHERE CONDUIT OR CABLE ENTERS WALL, CEILING, OR FLOOR, AND AT 15m(45') INTERVALS.</div><div>8. COLOUR BANDS MUST BE 25mm(1") WIDE AND CODED AS FOLLOWS FOR NOTED SYSTEMS. (WRITER TO EDIT)</div><div><div><div>SYSTEM</div><div>UP TO 208V</div><div>DATA SYSTEM</div><div>SECURITY</div><div>PUBLIC ADDRESS</div><div>FIRE ALARM</div><div>EMERGENCY LIGHTING</div></div><div><div>COLOUR</div><div>YELLOW</div><div>BROWN</div><div>BROWN</div><div>BLACK</div><div>RED</div><div>PINK</div></div></div><div>9. THIS CONTRACTOR MUST PAINT ALL SYSTEM JUNCTION BOXES AND COVERS IN CONFORMANCE WITH THE ABOVE SCHEDULE.</div></div><div><div>BREAKDOWN</div><div><div>1. THIS CONTRACTOR MUST SUBMIT A BREAKDOWN OF THE TENDER PRICE INTO CLASSIFICATIONS TO THE SATISFACTION OF THE CONSULTANT, WITH THE AGGREGATE OF THE BREAKDOWN TOTALING THE TOTAL CONTRACT AMOUNT. EACH ITEM MUST BE BROKEN OUT INTO MATERIAL AND LABOUR COSTS. PROGRESS CLAIMS, WHEN SUBMITTED ARE TO BE ITEMIZED AGAINST EACH ITEM OF THE DRAW BREAKDOWN. THIS SHALL BE DONE IN TABLE FORM SHOWING CONTRACT AMOUNT, AMOUNT THIS DRAW, TOTAL TO DATE, % COMPLETE AND BALANCE.</div><div>2. BREAKDOWN SHALL BE AS FOLLOWS:<div><div>1. PERMITS AND FEES</div><div>2. MOBILIZATION (MAXIMUM 1%)</div><div>3. DEMOLITION</div><div>4. PANELBOARDS AND MISCELLANEOUS DISTRIBUTION EQUIPMENT</div><div>5. FEEDER CONDUITS</div><div>6. FEEDER CABLES</div><div>7. LIGHTING FIXTURES</div><div>8. FIRE ALARM SYSTEM</div><div>9. VOICE/DATA SYSTEM</div><div>10. STARTERS, CONTRACTORS, CONTROL DEVICES, DISCONNECTS</div><div>11. WIRING FOR MECHANICAL EQUIPMENT</div><div>12. COMMISSIONING (MINIMUM 3%)</div></div></div><div>3. THE BREAKDOWN MUST BE APPROVED BY THE CONSULTANT PRIOR TO SUBMISSION OF THE FIRST DRAW.</div><div>4. BREAKDOWNS NOT COMPLYING TO THE ABOVE WILL NOT BE APPROVED.</div><div>5. BREAKDOWN MUST INDICATE TOTAL CONTRACT AMOUNT.</div><div>6. MOBILIZATION AMOUNT MAY ONLY BE DRAWN WHEN ALL REQUIRED SHOP DRAWINGS HAVE BEEN REVIEWED BY THE CONSULTANT.</div></div><div><div>SHOP DRAWINGS AND PRODUCT DATA</div><div><div>1. FURNISH COMPLETE CATALOG DATA FOR MANUFACTURED ITEMS OF EQUIPMENT TO BE USED IN THE WORK TO CONSULTANT FOR REVIEW WITHIN 30 DAYS AFTER AWARD OF CONTRACT.</div><div>2. IF MATERIAL OR EQUIPMENT IS NOT AS SPECIFIED OR SUBMITTAL IS NOT COMPLETE, IT WILL BE REJECTED BY CONSULTANT. ADDITIONAL SHOP DRAWINGS REQUIRED BY THE CONTRACTOR FOR MAINTENANCE MANUALS, SITE COPIES ETC. SHALL BE PHOTOCOPIES OF THE "REVIEWED" SHOP DRAWINGS. ALL COSTS TO PROVIDE ADDITIONAL COPIES OF SHOP DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.</div><div>3. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED.</div><div>4. CATALOG DATA OR SHOP DRAWINGS FOR EQUIPMENT, WHICH ARE NOTED AS BEING REVIEWED BY CONSULTANT OR HIS ENGINEER SHALL NOT SUPERSEDE CONTRACT DOCUMENTS.