

AIR HANDLING UNITS SCHEDULE-GAS FIRED MAKE UP AIR															
TAG	SERVICE	LOCATION	MAKE	MODEL	TYPE	SUPPLY FAN			HEATING CAPACITY		ELECTRICAL		WEIGHT (KG)	DIMENSIONS (LxWxH) mm	NOTES
						FLOW (L/S)	ESP (PA)	FAN MOTOR (HP)	INPUT (KW)	VOLT/PH/Hz	MCA				
AHU-3	PAINT ROOM	ROOF	ENGINEERED AIR	HE401/0/MV	DIRECT FIRED	17,940	125	25	787	575/3/60	35	2400	4575x2150x1900	1	

NOTES:
1. 3 SPEED CONTROL AND BACNET INTERFACE, TWO PART EPOXY PAINT WITH UV TOPCOAT, INTAKE HOOD, BURNER CONTROL, MIST ELIMINATOR AND FILTER SECTION.

HEAT PUMP SPLIT SYSTEM - OUTDOOR UNIT SCHEDULE														
TAG	SERVICE	LOCATION	MAKE	MODEL	TYPE	COOLING CAPACITY MAX.			HEATING CAPACITY MAX.		ELECTRICAL		WEIGHT (KG)	NOTES
						(KW)	BTU/HR	TONS	INPUT (KW)	V/PH/Hz	MCA			
HP-100	FC-1a FC-1b	ROOF	FUJITSU	AOU45RLXFZ	MULTI ZONE	14		15.8	208/1/60	4.59	30	28.9	104	1
HP-200	FC-2	ROOF	FUJITSU	AOU24RGLX	SINGLE ZONE	8.5		9.5	208/1/60	2.06	30	20.8	69	1

NOTES:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SINGLE POINT ELECTRICAL CONNECTION, FUSED DISCONNECT SWITCH, AMBIENT CONTROL FOR OPERATION DOWN TO 0'F (-18'C) WITH FREEZE STAT. PROVIDE CONTROL WIRING FROM INDOOR UNIT TO OUTDOOR UNIT. PROVIDE EXTENDED 5 YEAR WARRANTY ON COMPRESSOR. REFRIGERANT R410A. C/W MOUNTING BASE.

HEAT PUMP SPLIT SYSTEM - INDOOR UNIT SCHEDULE															
TAG	SERVICE	LOCATION	MAKE	MODEL	TYPE	VOLUME (L/S)	DX COIL			HEATING		ELECTRICAL		WEIGHT (KG)	NOTES
							COOLING (KW)	BTU/HR	TONS	INPUT (KW)	V/PH/Hz	MCA			
FC-1a	NE AREA	CEILING	FUJITSU	ARU24RLF	SLIM DUCT	390	88.36	5.2	5.8	73	208/1/60	23	1		
FC-1b	INTERIOR	CEILING	FUJITSU	ARU24RLF	SLIM DUCT	390	88.36	5.2	5.8	73	208/1/60	23	1		
FC-2	NW AREA	CEILING	FUJITSU	ARU24RLF	SLIM DUCT	390	88.36	5.2	5.8	73	208/1/60	23	1		

NOTES:
1. PROVIDE CONDENSATE DRAIN PUMP, PIPED TO DRAIN. C/W DISCONNECTED SWITCH POWERED FROM OUTDOOR UNIT.

GLYCOL HEATING HEAT PUMP SCHEDULE-GLYCOL SYSTEM													
TAG	SERVICE	LOCATION	MAKE	MODEL	TYPE	CAPACITY (KW)	WATER FLOW RATE (L/S)	ELECTRICAL			WEIGHT (KG)	DIMENSIONS (LxWxH) mm	NOTES
								MCA	MOP	V/PH/Hz			
HP-HW	UNIT HEATERS	ROOF	TRANE	ARP015XNIC2RSOAMSN	AIR SOURCE	50 KW	2.5	38	60	575/3/60	670	1600x800x1900	1

NOTES:
1. COMPLETE WITH:
SINGLE POINT ELECTRICAL CONNECTION. AMBIENT CONTROL FOR OPERATION DOWN TO 0'F (-18'C) WITH FREEZE STAT. PROVIDE EXTENDED 5 YEAR WARRANTY ON COMPRESSOR. REFRIGERANT R410A. GALVANIZED STEEL CABINET WITH AMERON SLOXATE PSX-700 EPOXY PAINT. HERESITE P-413 FOR CONDENSER COIL. COMPONENTS IN BOTTOM SIDE TO BE PROVIDED WITH BRONZEFLOW COATING.
BUILT-IN CIRCULATION PUMP-PRIMARY LOOP. TWO PIPE 2.5 L/S (40 GPM) AT 43 FT HEAD. 3x3x6 PUMPS, SHP. BUILT-IN MINI GLYCOL FEEDER WITH 8 GAL EXPANSION TANK. VFD ON FANS STAINLESS STEEL INLET HEADER AND HEAT EXCHANGER AND ELECTRONIC LOAD CONTROL.
SUITABLE FOR 20% GLYCOL MIXTURE

CONTROL DAMPER SCHEDULE									NOTES
TAG	SERVICE	LOCATION	MAKE	MODEL	SIZE mmxmm	AIR FLOW (L/S)	TYPE		
MD-AHU 3A	SUPPLY AIR TO P.R.	ROOF	TAMCO	9000	3300x1500	12,000	PARALLEL BLADE		1
MD-AHU 3B	RELIEF AIR	ROOF	TAMCO	9000	1600x500	5,000	PARALLEL BLADE		1
MD-AHU 3C	SUPPLY AIR TO SHOPS	ROOF	TAMCO	9000	1100x800	6,000	PARALLEL BLADE		1

NOTES:
1. SITE CONFIRM CONNECTION SIZE IN LINE DUCTED. C/W SALT WATER RESISTANCE OPTION. POSITION BLADES TO DIRECT AIR FLOW DOWN. C/W MODULATING, SPRING RETURN ACTUATORS (MIN 4 ACTUATORS FOR MD-AHU3A AND 2 FOR MD-AHU3C)

UNIT HEATER SCHEDULE- HOT WATER/GLYCOL										
TAG	MAKE	MODEL	HEATING CAPACITY KW (MBH)	FLOW RATE L/S (GPM)	EWT (C)	LWT (C)	ELECTRICAL		WEIGHT (KG)	NOTES
							W	V/PH/Hz		
UH-1	TRANE / KAMPFMAN	TOP-5	13.3 (45.4)	0.63 (10)	46	41	208	208/1/60	34	1
UH-2	TRANE / KAMPFMAN	TOP-5	13.3 (45.4)	0.63 (10)	46	41	208	208/1/60	34	1
UH-3	TRANE / KAMPFMAN	TOP-5	13.3 (45.4)	0.63 (10)	46	41	208	208/1/60	34	1
UH-4	TRANE / KAMPFMAN	TOP-5	13.3 (45.4)	0.63 (10)	46	41	208	208/1/60	34	1

NOTES:
1. C/W Baffles.

GLYCOL STORAGE TANK SCHEDULE						
TAG	MAKE	TYPE	CAPACITY (LITRES)	DIMENSIONS DIA x H (mm)	MATERIAL	NOTES
ST-1	AO SMITH	VERTICAL HW STORAGE	450	600 x 1600	STAINLESS STEEL	1

NOTES:
1. C/W MIN 50mm THICK FOAM INSULATION. PAINTED SHEET METAL JACKET. 50# (2") GLYCOL S & R CONNECTIONS, HIGH/LOW + 20# DRAIN CONNECTIONS ON BOTTOM/TOP + 20 25# T & P TAPPING. SUITABLE FOR WORKING PRESSURE AT 6900 KPA (100PSI, AT 95' C). ASME RATED 316S.S.

EXPANSION TANK SCHEDULE							
TAG	SERVICE	MAKE	TYPE	CAPACITY (LITRES)	DIMENSIONS DIA x H (mm)	WEIGHT (KG)	NOTES
ET-1	HW SYSTEM GLYCOL	AMTROL	DIAPHRAGM TYPE	30	310 x 500	10	1

NOTES:
1. PRE CHARGED TO 80 KPA. SUITABLE FOR USE WITH GLYCOL SYSTEM.

EXHAUST FAN SCHEDULE													
TAG	SERVICE	LOCATION	MAKE	MODEL	TYPE	AIR FLOW (L/s)	FAN S.P. (Pa)	FAN DRAW (KW)	FAN SPEED (RPM)	DRIVE TYPE	FAN MOTOR (KW)	ELECTRICAL (V/PH/Hz)	NOTES
EF-6	EXHAUST	OUTSIDE PAINT KITCHEN	COOK	ACRU-B	165R3B	873.1	65	0.173	831	BELT	0.186	120/1/60	1
EF-7	EXHAUST	OUTSIDE PAINT KITCHEN	COOK	ACRU-B	165R3B	873.1	65	0.173	831	BELT	0.186	120/1/60	1

NOTES:
1. SUITABLE FOR WALL INSTALLATION. SITE CONFIRM CONNECTION CURB SIZE. EXISTING FAN CAPACITIES TO BE SITE CONFIRMED.



