

ULLSWATER COMMUNITY CENTRE KITCHEN VENTILATION SYSTEM UPGRADES

**TOWNSHIP OF MUSKOKA LAKES
1503 OLD PARRY SOUND ROAD, UTTERSON**



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DOMESTIC COLD WATER PIPING	----
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NATURAL GAS PIPING PIPING	----
SANITARY WASTE PIPING (ABOVE GRADE)	----
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STORM WASTE PIPING (ABOVE GRADE)	----
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HEATING WATER SUPPLY PIPING	----
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REFRIGERANT LIQUID PIPING	----
REFRIGERANT SUCTION PIPING	----
FUEL OIL SUPPLY	----FOS----
FUEL OIL RETURN	----FOR----
FUEL OIL FILL	----FOF----
FUEL OIL VENT	----FOV----
PIPE UP	○
PIPED DOWN	○
ISOLATION VALVE	✕
FLOW BALANCING VALVE	✕
CHECK VALVE	✕
BACKFLOW PREVENTER	✕
PRESSURE RELIEF VALVE (PRV)	✕
WATER METER	Ⓜ
NATURAL GAS METER	Ⓜ
CLEANOUT AT ABOVE	CO
CLEANOUT AT BELOW	CO
CONNECT TO EXISTING	—C—
AIR FLOW DIRECTION	←
FLEXIBLE DUCT CONNECTOR	≡
EXISTING SERVICES OR EQUIPMENT	▭
EXISTING SERVICES OR EQUIPMENT TO BE REMOVED	▭
CIRCULATOR	⊙
FLOOR DRAIN C/W TRAP	⊙
SUPPLY DUCT UP/DOWN	✕
RETURN DUCT UP/DOWN	✕
EXHAUST DUCT UP/DOWN	✕
ROUND DUCT UP/DOWN	⊕
FIRE DAMPER	FD
BALANCING DAMPER	BD
MOTORIZED DAMPER	M
FIRE EXTINGUISHER (FE-1), 6-LITER A-K	⊗
MANUAL PULL STATION	MS
THERMOSTAT	⓪
THERMOSTAT HEATING (DIV. 16)	TH
THERMOSTAT VENTILATION (DIV. 16)	TV
HUMIDISTAT (DIV. 16)	HI
CARBON DIOXIDE SENSOR	CO ₂
CARBON MONOXIDE SENSOR	CO-1
NITROGEN DIOXIDE SENSOR	NO2-1
CONTROL WIRE (LOW VOLTAGE)	—
DRAWING REVISION	☁
SYMBOL INDICATES A REVISION, (# DENOTES REVISION NUMBER)	⚠
SYMBOL INDICATES MODIFICATION OR NEW WORK	⚡
SYMBOL INDICATES NOTE DEMOLITION/ REMOVAL WORK	⚡
DETAIL NUMBER	2
SHEET NUMBER/ DETAIL LOCATION	M.2
TYPE OF DIFFUSER/GRILLE OR (SEE SCHEDULE)	X XX
SIZE- IMPERIAL: IN. METRIC: MM	X XX
AIR FLOW- IMPERIAL: CFM, METRIC: L/S	X XX