</div><div>5. REVIEW COMMENTS OF CONSULTANT SHALL NOT RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR DEVIATIONS FROM CONTRACT DOCUMENTS UNLESS CONSULTANT'S ATTENTION HAS BEEN CALLED TO SUCH DEVIATIONS IN WRITING AT TIME OF SUBMISSION, NOR SHALL THEY RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR ERRORS IN ITEMS SUBMITTED.</div><div>6. CHECK WORK DESCRIBED BY CATALOG DATA WITH CONTRACT DOCUMENTS FOR DEVIATIONS AND ERRORS.</div><div>7. SHOP DRAWINGS AND PRODUCT DATA SHALL SHOW:<div><div>1. MOUNTING ARRANGEMENTS.</div><div>2. OPERATING AND MAINTENANCE CLEARANCES, E.G. ACCESS DOOR SWING SPACES.</div></div></div><div>8. SHOP DRAWINGS AND PRODUCT DATA SHALL BE ACCOMPANIED BY:<div><div>1. DETAILED DRAWINGS OF BASES, SUPPORTS, AND ANCHOR BOLTS.</div><div>2. MANUFACTURER TEST DATA WHERE REQUESTED.</div><div>3. MANUFACTURER CURRENT RATING AND CERTIFICATION MODEL PRODUCTION.</div><div>4. CERTIFICATION OF COMPLIANCE TO APPLICABLE CODES.</div></div></div><div>9. STATE SIZES, CAPACITIES, BRAND NAMES, MOTOR HP, ACCESSORIES, MATERIALS, GAUGES, DIMENSIONS, AND OTHER PERTINENT INFORMATION. LIST ON CATALOG COVERS PAGE NUMBERS OF SUBMITTED ITEMS TO UNDERLINE APPLICABLE DATA.</div><div>10. ONCE THESE SHOP DRAWINGS ARE RETURNED "REVIEWED" OR "REVIEWED AS NOTED" FABRICATION, PRODUCTION, AND INSTALLATION MAY COMMENCE. NOTE: IF A SHOP DRAWING IS RETURNED "REVIEWED AS NOTED" THIS CONTRACTOR MUST PROVIDE WRITTEN INDICATION THAT THE COMMENTS HAVE BEEN COMPLIED WITH.</div><div>12. A PARTIAL LIST OF SHOP DRAWINGS INCLUDES:<div><div>1. PANELBOARDS</div><div>2. LUMINAIRES</div><div>3. STARTERS, CONTRACTORS, AND CONTROL DEVICES</div><div>4. FIRESTOPPING MATERIALS</div><div>5. WIRING DEVICES</div><div>6. COMPUTER SYSTEM COMPONENTS</div><div>7. DISCONNECTS</div></div></div></div></div><div><div>FIRESTOPPING</div><div><div>1. FIRESTOPPING MATERIAL AND INSTALLATION WITHIN ANNULAR SPACE BETWEEN CONDUITS, DUCTS, AND ADJACENT FIRE SEPARATION.</div><div>2. PROVIDE MATERIALS AND SYSTEMS CAPABLE OF MAINTAINING EFFECTIVE BARRIER AGAINST FLAME, SMOKE, AND GASES.</div><div>3. COMPLY WITH THE REQUIREMENTS OF CAN4-S115-N35, AND DO NOT EXCEED OPENING SIZED FOR WHICH THEY HAVE BEEN TESTED.</div><div>4. SYSTEMS TO HAVE AN F OR FT RATING (AS APPLICABLE) NOT LESS THAN THE FIRE PROTECTION RATING REQUIRED FOR CLOSURES IN A FIRE SEPARATION. PROVIDE FIREWRAP BLANKET AROUND SERVICES PENETRATING FIREWALLS.</div><div>5. EXTENT OF BLANKET MUST CORRESPOND TO ULC RECOMMENDATIONS. IN GENERAL WRAP INDIVIDUAL CONDUITS WITH APPROVED FIREWRAP MATERIALS ON EACH SIDE OF FIREWALL. REFER TO ARCHITECTURAL DRAWINGS FOR FT RATINGS. PROVIDE 1 AND/OR 2 LAYERS OF FIREWRAP WITH TRANSVERSE AND LONGITUDINAL SEAMS OVERLAPPED AND JOINT BUTTED (SECOND LAYER OFFSET FROM FIRST LAYER). BUT EDGES ARE TO BE SEALED WITH ALUMINUM FOIL TAPE. PROVIDE 50 MM STAINLESS STEEL BANDING AT 200 MM INTERVALS. INSTALL FIREWRAP TO MANUFACTURERS' RECOMMENDATIONS FOR PROPER FT RATING. ACCEPTABLE MANUFACTURERS ARE 3M FIREMASTER DUCTWRAP OR APPROVED EQUAL.