1 SITE PLAN
SCALE: NTS



CONTROLS LEGEND	
SYMBOL	DESCRIPTION
	TEMPERATURE- PROGRAMMABLE
	TEMPERATURE SENSOR (DDC)
	3-WAY CONTROL VALVE
	2-WAY CONTROL VALVE
	WELL
	TEMPERATURE SENSOR
	TEMPERATURE SENSOR- STRAP ON
	PRESSURE SENSOR
	FLOW SWITCH
	SWITCH - AS NOTED
	DDC ROOM TEMPERATURE SENSOR
	DIFFERENTIAL PRESSURE SENSOR

GENERAL LEGEND	
SYMBOL	DESCRIPTION
	EQUIPMENT TAG
	DRAWING NOTE
	ADJACENT
	AFF ABOVE FINISHED FLOOR
	CONNECT INTO EXISTING
	DN DOWN
	EXISTING
	FA FROM ABOVE
	FB FROM BELOW
	GC GENERAL CONTRACTOR
	RE REMOVE EXISTING
	RL RELOCATE EXISTING
	SS STAINLESS STEEL
	TR TO REMAIN
	TYP TYPICAL
	U/G UNDERGROUND

PIPING LEGEND GENERAL	
SYMBOL	DESCRIPTION
	PRESSURE REDUCING VALVE
	ISOLATION/SHUT OFF VALVE
	GLOBE VALVE
	CIRCUIT BALANCING VALVE
	3-WAY MIXING VALVE
	PRESSURE RELIEF VALVE
	STRAINER
	CHECK VALVE
	CAP OFF
	BALANCING VALVE
	UNION
	PIPE BREAK
	PIPE DOWN
	PIPE UP
	TIE INTO EXISTING PIPING
	PIPE SLEEVE
	FLEXIBLE JOINT
	PIPE SECTION
	PUMP
	AIR VENT/AUTOMATIC AIR VENT
	PRESSURE GAUGE
	TEMPERATURE GAUGE
	NEW PIPE
	EXISTING PIPE TO REMAIN
	EXISTING PIPE TO BE REMOVED
	SUPPLY
	RETURN
	SLOPE

SHEET METAL LEGEND	
SYMBOL	DESCRIPTION
	DEMOLITION
	NEW DUCTWORK
	ACOUSTICALLY INSULATED DUCT
	EXISTING DUCTWORK TO REMAIN
	EXISTING DUCTWORK TO BE REMOVED
	SUPPLY AIR DUCT RISER - UP
	RETURN AIR DUCT RISER - UP
	SUPPLY AIR DUCT RISER - DOWN
	RETURN AIR DUCT RISER - DOWN
	SUPPLY AIR GRILLE - NEW
	RETURN/EXHAUST AIR GRILLE - NEW
	SUPPLY AIR GRILLE - EXISTING
	RETURN/EXHAUST AIR GRILLE - EXISTING
	DOOR UNDERCUT
	DOOR GRILLE
	TURNING VANES
	ACCESS HATCH
	ACCESS PANEL
	HEAT TRACE CABLE
	EXHAUST FAN - CEILING MTD.
	EXHAUST FAN - INLINE
	FIRE DAMPER - NEW
	FIRE DAMPER - EXISTING
	SMOKE DAMPER - NEW
	SMOKE DAMPER - EXISTING
	MOTORIZED DAMPER
	BALANCING DAMPER
	BACK DRAFT DAMPER
	AIR FLOW (CFM/%)
	DIFFUSER/GRILLE TAG
	TYPE
	SIZE (in/mm)
	AIR FLOW (CFM/%)
	E/A EXHAUST AIR
	G/E GENERAL EXHAUST
	O/A OUTSIDE AIR
	P/A PRIMARY AIR
	R/A RETURN AIR
	S/A SUPPLY AIR
	T/E TOILET EXHAUST
	CE CONNECT TO EXISTING

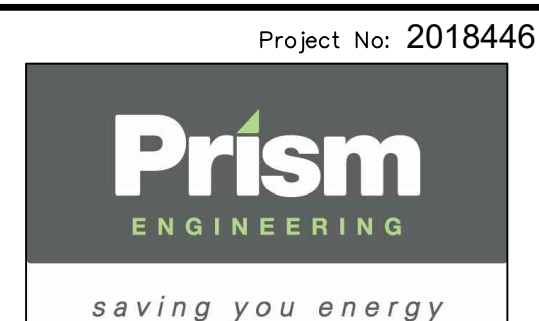
PIPING LEGEND	
SYMBOL	DESCRIPTION
	GLS GLYCOL SUPPLY
	GLR GLYCOL RETURN
	GAS NATURAL GAS PIPING
	RL REFRIGERANT LIQUID
	RV REFRIGERANT VAPOR

DRAWING LIST		
DWG. NO.	DESCRIPTION	SCALE
ME-1	LEGENDS, SITE PLAN, SCHEDULES AND DRAWING LIST	NTS
ME-2	GROUND FLOOR PLAN - DEMO & NEW	1:100
ME-3	ROOF PLAN - DEMO & NEW	1:100
ME-4	SCHEMATICS	NTS
ME-5	SECTIONS AND DETAILS	NTS

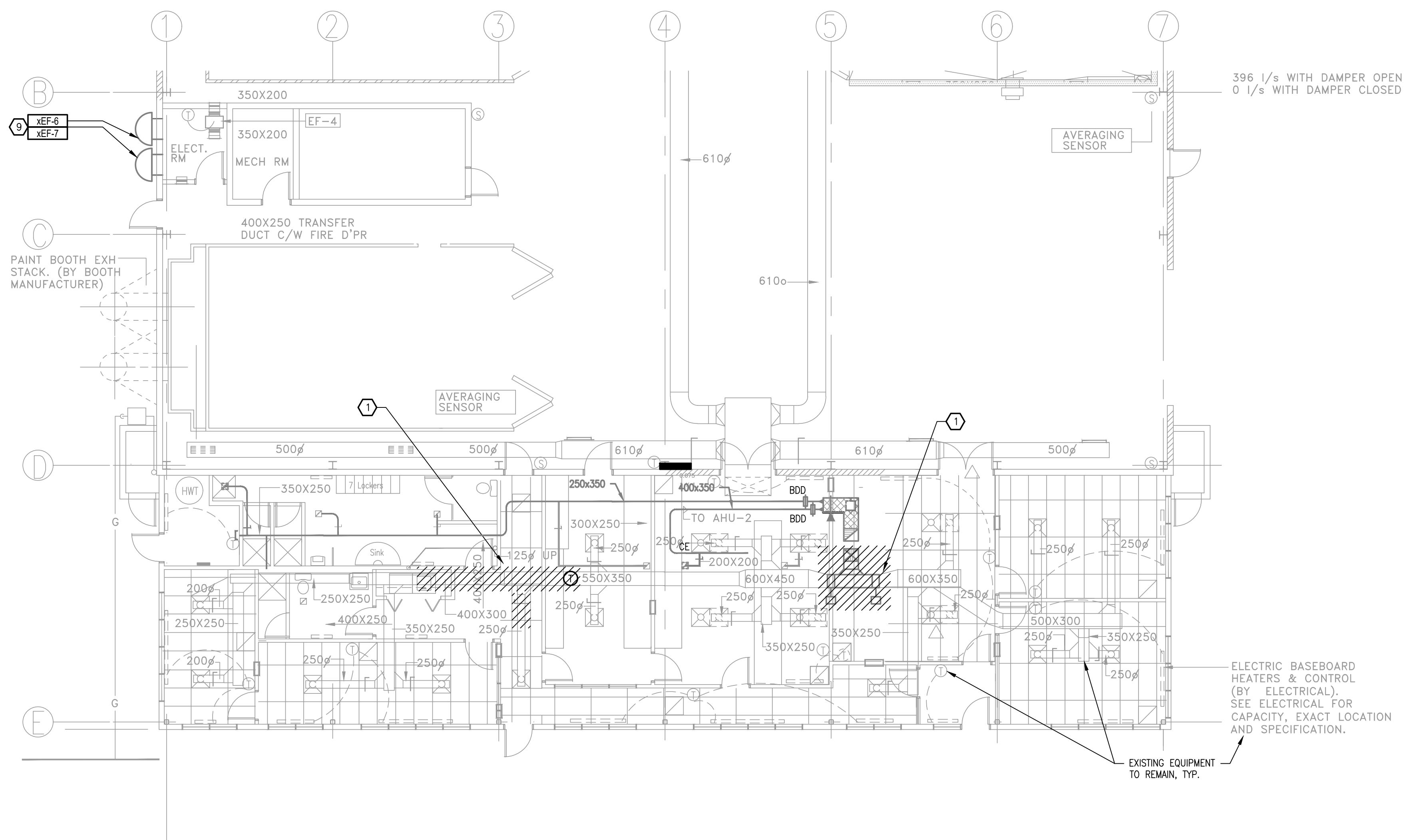
FISHERIES AND OCEANS CANADA
REAL PROPERTY AND SAFETY AND SECURITY

VICTORIA, CANADIAN COAST GUARD BASE BUOY MAINTENANCE BUILDING 2021 HVAC UPGRADES LEGENDS, SITE PLAN, SCHEDULES AND DRAWING LIST	SCALE NTS DATE SEPTEMBER, 2020 DRAWING NUMBER ME-1 PROJECT # 20210346 3
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DWG. NO.	DRAWING REFERENCES	NOTES	NO.	DATE	REVISIONS	CHECKED BK
3		ISSUED FOR TENDER		2021/07/07		
2		ISSUED FOR TENDER REVIEW		2020/10/30		
1		ISSUED FOR INTERNAL REVIEW		2020/09/17		