MASTER MECHANICAL LEGEND

ALL SYMBOLS/DEVICES LISTED MAY NOT APPLY

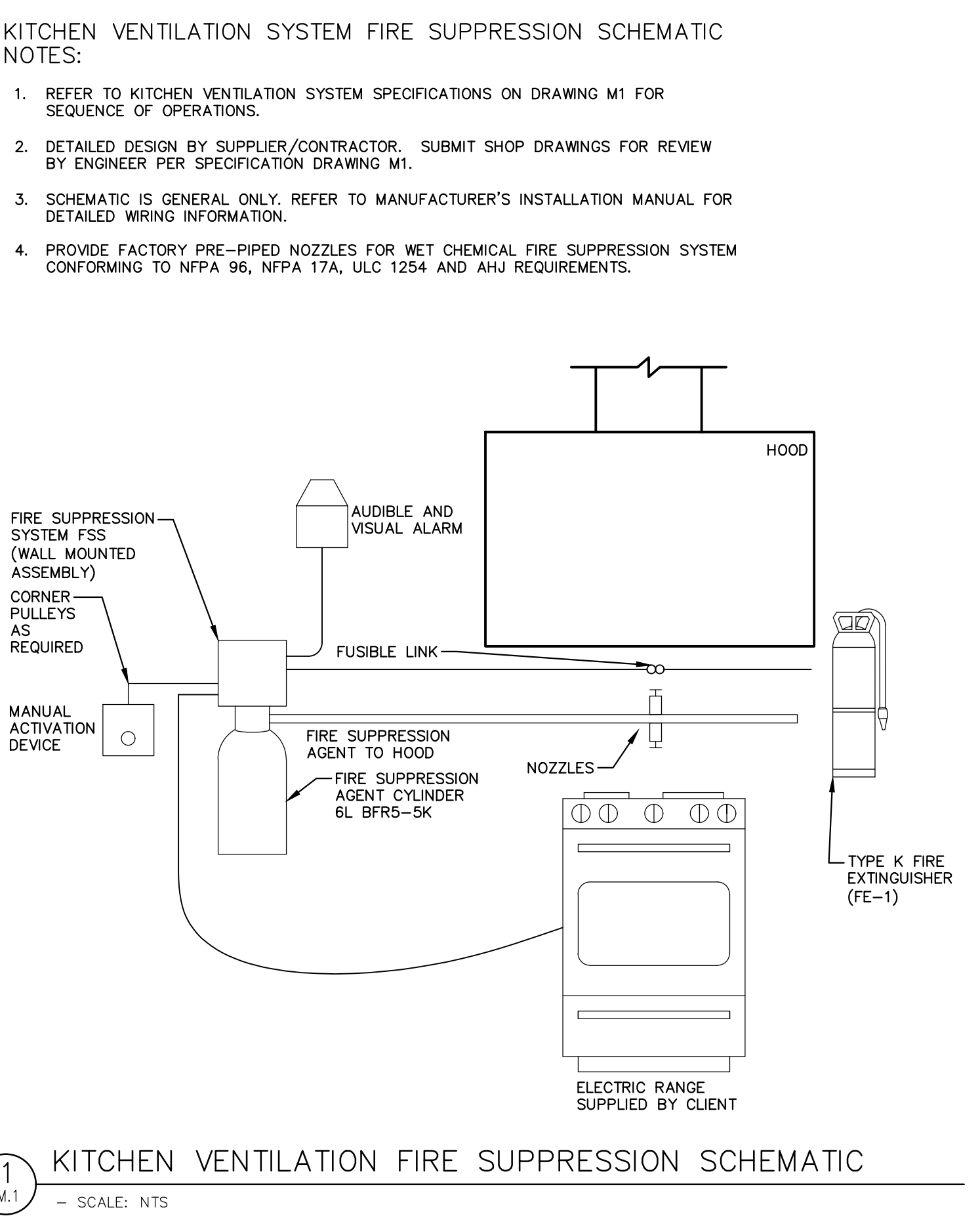
- GENERAL SPECIFICATIONS:
- REVIEW WORK AREA AND REVD DRAWINGS IN CONJUNCTION WITH ALL DISCIPLINES BEFORE COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND POTENTIAL ISSUES ON WORK-SITE. NO ADDITIONAL PAYMENTS WILL BE MADE RELATED TO CLAIMS FOR ITEMS THAT WOULD HAVE BEEN APPARENT IF THE WORK AREA AND ALL PLANS WERE REVIEWED PRIOR TO PRICING THE WORKS.
 - THE GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR NECESSARY PERMITS PERTAINING TO THE INSTALLATION OF THEIR WORK AND PROVIDE ANY CERTIFICATES AND SIGN-OFFS AS CIRCUMSTANCES REQUIRE.
 - WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE, ONTARIO FIRE CODE, OCCUPATIONAL HEALTH AND SAFETY ACT, AND AUTHORITIES HAVING JURISDICTION. MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE CANADIAN STANDARDS ASSOCIATION, AND AUTHORITIES HAVING JURISDICTION. STANDARDS SET OUT IN DESIGN DRAWINGS SHALL NOT BE REDUCED BY CONFORMANCE TO APPLICABLE CODES AND STANDARDS. MAKE ALL MINOR MODIFICATIONS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION AT NO COST TO THE OWNER.
 - SUBMIT ELECTRONIC SHOP DRAWINGS FOR EQUIPMENT LISTED ON THE SCHEDULES FOR REVIEW PRIOR TO ORDERING. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES TO PROVIDE A COMPLETE WORKING SYSTEM CONSISTENT WITH THE INTENT OF THE DESIGN DRAWINGS. CONTRACTOR SHALL REVIEW DESIGN DRAWINGS, EQUIPMENT SCHEDULES AND SHOP DRAWINGS FOR ERRORS AND OMISSIONS AND ELEMENTS RELATING TO WORKS/ASSEMBLY ON-SITE.
 - AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL PROVIDE MARKED UP RECORD DRAWINGS AND OPERATION AND MAINTENANCE MANUALS. THE FIRST PAGE OF THE OPERATION AND MAINTENANCE MANUAL SHALL BE A TYPE WRITTEN DOCUMENT EXPLAINING THE DETAILED MAINTENANCE REQUIREMENTS AND SCHEDULE FOR THE SYSTEM AND ANY OTHER INFORMATION THAT IS SPECIFIC TO THIS PROJECT. GENERIC OPERATIONS AND MAINTENANCE MANUALS WITH NO PROJECT SPECIFIC INFORMATION WILL NOT BE ACCEPTED.
 - PROVIDE TRAINING FOR THE OPERATOR OR OWNER'S REPRESENTATIVE. PROVIDE COMMISSIONING SERVICES AS REQUIRED.
 - LABEL ALL EQUIPMENT, PIPING, CONDUIT ETC.
 - THE CONTRACTOR IS RESPONSIBLE FOR STORAGE AND SECURITY OF MATERIALS AND EQUIPMENT ON THE JOB SITE.
 - THE OWNER'S PROPERTY MUST BE KEPT IN TIDY CONDITION, PROMPTLY REMOVE GARBAGE FROM THE SITE. CLEAN WORK AREA PRIOR TO ALL INSPECTIONS AND KEEP SITE IN A SAFE CONDITION.
 - DESIGN DRAWINGS ILLUSTRATE THE GENERAL LAYOUT OF THE WORK ONLY. COORDINATE THE INSTALLATION OF WORK WITH OTHER TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LAYOUT OF EQUIPMENT AND MATERIALS AND ENSURING THERE ARE NO INTERFERENCES WITH OTHER SYSTEMS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THEIR WORK.
 - EQUIPMENT SHALL BE INSTALLED, STARTED, TESTED, AND ADJUSTED AS PER THE MANUFACTURERS' INSTRUCTIONS, AND AS NECESSARY TO ENSURE OPTIMUM PERFORMANCE. EQUIPMENT SHALL BE INSTALLED TO ALLOW FOR EASY ACCESS AND MAINTENANCE.
 - THE CONTRACTOR SHALL GUARANTEE WORK PERFORMED UNDER THIS CONTRACT FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. ENSURE THAT ALL EQUIPMENT IS WARRANTED BY THE MANUFACTURER FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
 - MATERIALS AND EQUIPMENT SHALL BE NEW, TOP QUALITY AND SPECIFICATION GRADE, EXCEPT WHERE NOTED OTHERWISE.
 - THIS SPECIFICATION SHALL BE CONSIDERED TO BE THE BASE BID SPECIFICATION AND CONTRACTORS MUST CARRY THE BASE BID MANUFACTURERS IN THEIR QUOTATION. ALTERNATE MANUFACTURERS OF EQUIPMENT CAN ONLY BE OFFERED AS PROPOSED ALTERNATES WITH THE CORRESPONDING PRICE REDUCTIONS PASSED ALONG TO OWNER.
 - THE CONTRACTOR SHALL NOT WELD TO OR MAKE A HOLE IN A STRUCTURAL MEMBER WITHOUT REVIEW FROM THE STRUCTURAL ENGINEER. ATTACHMENTS TO STRUCTURAL MEMBERS SHALL BE MADE WITH SUITABLE CLAMPS OR CLIPS.
 - THE GENERAL CONTRACTOR SHALL PROVIDE ALL OPENINGS AND REINFORCEMENT FRAMING AS REQUIRED.
 - ALL MATERIALS IN CEILING SPACE USED FOR RETURN AIR PLENUM MUST BE PLENUM RATED.
 - CONFIRM FIRE SEPARATIONS WITH ARCHITECTURAL DRAWINGS AND GENERAL CONTRACTOR. ALL PENETRATIONS THROUGH FIRE SEPARATIONS SHALL BE FITTED WITH EXPANSION SLEEVES AND ULC CERTIFIED FIRE STOPPING. ACCEPTABLE MATERIAL: HILT OR APPROVED EQUIVALENT.
 - THE OWNER RESERVES THE RIGHT TO MAKE MINOR ALTERATIONS TO THE LOCATION OF EQUIPMENT ETC AT NO ADDITION TO THE CONTRACT AMOUNT.
 - THESE DRAWINGS ARE SCHEMATIC IN NATURE AND INTENDED TO SERVE AS A GUIDE SHOWING QUANTITIES AND GENERAL ARRANGEMENTS AND ARE NOT NECESSARILY WORKING DRAWINGS FROM WHICH MEASUREMENTS CAN BE TAKEN, EXCEPT WHERE DIMENSION FIGURES ARE SPECIFICALLY SHOWN. INFORMATION INVOLVING ACCURATE MEASUREMENTS OF BUILDING SHALL BE TAKEN FROM ARCHITECTURAL BUILDING DRAWINGS OR FROM THE SITE.
 - MAINTAIN ADEQUATE LIABILITY INSURANCE TO PROTECT OWNER AND ALL CONTRACTORS.
 - TEMPORARY LIGHTING AND POWER FOR CONSTRUCTION BY GENERAL CONTRACTOR.
 - ALL EQUIPMENT, PIPING, CONDUIT, WIRING, JUNCTION BOXES, HARDWARE, ETC. INSTALLED IN OPEN CEILING SPACES SHALL BE INSTALLED IN AN INCONSPICUOUS AND AESTHETICALLY PLEASING MANNER UP TO THE SOLE DISCRETION OF THE OWNER AND ENGINEER. ALL EQUIPMENT, PIPING, CONDUIT, WIRING, JUNCTION BOXES, HARDWARE SHALL BE INSTALLED IN CHASES, ABOVE ADJACENT CEILINGS WHERE POSSIBLE.
 - SUITABLE ACCESS DOORS MUST BE PROVIDED WHERE NECESSARY TO ACCESS VALVES, JUNCTION BOXES, CLEAN OUTS, FIRE DAMPERS, AND OTHER EQUIPMENT AND APPURTENANCES. ALL ITEMS REQUIRING ACCESS PANELS ARE NOT NECESSARILY SHOWN, CARRY A REASONABLE COST ALLOWANCE. COORDINATE EXACT LOCATION OF COMPONENTS REQUIRING ACCESS AND SELECT SIZES WHICH ARE SUITABLE FOR MAINTENANCE.
 - FOR GYPSUM WALLS AND CEILINGS IN OCCUPIED AREAS, PROVIDE CONCEALED DOORS WITH 5/8" RECESS TO RECEIVE DRYWALL, ACCEPTABLE MATERIAL: FOR STANDARD CEILINGS AND WALLS ACUDOR DW-5015 OR EQUIVALENT, FOR 90 MINUTE FIRE RATING ACUDOR FW(C)-5015 OR EQUIVALENT, FOR GREATER RATING, CONTACT ENGINEER AND ARCHITECT.
 - FOR GYPSUM, PLASTER, MASONRY OR TILE WALLS AND CEILINGS IN UTILITY AND STORAGE AREAS, PROVIDE UNIVERSAL FLUSH ACCESS DOOR, ACCEPTABLE MATERIAL: FOR STANDARD CEILINGS AND WALLS ACUDOR UP-5000 OR EQUIVALENT, FOR 90 MINUTE FIRE RATING ACUDOR FW-5050, FOR GREATER RATING, CONTACT ENGINEER AND ARCHITECT.
 - PAY FOR AND COORDINATE ALL UTILITY LOCATES AS REQUIRED.
 - PROVIDE WATER-PROOFING OF BUILDING OPENINGS RELATED TO THE WORK OF ALL TRADES.

RANGE HOOD SCHEDULE									
TAG	MAKE	MODEL	DIMENSIONS (IN)			EXHAUST			ACCESSORIES/REMARKS
			LENGTH	WIDTH	HEIGHT	VOLUME (CFM)	E.S.P. (IN WC)	COLLAR SIZE (IN) WIDTH LENGTH	
RH-1	BROAN	BCS330WWC	19- ¹ / ₈	29- ¹ / ₈	6	210	0.1	3- ¹ / ₄ 10	COLOR: WHITE, C/W WALL CAP EXCLUDING INTEGRAL BACK DRAFT DAMPER, INSULATED DUCT TO EXTERIOR

