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Client/client

PARKS CANADA

Project title/Titre du projet

23433 Mavis Avenue  
Fort Langley, British Columbia

FORT LANGLEY  
NATIONAL HISTORIC PARK  
KITCHEN UPGRADE

Consultant Signature Only

Designed by/Concept par  
I.N.

Drawn by/Dessiné par  
S.E.

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PREETIPAL PAUL

Drawing title/Titre du dessin

OPERATIONS BUILDING - PARTIAL  
GROUND FLOOR PLAN AND  
SECOND FLOOR - NEW  
CONSTRUCTION - HVAC

Project No./No. du  
projet  
R.081108.001

Sheet/Feuille  
M-03

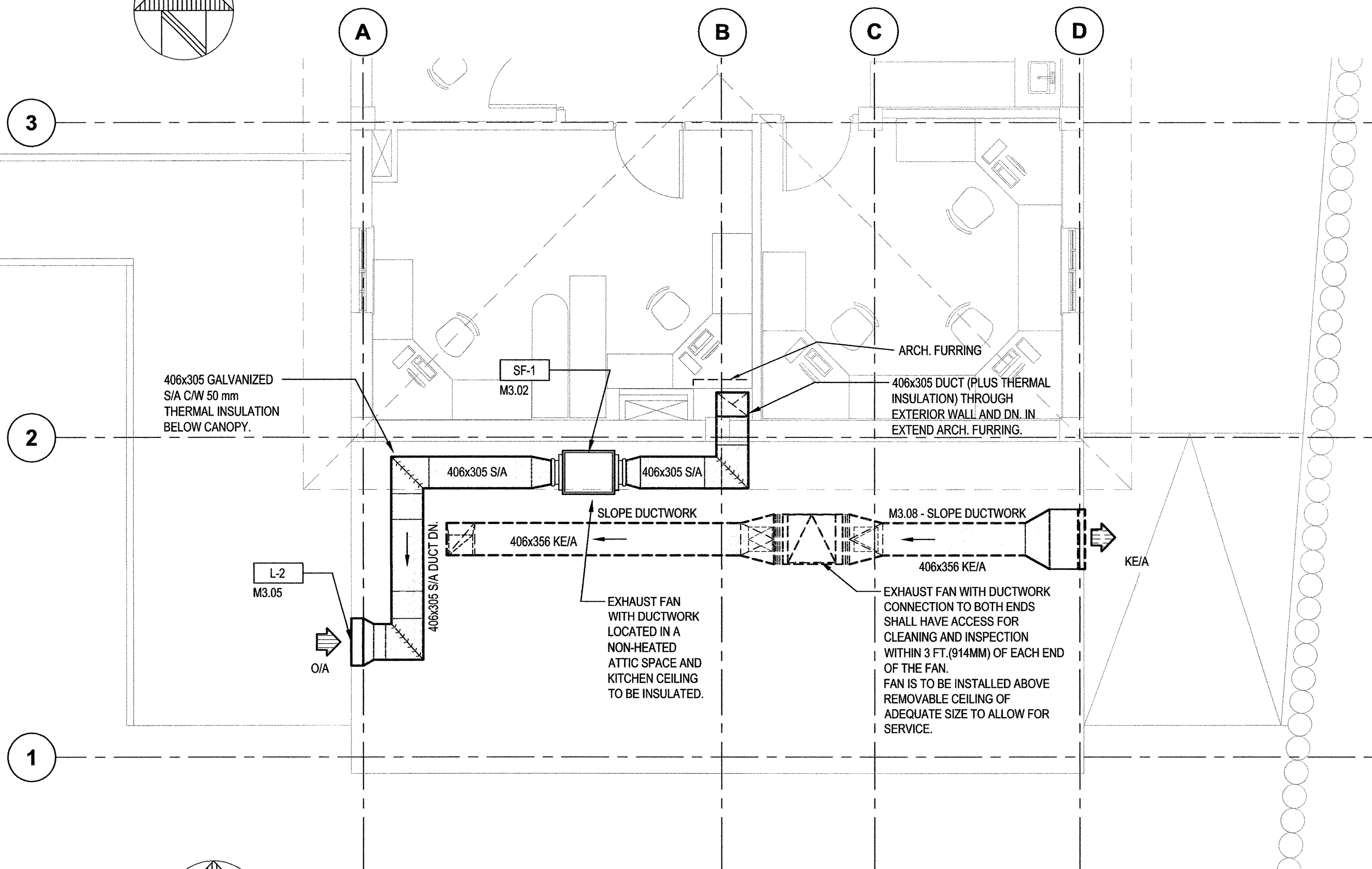
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## M-03 - DRAWING NOTES