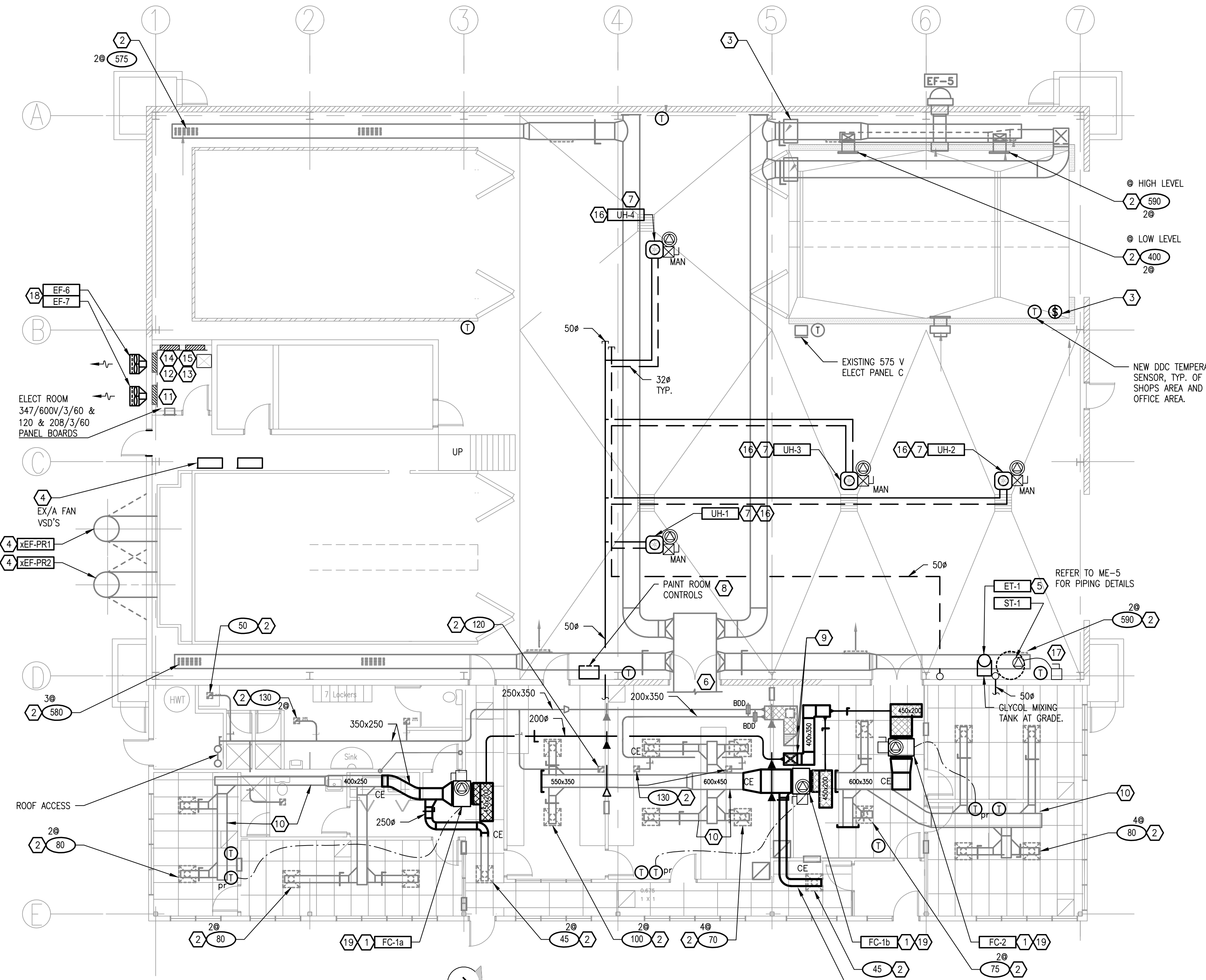
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- ### 1 DEMO DRAWING NOTES
- REMOVE S/A, R/A AND E/A DUCTWORK AND MECHANICAL SERVICES/EQUIPMENT AS INDICATED. REMOVE ALL REDUNDANT ELECTRICAL AND MECHANICAL SERVICES AND CONNECTIONS. RETAIN EXISTING FIRE DAMPERS.

- ### DEMO GENERAL NOTES
- THE OFFICE AND WORKSHOP AREAS ARE TO BE KEPT IN OPERATION DURING DEMOLITION AND CONSTRUCTION.
 - SHORT SERVICE OUTAGES (1-30 MINUTES) SHALL BE ALLOWED DURING OFFICE HOURS IF AND WHEN COORDINATED WITH THE BASE OPERATIONS MANAGER.
 - OUTAGES SHALL BE PRE-PLANNED AND AT LEAST 96 HOURS OF NOTICE PROVIDED BEFORE THE OUTAGE.
 - ALLOW FOR AFTER HOUR CONSTRUCTION AND CLEAN UP BEFORE OFFICE HOURS RESUME IN EACH MORNING.
 - CONSTRUCTION WORK ON WEEKENDS WILL BE ALLOWED, SUBJECT TO THE BASE OPERATIONS MANAGER'S APPROVAL.
 - ANY SERVICE OUTAGES WHICH AFFECT THE OPERATIONS OF THE COMPUTER SERVERS MUST BE PRE-APPROVED AND THE DURATION OF THE OUTAGE MINIMIZED.
 - MEASURES SHALL BE TAKEN TO PROTECT COMPUTER, ELECTRONICS AND PERSONAL EQUIPMENT IN THE FACILITY.
 - CEILING TILES MAY BE REMOVED AT THE START OF DEMOLITION AND LEFT OPEN UNTIL THE CONSTRUCTION WORK IS COMPLETE.
 - REMOVE PAINT KITCHEN EXHAUST FANS XEF-6 AND XEF-7. REUSE AND EXTEND EXISTING BREAKERS, WIRING AND CONDUIT WHERE POSSIBLE. EXISTING FAN CAPACITIES TO BE SITE CONFIRMED.

1 GROUND FLOOR PLAN-DEMO
ME-2 SCALE: 1:100



2 GROUND FLOOR PLAN-NEW
ME-2 SCALE: 1:100

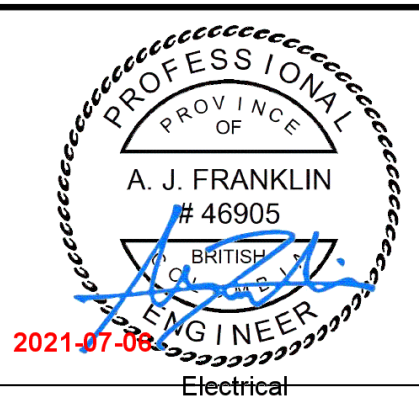
- ### NEW DRAWING NOTES
- HEAT PUMP FAN COIL MOUNTED IN CEILING SPACE AND CONNECTED TO EXISTING DUCTWORK AS INDICATED. PROVIDE REFRIGERATION PIPING, POWER SUPPLY, CONTROLS WIRING FROM THE OUTDOOR UNIT TO THE INDOOR FAN COIL (NOT SHOWN FOR CLARITY). DISCHARGE DUCT FROM FAN COILS TO BE 1000 X 150 (UNO) AND RETURN DUCT TO BE RETURN CONNECTION SIZE. RETURN BOOT TO BE C/W 12 MM THICK ACOUSTIC INSULATION. PROVIDE PUMPED CONDENSATE, 12 MM DIAM. FROM COIL DRAIN PAN, UP THROUGH ROOF TO OUTDOORS. ALL ROOF PENETRATIONS TO BE HORIZONTAL THROUGH SIDE OF ROOF CAP. COMPLETE WITH FLASHING AND SEALING WATER-TIGHT. CONDENSATE AND REFRIGERANT PIPING NOT SHOWN. REFER TO ME-3 AND ME-4. SEISMICALLY RESTRAIN FANCOIL UNITS.
 - RE-BALANCE EXISTING AIR TERMINAL TO THE AIR FLOW INDICATED IN L/S.
 - PROVIDE NEW TIMER SWITCH (30, 60, 120 MIN & OFF) IN NEMA 4X ENCLOSURE TO CONTROL EXISTING SUPPLY AIR DAMPERS. PROVIDE LAMACOD LABEL TO INDICATE SET TIMER FOR LOW LEVEL SUPPLY AIR. REFER TO SEQUENCES OF CONTROL.
 - ON THE EXISTING MEZZANINE LEVEL, PROVIDE NEW 5 HP, 3 PHASE 4 WIRE VARIABLE SPEED DRIVES FOR XEF-PR1 AND XEF-PR2. MOUNT VSD'S AND LINE FILTERS ON WELDED, PRIME AND PAINTED STEEL SUPPORT STAND FASTENED TO FLOOR. MAINTAIN SERVICE ACCESS TO PAINT ROOM LIGHTS AND DO NOT BLOCK REMOVABLE FLOOR PLATE. MAINTAIN 1 M CLEARANCE IN FRONT OF VSD'S. RE-USE THE FAN MOTOR IN XEF-PR1 AND PROVIDE A NEW HIGH EFFICIENCY, ELECTRIC MOTOR TO REPLACE THE FAN MOTOR IN XEF-PR2. PROVIDE POWER SUPPLY FROM PAINT ROOM CONTROL PANEL TO VSD'S AND TO EXHAUST FANS. PROVIDE CONTROL WIRING AS REQUIRED. REFER TO SEQUENCES OF CONTROL AND PAINT ROOM CONTROL DETAILS. REPAIR CONNECTIONS TO EXISTING FILTER P-GAUGE.
 - PROVIDE PRIMED AND PAINTED STEEL SUPPORT/PROTECTION CASE FOR THE STORAGE TANK, THE EXPANSION TANK AND THE GLYCOL MIXING TANK. HEATING GLYCOL LOOP TO BE FILLED AUTOMATICALLY FROM THE GLYCOL MIXING TANK WHEN THE PRESSURE AT THE STORAGE TANKS DROPS BELOW 207 KPA (30 PSI). SEISMICALLY ANCHOR TO FLOOR. SITE CONFIRM BEST LOCATION FOR PIPING RISERS.
 - SUPPLY AIR DUCT FROM ROOF LEVEL FROM AHU-3. REFER TO DRAWING ME-4.
 - MOUNT UNIT HEATER AS HIGH AS POSSIBLE, IN JOIST SPACE. ENSURE ALL PIPING AND WIRING IS CLEAR OF THE OVERHEAD CRANE. PROVIDE DIFFUSER BESIDE EACH UNIT HEATER. FANS TO BE CONTROLLED BY ODC SYSTEM. REFER TO SEQUENCES OF CONTROL.
 - REPLACE/MODIFY EXISTING PAINT ROOM HVAC CONTROLS TO PROVIDE CONTROL DEVICES AS INDICATED IN THE PAINT ROOM DETAIL ON DWG ME-5 AND SEQUENCES OF CONTROL INDICATED IN THE SPECIFICATIONS. PROVIDE CONTROL DISPLAY SCREEN AND NEMA 1 ENCLOSURE(S).
 - PROVIDE NEW 400 X 350 SUPPLY AND EXHAUST AIR DUCTS AND TRANSITION AS REQUIRED TO CONNECT TO INLET AND OUTLET OF HRV-1. BALANCE O/A FLOW TO EACH FAN COIL AT 140L/S. CONNECT EACH O/A DUCT TO FAN COIL RETURN PLENUM.
 - CLEAN EXISTING AIR DUCTWORK BEFORE RE-USED.
 - EXISTING 500A 347/600V 3P 4W 42 CCT. SINGLE TUB ELECTRICAL PANEL 'B'.
 - EXISTING 225A 120/208V 3P 4W 84 CCT. DOUBLE TUB ELECTRICAL PANEL 'A' FED FROM A 60A-3P BREAKER IN PANEL 'B' AND A 45KVA 600V-120/208V 3P 4W FLOOR MOUNTED TRANSFORMER.
 - REMOVE EXISTING 45KVA 600-120/208V 3P 4W TRANSFORMER, WIRING AND CONDUIT BACK TO SOURCE. RETURN EXISTING 60A-3P BREAKER IN ELECTRICAL PANEL 'B' TO OWNER. PROVIDE A NEW 75KVA 600-120/208V 3P 4W TRANSFORMER IN THE SAME LOCATION AS EXISTING, AND PROVIDE A NEW 100A-3P BREAKER IN ELECTRICAL PANEL 'B'. ROUTE 3#3 + #8 GRN. GND. - 35MM (1.25")C.
 - PROVIDE A NEW 225A 120/208V 3P 4W 24CCT. ELECTRICAL PANEL 'BA' C/W 200A-3P MAIN BREAKER. FROM THE NEW 75KVA TRANSFORMER, ROUTE 4#300 + #4 GRN. GND. - 76MM (3")C. CONNECT THE LUGS OF NEW ELECTRICAL PANEL 'BA' WITH EXISTING ELECTRICAL PANEL 'A' USING 4#3/0 + #6 GRN. GND. - 63MM (2.5")C.
 - PROVIDE A NEW 225A 347/600V 3P 4W 24CCT. ELECTRICAL PANEL 'BB' IN THE LOCATION SHOWN. PROVIDE A NEW 150A-3P BREAKER IN ELECTRICAL PANEL 'B', AND ROUTE 4#1/0 + #6 GRN. GND. - 53MM (2")C. ENSURE MINIMUM 1M CLEARANCE IN FRONT OF PANEL.
 - PROVIDE A 15A-2P BREAKER IN ELECTRICAL PANEL 'BA' FOR ALL UNIT HEATERS UH-1, UH-2, UH-3 AND UH-4. PROVIDE MOTOR RATED MAGNETIC STARTER C/W MANUAL ON-OFF SWITCH AND OVERCURRENT PROTECTION MOUNTED ON EACH UNIT HEATER AND ROUTE 2#12 + #12 GRN. GND. - 16MM (1/2")C.
 - PROVIDE A NEW 15A-1P BREAKER IN ELECTRICAL PANEL 'BA' AND A 120V 30A-1P UNFUSED SAFETY SWITCH ON THE NEAREST WALL FOR GLYCOL MIXING TANK. ROUTE 2#12 + #12 GRN. GND. - 16MM (1/2")C.
 - PROVIDE NEW, OF SAME CAPACITY, EXHAUST FANS EF-6 AND EF-7 IN THE SAME LOCATION. REUSE AND EXTEND EXISTING BREAKERS, WIRING AND CONDUIT WHERE POSSIBLE TO WEATHERPROOF 30A-1P UNFUSED SAFETY SWITCHES MOUNTED ON EACH UNIT. ALLOW FOR CAPACITIES AS PER EQUIPMENT SCHEDULES, HOWEVER EXISTING FAN CAPACITIES TO BE SITE CONFIRMED.
 - PROVIDE A NEW 30A-2P UNFUSED SAFETY SWITCH MOUNTED ON MECHANICAL EQUIPMENT AND ROUTE 2#12 + #12 GRN. GND. - 16MM (1/2")C FROM ASSOCIATED OUTDOOR UNIT.

