

1 SPIUS CREEK HATCHERY – HVAC UPGRADES – SITE PLAN
Scale: 1:500



2 SPIUS CREEK – RESIDENCE 1
Scale: N.T.S.



3 SPIUS CREEK – RESIDENCE 2
Scale: N.T.S.



4 SPIUS CREEK – HATCHERY
Scale: N.T.S.

HP-2
4-TON VRV OUTDOOR HEAT PUMP.
CONTRACTOR TO PROVIDE PAINTED WELDED STEEL FRAME TO MOUNT UNIT 24" ABOVE GRADE ON CONCRETE PAD, SEISMICALLY RESTRAINED AS PER SPECIFICATION.

HP-1
3-TON VRV CONTRACTOR TO PROVIDE PAINTED WELDED STEEL FRAME TO MOUNT UNIT 24" ABOVE GRADE ON CONCRETE PAD ON EXISTING CONCRETE WALKWAY. SEISMICALLY RESTRAINED AS PER SPECIFICATION.

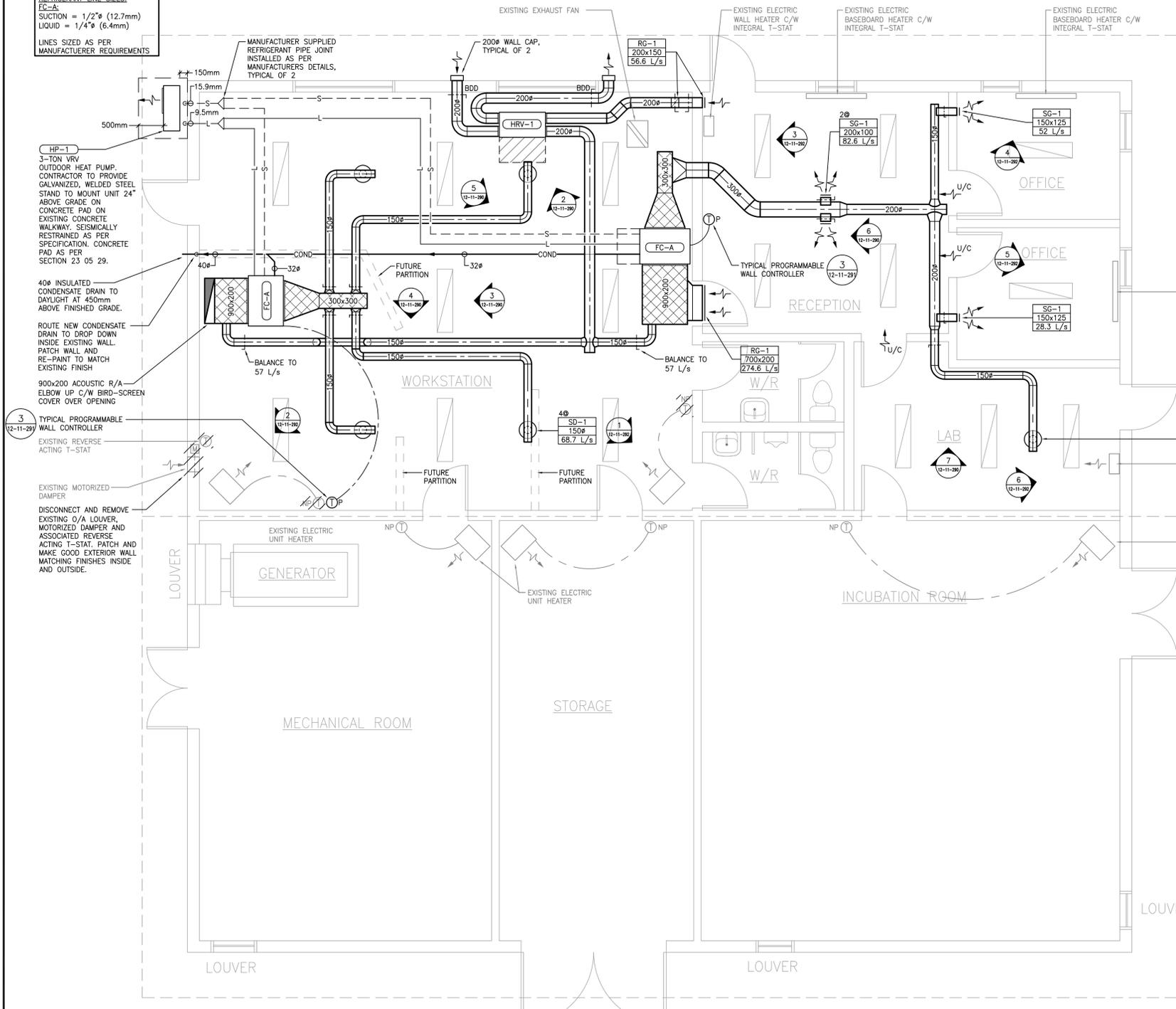
- ### GENERAL NOTES
- THE MECHANICAL CONTRACTOR SHALL ACT AS A GENERAL CONTRACTOR AND SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL TRADES REQUIRED TO CARRY OUT THE WORK OUTLINED ON THE DRAWINGS AND SPECIFICATIONS.
 - THE MECHANICAL CONTRACTOR SHALL ARRANGE FOR AN ELECTRICAL CONTRACTOR TO PROVIDE POWER TO NEW EQUIPMENT. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE 208/1/60 PH POWER FOR NEW HEAT PUMPS (HP-1 / HP-2) AND NEW FAN COILS (FC-A / 2 REQUIRED) AND (FC-B / 8 REQUIRED) WITH ALL REQUIRED DISCONNECTS AND BREAKERS.
 - ELECTRICAL CONTRACTOR RETAINED BY THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED RE-WIRING OF THE EXISTING BASEBOARD HEATERS, UNIT HEATERS AND WALL HEATERS IN ORDER FOR THEM TO OPERATE AS SECOND STAGE HEATING TO THE HEAT PUMP SYSTEM AS PER DRAWINGS AND SPECIFICATIONS.
 - BALANCING AND COMMISSIONING SHALL BE COMPLETED BY A TESTING, ADJUSTING AND BALANCING AGENCY AS OUTLINED IN THE MECHANICAL SPECIFICATIONS SECTION 23 05 93 BY THE CONTRACTOR RETAINED TAB AGENCY.
 - DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INTENDED TO INDICATE THE SCOPE AND GENERAL ARRANGEMENT OF WORK AND ARE NOT DETAILED INSTALLATION INSTRUCTIONS. DO NOT SCALE THE DRAWINGS. OBTAIN ACCURATE MEASUREMENTS FROM SITE.