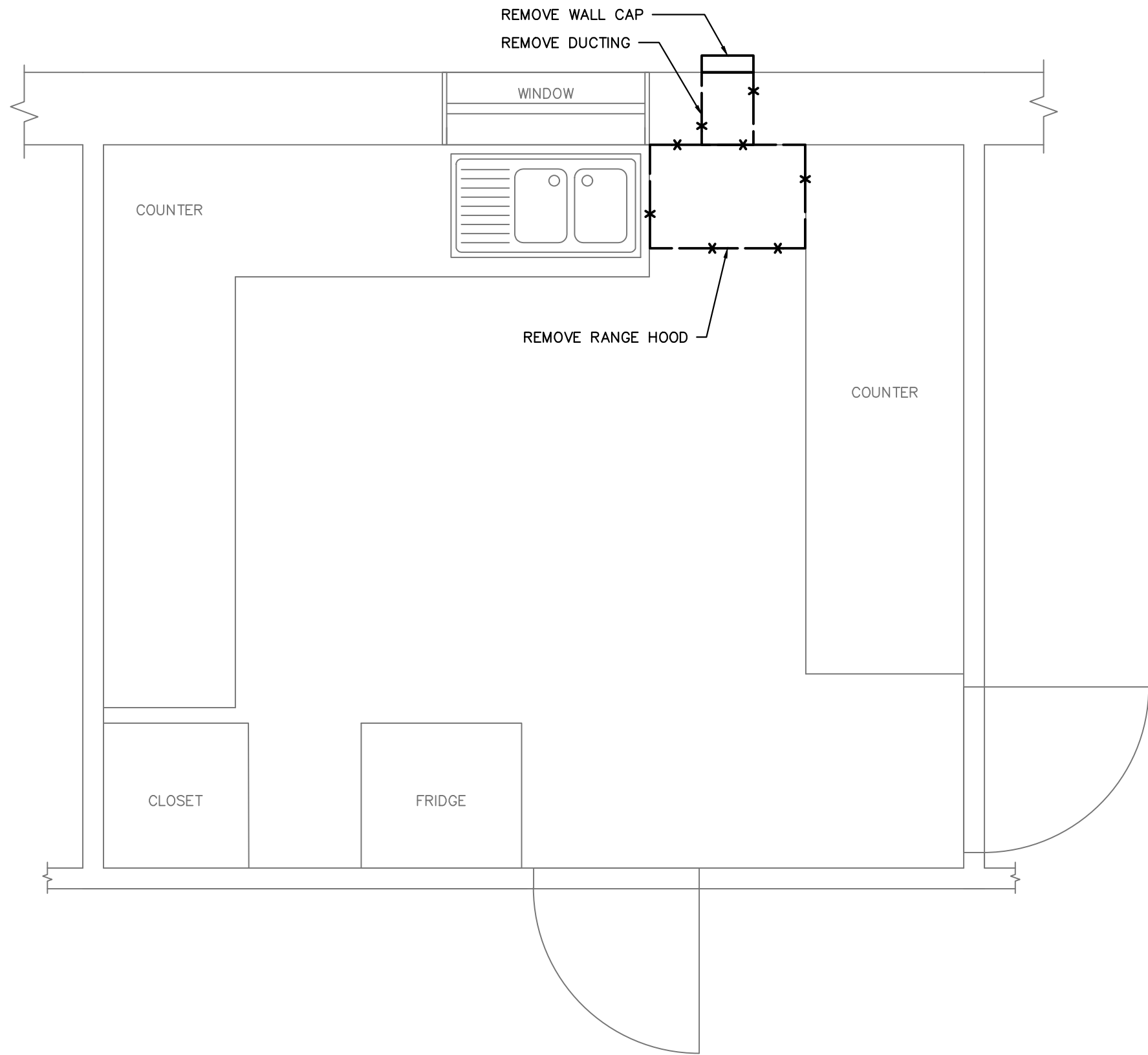
FIRE SUPPRESSION SYSTEM SCHEDULE		
DESCRIPTION	MODEL	ACCESSORIES/REMARKS
RESTAURANT COOKING AREA FIRE SUPPRESSION SYSTEM	BUCKEYE	BFR5-5K FIRE SUPPRESSION AGENT CYLINDER, MB-1 CYLINDER MOUNTING BRACKET, BFR-VLV VALVE, BFR-DAK DISCHARGE ADAPTER KIT, BFR-CAP VALVE CAP, SRM2-E-120 SYSTEM RELEASING MODULE (TWO MS-DPDT MICROSWITCHES INCLUDED), SM-120 SOLENOID MONITOR, RPS-M REMOTE MECHANICAL PULL STATION, FLB-1 FUSIBLE LINK BRACKET, BFR-SC-100 SHIELDED CABLE INTERFACE, 2x N-1HP NOZZLE, 2x N-SA SWIVEL NOZZLE ADAPTOR

- KITCHEN VENTILATION SYSTEM SPECIFICATIONS:
- THE PROPOSED KITCHEN EXHAUST HOOD LAYOUT SHOWN ON THESE DRAWINGS ARE TO ILLUSTRATE THE GENERAL LOCATIONS OF EQUIPMENT, A KITCHEN EXHAUST HOOD AIRFLOW RATE OF 100 CFM MINIMUM, 300 CFM MAXIMUM WAS USED TO ESTABLISH THE EXHAUST FAN AND MAKE-UP AIR SIZING. THIS AIRFLOW RATE SHALL BE CONFIRMED WITH THE FINAL KITCHEN LAYOUT PROVIDED BY THE OWNER. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF SHOP DRAWINGS FOR SYSTEM INSTALLATION INCLUDING HOOD, EXHAUST DUCT, APPLIANCES, FIRE DETECTORS, PIPING, NOZZLES, APPLIANCE SHUTOFF DEVICES, FIRE SUPPRESSION AGENT STORAGE CONTAINERS AS WELL AS CONTROLLER, AND MANUAL ACTIVATION DEVICES. SHOP DRAWINGS AND CERTIFICATION THAT INSTALLATION IS IN COMPLIANCE WITH THE TERMS OF THE LISTING AND MANUFACTURER'S INSTRUCTIONS SHALL BE SUBMITTED TO OWNER'S ENGINEER AND AHJ FOR REVIEW. SHOP DRAWINGS TO BE IDENTIFIED AS PRE-ENGINEERED AND UL300 LISTED, OR BE STAMPED BY A PROFESSIONAL ENGINEER.
 - WORK MUST BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO ELECTRICAL SAFETY CODE, ONTARIO BUILDING CODE, ONTARIO FIRE CODE, OCCUPATIONAL HEALTH AND SAFETY ACT, AND LOCAL CODES.
 - HOODS SHALL BE SIZED TO MATCH THE WIDTH OF THE KITCHEN RANGE.
 - PROVIDE MESH FILTER IN HOOD.
 - PROVIDE DUCTWORK WITH SLOPE BACK TO THE KITCHEN HOOD, DO NOT INSTALL WITH DIPS OR TRAPS, DO NOT TIE IN WITH ANY OTHER DUCTWORK SYSTEMS.
 - PROVIDE ALL DUCT SUPPORT HARDWARE, JOINTS (TELESCOPING AND BELL JOINTS).
 - PROVIDE SUITABLE WEATHER PROTECTIVE COATING ON ALL DUCTWORK ON EXTERIOR OF BUILDING
 - LIGHTING UNITS IN HOODS SHALL BE LISTED FOR USE IN COOKING APPLICATIONS AND SHALL BE WIRED THROUGH KITCHEN HOOD.
 - PROVIDE READILY ACCESSIBLE MEANS OF MANUAL ACTIVATION LOCATED AT 48" (1.2m) AFF. DEVICE SHALL BE INDEPENDENT OF AUTOMATIC ACTIVATION AND SHALL BE FULLY MECHANICAL. POST INSTRUCTIONS FOR MANUAL OPERATION OF FIRE EXTINGUISHING SYSTEM IN CONSPICUOUS LOCATION IN KITCHEN.
 - PROVIDE K-CLASS PORTABLE FIRE EXTINGUISHER IN COOKING AREAS TO NFPA 10.
 - AUTOMATIC FIRE EXTINGUISHING SYSTEMS SHALL COMPLY WITH UL300 AND NFPA 12, NFPA 13, NFPA 17, NFPA 17A.
 - INSTALLATION AND CLEARANCES OF ALL KITCHEN COOKING APPLIANCES SHALL BE TO MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE SHUNT TRIP BREAKERS FOR ALL ELECTRICAL COOKING APPLIANCES.
 - WHERE OCCUPANCY IS PROTECTED BY FIRE ALARM SYSTEM, PROVIDE SUPERVISORY EQUIPMENT/SIGNAL TO FIRE ALARM SYSTEM WHERE ELECTRICAL POWER IS REQUIRED TO OPERATE AUTOMATIC FIRE EXTINGUISHING SYSTEM.
 - VENTILATION NORMAL OPERATION.
 - 15.1. UPON VENTILATION SYSTEM START SIGNAL FROM THE KITCHEN HOOD MANUFACTURER SUPPLIED SWITCH, THE INTERNAL EXHAUST FAN SHALL TURN ON.
 - 15.2. UPON VENTILATION SYSTEM STOP SIGNAL FROM THE KITCHEN HOOD MANUFACTURER SUPPLIED SWITCH, THE INTERNAL EXHAUST FAN SHALL TURN OFF.
 - UPON ACTIVATION OF FIRE EXTINGUISHING SYSTEM THE FOLLOWING SEQUENCE OF OPERATION SHALL OCCUR:
 - 16.1. ALL SOURCES OF FUEL AND POWER SHALL BE AUTOMATICALLY SHUT OFF TO THE RANGE. ALL SHUTOFF DEVICES SHALL REQUIRE A MANUAL RESET.
 - 16.2. AUDIBLE AND/OR VISUAL ALARM SHALL BE ACTIVATED.
 - 16.3. WHERE OCCUPANCY IS PROTECTED BY FIRE ALARM SYSTEM, ACTIVATION SHALL TRIGGER FIRE ALARM SYSTEM BY MEANS OF MICRO-SWITCH.
 - 16.4. HOOD EXHAUST FAN SHALL STAY RUNNING AFTER EXTINGUISHING SYSTEM HAS BEEN ACTIVATED UNLESS FAN SHUTDOWN IS REQUIRED BY A LISTED COMPONENT IN THE AUTOMATIC FIRE EXTINGUISHING SYSTEM.
 - 16.5. ELECTRICAL POWER TO ELECTRICAL COOKING APPLIANCES SHALL BE TURNED OFF VIA A SHUNT TRIPPER FROM THE FIRE SUPPRESSION CONTROLLER.
 - 16.6. EXHAUST HOOD LIGHTS SHALL BE TURNED OFF VIA A CONTROL RELAY FROM THE FIRE SUPPRESSION CONTROLLER.