- M3.01 PROVIDE 18 KW (208V/3PH) DUCT HEATER DH-1.  
A. DUCT HEATER SHOULD BE SLIP-IN MODEL TYPE, CSA-C AND CSA-US CERTIFIED  
ACCORDING TO CSA STANDARD C22.2 NO. 155 AND UL 1996. ELECTRIC HEATERS SHALL BE  
MANUFACTURED AND APPROVED FOR ZERO CLEARANCE FOR ALL COMBUSTIBLE  
MATERIALS (OPEN COIL, INSERT, NO SCREEN, HORIZONTAL FLOW FOR 1000CFM - 472 L/S).  
B. HEATER FRAMES SHALL BE MADE OF GALVANIZED STEEL, ASSEMBLED WITH RIVETS -  
NO WELDING ALLOWED. THE CONTROL PANEL SHALL HAVE PRE-PUNCHED  
FLANGES FOR EASY FIELD INSTALLATION AND ROUNDED CORNERS THEREFORE  
PREVENTING SHARP EDGES. HEATER DIMENSIONS: LENGTH 18" (457MM) x HEIGHT 10"  
(254mm) x WIDTH 7" (178mm). HEATER CONTROL BOX DIMENSIONS: 9"x12"x35"  
(229x305x890mm). ELECTRICAL SIGNAL 0-10V, 0.1 in. PRESSURE DROP. FAST RESPONSE  
TIME. THERMOSTAT - FIELD INSTALLATION AND WIRING.  
C. HEATING ELEMENTS SHALL BE OPEN COIL, GRADE C NICKEL CHROME ALLOY  
(STANDARD) OR OPEN COIL, GRADE A (NICK80) NICKEL CHROME ALLOY, NO TRACES OF  
IRON OR TUBULAR TYPE, MADE OF INCOLOY 800 (NICKEL ALLOY) TUBE WITH A  
DIAMETER OF 3/8" (9.5mm) CONTAINING A HEATING COIL IN MAGNESIUM OXIDE  
POWDER OR FINNED TUBULAR TYPE, MADE OF INCOLOY 800 (NICKEL ALLOY) TUBE WITH  
A DIAMETER OF 3/8" (9.5mm) CONTAINING A HEATING COIL IN MAGNESIUM OXIDE  
POWDER, SUPPORTED BY CERAMIC BUSHINGS IN AN ENCLOSED FRAME DESIGN.  
D. ELECTRIC HEATERS SHALL BE PROVIDED WITH A SSR MODULATING FIRST STAGE AND  
FIXED ADDITIONAL STAGES.  
E. HEATER TO HAVE A SILENT TYPE CONTACTORS, AUTOMATIC THERMAL CUTOUTS,  
TRANSFORMER WITH SECONDARY FUSE, INTERNAL WIRING FOR THE NUMBER OF  
STAGES INDICATED, DISCONNECTS ETC.  
F. ALL THE CONTROLS SHALL BE INTEGRATED AND PRE-WIRED WITHIN A NEMA-12  
CONTROL PANEL WHICH WILL INCLUDE A REMOVABLE, HINGED DOOR TO  
PROVIDE EASY ACCESS. MECHANICAL CONTRACTOR IS TO SECURE HINGED DOOR  
OPENING FROM PUBLIC.  
G. MODULATING ELECTRIC HEATER SHALL BE SUPPLIED WITH AN ELECTRONIC SENSOR ON  
EACH SIDE OF THE HEATER TO MEASURE THE TEMPERATURE AND THE AIRFLOW, AND A  
NEPTRONIC HEC CONTROLLER TO ADJUST THE OUTPUT TEMPERATURE IN ACCORDANCE  
WITH THE MEASURED PARAMETERS. THE NEPTRONIC HEC CONTROLLER SHALL STOP THE  
ELECTRIC HEATER WHEN THERE IS NO AIRFLOW.
- M3.02 PROVIDE BELT DRIVEN CENTRIFUGAL INLINE SUPPLY FAN SF-1, 472 L/s (1000 CFM),  
GALVANIZED STEEL HOUSING - BACKWARD INCLINED ALUMINIUM WHEEL - TWO BOLTED  
ACCESS PANELS - INTEGRAL DUCT CONNECTION FLANGES - BALL BEARING MOTORS  