</div><div>6. THE FIRESTOPPING MATERIALS ARE NOT TO SHRINK, SLUMP OR SAG AND BE FREE OF ASBESTOS, HALOGENS AND VOLATILE SOLVENTS.</div><div>7. FIRESTOPPING MATERIALS ARE TO CONSIST OF A COMPONENT SEALANT APPLIED WITH A CONVENTIONAL CAULKING GUN AND TROWEL.</div><div>8. FIRESTOP MATERIALS ARE TO BE CAPABLE OF RECEIVING FINISH MATERIALS IN THOSE AREAS, WHICH ARE EXPOSED AND SCHEDULED TO RECEIVE FINISHES.</div><div>9. FIRESTOPPING SHALL BE INSPECTED AND APPROVED BY LOCAL AUTHORITY PRIOR TO CONCEALMENT OR ENCLOSURE.</div><div>10. INSTALL MATERIAL AND COMPONENTS IN ACCORDANCE WITH ULC CERTIFICATION, MANUFACTURERS INSTRUCTIONS AND LOCAL AUTHORITY.</div><div>11. SUBMIT PRODUCT LITERATURE AND INSTALLATION MATERIAL ON FIRESTOPPING IN SHOP DRAWING AND PRODUCT DATA MANUAL.</div><div>12. ACCEPTABLE MATERIALS:<div><div>FIRESELEVE INDUSTRIES INC.</div><div>GENERAL ELECTRIC PENALS FIRESTOP SYSTEMS</div><div>INTERNATIONAL PROTECTIVE COATINGS CORP.</div><div>INTERCORSEAL CORPORATION (METACALK)</div><div>PROSET SYSTEMS</div><div>JM</div><div>40 SYSTEMS</div><div>HILLT</div><div>ROYAL</div></div><div>NOTE: FIRE STOP MATERIAL MUST CONFORM TO REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION. CONTRACTOR TO CONFIRM PRIOR TO APPLICATION AND ENSURE MATERIAL USED IS COMPATIBLE WITH THAT USED BY OTHER TRADES ON SITE.</div></div><div>13. ENSURE FIRESTOP MANUFACTURER REPRESENTATIVE PERFORMS ON SITE INSPECTIONS AND CERTIFIES INSTALLATION. SUBMIT INSPECTION REPORTS/CERTIFICATION AT TIME OF SUBSTANTIAL COMPLETION.</div></div><div><div>WIRING DEVICES</div><div><div>1. GENERAL PURPOSE AC SWITCHES MUST CONFORM TO CSA C22.2 NO. 111 (LATEST EDITION).</div><div>2. 15 OR 20 A, 120 V, SINGLE POLE, DOUBLE POLE, THREE-WAY, OR FOUR-WAY SWITCHES.</div><div>3. RECEPTACLES, PLUGS, AND OTHER SIMILAR WIRING DEVICES MUST CONFORM TO CSA C22.2 NO. 42 (LATEST EDITION).</div><div>4. DUPLEX RECEPTACLES, CSA TYPE 5-15 R, 125 V, 15 A, U GROUND, WITH THE FOLLOWING FEATURES:<div><div>1. UREA MOLDED HOUSING WITH COLOUR AS SELECTED BY ARCHITECT.</div><div>2. SUITABLE FOR NO. 10 AWG FOR BACK AND SIDE WIRING.</div><div>3. BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.</div><div>4. EIGHT BACK WIRE ENTRANCES, FOUR SIDE WIRING SCREWS.</div><div>5. TRIPLE WIRE CONTACTS AND RIVETED GROUNDING CONTACTS.</div></div></div><div>5. ACCEPTABLE MATERIALS:<div><div>1. GROUND FAULT PROTECTED T-SLOT RECEPTACLES: HUBBELL CAT. #GF20X COMPLETE WITH DECORA STYLE COVERPLATE TO SUIT SPECIFICATION BELOW.</div><div>2. T-SLOT RECEPTACLES: HUBBELL CAT. #HRS352</div></div><div>6. OTHER RECEPTACLES WITH AMPACITY AND VOLTAGE AS INDICATED. COLOUR BY ARCHITECT.</div></div><div>7. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE:<div><div>PASS & SEYMOUR</div><div>LEVITON</div></div><div>8. INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.