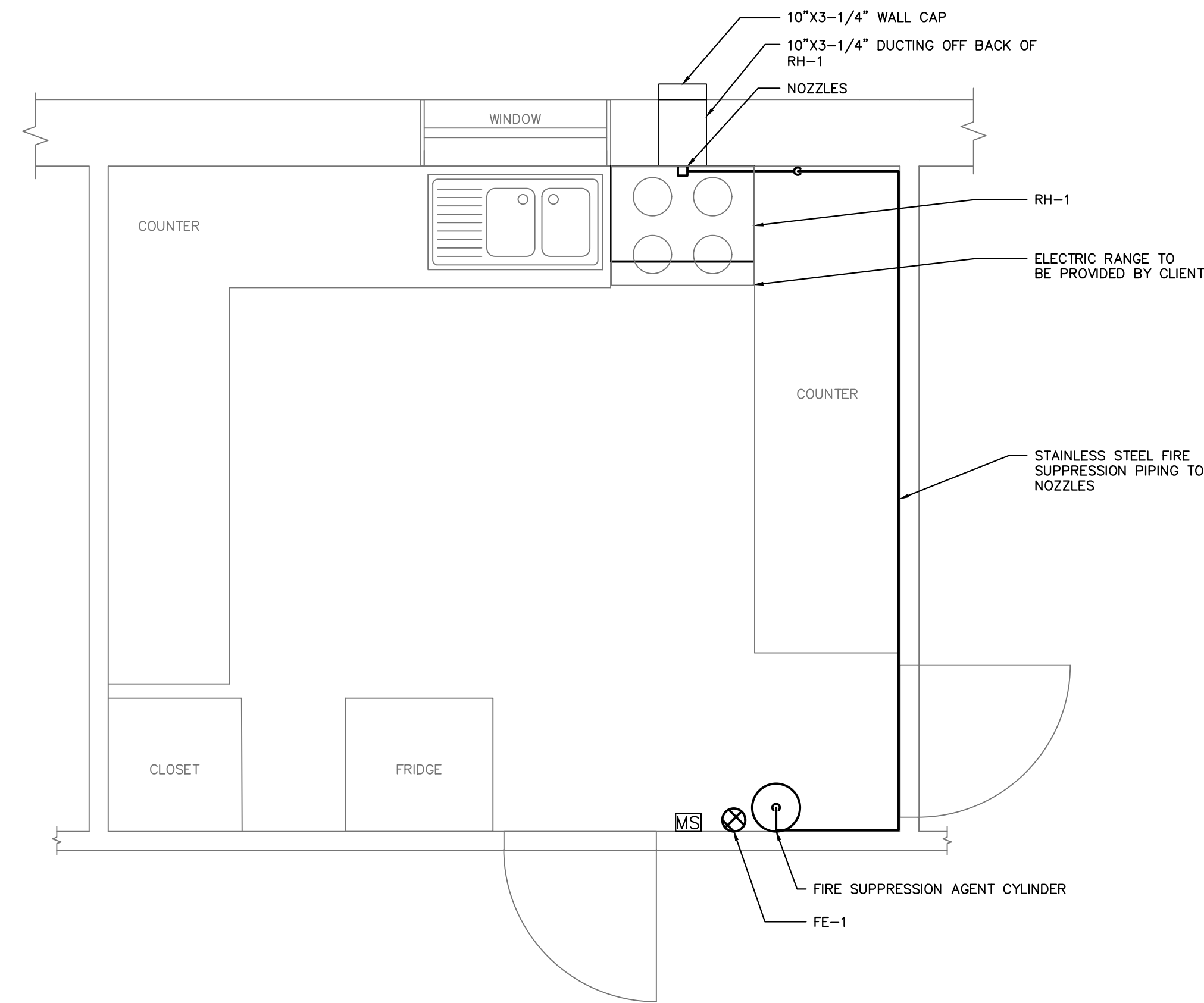
- HVAC SPECIFICATIONS
- DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE, ONTARIO FIRE CODE, AND THE ASHRAE AND SMACNA STANDARDS.
 - AIR DISTRIBUTION SYSTEMS MUST BE BALANCED TO WITHIN 5% OF THE SPECIFIED VALUES SHOWN ON THE DRAWINGS. BALANCE AIR HANDLING UNITS PROVIDING VENTILATION TO THE VENTILATION LEVELS SHOWN. THE BALANCING MUST BE PERFORMED BY AN INDEPENDENT, NEBB CERTIFIED FIRM, SPECIALIZING IN THIS WORK. THE MECHANICAL CONTRACTOR SHALL TURN OVER THE BALANCING REPORT PRIOR TO SUBSTANTIAL COMPLETION BEING AWARDED.
 - VOLUME DAMPERS MUST BE INSTALLED IN THE AIR DISTRIBUTION SYSTEMS AS SHOWN ON THE DRAWINGS AND AS NECESSARY TO ALLOW PROPER BALANCING.
 - DUCTS MUST BE SEALED TO PREVENT AIR LEAKAGE. SEAL TO SMACNA AND ASHRAE 90.1 STANDARDS. FOR UNPAINTED DUCTS INSTALLED IN VISIBLE SPACES, THE DUCT MASTIC IS TO BE APPLIED TO THE INTERIOR OF DUCT JOINTS AND PENETRATIONS AND SHALL NOT BE VISIBLE FROM THE EXTERIOR. MASTIC MAY BE APPLIED TO THE EXTERIOR OF DUCTS ONLY IN AREAS WHERE IT IS NOT VISIBLE TO OCCUPANTS. EXPOSED MASTIC SHALL BE PAINTABLE AND IS TO BE APPLIED NEATLY WITH THE EXCESS REMOVED. REFER TO ARCHITECT'S DRAWINGS TO CONFIRM WHETHER OR NOT DUCTS ARE TO BE PAINTED.
 - FLEXIBLE DUCT CONNECTIONS SHALL BE USED TO CONNECT FANS OR AIR HANDLERS TO RIGID DUCT TO REDUCE THE TRANSFER OF NOISE VIBRATION.
 - FINAL CONNECTIONS TO DIFFUSERS SHALL BE MADE USING HARD ELBOWS CONNECTED TO FLEXIBLE ALUMINUM DUCTS TO MINIMIZE NOISE VIBRATION WHERE SHOWN. MAXIMUM 5' OF FLEXIBLE DUCT.
 - FIRE DAMPERS MUST HAVE A FIRE PROTECTION RATING IN ACCORDANCE WITH THE NFPA AND MUST BEAR THE ULC LABEL. USE DYNAMIC AND TYPE 'B' FIRE DAMPERS ONLY.
 - INSTALL R-8 FOIL BACKED VAPOUR RETARDANT FIBERGLASS INSULATION WITH JOINTS AND SEAMS SEALED WITH 3" FOIL TAPE ON DUCTS IN UNCONDITIONED SPACES.
 - PROVIDE TWO (2) SETS OF FILTERS FOR EQUIPMENT. ONE (1) SET FOR USE DURING CONSTRUCTION, AND ONE (1) SET TO BE INSTALLED IMMEDIATELY PRIOR TO BALANCING.
 - DUCT SIZES ARE SHOWN IN INCHES AND DO NOT INCLUDE FOR INTERNAL INSULATION.
 - PIPES AND EQUIPMENT MUST BE INSTALLED SO AS TO MINIMIZE THE TRANSFER OF VIBRATION TO THE BUILDING AND ALSO TO ALLOW FOR EXPANSION AND CONTRACTION AS NECESSARY.
 - EQUIPMENT SHALL BE ASHRAE 90.1 COMPLIANT.
 - LINE VOLTAGE STARTERS, CONTROLS AND EQUIPMENT SAFETY SWITCHES SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED ON THE ELECTRICAL DESIGN DRAWINGS. LOW VOLTAGE STARTERS AND CONTROLS SHALL BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR.
 - ELECTRICAL WIRING, CONDUIT, JUNCTION BOXES, BACK BOXES, MOUNTING HARDWARE ETC. ABOVE 24V TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. CONTROLS WIRING, CONDUIT, JUNCTION BOXES, BACK BOXES, MOUNTING HARDWARE ETC. 24V AND BELOW TO BE INSTALLED BY MECHANICAL CONTRACTOR (MECHANICAL CONTRACTOR MAY SUB-CONTRACT THIS WORK TO ELECTRICAL CONTRACTOR).
 - THERMOSTATS AND CONTROLLERS INTENDED TO BE OPERATED BY THE OCCUPANT AND LOCATED IN A BARRIER-FREE PATH OF TRAVEL. SHALL BE MOUNTED 4FT (1200MM) ABOVE THE FINISHED FLOOR.
 - THE MECHANICAL CONTRACTOR SHALL INSTALL PIPE WITH SLEEVES IN ORDER TO PREVENT CONTACT WITH CONCRETE, MASONRY OR SIMILAR MATERIALS.
 - ROOF CURBS AND FLASHINGS ARE TO BE SUPPLIED BY THE MECHANICAL CONTRACTOR, INSTALLED BY THE GENERAL CONTRACTOR/ROOFER.
 - ALL EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER THAT MANUFACTURER'S RECOMMENDED CLEARANCES ARE MAINTAINED. THE CONTRACTOR SHALL LAY OUT THE WORK BASED ON THE MANUFACTURER'S RECOMMENDED CLEARANCES AND ADVISE ENGINEER IMMEDIATELY IF ANY SITE CONDITIONS NEGATIVELY AFFECT THE PROPER INSTALLATION OF ALL EQUIPMENT.
 - ALL DOOR UNDERCUTS INDICATED SHALL BE MIN 3/4". COORDINATE WITH GENERAL CONTRACTOR.
 - THIS CONTRACTOR SHALL REVIEW AND CONFIRM ALL EXISTING INDOOR METALLIC PIPING SYSTEMS ARE BONDED. PROVIDE BONDING FOR ALL NEW INDOOR METALLIC PIPING SYSTEMS AND EXISTING SYSTEMS WITHOUT PROPER BOND. BONDING SHALL BE INSTALLED TO THE REQUIREMENTS OF OESC 10-406. THE GENERAL CONTRACTOR SHALL DETERMINE IF BONDING IS BY MECHANICAL OR ELECTRICAL.
 - CLEAN ALL EXISTING GRILLES AND DIFFUSERS WHICH ARE SHOWN TO REMAIN.
 - DUCTWORK CONNECTIONS TO OUTDOOR AIR HANDLING UNITS WITH HORIZONTAL DISCHARGE SHALL BE EQUIPPED WITH WEATHER-TIGHT GASKETS AND FLASHING SHALL BE PROVIDED.