 - TAKE FIELD MEASUREMENTS WHERE EQUIPMENT AND MATERIALS DIMENSIONS ARE DEPENDENT UPON BUILDING DIMENSIONS.
 - A SEISMIC ENGINEER SHALL BE RETAINED TO CONFIRM ALL MECHANICAL EQUIPMENT IS ADEQUATELY RESTRAINED. REFER TO SPECIFICATIONS SECTION 23 05 48 FOR FURTHER DETAILS.
 - PURGE, VACUUM DRY AND TEST ALL REFRIGERANT PIPING PRIOR TO CHARGING AS PER SPECIFICATION SECTION 23 23 00 AND AS OUTLINED IN THE MANUFACTURERS INSTALLATION MANUAL.
 - NEW PIPING SHALL BE INSULATED AS OUTLINED IN SPECIFICATION SECTION 23 07 00.
 - TEST ALL NEW PLUMBING AND HEATING PIPING AS OUTLINED IN MECHANICAL SPECIFICATION SECTION 23 05 93.
 - PROVIDE EQUIPMENT TAGS ON ALL NEW EQUIPMENT.
 - PATCH AND MAKE GOOD ANY EXISTING BUILDING SURFACES THAT HAVE BEEN EFFECTED BY THE INSTALLATION OF THE NEW HVAC AND PLUMBING SYSTEMS. RE-PAINT AND FINISH TO MATCH EXISTING.
 - ALLOW TO OPEN WALLS AS REQUIRED TO CONCEAL REFRIGERANT PIPING AND CONDENSATE DRAINAGE PIPING. PATCH AND MAKE GOOD ALL EFFECTED AREAS TO MATCH EXISTING FINISHES.
 - REMOVE ANY REDUNDANT PIPING THAT OBSTRUCTS THE INSTALLATION OF NEW MECHANICAL SYSTEMS, UNLESS OTHERWISE INDICATED.
 - RELOCATE ANY EQUIPMENT/ELECTRICAL OUTLETS AFFECTED BY THE INSTALLATION OF NEW MECHANICAL SYSTEMS.
 - CONTRACTOR SHALL ALLOW FOR ANY PIPING OFFSETS REQUIRED TO AVOID EXISTING CONDITIONS (STRUCTURAL/MECHANICAL/ELECTRICAL) ENCOUNTERED ON SITE.
 - SEAL ALL UNUSED OPENINGS THROUGH WALLS AND CEILING TO MAINTAIN EXISTING FIRE RATING.
 - SEAL ALL PIPE PENETRATIONS THROUGH THE BUILDING ENVELOPE WEATHER TIGHT.
 - CONTRACTOR TO COMPLY WITH DFO HALOCARBON PROCEDURES. REFER TO APPENDIX A IN THE MECHANICAL SPECIFICATION.
 - CONTRACTOR TO HAVE RED-SEAL & 2 REFRIGERANT TICKETS TO PERFORM WORK. REFER TO APPENDIX A – HALOCARBON PROCEDURES.
 - SUSPEND EXPOSED FAN COILS FROM U/S OF STRUCTURE WITH VIBRATION ISOLATION AS CLOSE AS POSSIBLE TO THE CEILING.
 - ALL EXPOSED ROUND DUCTWORK TO BE SPIRAL DUCTS FREE FROM ANY OIL, DIRT AND DEBRIS.