</div><div>9. SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.</div><div>10. STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET BOXES.</div><div>11. WEATHERPROOF "HEAVY DUTY IN USE" COVER PLATES, COMPLETE WITH GASKETS FOR DUPLEX RECEPTACLES AS INDICATED.</div><div>12. PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.</div><div>13. INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.</div></div><div><div>LIGHTING SYSTEMS</div><div><div>1. FIXTURES ARE TO BE PROVIDED AS NOTED IN THE LIGHT FIXTURE SCHEDULE C/W THE FOLLOWING FEATURES:<div><div>1. LED</div><div>2. FIXTURE LED'S MUST BE TESTED IN CONFORMANCE WITH IESNA LM80 STANDARD.</div><div>3. LED'S MUST BE SELECTED USING A BINNING ALGORITHM TO ENSURE COLOUR AND LUMEN OUTPUT OF A GIVEN FIXTURE ARE CONSISTENT, AS WELL AS MEET OR SURPASS ANSI C78.377 SPECIFICATION FOR THE RATED LIFETIME OF THE FIXTURE. COLOUR ACCURACY BETWEEN PRODUCTS MUST BE WITHIN A 2-STEP MACADAM ELLIPSE.</div><div>4. LUMINAIRES MUST BE TESTED TO IESNA LM79 BY AN INDEPENDENT APPROVED LABORATORY.</div><div>5. LUMINAIRES MUST BE TESTED PRIOR TO SHIPPING.</div><div>6. LUMINAIRES MUST BE ULC CERTIFIED AND APPROVED FOR USE IN CANADA.</div><div>6. FIXTURES MUST MAINTAIN A MINIMUM OF 90% OF THEIR INITIAL LIGHT OUTPUT FOR 60,000 HOURS. SUBMIT TEST RESULTS UPON REQUEST.</div><div>7. LUMEN VALUES INDICATED FOR FIXTURES IN THE PROJECT DOCUMENTS ARE TO BE CONSIDERED AS "ABSOLUTE" OR "DELIVERED" VALUES.</div><div>8. OTHER THAN FOR SPECIALTY FIXTURES, AND UNLESS OTHERWISE INDICATED, THE MAXIMUM DRIVER CURRENT IS TO BE 750 MA.</div></div></div><div>2. FIXTURE INSTALLATION<div><div>1. LOCATE AND INSTALL LUMINAIRES AS INDICATED.</div><div>2. FIXTURE SURFACE MOUNTED TO SUSPENDED CEILINGS MUST BE SECURED THROUGH CEILING ASSEMBLY TO CROSS MEMBER SUPPORTS. THESE SUPPORTS ARE TO BE STEEL CHANNELS OR ANGLES INDEPENDENTLY SECURED TO STRUCTURE USING #12 "JACK" CHAIN. EACH CHAIN MUST BE SECURED SO NO FIXTURE WEIGHT IS ADDED TO THE CEILING ASSEMBLY.</div><div>3. PLASTER FRAMES/FLANGE KITS MUST BE PROVIDED BY THIS DIVISION FOR FIXTURES RECESSED IN PLASTER AND/OR DRYWALL CEILINGS.</div><div>4. WHERE SPECIFIED, FIXTURES TO BE CHAIN HUNG SHALL BE HUNG USING "JACK" CHAIN WITH A CAPACITY TO SUIT THE FIXTURE WEIGHT. BRANCH CIRCUIT WIRING FEEDING THESE FIXTURES SHALL BE AC90 CABLE "Y"-WRAPPED AT 36" (900mm) INTERVALS ALONG LENGTH OF DROP. FINAL APPEARANCE MUST BE NEAT AND PROFESSIONAL.</div><div>5. CONNECT LUMINAIRES TO LIGHTING CIRCUITS AS INDICATED.</div><div>6. ALIGN LUMINAIRES MOUNTED IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINES.</div><div>7. ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING GRID LINES.</div><div>8. ALL LIGHTING BRANCH CIRCUITS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS.</div></div></div><div>3. GUARANTEE<div><div>1. ALL LED FIXTURES AND DRIVERS ARE TO BE COMPLETE WITH A 5 YEAR GUARANTEE.