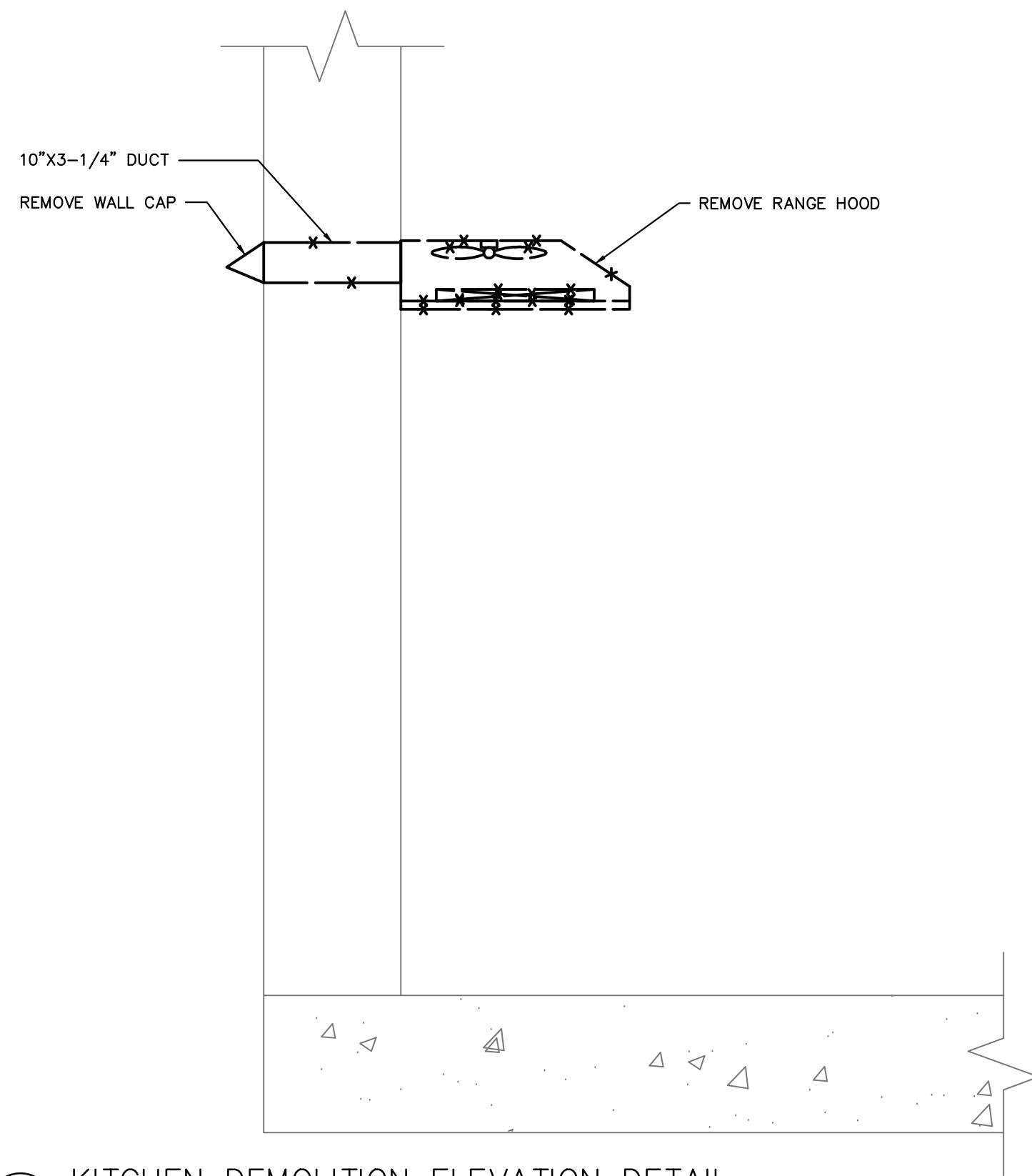
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			1.	ISSUED FOR CLIENT REVIEW	JUNE/2025						
			2.	ISSUED FOR TENDER	JULY/2025						
								DESIGN: AB/MCG/JT	FILE: 225022	DWG:	M.1
								DRAWN: AB/MCG	DATE: MAY 2025		
								CHECK: JT	SCALE: AS SHOWN		



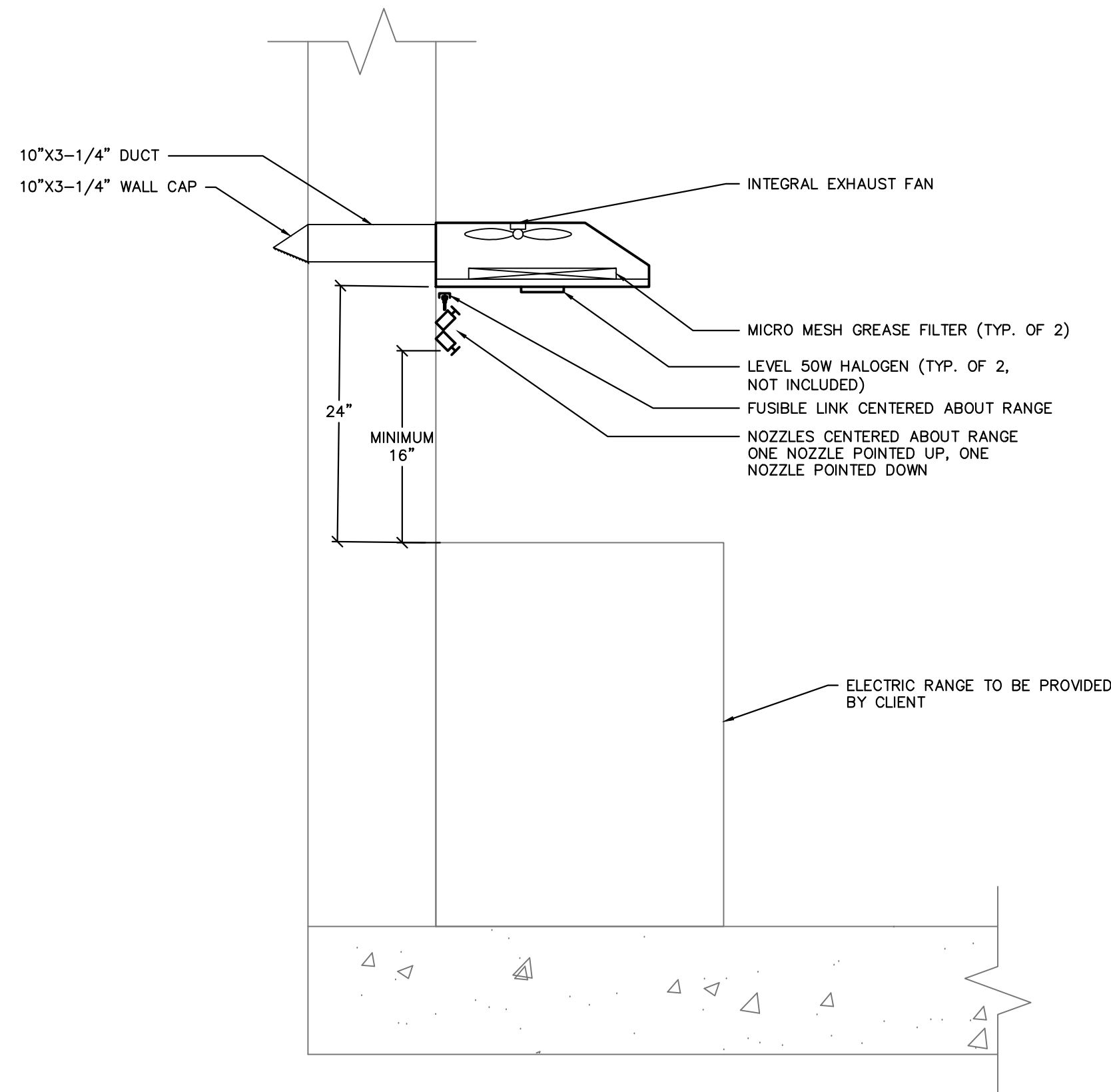
1
M.2
KITCHEN DEMOLITION LAYOUT
— SCALE: 1/2"=1'-0"



3
M.2
KITCHEN INSTALLATION LAYOUT
— SCALE: 1/2"=1'-0"



2
M.2
KITCHEN DEMOLITION ELEVATION DETAIL
— SCALE: 1"=1'-0"



4
M.2
KITCHEN INSTALLATION ELEVATION DETAIL
— SCALE: 1"=1'-0"

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BENCHMARKS

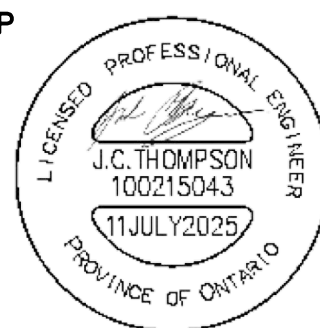
NOTES

No.