SYMBOL SCHEDULE

	ELBOW DOWN
	ELBOW UP
	TEE DOWN
	TEE UP
	FLOW DIRECTION
	P-TRAP
	GATE VALVE
	BALL VALVE
	CHECK VALVE
	BALANCING VALVE
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	STRAINER
	BACKFLOW DEVICE
	PIPE BREAK
	CLEANOUT AT GRADE
	PIPE CAP
	PIPE UNION
	PUMP
	RELIEF VALVE
	AIR VENT
	PRESSURE GAUGE
	THERMOMETER
	DIFFERENTIAL PRESSURE REGULATOR
	PIPE TO DRAIN
	FLOOR DRAIN
	FUNNEL FLOOR DRAIN
	REFRIGERANT SUPPLY
	REFRIGERANT RETURN
	SUPPLY AIR DUCT
	RETURN AIR DUCT
	EXHAUST AIR DUCT
	RECTANGULAR DUCT BREAK
	ROUND DUCT BREAK
	DUCT ACOUSTIC INSULATION
	SQUARE ELBOW WITH TURNING VANES
	ROUND ELBOW, r/w = 1.5
	ROUND DUCT UP
	ROUND DUCT DOWN
	FLOOR GRILLE
	BALANCING DAMPER
	SUPPLY AIR DIFFUSER / GRILLE
	RETURN GRILLE
	EXHAUST GRILLE
	FIRE DAMPER IN VERTICAL DUCT
	FIRE DAMPER IN HORIZONTAL DUCT
	AIRFLOW DIRECTIONAL ARROW
	PROGRAMMABLE WALL CONTROLLER
	THERMOSTAT - NOT-PROGRAMMABLE
	DETAIL DESIGNATION
	DRAWING TO FIND DETAIL
	EQUIPMENT IDENTIFIER - REFER TO EQUIPMENT SCHEDULES FOR NEW EQUIPMENT.
	GRILLE TYPE - REFER TO EQUIPMENT SCHEDULES.
	INLET SIZE
	AIRFLOW (CFM)

						FISHERIES AND OCEANS CANADA REAL PROPERTY AND SAFETY AND SECURITY	
						PROJECT NO: 9L526 SPIUS CREEK HATCHERY HVAC UPGRADES SITE PLAN	
DWG. NO.	DRAWING REFERENCES	NOTES	NO.	DATE	REVISIONS	DESIGNED S.M.C.	DRAWN S.M.C. CHECKED M.S. RECOMMENDED APPROVED