- ### NEW GENERAL NOTES
- THE OFFICE AND WORKSHOP AREAS ARE TO BE KEPT IN OPERATION DURING DEMOLITION AND CONSTRUCTION. SHORT SERVICE OUTAGES (1-30 MINUTES) SHALL BE ALLOWED DURING OFFICE HOURS IF AND WHEN COORDINATED WITH THE BASE OPERATIONS MANAGER.
 - OUTAGES SHALL BE PRE-PLANNED AND AT LEAST 96 HOURS OF NOTICE PROVIDED BEFORE THE OUTAGE. ALLOW FOR AFTER HOUR CONSTRUCTION AND CLEAN UP BEFORE OFFICE HOURS RESUME IN EACH MORNING. CONSTRUCTION WORK ON WEEKENDS WILL BE ALLOWED, SUBJECT TO THE BASE OPERATIONS MANAGER'S APPROVAL. ANY SERVICE OUTAGES WHICH AFFECT THE OPERATIONS OF THE COMPUTER SERVERS MUST BE PRE-APPROVED AND THE DURATION OF THE OUTAGE MINIMIZED. MEASURES SHALL BE TAKEN TO PROTECT COMPUTER, ELECTRONICS AND PERSONAL EQUIPMENT IN THE FACILITY. CEILING TILES MAY BE REMOVED AT THE START OF DEMOLITION AND LEFT OPEN UNTIL THE CONSTRUCTION WORK IS COMPLETE.
 - EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE AND THE CONTRACTOR SHALL CONFIRM BEST EXACT LOCATIONS TO SUIT SITE CONDITIONS. THE CONTRACTOR IS TO RESUPPORT AND RE-CONNECT FLEXIBLE DUCTWORK FOR APPROXIMATELY FOUR OF THE EXISTING DIFFUSERS WHICH HAVE BECOME DISCONNECTED.
 - CONTRACTOR SHALL MODIFY/RELOCATE/REPLACE EXISTING CEILING, LIGHT FIXTURE, DUCTWORK AND PIPING SUPPORTS AND MISC WIRING, AND ELECT. CONDUIT 20 MM DIAM AND LESS AS REQUIRED TO INSTALL THE NEW EQUIPMENT. THE CONTRACTOR SHALL ALSO ALLOW FOR THE RELOCATION OF TWO LIGHTING FIXTURES TO ADJACENT LOCATIONS TO ALLOW FOR BETTER SERVICE ACCESS TO EQUIPMENT. LOCATE ACCESS PANELS TO PROVIDE THE BEST SERVICE ACCESS.
 - ALL EQUIPMENT SUPPLIED MUST PROVIDE CLEARANCE FOR THE OVERHEAD CRANE AND OTHER SHOP EQUIPMENT. THE CONTRACTOR SHALL CONFIRM THAT ALL EQUIPMENT IS CLEAR OF THE CRANE BY TRAVERSING THE CRANE THROUGH IT'S FULL MOVEMENT.
 - ALL NEW EQUIPMENT SHALL BE INSTALLED C/W LOCAL SAFETY ISOLATION SWITCH. INDOOR HEAT PUMPS TO BE COMPLETE WITH VIBRATION ISOLATION HANGERS, SEISMIC RESTRAINT AND FLEX CONNECTIONS ON S/A AND R/A DUCTWORK CONNECTIONS.
 - CLEAN EXISTING AIR DUCTWORK BEFORE RE-USE.
 - GLYCOL S & R PIPING AT HIGH LEVEL, REFER TO SCHEMATIC DWG FOR DETAILS AND PIPE SIZE.

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REAL PROPERTY AND SAFETY AND SECURITY

VICTORIA, CANADIAN COAST
GUARD BASE
BUOY MAINTENANCE BUILDING
2021 HVAC UPGRADES
GROUND FLOOR PLAN - DEMO
AND NEW

SCALE
1:100
DATE
SEPTEMBER, 2020
DRAWING NUMBER
ME-2
PROJECT # 20210346 **3**



NO.	DATE	REVISIONS
3	2021/07/07	ISSUED FOR TENDER
2	2020/10/30	ISSUED FOR TENDER REVIEW
1	2020/09/17	ISSUED FOR INTERNAL REVIEW

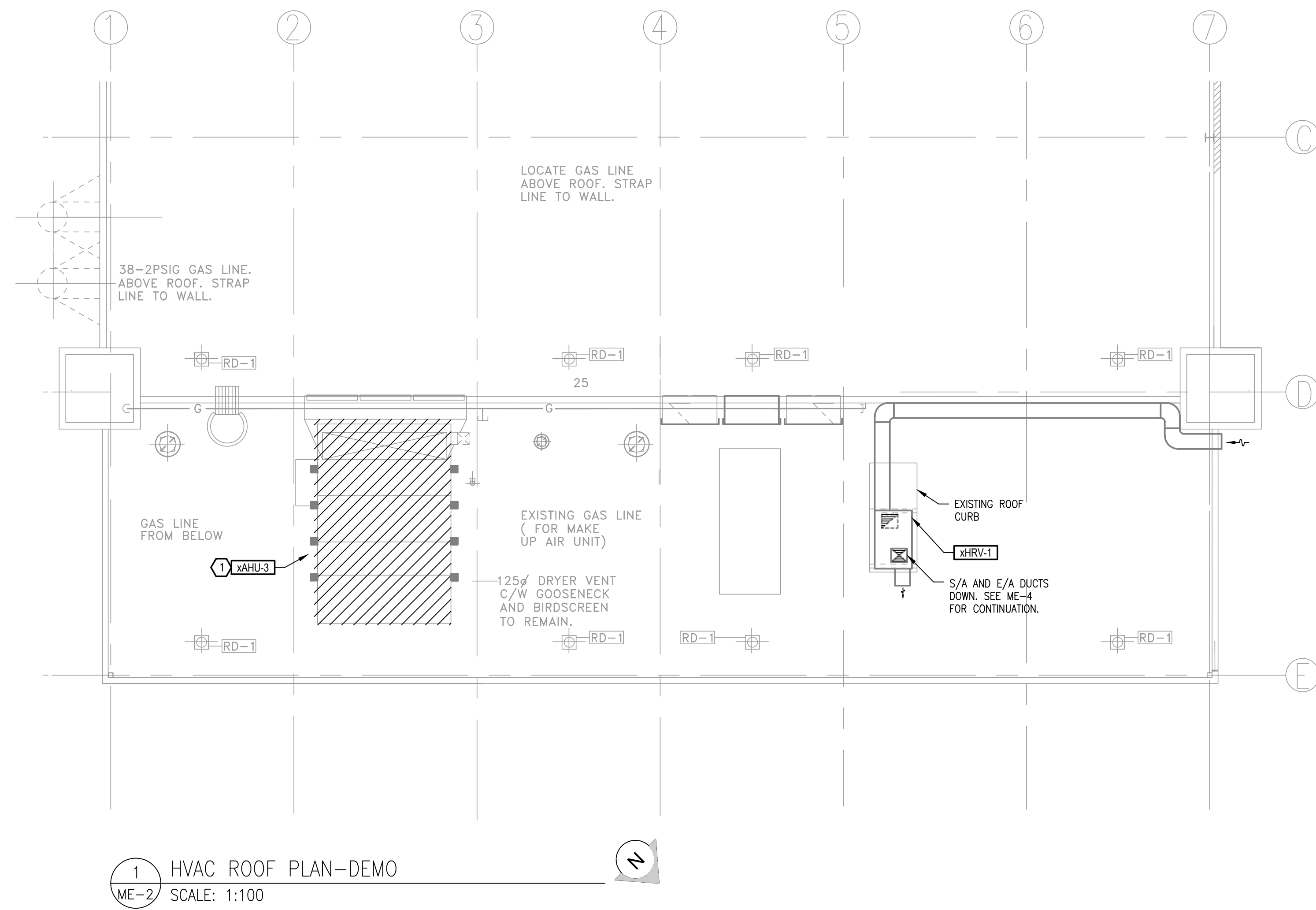
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DWG. NO.	DRAWING REFERENCES