ADJUSTABLE MOTOR PULLEY - ADJUSTABLE MOTOR PLATE - FAN SHAFT MOUNTED IN  
BALL BEARING PILLOW BLOCKS - STATIC FREE BELTS - CORROSION RESISTANT  
FASTENERS, MOTOR VFD RATED WITHOUT SHAFT GROUNDING PROTECTION  
MOTOR WITH CSA APPROVAL UL/CUL 705 LISTED - "POWER VENTILATORS" SWITCH,  
NEMA-1, TOGGLE, SHIPPED WITH UNIT, JUNCTION BOX MOUNTED & WIRED, DAMPER  
SHIPPED LOOSE - INLINE GRAVITY OPERATED, NOT COATED MOTOR COVER, ISOLATORS &  
BRACKETS, SPRING HANGING (1 KIT(S); QTY 4) - (SHIPPED LOOSE), BEARINGS WITH GREASE  
FITTINGS, 1/2 LIFE OF 100,000 HRS (150 AVG. LIFE 500,000 HRS), UNIT WARRANTY 1 YR. FAN  
SIZE 1700x670x700 (1000 WITH MOTOR)x762L, 0.5HP, 208V, 3PH, 6.5 SONES. PROVIDE FLEX  
CONNECTION ON INLET AND OUTLET AS INDICATED. FAN IS INTERLOCKED WITH KEF-1  
MOTOR ACCESS TO BE FROM BELOW FAN (3 OR 9 O'CLOCK MOTOR POSITION) AND BE  
SERVICEABLE. FAN TO BE CEILING MOUNTED. ACCESS FROM T-BAR CEILING. COORDINATE  
ACCESS WITH LIGHT FIXTURES, PLUMBING VENT LINES, SPRINKLER LINES AND SPRINKLER  
HEADS.
- M3.03 PROVIDE KEF-1 (KITCHEN EXHAUST FAN), 590 L/s (1250 CFM).  
HOUSING: CONTINUOUSLY WELDED STEEL HOUSING, INLET AND OUTLET FLANGES WITH  
MOUNTING HOLES, ALUMINIUM RUB RING MEETS AMCA TYPE B SPARK RESISTANCE,  
STRUCTURAL STEEL PARTS ARE PHOSPHATIZED AND COATED WITH PERMACTOR  
BEARINGS, SHAFT, AND WHEEL: HEAVY DUTY, SELF-ALIGNING BALL OR ROLLER PILLOW  
BLOCK BEARINGS WITH EXTENDED LUBRICATION LINES, POLISHED, SOLID STEEL SHAFTS.  
BACKWARD INCLINED ALUMINIUM WHEEL. MOTOR WITH CSA APPROVAL, MOTOR WITH  
CLASS F OR GREATER INSULATION, CONCRETE GRAY-RAI 7023, FAN AND ATTACHED  
ACCESSORIES HANGING, ISOLATOR SPRING HANGING - 1 INCH, UL-762 - "POWER  
VENTILATORS FOR RESTAURANT EXHAUST APPLIANCES", 3 O'CLOCK MOTOR POSITION,  
EXTENDED LUBE LINES - COPPER, MOTOR COVER - STEEL, EASY ACCESS DOOR, GREASE  
TRAP WITH DRAIN CONNECTION (SHIPPED LOOSE), MOUNTING RAILS, DRAIN CONNECTION  
- 1" PIPE THREAD W/PLUG. INSTALL UNIT COLLECTOR FOR GREASE AND WATER FROM THE  
FAN [EXTRACT THE GREASE FROM THE WATER FOR EASE OF GREASE DISPOSAL].  
UNIT WARRANTY: 1 YR (STANDARD).  
INLINE AXIAL FAN (680W x 690H x 610L), 0.75 HP, 0.5" W.G. ESP, HORIZONTAL POSITION,  
FRAME SIZE 56, WEIGHT 150 lbs (68 kg), SOUND DATA 70 dba, 208V, 3PH. PROVIDE FLEX  
CONNECTION ON INLET AND OUTLET AS INDICATED.  
KITCHEN EXHAUST FAN TO BE UL LISTED FOR RESTAURANT EXHAUST APPLICATIONS.  