</div><div>2. THE LABOUR REQUIRED TO REPLACE THESE DRIVERS MUST BE INCLUDED IN THE ABOVE GUARANTEE.</div></div></div><div><div>DISCONNECT SWITCHES</div><div><div>1. MUST CONFORM TO CSA C22.2 NO. 4 (LATEST EDITION).</div><div>2. FUSIBLE, AND/OR NON-FUSIBLE, HORSEPOWER RATED DISCONNECT SWITCHES, SIZE AS INDICATED.</div><div>3. PROVISION FOR PADLOCKING IN OFF SWITCH POSITION BY THREE LOCKS.</div><div>4. MECHANICALLY INTERLOCKED DOOR TO PREVENT OPENING WHEN HANDLE IS IN "ON" POSITION.</div><div>5. QUICK-MAKE, QUICK-BREAK ACTION.</div><div>6. ON-OFF SWITCH POSITION INDICATION ON SWITCH ENCLOSURE COVER.</div><div>7. PROVIDE LAMICOID LABEL.</div><div>9. DISCONNECT SWITCHES MUST BE ONE OF THE FOLLOWING:<div><div>1. CUTLER HAMMER</div><div>2. SCHNEIDER ELECTRIC</div><div>3. SIEMENS</div></div></div></div></div><div><div>MOTOR STARTERS AND DEVICES</div><div><div>1. MAGNETIC AND COMBINATION MAGNETIC STARTERS OF SIZE, TYPE, RATING AND ENCLOSURE TYPE AS INDICATED WITH COMPONENTS AS FOLLOWS:<div><div>1. CONTRACTOR SOLENOID OPERATED, RAPID ACTION TYPE.</div><div>2. MOTOR OVERLOAD PROTECTION DEVICE IN EACH PHASE, MANUALLY RESET FROM OUTSIDE ENCLOSURE.</div><div>3. WIRING AND SCHEMATIC DIAGRAM INSE STARTER ENCLOSURE IN VISIBLE LOCATION.</div><div>4. IDENTIFY EACH WIRE AND TERMINAL FOR EXTERNAL CONNECTIONS, WITHIN STARTER, WITH PERMANENT NUMBER MARKING IDENTICAL TO DIAGRAM.</div></div></div><div>2. ACCESSORIES:<div><div>1. PUSHBUTTONS SELECTOR SWITCHES STANDARD DUTY LABELED AS INDICATED.</div><div>2. INDICATING LIGHTS, STANDARD DUTY TYPE AND COLOUR AS INDICATED.</div><div>3. 1-W/O AND 1-W/C SPARE ALARM CONTACTS UNLESS OTHERWISE INDICATED.</div><div>4. SINGLE PHASE, DRY TYPE, CONTROL TRANSFORMER WITH PRIMARY VOLTAGE AS INDICATED AND SECONDARY VOLTAGE TO SUIT REMOTE CONTROL DEVICE, COMPLETE WITH SECONDARY FUSE, INSTALLED IN WITH STARTER AS NOTED.</div><div>5. SIZE CONTROL TRANSFORMER FOR CONTROL CIRCUIT LOAD PLUS 20% SPARE CAPACITY.</div></div></div><div>3. ALL STARTERS AND DEVICES MUST BE CAPABLE OF INTERRUPTING A FAULT CURRENT OF 35,000KA RMS SYMMETRICAL.</div><div>4. PROVIDE NEMA STYLE STARTERS ONLY. IEC STARTERS OR HALF SIZE STARTERS WILL NOT BE ACCEPTED.</div><div>5. EACH STARTER SHALL BE EQUIPPED WITH A FUSIBLE SWITCH, A FUSED CONTROL, POWER TRANSFORMER, TWO (2) INDICATING LIGHTS, CONTROL DEVICE AS PER THE EQUIPMENT WIRING SCHEDULE TWO (2)-A/O AND TWO (2)-A/O CONTACTS (INCLUDING SPARES), UNLESS OTHERWISE SCHEDULED ON THE DRAWINGS. DEVICE PANEL TO HAVE SPACE TO ACCOMMODATE SIX (6)-THE PILOT-CONTROL DEVICES OR INDICATING AMMETERS, VOLTMETERS, OR ELAPSED TIME METERS.</div><div>6. INDIVIDUAL FEEDER AND STARTER DISCONNECT SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK GATE OPERATED TYPE UTILIZING CLASS J FUSE CLIPS. THE FUSED SWITCH SHALL HAVE A 200, 000 AIC RATED VOLTAGE.</div></div><div><div>ASBESTOS</div><div><div>1. IF ASBESTOS IS SUSPECTED OR IDENTIFIED CEASE ALL WORK IN THE IMMEDIATE AREA IN ACCORDANCE WITH OHS&A AND NOTIFY CONSULTANT.