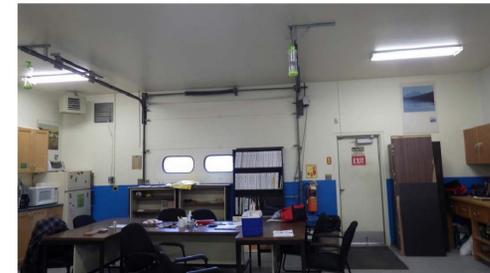
REFRIGERANT LINE SIZES:
 FC-A:
 SUCTION = 1/2" (12.7mm)
 LIQUID = 1/4" (6.4mm)
 LINES SIZED AS PER
 MANUFACTURER REQUIREMENTS



1 HVAC UPGRADES - HATCHERY BUILDING PLAN
 Scale: 1:50



2 HATCHERY - WORKSTATION 1
 Scale: N.T.S.



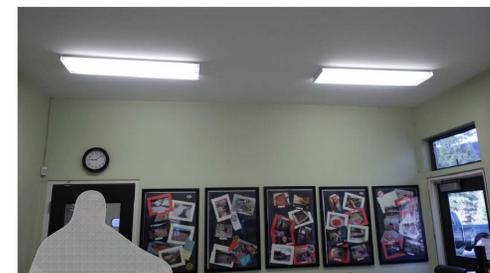
3 HATCHERY - BREAK AREA
 Scale: N.T.S.



4 HATCHERY - KITCHEN
 Scale: N.T.S.



5 HATCHERY - WORKSTATION 2
 Scale: N.T.S.



6 HATCHERY - RECEPTION
 Scale: N.T.S.



7 HATCHERY - LAB
 Scale: N.T.S.

HATCHERY BUILDING FAN COIL CONTROL / AUXILIARY ELECTRIC HEAT:

- FOLLOWING INFORMATION IS BASED ON THE COOL AUTOMATION - THERMOPAD
- REFER TO VIRTUAL AUTO MODE IN THE T-STAT MANUAL
- AUXILIARY HEATER (EXISTING BASEBOARD) CONNECTS TO OUT-A/GRN AND WILL INTERLOCK WITH A RELAY (SEE DRAWINGS FOR QUANTITY). TERMINALS 7 AND 8 WILL BE USED TO POWER THE THERMOSTAT AND COMMUNICATE WITH THE VRY HEAD UNIT.
- IN VIRTUAL AUTO MODE THE OCCUPANT IS ALLOWED TO CHANGE SET-POINT, FAN SPEED AND TURN HVAC ON/OFF BUT NOT ALLOWED TO CHANGE OPERATION MODE. T-STAT WILL DECIDE ABOUT COOLING OR HEATING MODE BASED ON SET-POINT, ROOM TEMPERATURE AND d12C, d12H VALUES ACCORDING TO THE BELOW RULES.
 - IN COOLING MODE CONTROLLER WILL STAY IN COOLING MODE WHILE: ROOM TEMPERATURE > SET-POINT
 - IN COOLING MODE CONTROLLER WILL PASS TO HEATING MODE IF: ROOM TEMPERATURE < SET-POINT
 - IN HEATING MODE CONTROLLER WILL STAY IN HEATING MODE WHILE: ROOM TEMPERATURE < SET-POINT
 - IN HEATING MODE CONTROLLER WILL PASS TO COOLING MODE IF: ROOM TEMPERATURE > SET-POINT
- IN COOLING MODE HVAC IS RESPONSIBLE FOR COOLING OPERATION. CONTROLLER TAKES NO CONTROL OVER THIS PROCESS. IN AUX HEATING MODE T-STAT USES HYSTERESIS
 - AUX HEATING GOES ON IF: ROOM TEMPERATURE < SET-POINT
 - AUX HEATING GOES OFF IF: ROOM TEMPERATURE > OR EQUAL TO SET-POINT

8 CONTROL SEQUENCE FOR FAN COILS
 Scale: N.T.S.

DWG. NO.	DRAWING REFERENCES	NOTES	NO.	DATE	REVISIONS

FISHERIES AND OCEANS CANADA
 REAL PROPERTY AND SAFETY AND SECURITY

PROJECT NO: 9L526
SPUIS CREEK HATCHERY
HVAC UPGRADES
HATCHERY BUILDING

SCALE AS NOTED	DATE MARCH 31, 2016
DRAWING NUMBER 12-11-290	

DESIGNED S.M.C.
DRAWN S.M.C.
CHECKED M.S.
RECOMMENDED
APPROVED