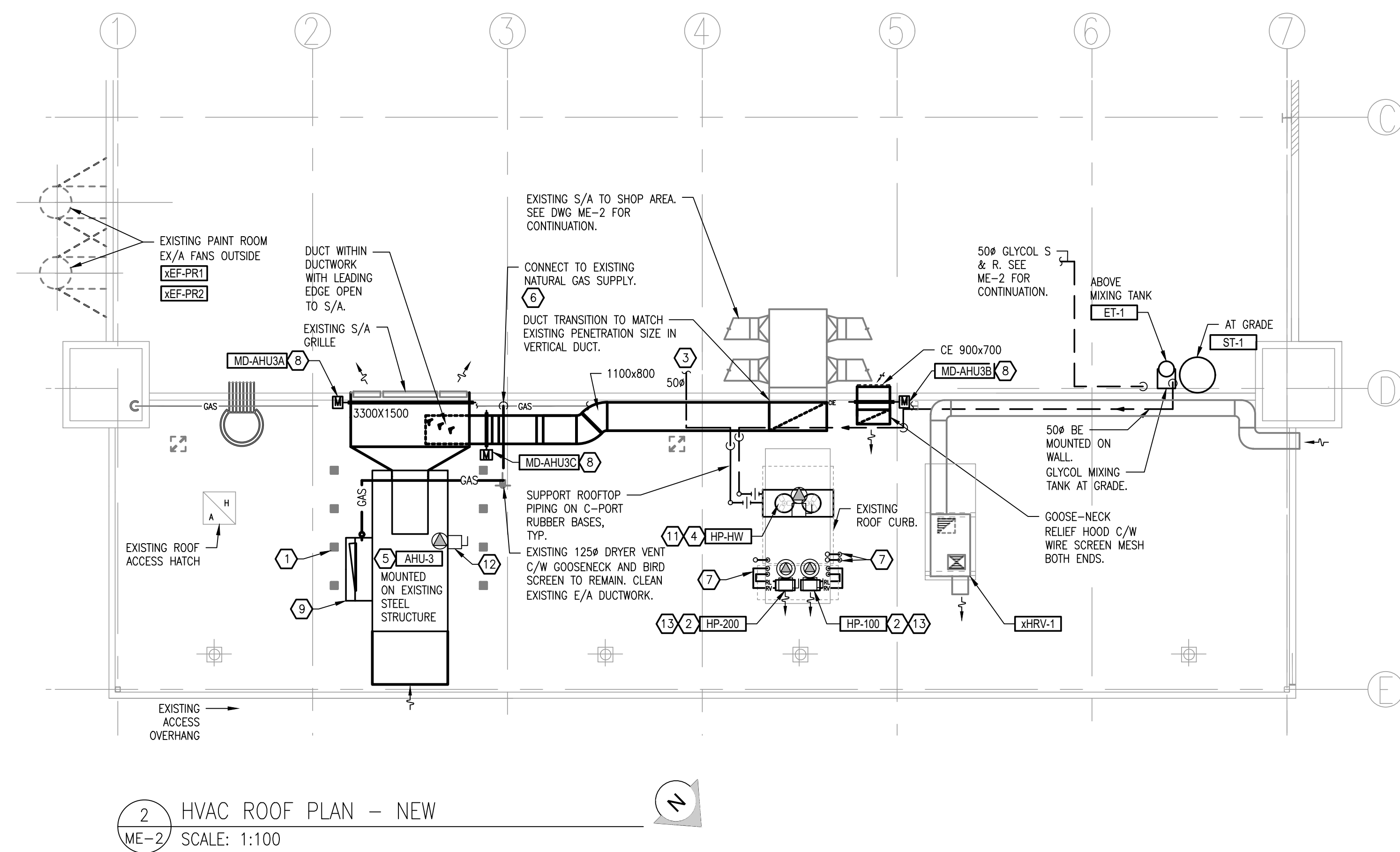
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NOTES



- DRAWING NOTES**
- REMOVE EXISTING EQUIPMENT AND REDUNDANT SERVICES.



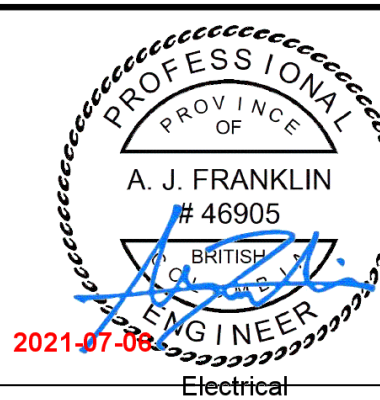
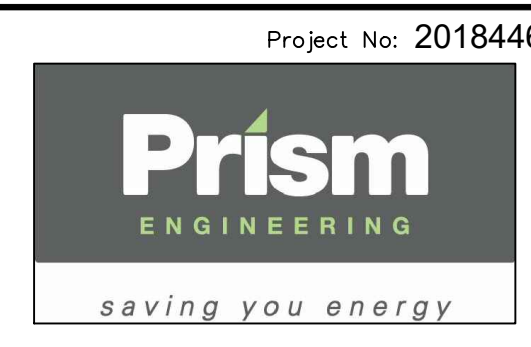
- DRAWING NOTES**
- EXISTING STRUCTURAL STEEL TO BE RE-PAINTED AND EVALUATED BY STRUCTURAL ENGINEER WITH RESPECT TO NEW AHU WEIGHT.
 - HEAT PUMP MOUNTED ON EXISTING ROOF CURBS. PROVIDE PRIMED AND PAINTED SUPPORT PLATFORM FOR HP-100 & HP-200. ANCHORS FOR STEEL PLATFORM TO BE ON SIDE OF CURBS, HAVE FLASHING AND BE SEALED WATER TIGHT.
 - HEATING WATER (GLYCOL MIXTURE) SUPPLY AND RETURN PIPING TO RUN WITHIN THE JOIST SPACE. SITE CONFIRM EXACT ROUTING AND ENSURE ALL EQUIPMENT AND PIPING IS CLEAR OF THE OVERHEAD CRANE.
 - HEATING SYSTEM HEAT PUMP MOUNTED ON EXISTING ROOF CURBS. PROVIDE PRIMED AND PAINTED SUPPORT PLATFORM FOR HP-HW TO SPREAD THE WEIGHT OF THE UNIT OVER 75% OF THE EXISTING ROOF CURBS. ANCHORS FOR STEEL PLATFORM TO BE ON SIDE OF CURBS, HAVE FLASHING AND BE SEALED WATER TIGHT.
 - GAS FIRED AIR HANDLING UNIT AHU-3 MOUNTED ON EXISTING ROOF CURBS. PROVIDE ADDITIONAL PRIMED AND PAINTED SUPPORT PLATFORM/RAILS AS REQUIRED TO MOUNT THE UNIT ON THE EXISTING ROOF CURBS. ANCHORS TO BE ON SIDE OF CURBS, HAVE FLASHING AND BE SEALED WATER TIGHT. CONNECT TO DUCTWORK AND PROVIDE ADDITIONAL/MODIFIED INTAKE HOOD AS INDICATED PROVIDE CONTROL WIRING AND POWER SUPPLY WITH LOCAL DISCONNECT SWITCH.
 - EXISTING NATURAL GAS LINE TO BE EXTENDED (40 MM) TO SERVE AHU-3. SITE CONFIRM CONNECTION SIZE AND LOCATION AND PROVIDE SEISMIC SHUT-OFF VALVE AND GAS REGULATOR.
 - REFRIGERANT PIPING TO FAN COIL UNITS AND CONDENSATE DRAIN FROM FAN COIL UNITS TO ROOF. REFER TO ME-3 AND ME-5.
 - PROVIDE A NEW 15A-1P BREAKER IN PANEL 'BA' AND ROUTE 2#12+12 GRN.GND.-16MM (1/2") FOR THE THREE MOTORIZED DAMPERS, AND PROVIDE WEATHER PROOF ENCLOSURE/COVER FOR EACH.
 - PROVIDE A NEW 15A-1P BREAKER IN ELECTRICAL PANEL 'BA' AND ROUTE 2#12+12 GRN.GND.-16MM (1/2") FOR A NEW GFI RECEPTACLE C/W WEATHERPROOF COVER MIN 300 ABOVE ROOF.
 - PROVIDE SHEET METAL AIR INTAKE WEATHER HOOD FACING DOWNWARDS. AIR INTAKE TO BE PROTECTED AGAINST NESTING OF BIRDS. SHEET METAL ACCORDING TO SPECIFICATIONS.
 - PROVIDE A NEW 60A-3P BREAKER IN ELECTRICAL PANEL 'BB', AND A WEATHERPROOF 600V 60A-3P UNFUSED SAFETY SWITCH ON UNIT. ROUTE 4#6+10 GRN.GND.- 27MM (1") FOR HP-HW.
 - PROVIDE A NEW 60A-3P BREAKER IN ELECTRICAL PANEL 'BB' AND A WEATHERPROOF 600V 60A-3P UNFUSED SAFETY SWITCH ON AHU-3. ROUTE 4#6+10 GRN.GND.- 27MM (1").
 - PROVIDE A NEW 30A-2P BREAKER IN ELECTRICAL PANEL 'BA' AND A WEATHERPROOF 208V 30A-2P UNFUSED SAFETY SWITCH FOR MECHANICAL EQUIPMENT. ROUTE 2#10+12 GRN. GND. - 21MM (3/4").