DUCTWORK TO BE INSTALLED PER NFPA 96.  
FAN AND MOTOR TO BE SERVICEABLE FROM BELOW (REMOVABLE CEILING).  
FAN TO BE CEILING MOUNTED. MAINTAIN 152mm CLEARANCE BETWEEN EXHAUST DUCT /  
FAN AND ALL NONCOMBUSTIBLE MATERIAL.
- M3.04 NEW HOOD IS SPECIFIED BY KITCHEN CONSULTANT. SIZE & LOCATION TO BE VERIFIED.  
SIZE AND LOCATION FOR EXHAUST DUCT CONNECTION TO BE CONFIRMED. APPROXIMATE  
SIZE 1500 mm (5') HOOD LENGTH.  
WET CHEMICAL FIRE SUPPRESSION SYSTEM IS SPECIFIED BY KITCHEN CONSULTANT.
- M3.05 KITCHEN EXHAUST AND SUPPLY LOUVRES. SELECT LOUVER FASTENING TYPE TO SUIT  
BUILDING CONSTRUCTION. CUSTOM BAKED ENAMEL FINISH. COLOUR TO BE SELECTED BY  
ARCHITECT AT SHOP DRAWING REVIEW. AIR P.D. = 46 PA (0.18 in. W.G.) AT BEGINNING  
POINT OF WATER PENETRATION, 381 MM IN (1.250 FPM). PROVIDE 12MM BIRDSCREEN ON  
LOUVER. SEE ARCHITECTURAL DRAWING FOR FLANGE OPTION AND FLASHING DETAIL.  
LOUVER TO BE WITH SHAPES WITH TWO VERTICAL PARALLEL SIDES. TOP SIDE TO  
FOLLOW ROOF SLOPE.  
L-1 - WIDTH 30" (762mm), HEIGHT 10" (254mm) - SMALLER VERTICAL SIDE, HEIGHT 22"  
(559mm) LONGER VERTICAL SIDE AND DEPTH 6" (152mm), AIR PRESSURE DROP 25pa,  
SERVICE KEF-1.  
L-2 - WIDTH 30" (762mm), HEIGHT 10" (254mm) - SMALLER VERTICAL SIDE, HEIGHT 22"  
(559mm) LONGER VERTICAL SIDE AND DEPTH 6" (152mm), AIR PRESSURE DROP 25pa,  
SERVICE SF-1.
- M3.06 PROVIDE SIDEWALL MOUNT SUPPLY AIR REGISTER. MAKE GOOD ALL SURFACES  
AFFECTED BY REMOVAL/REINSTALLATION. PROVIDE FIRE DAMPER AT FLOOR  
SEPARATION. PROVIDE ACCESS PANEL TO FIRE DAMPER.
- M3.07 PROVIDE 750 W (120V / 1 PHASE) RADIANT CEILING PANEL (EQUIVALENT TO QMARK -  
CP751F (1220x610)). PROVIDE T-STAT IN SPACE CW ELECTRICAL WIRING. RADIANT PANEL  
TO BE APPROVED FOR USE IN HIGH MOISTURE AREAS (FACTORY SILICONE SEALED,  
PANEL, CONDUIT, ETC.). INSTALL IN T-BAR.
- M3.08 EXHAUST KITCHEN AIR DUCTWORK (406x356mm) SLOPE DUCT DOWNWARDS TOWARDS  
KITCHEN HOOD.
- M3.09 PROVIDE SUPPLY GRILLE IN T-BAR (EGG CRATE SIZE 610x610).
- M3.10 PROVIDE DOOR GRILLE (508x406).
- M3.11 PROVIDE THERMOSTAT FOR CONTROL OF RADIANT PANELS.
- M3.12 PROVIDE S/A DUCT SLEEVE BETWEEN STRUCTURAL BEAMS 50mm BELOW CEILING AND  
ABOVE T-BAR. PROVIDE INSECT SCREEN ON DUCT OUTLET.
- M3.13 INSTALL EXISTING EXHAUST FAN TO NEW LOCATION. EXTEND POWER WIRING AS  
REQUIRED. EXTEND EXHAUST DUCTWORK.

OPERATION BUILDING - PARTIAL GROUND FLOOR PLAN - RENOVATION

1:50



OPERATION BUILDING - PARTIAL SECOND FLOOR PLAN - RENOVATION

1:50