REVISION DESCRIPTION

DATE

ENGINEER STAMP



ULLSWATER COMMUNITY CENTRE TOWNSHIP OF MUSKOKA LAKES

MECHANICAL DEMOLITION AND INSTALLATION LAYOUTS



DESIGN: AB/MCG/JT

FILE: 225022

DWG:

DRAWN: AB/MCG

DATE: MAY 2025

M.2

CHECK: JT

SCALE: AS SHOWN

SINGLE LINE SYMBOLS AND CONTROL DIAGRAMS	
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER, MOULDED CASE WITH THERMAL & MAGNETIC TRIPS
	MOTOR CIRCUIT PROTECTOR (MCP) STYLE BREAKER, WITH MAGNETIC TRIPS ONLY
	NEMA SIZE 1 STARTER WITH THERMAL OVERLOAD TRIP
	VARIABLE FREQUENCY DRIVE, C/W BYPASS MOTOR STARTER/CONTACTOR AND CONTROL TRANSFORMER
	CURRENT TRANSFORMER
	CAPACITOR
	CONTROL POWER TRANSFORMER (CPT)
	FUSE
	FUSIBLE DISCONNECT SWITCH
	NON-FUSIBLE DISCONNECT SWITCH
	DRY-TYPE POWER TRANSFORMER (INDOOR)
	OIL-FILLED POWER TRANSFORMER (OUTDOOR)
	SEAL (EYS) FITTING C/W CHICO POWDER
	MOTOR STARTER (MS) COIL, WITH COIL SUPPRESSOR
	PILOT LIGHT, WHERE "X" INDICATES LENS COLOR: R=RED, W=WHITE, G=GREEN
	PUSH TO TEST STYLE PILOT LIGHT
	ELAPSE TIME METER, IN HOURS
	CONTROL RELAY (# DENOTES RELAY NUMBER)
	TERMINAL BLOCK
	SOLENOID VALVE
	CONTACT, N.O. AND N.C.
	TEMPERATURE SWITCH, N.O AND N.C.
	LIMIT OR POSITION SWITCH, N.O AND N.C.
	PRESSURE SWITCH, N.O AND N.C.
	LEVEL OR FLOAT SWITCH, N.O AND N.C.
	TORQUE SWITCH, N.O AND N.C.
	PUSHBUTTON DEVICE, N.O AND N.C.
	SELECTOR SWITCH, 2-POSITION & 3-POSITION

LIGHTING AND POWER ELECTRICAL SYMBOLS	
SYMBOL	DESCRIPTION
	1'x4' FLUORESCENT LUMINAIRE. "X" DENOTES LUMINAIRE TYPE (REFER TO LUMINAIRE SCHEDULE).
	DENOTES SWITCH LEG
	DENOTES BRANCH CIRCUIT NUMBER
	DENOTES PANEL DESIGNATION
	2'x4' FLUORESCENT LUMINAIRE. "X" DENOTES LUMINAIRE TYPE (REFER TO LUMINAIRE SCHEDULE)
	CEILING MOUNTED LUMINAIRE – "x" DENOTES TYPE
	WALL MOUNTED LUMINAIRE – "x" DENOTES TYPE
	EXIT LIGHT – "x" DENOTES TYPE
	LIGHT SWITCH C/W BACK BOX: – "S" INDICATES 2-WIRE SWITCH – "S3" INDICATES 3-WIRE SWITCH – "S4" INDICATES 4-WIRE SWITCH – "D" INDICATES DIMMER (SIZE TO SUIT) – "T" INDICATES MANUAL TIMER – "M" INDICATES MOTION DETECTOR
	EMERGENCY REMOTE HEADS
	EMERGENCY BATTERY UNIT WITH REMOTE HEADS AND CHARGER (BU#)
	EXPLOSION PROOF – CLASS 1 DIV. 1&2
	ELECTRICAL PANEL/ENCLOSURE
	DUPLEX RECEPTACLE
	SINGLE RECEPTACLE
	GFI TYPE DUPLEX RECEPTACLE
	SPLIT DUPLEX RECEPTACLE
	DRYER RECEPTACLE
	HARD WIRED CONNECTION
	SINGLE PHASE MOTOR
	THREE PHASE MOTOR
	SINGLE PHASE MANUAL STARTER SWITCH WITH LOCK-OFF AND PILOT LIGHT
	MANUAL STARTER SWITCH C/W PILOT LIGHT AND HAND/OFF/AUTO SELECTOR SWITCH
	CONTROL STATION OR PANEL
	DISCONNECT SWITCH, UN-FUSED, # DENOTES NUMBER OF POLES
	UNAUTHORIZED ENTRY KEYPAD UNIT
	MAGNETIC REED DOOR SWITCH
	MOTION SENSOR
	SMOKE DETECTOR
	TELEPHONE OUTLET
	DATA OUTLET
	JUNCTION BOX
	THERMOSTAT (VENTILATION)
	THERMOSTAT

GENERAL SYMBOLS	
	DETAIL SYMBOL: X = DETAIL NUMBER YZ = DRAWING NUMBER
	EQUIPMENT SUPPLIED BY ANOTHER DIVISION, INSTALLATION, WIRING AND CONDUIT BY DIVISION 16
	EXISTING OR RELOCATED EQUIPMENT, NEW WIRING AND CONDUIT BY DIVISION 16
	SYMBOL INDICATES A REVISION, (# DENOTES REVISION NUMBER)
	SYMBOL INDICATES MODIFICATION OR NEW WORK NOTE (# DENOTES NOTE NUMBER)
	SYMBOL INDICATES A REMOVAL NOTE (# DENOTES NOTE NUMBER)