- GENERAL NOTES**
- ALL ELECTRICAL CONDUITS AND CONNECTIONS IN THIS AREA SHALL USE LIQUID TIGHT CONNECTORS.
 - ALL ELECTRICAL DEVICES IN THIS AREA SHALL BE WATERPROOF.
 - REFER TO DETAIL 3 DRAWING ME-5 FOR ELECTRICAL ROOF PENETRATION DETAIL.
 - CONTRACTOR WILL RE-INSTALL THE BIRD WIRE SYSTEM ON THE ROOF, IF REQUIRED TO REMOVE DURING CONSTRUCTION PHASE.

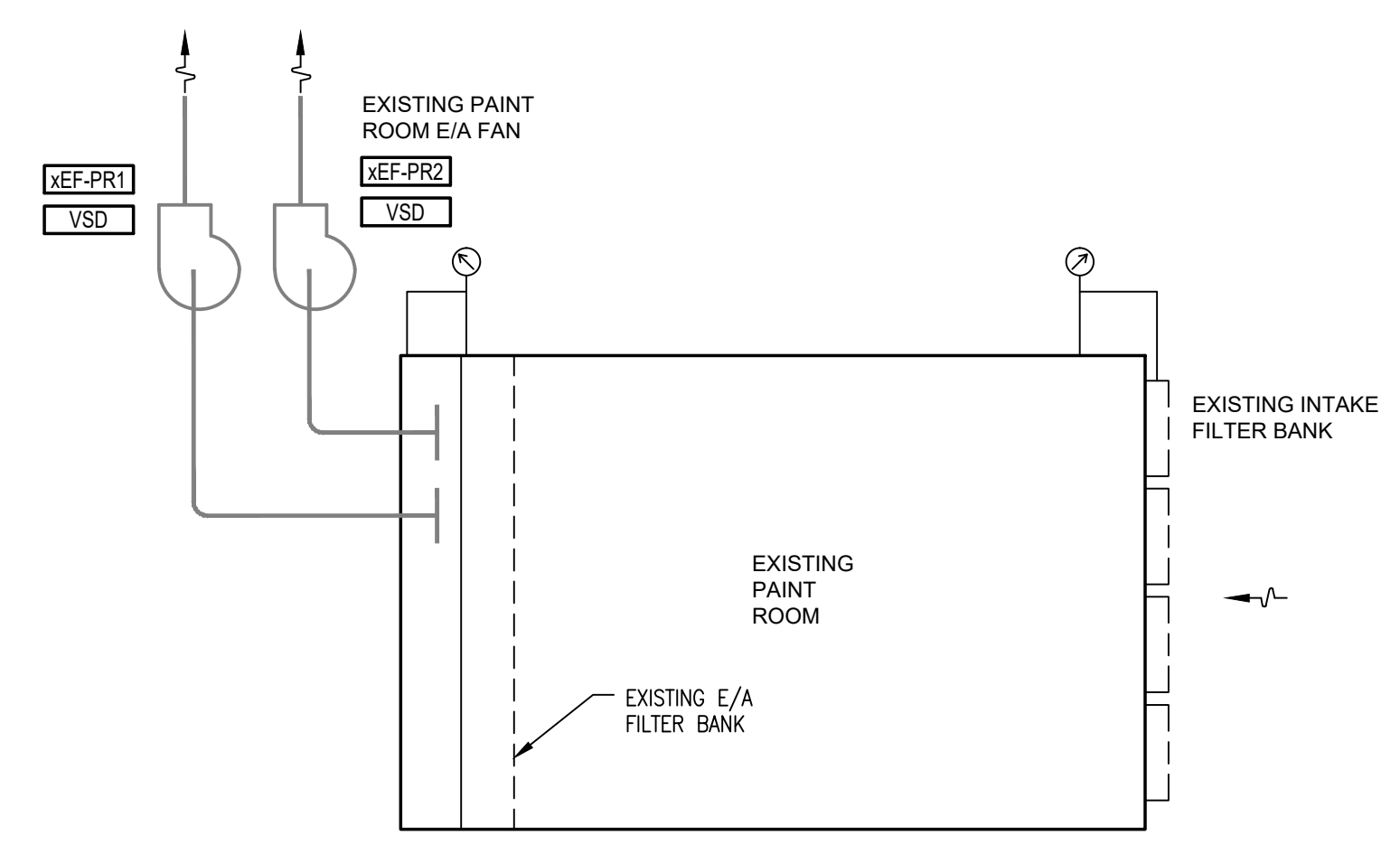
DWG. NO.	DRAWING REFERENCES

NO.	DATE	REVISIONS
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2	2020/10/30	ISSUED FOR TENDER REVIEW
1	2020/09/17	ISSUED FOR INTERNAL REVIEW

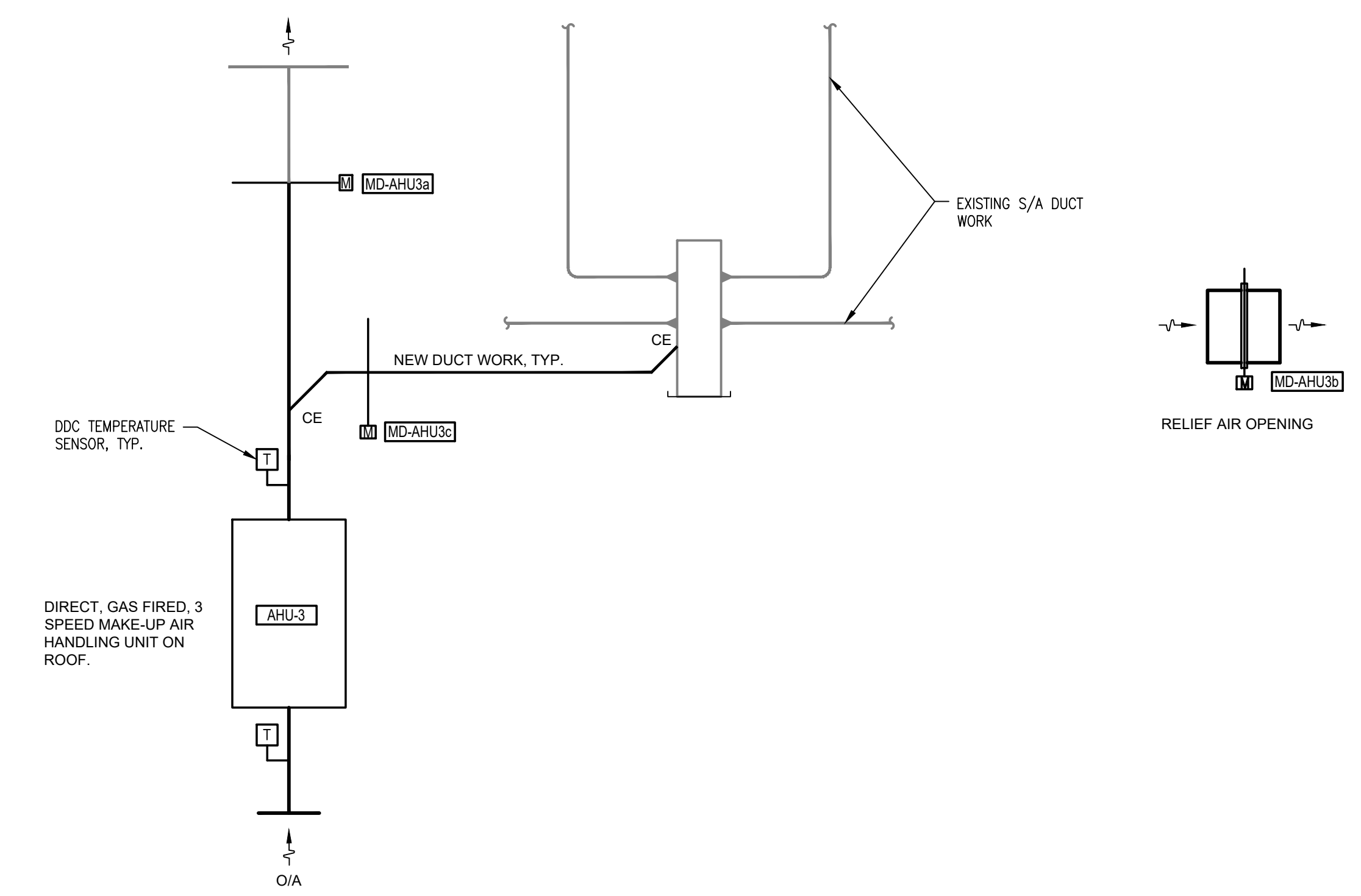
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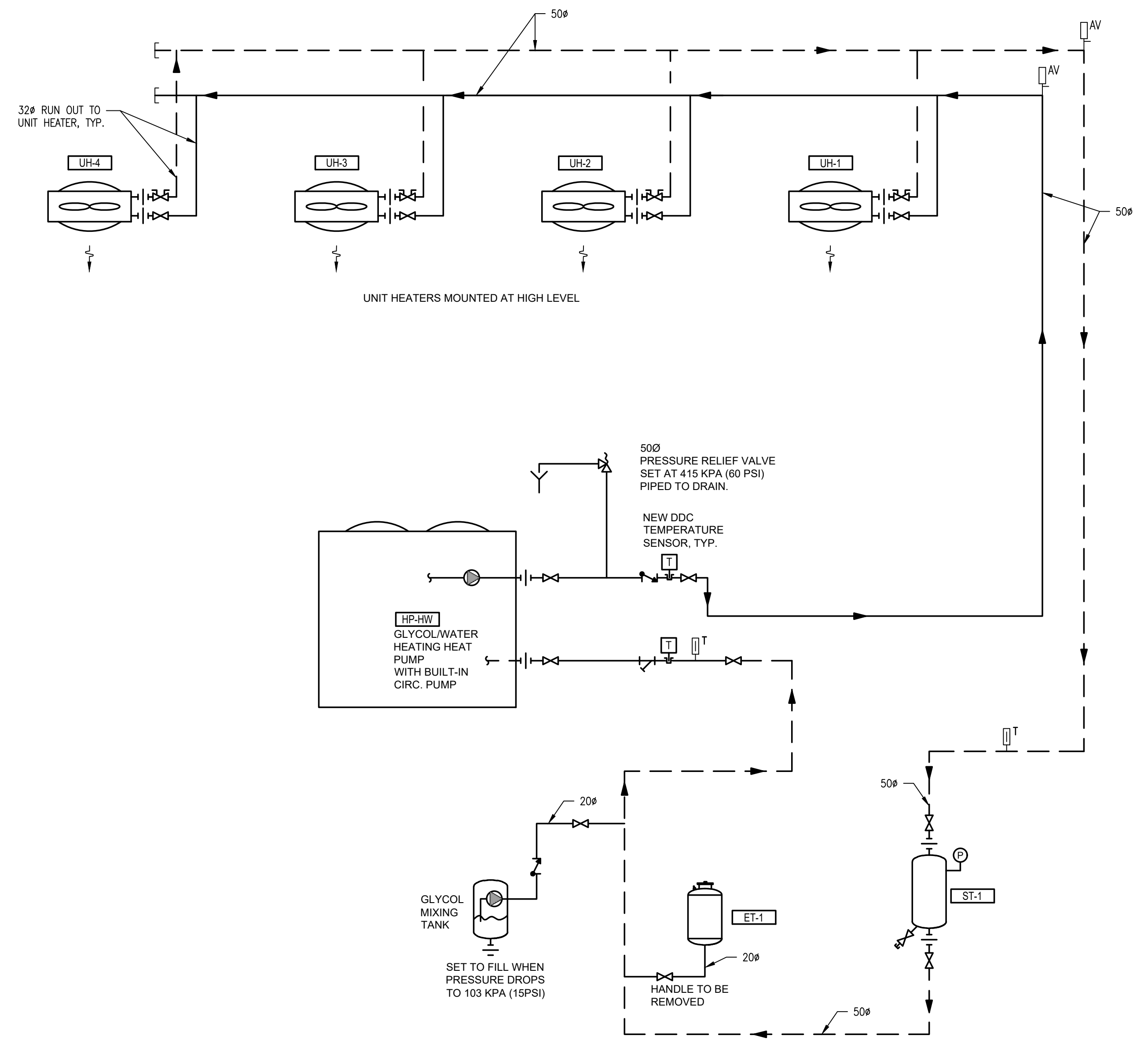
Project No: 2018446