</div><div>2. EACH CONTRACTOR AND ON SITE EMPLOYEE OF THE CONTRACTOR SHALL HAVE "ASBESTOS AWARENESS TRAINING".</div><div>3. THE CONTRACTOR SHALL ENSURE THAT EMPLOYEES WHO MAY COME INTO CONTACT WITH ASBESTOS DUE TO THE NATURE OF THE WORK THAT THEY PERFORM, HAVE RECEIVED TRAINING THAT ENABLES THEM TO RECOGNIZE ASBESTOS AND THAT ENABLES THEM TO REACT IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS THERETO SHOULD CONTACT WITH ASBESTOS OCCUR DURING THE COURSE OF THEIR WORK.</div><div>4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE ASBESTOS BOOK IN THE BUILDING PRIOR TO STARTING ANY WORK.</div><div>5. EXISTING OCCUPIED BUILDINGS (DEPENDING UPON THEIR AGE) MAY CONTAIN ASBESTOS IN THERMAL INSULATING MATERIALS AND SOME MANUFACTURED PRODUCTS, SUCH AS VINYL ASBESTOS FLOOR TILE, ANY INSULATING MATERIALS, ON PIPES, FITTINGS, BOILERS, TANKS, DUCTWORK, ETC. MAY CONTAIN ASBESTOS AND SHALL NOT BE DISTURBED.</div><div>6. A SURVEY OF THE BUILDING DOCUMENTING THE LOCATION AND CONDITION OF ASBESTOS-CONTAINING MATERIALS IS AVAILABLE FOR YOUR MANDATORY REVIEW PRIOR TO COMMENCING ANY WORK ON PREMISES.</div></div></div><div><div>PANEL BOARDS</div><div><div>1. PANEL BOARDS MUST CONFORM TO CSA C22.2 NO. 29 (LATEST EDITION).</div><div>2. IN ADDITION TO CSA REQUIREMENTS MANUFACTURER'S NAMEPLATE MUST SHOW FAULT CURRENT THAT PANEL INCLUDING BREAKERS HAS BEEN BUILT TO WITHSTAND, SERIES RATING IS ACCEPTABLE-SUBMIT INFORMATION WITH SHOP DRAWINGS.</div><div>3. BUS AND BREAKERS/SWITCHES MUST BE RATED FOR 10KA (SYMMETRICAL) INTERRUPTING CAPACITY OR AS INDICATED.</div><div>4. SEQUENCE PHASE BUSSING WITH ODD NUMBERED BREAKERS ON LEFT AND EVEN ON RIGHT, WITH EACH BREAKER IDENTIFIED BY PERMANENT NUMBER IDENTIFICATION AS TO CIRCUIT NUMBER AND PHASE.</div><div>5. PANEL BOARD MAINS, NUMBER OF CIRCUITS, AND NUMBER AND SIZE OF BRANCH CIRCUIT AS INDICATED.</div><div>6. TWO KEYS FOR EACH PANEL BOARD AND KEY PANEL BOARDS ALIKE.</div><div>7. ALUMINUM BUS WITH NEUTRAL OF SAME AMPERE RATING AS MAINS.</div><div>8. MAINS MUST BE SUITABLE FOR BOLT-ON BREAKERS. PROVIDE MAIN (IF APPLICABLE) AND BRANCH BREAKERS AS BOLT-ON STYLE.</div><div>9. TRIM AND DOOR FINISH MUST BE BAKED GRAY ENAMEL.</div><div>10. BREAKERS WITH THERMAL AND MAGNETIC TRIPPING IN PANEL BOARD DESCRIPTION AS INDICATED OTHERWISE.</div><div>11. PROVIDE NAMEPLATE FOR EACH PANEL BOARD WITH ENGRAVED DESCRIPTION AS INDICATED.</div><div>12. FOR EACH NEW AND EXISTING PANEL PROVIDE COMPLETE CIRCUIT DIRECTORY WITH TYPEWRITTEN LEGEND SHOWING LOCATION OF EACH CIRCUIT.</div><div>13. LOCATE PANEL BOARDS AS INDICATED AND MOUNT SECURELY, PLUMB, TRUE AND SQUARE, TO ADJOINING SURFACES.</div><div>14. INSTALL SURFACE MOUNTED PANEL BOARDS ON PLYWOOD BACKBOARDS. WHERE PRACTICAL, GROUP PANEL BOARDS ON COMMON BACKBOARD.</div><div>15. CONNECT LOADS TO CIRCUITS.