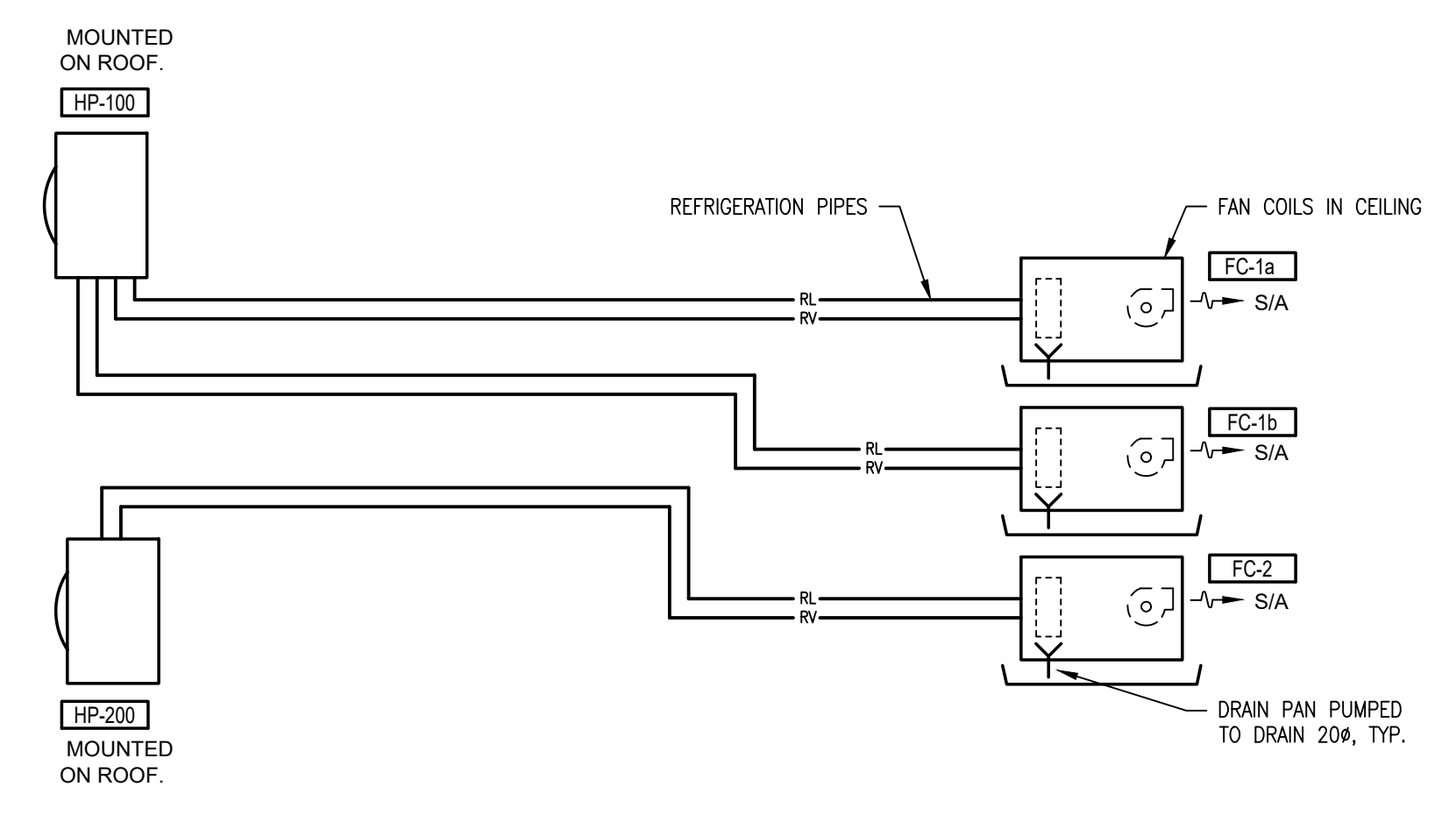
PAINT ROOM EXHAUST SYSTEM



PAINT BOOTH MAKE-UP AIR



SUPPLEMENTAL HEAT PUMP GLYCOL HEATING SYSTEM



OFFICE HEAT PUMPS

DWG. NO.	DRAWING REFERENCES

Project No: 2018446

NOTES

NO.	DATE	REVISIONS
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2	2020/10/30	ISSUED FOR TENDER REVIEW
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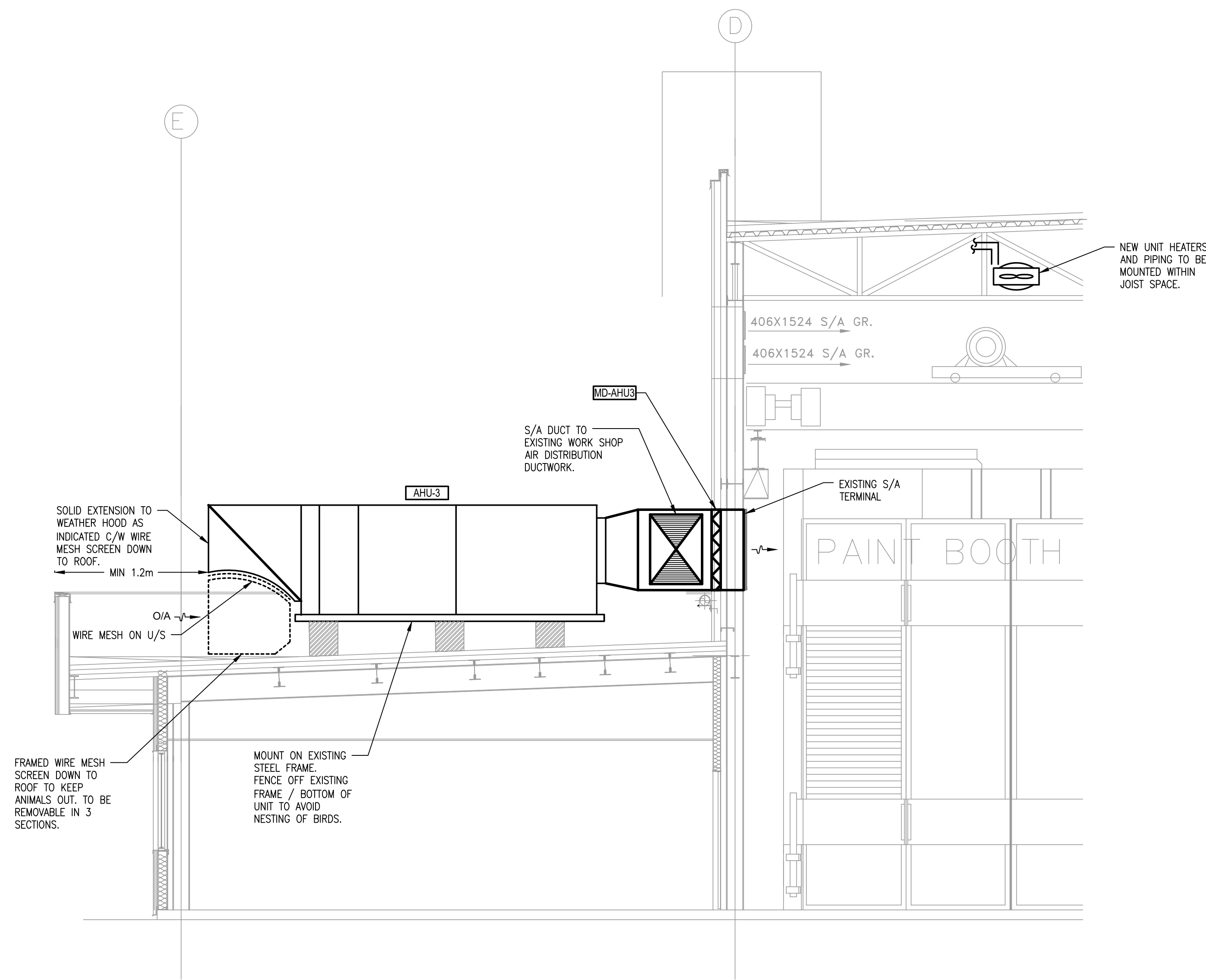
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FISHERIES AND OCEANS CANADA
REAL PROPERTY AND SAFETY AND SECURITY

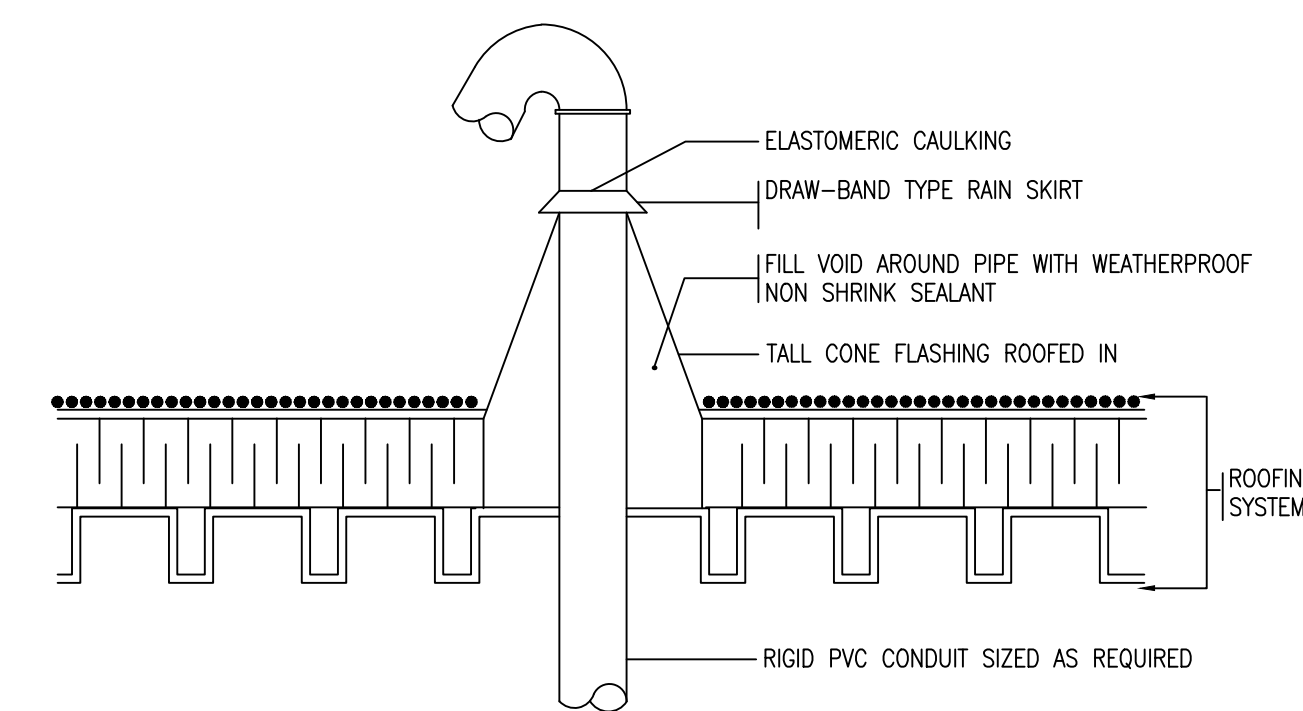
VICTORIA, CANADIAN COAST
GUARD BASE
BUOY MAINTENANCE BUILDING
2021 HVAC UPGRADES

SCHMATICS

SCALE
NTS
DATE
SEPTEMBER, 2020
DRAWING NUMBER
ME-4
PROJECT # 20210346 **3**

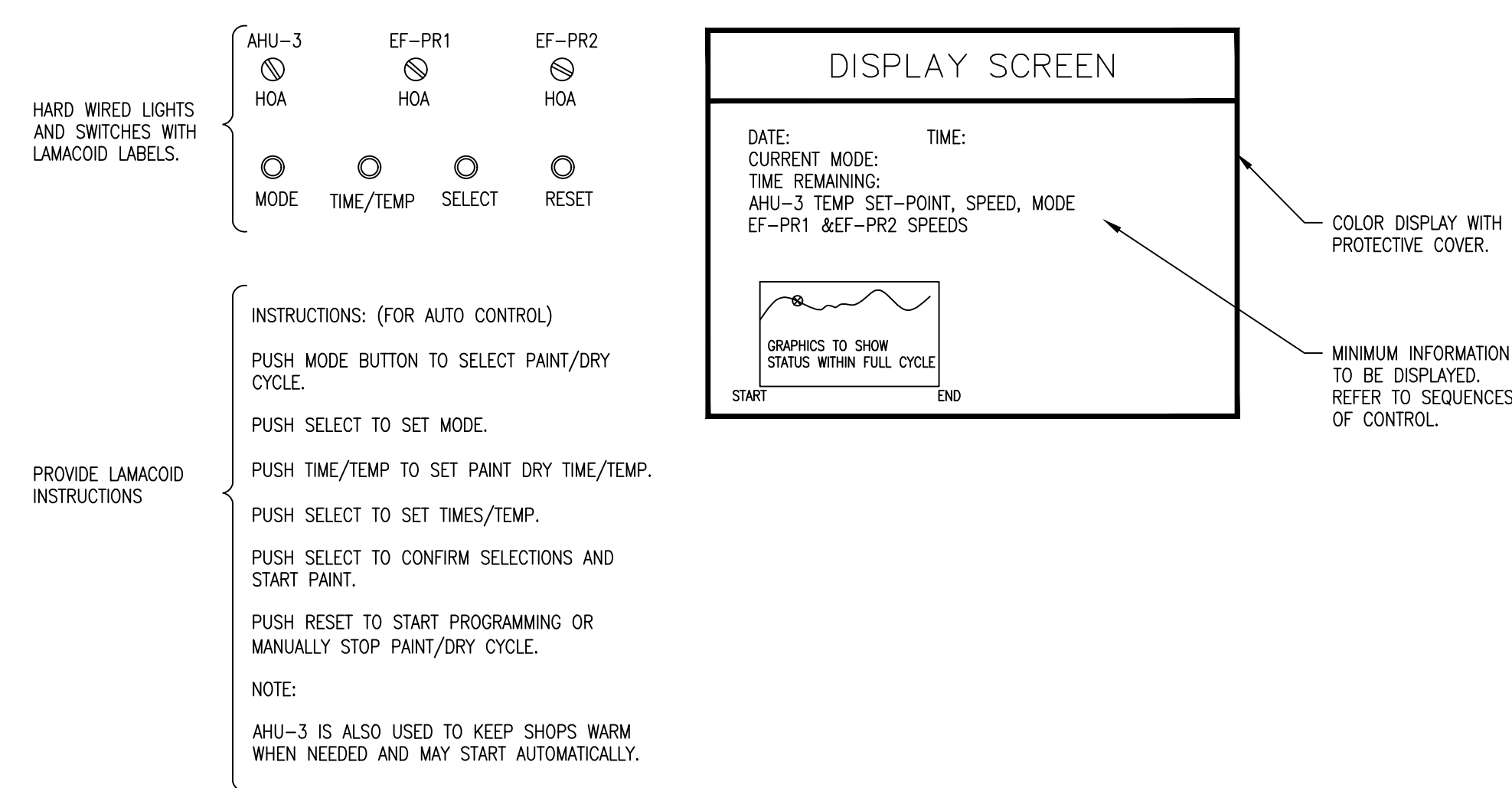


1 SECTION
ME-5 SCALE: NTS



- NOTES:
- FOR FIRE SEPARATIONS, USE APPROVED SEALANT AS PER SPECIFICATION, AND FIRE RESISTANT MINERAL FIBRE FOR FILLING ANY SPACES/GAPS.
 - ROUTE TECK CABLE FOR SERVICE SIZED AS REQUIRED.

3 ELECTRICAL ROOF PENETRATION DETAIL
ME-5 SCALE: NTS



2 PAINT ROOM CONTROLS- DETAILS
ME-5 SCALE: NTS

		FISHERIES AND OCEANS CANADA REAL PROPERTY AND SAFETY AND SECURITY	
Project No: 2018446		VICTORIA, CANADIAN COAST GUARD BASE BUOY MAINTENANCE BUILDING 2021 HVAC UPGRADES	
		SCALE NTS	
DWG. NO. DRAWING REFERENCES NOTES		NO. DATE REVISIONS	
		DESIGNED: HA DRAWN: HA	
		CHECKED: BK	
		DATE: SEPTEMBER, 2020	
		DRAWING NUMBER ME-5	
		PROJECT # 20210346 3	