</div><div>16. CONNECT NEUTRAL CONDUCTORS TO COMMON NEUTRAL BUS.</div><div>17. BRANCH CIRCUIT PANEL BOARDS MUST BE ONE OF THE FOLLOWING:<div><div>- CUTLER HAMMER CAT. #P0W-R-LINE-C PRL-1 OR PRL-2</div><div>- SCHNEIDER ELECTRIC CAT. #NODD SERIES</div><div>- SIEMENS CAT. #SENTION P1 SERIES</div></div></div><div>20. ALL REDUNDANT BREAKERS ARE TO REMAIN AND BE RE-LABELED AS "SPARE".</div><div>21. EXISTING PANELS MUST BE REVIEWED FOR LOOSE AND/OR FAULTY BREAKERS AND WIRING. ALL REQUIRED MODIFICATIONS MUST BE PERFORMED TO CORRECT ANY UNCOVERED PROBLEMS.</div></div><div><div>REFERENCES</div><div><div>CANADIAN STANDARDS ASSOCIATION (CSA)</div><div>1. CSA C22.2 NO.248.12/94, LOW VOLTAGE FUSES PART 12: CLASS R (8)-NATIONAL STANDARD WITH, UL 248-12 (1ST EDITION).</div><div>2. CSA C22.2 NO. 106-M92 (LATEST EDITION).</div></div><div><div>MAINTENANCE MATERIAL</div><div>1. THREE SPARE FUSES OF EACH TYPE AND SIZE INSTALLED.</div></div><div><div>DELIVERY AND STORAGE</div><div>1. SHIP FUSES IN ORIGINAL CONTAINERS.</div><div>2. STORE FUSES IN ORIGINAL CONTAINERS IN MOISTURE FREE LOCATION.</div></div><div><div>PRODUCTS / FUSES GENERAL</div><div>1. FUSES: PRODUCT OF ONE MANUFACTURER FOR ENTIRE PROJECT.</div><div>2. FUSES SPECIFIED BELOW MUST CONFORM TO CSA C22.2 NO. 106 (LATEST EDITION). FUSES CONFORMING TO STANDARD C22.2 NO. 106-1953 WILL BE REJECTED.</div><div>3. FUSES MUST PROVIDE A FULLY CO-ORDINATED SYSTEM FOR BOTH OVERLOAD AND FAULT CONDITIONS.</div></div><div><div>FUSE TYPES</div><div>CLASS I FUSES (FORMERLY HRC-L) FOR RATINGS 801-8000 A.<div><div>1. TIME DELAY, CAPABLE OF CARRYING 500% OF ITS RATED CURRENT FOR 10 S MINIMUM.</div><div>2. FAST ACTING AS NOTED.</div></div><div>CLASS J FUSES (FORMERLY HRC-J).<div><div>1. TIME DELAY, CAPABLE OF CARRYING 500% OF ITS RATED CURRENT FOR 10 S MINIMUM.</div><div>2. FAST ACTING AS NOTED.</div></div><div>CLASS R FUSES (FORMERLY HRC-R) FOR UL CLASS RK1 FUSES, PEAK LET-THROUGH CURRENT AND I²t VALUES NOT TO EXCEED LIMITS OF UL 1986-1982, TABLE 10.2.</div></div></div><div><div>ACCEPTABLE PRODUCTS</div><div><div>1. SERVICE ENTRANCES</div><div>2. 1-600 A: MERSEN TYPE CL</div><div>3. 601-6000 A: MERSEN TYPE CL</div></div><div><div>2. MOTOR PROTECTION:</div><div>1. 1-600 A: MERSEN TYPE AJT</div><div>2. 601-2000 A: MERSEN TYPE AMBT</div></div><div><div>3. OTHER ACCEPTABLE MANUFACTURERS:</div><div>1. GEC</div><div>2. LITTLE FUSE</div></div></div><div><div>INSTALLATION</div><div><div>1. INSTALL FUSES IN MOUNTING DEVICES IMMEDIATELY BEFORE ENERGIZING CIRCUIT.</div><div>2. ENSURE CORRECT FUSES FITTED TO PHYSICALLY MATCHED MOUNTING DEVICES.</div><div>3. INSTALL CLASS R REJECTION CLIPS FOR HRC-R FUSES.</div><div>4. ENSURE CORRECT FUSES FITTED TO ASSIGNED ELECTRICAL CIRCUIT.</div></div></div><div><div>FIRE ALARM SYSTEMS</div><div><div>1. INSTALLATION OF FIRE ALARM DEVICES MUST CONFORM TO ULC-S524 (LATEST EDITION).</div><div>2. ALL WIRING MUST BE COLOUR CODED, SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND CONFORM TO THE LATEST EDITION OF THE ELECTRICAL SAFETY CODE.</div><div>3. ALL NEW FIRE ALARM DETECTION AND SIGNALING DEVICES ADDED DUE TO RENOVATIONS SHALL BE CONNECTED TO EXISTING LOCAL ZONE OR NEW ZONE AS INDICATED.</div><div>4. ONCE INSTALLATION IS COMPLETE THE MANUFACTURER'S REPRESENTATIVE MUST MAKE AN INSPECTION OF THE DEVICES INSTALLED.</div><div>5. THIS TEST MUST CONFORM TO THE ONTARIO BUILDING CODE AND THE LATEST EDITION OF ULC CAN4-S537.</div><div>6. ALL COSTS ASSOCIATED WITH THIS INSPECTION BY THE CONTRACTOR AND MANUFACTURER MUST BE CARRIED IN THE TENDER PRICE.</div><div>8. UPON SUCCESSFUL COMPLETION OF TESTING THE MANUFACTURER MUST SUBMIT TO THE CONTRACTOR AND CONSULTANT:<div><div>- A CERTIFICATE OF VERIFICATION</div><div>- FIELD TECHNICIAN VERIFICATION SHEETS FOR EACH DEVICE VERIFIED (INCLUDE COPIES OF SAME IN MAINTENANCE MANUALS)</div></div></div><div>9. PROVIDE INTEGRATED TESTING OF THIS LIFE SAFETY SYSTEM IN CONFORMANCE WITH THE NOTED SPECIFICATION SECTION. INCLUDE ALL ASSOCIATED COSTS IN TENDER.</div></div><div><div>INTEGRATED TESTING OF LIFE SAFETY AND FIRE PROTECTION SYSTEMS</div><div><div>1. LIFE SAFETY AND FIRE PROTECTION SYSTEMS ARE TO BE INSTALLED TO COMPLY WITH THE PROVISIONS OF THE CURRENT ONTARIO BUILDING AND FIRE CODES, AS A RESULT, COMMISSIONING OF THESE INTEGRATED SYSTEMS MUST BE PERFORMED AS A WHOLE. THE CONTRACTOR SHALL ENSURE THE PROPER OPERATION AND INTER-RELATIONSHIP BETWEEN SYSTEMS.</div><div>2. THESE SYSTEMS AS APPLICABLE TO ANY GIVEN PROJECT INCLUDE BUT ARE NOT LIMITED TO FIRE ALARM AND ACCESS CONTROL AND EGRESS DEVICES.</div><div>3. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH CAN/ULC S1001-2011. SPECIAL CONSIDERATION IS TO BE GIVEN TO THE SEQUENCE OF OPERATIONS . THE WORK TO BE PERFORMED BY THIS CONTRACTOR IS ALSO DESCRIBED IN CAN/ULC S1001-2011.</div><div>4. ALL APPLICABLE CONTRACTORS, SUB-CONTRACTORS, TESTING AGENTS, AND SUPPLIERS ARE TO INCLUDE ALL REQUIRED COSTS IN THEIR RESPECTIVE TENDER COSTS. THIS TESTING AGENT MUST BE A THIRD PARTY FIRM NOT ASSOCIATED WITH THIS PROJECT IN ANY WAY AND BE UNDER CONTRACT WITH THE ELECTRICAL SUB-CONTRACTOR NOT THE FIRE ALARM SUPPLIER.</div><div>5. PROVIDE THIS TESTING FOR NFPA HOOD AND NEW MAKE-UP AIR UNIT.</div><div>6. THIS TESTING IS TO OCCUR TWICE, ONCE UPON COMPLETION OF RE-INSTALLATION OF EXISTING MAKE-UP AIR UNIT. ONCE UPON COMPLETION OF INSTALLATION OF NEW MAKE-UP AIR UNIT.</div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>	<p>The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.</p> <p>The drawings show the general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.</p> <p>The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.</p> <p>Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.</p> <p>Do not scale this drawing.</p> <p>© 2021 DEI & Associates Inc.</p>