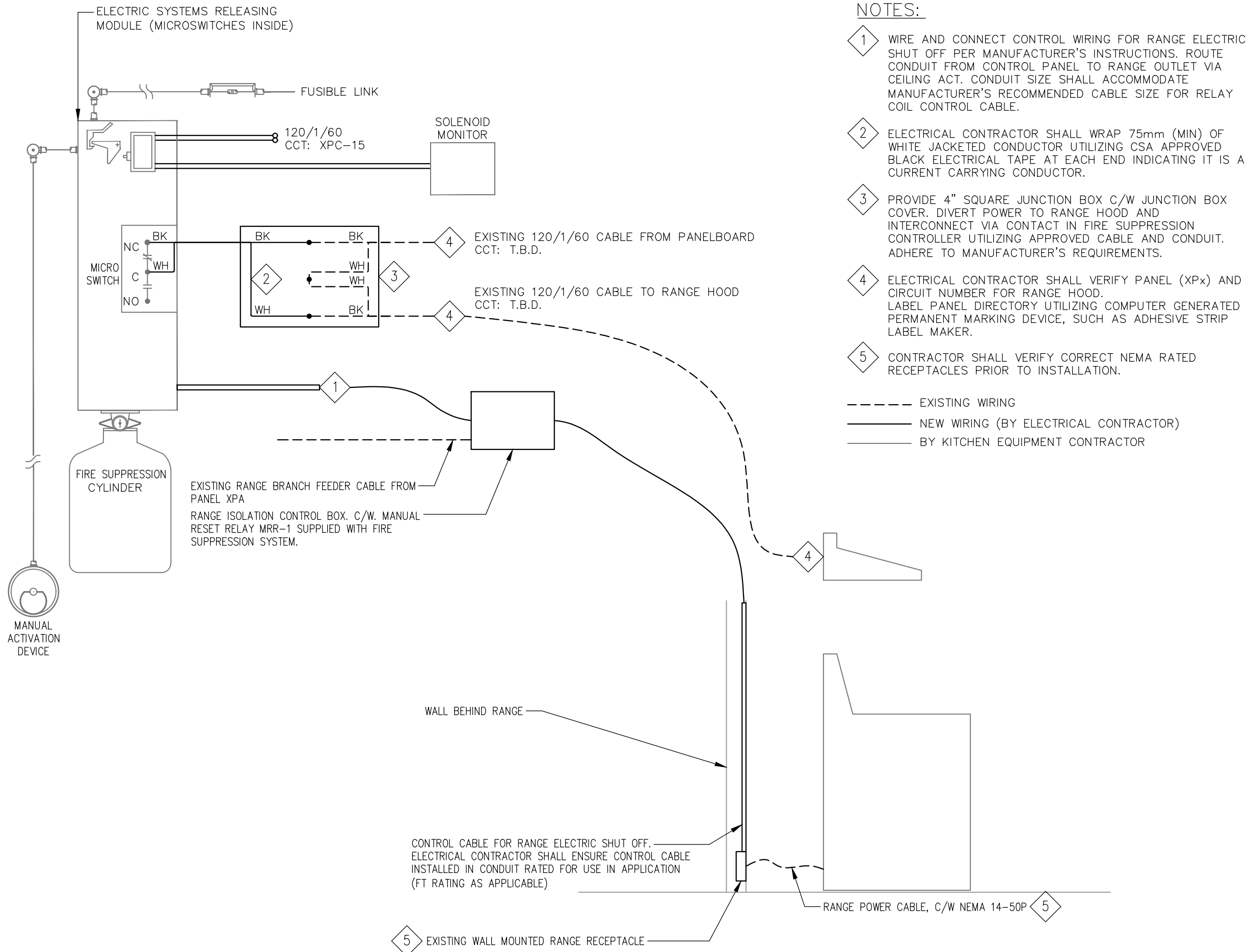
MASTER ELECTRICAL LEGEND

ALL SYMBOLS/DEVICES/ABBREVIATIONS LISTED MAY NOT APPLY

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STANDARD ABBREVIATIONS – ELECTRICAL	
ABBREVIATION	DESCRIPTION
A	AMPERES (CONTINUOUS)
AC	ALTERNATING CURRENT
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
BU	BATTERY UNIT (EMERGENCY)
°C	DEGREE CELSIUS
C	CONDUCTOR
CCT	CIRCUIT
CL	CENTERLINE
C/W	COMPLETE WITH
CPT	CONTROL POWER TRANSFORMER
CSA	CANADIAN STANDARDS ASSOCIATION
CT	CURRENT TRANSFORMER
Cu	COPPER
DC	DIRECT CURRENT
DISC	DISCONNECT
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EEMAC	ELECTRICAL AND ELECTRONIC MANUFACTURERS ASSOCIATION OF CANADA
EP	EXPLOSION PROOF (SEE "CLASSIFICATION SUMMARY")
ETM	ELAPSED TIME METER
ESA	ELECTRICAL SAFETY AUTHORITY
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
Hz	HERTZ
IEEE	INSTITUTE OF ELECTRICAL & ELECTRONIC ENGINEERS
INST	INSTANTANEOUS
I/O	INPUT/OUTPUT
ISB	INTRINSIC SAFETY BARRIER
JB	JUNCTION BOX
kAIC	KILO-AMP INTERRUPTING CAPACITY
kVA	KILOVOLTAMPERE
kW	KILOWATT
kWh	KILOWATT HOUR
kV	KILOVOLT
LA	LIGHTNING ARRESTOR
LOR	LOCAL-OFF-REMOTE
LUC	LOCAL UTILITY COMPANY
MAN	MANUAL
MCC	MOTOR CONTROL CENTRE
MH	MANHOLE
mm	MILLIMETER
MOT	MOTOR
N	NEUTRAL
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/A	NON AUTOMATIC
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
NP	NAMEPLATE
NTS	NOT TO SCALE
OESC	ONTARIO ELECTRICAL SAFETY CODE
O/H	OVERHEAD
O/L	OVERLOAD
OO	ON-OFF
PB	PUSHBUTTON
PDC	POWER DISTRIBUTION CENTRE
PH, OR Ø	PHASE OR DIAMETER
PLC	PROGRAMMABLE LOGIC CONTROLLER
REM	REMOTE
RGS	RIGID GALVANIZED STEEL
RPVC	RIGID PVC CONDUIT
SN	SOLID NEUTRAL
SPDT	SINGLE POLE DOUBLE THROW
SPMDD	STANDARD PROCTOR MAXIMUM DRY DENSITY
SPST	SINGLE POLE SINGLE THROW
SS	STAINLESS STEEL
SW	SWITCH
SYM	SYMMETRICAL
TDC	TIME DELAY ON CLOSING
TDOO	TIME DELAY ON DROP-OUT (OR OFF TIMER)
TDO	TIME DELAY ON OPENING
TDPU	TIME DELAY ON PICK-UP
TYP.	TYPICAL
U/G	UNDERGROUND
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
316SS	316 STAINLESS STEEL



- NOTES:
- WIRE AND CONNECT CONTROL WIRING FOR RANGE ELECTRIC SHUT OFF PER MANUFACTURER'S INSTRUCTIONS, ROUTE CONDUIT FROM CONTROL PANEL TO RANGE OUTLET VIA CEILING ACT. CONDUIT SIZE SHALL ACCOMMODATE MANUFACTURER'S RECOMMENDED CABLE SIZE FOR RELAY COIL CONTROL CABLE.
 - ELECTRICAL CONTRACTOR SHALL WRAP 75mm (MIN) OF WHITE JACKETED CONDUCTOR UTILIZING CSA APPROVED BLACK ELECTRICAL TAPE AT EACH END INDICATING IT IS A CURRENT CARRYING CONDUCTOR.
 - PROVIDE 4" SQUARE JUNCTION BOX C/W JUNCTION BOX COVER. DIVERT POWER TO RANGE HOOD AND INTERCONNECT VIA CONTACT IN FIRE SUPPRESSION CONTROLLER UTILIZING APPROVED CABLE AND CONDUIT. ADHERE TO MANUFACTURER'S REQUIREMENTS.
 - ELECTRICAL CONTRACTOR SHALL VERIFY PANEL (XPx) AND CIRCUIT NUMBER FOR RANGE HOOD. LABEL PANEL DIRECTORY UTILIZING COMPUTER GENERATED PERMANENT MARKING DEVICE, SUCH AS ADHESIVE STRIP LABEL MAKER.
 - CONTRACTOR SHALL VERIFY CORRECT NEMA RATED RECEPTACLES PRIOR TO INSTALLATION.
- EXISTING WIRING
— NEW WIRING (BY ELECTRICAL CONTRACTOR)
— BY KITCHEN EQUIPMENT CONTRACTOR

1 FIRE SUPPRESSION SYSTEM WIRING DIAGRAM
E.1 • SCALE: NTS

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

NOTES

No.

REVISION DESCRIPTION

DATE

ENGINEER STAMP



ULLSWATER COMMUNITY CENTRE
TOWNSHIP OF MUSKOKA LAKES

ELECTRICAL
LEGEND AND DETAILS



DESIGN: MCG / PP

FILE: 225022

DWG:

DRAWN: MCG

DATE: MAY 2025

E.1

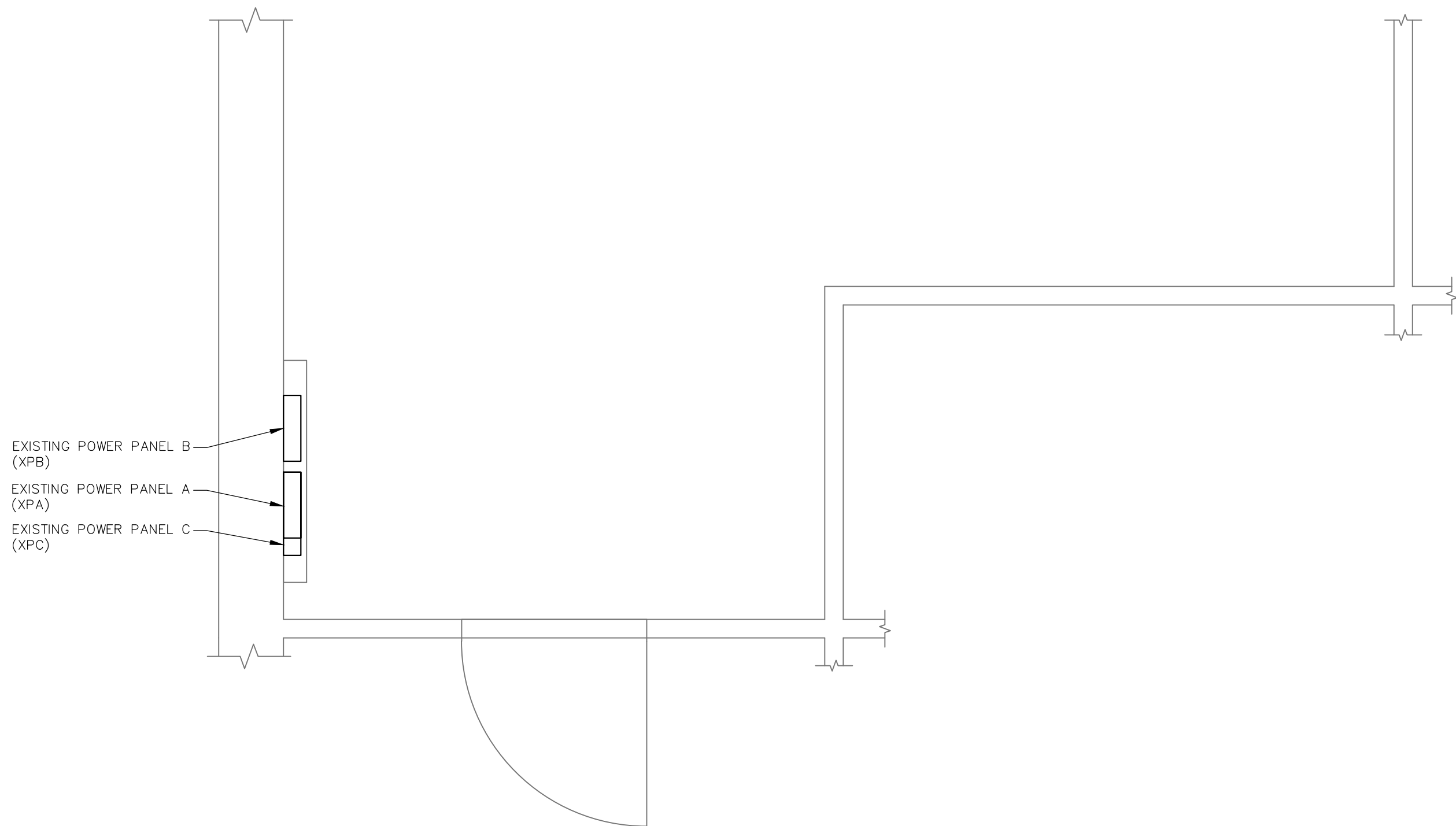
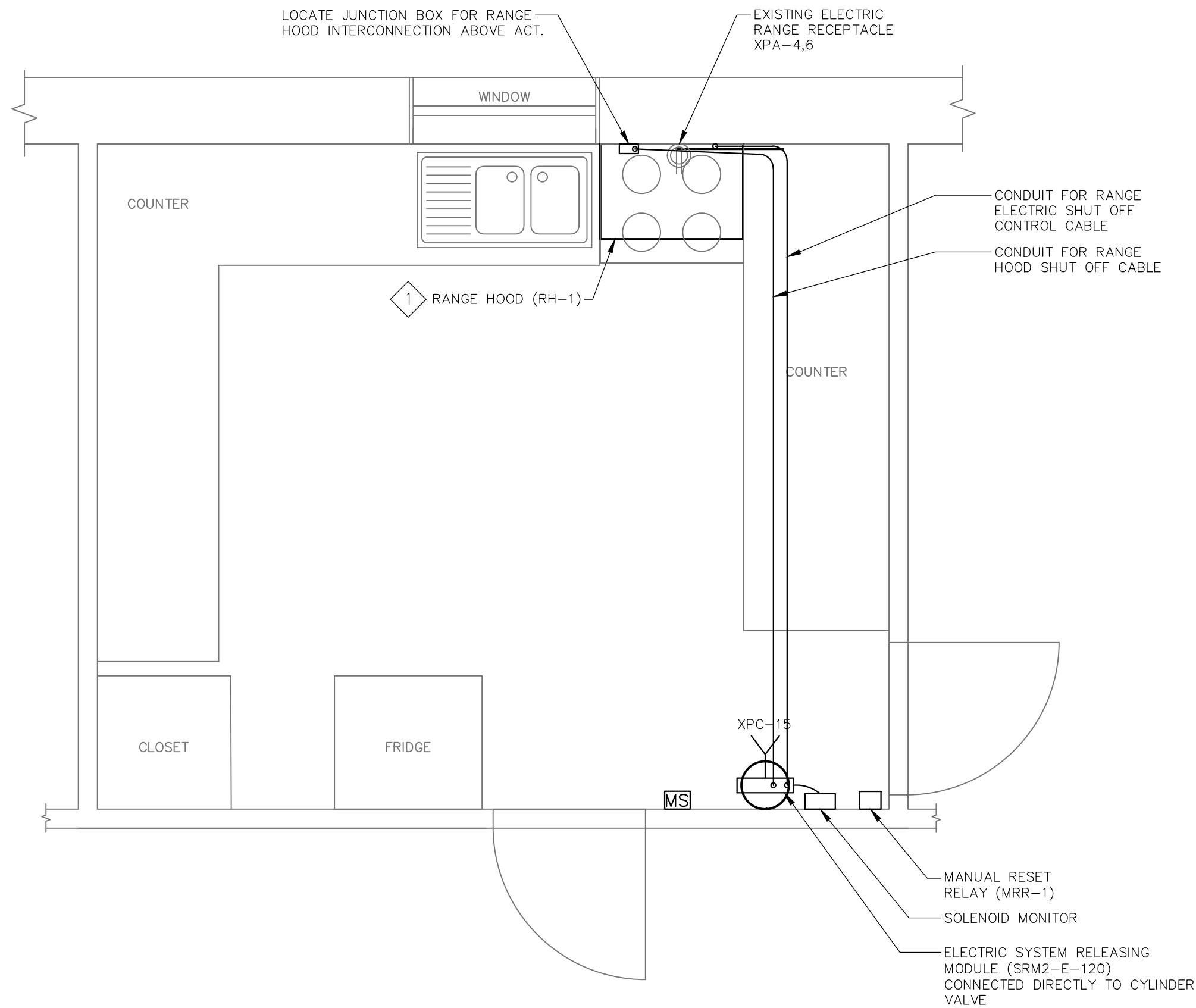
CHECK: SRT

SCALE: AS SHOWN

DRAWING NOTES

1

RE-USE WIRING FROM EXISTING RANGE HOOD. THE CIRCUIT NUMBER COULD NOT BE IDENTIFIED FROM THE PANEL DIRECTORIES, CONTRACTOR TO INVESTIGATE.



1
E.2

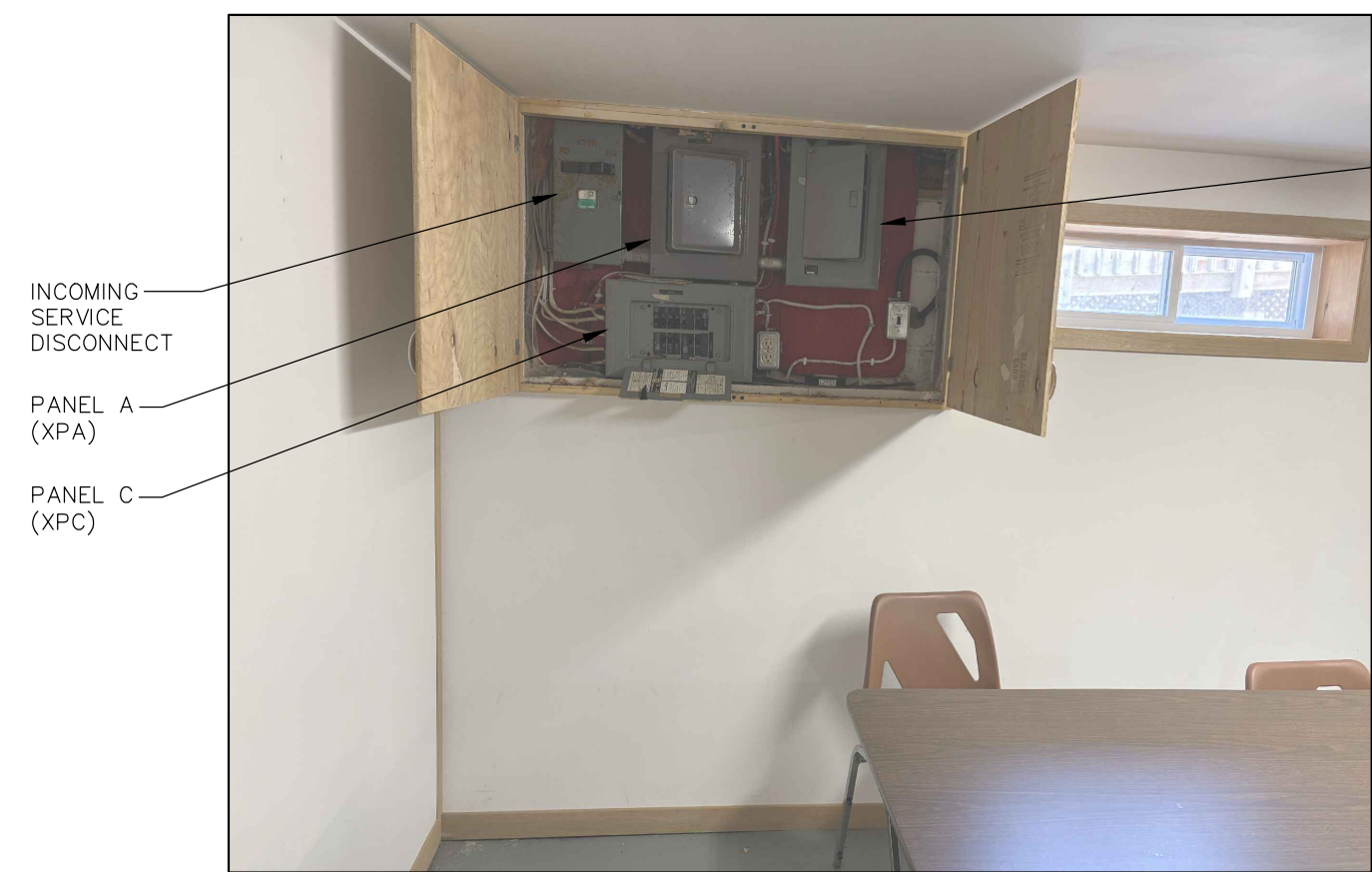
KITCHEN LAYOUT

• SCALE: 1/2" = 1'-0"

2
E.2

BASEMENT LAYOUT

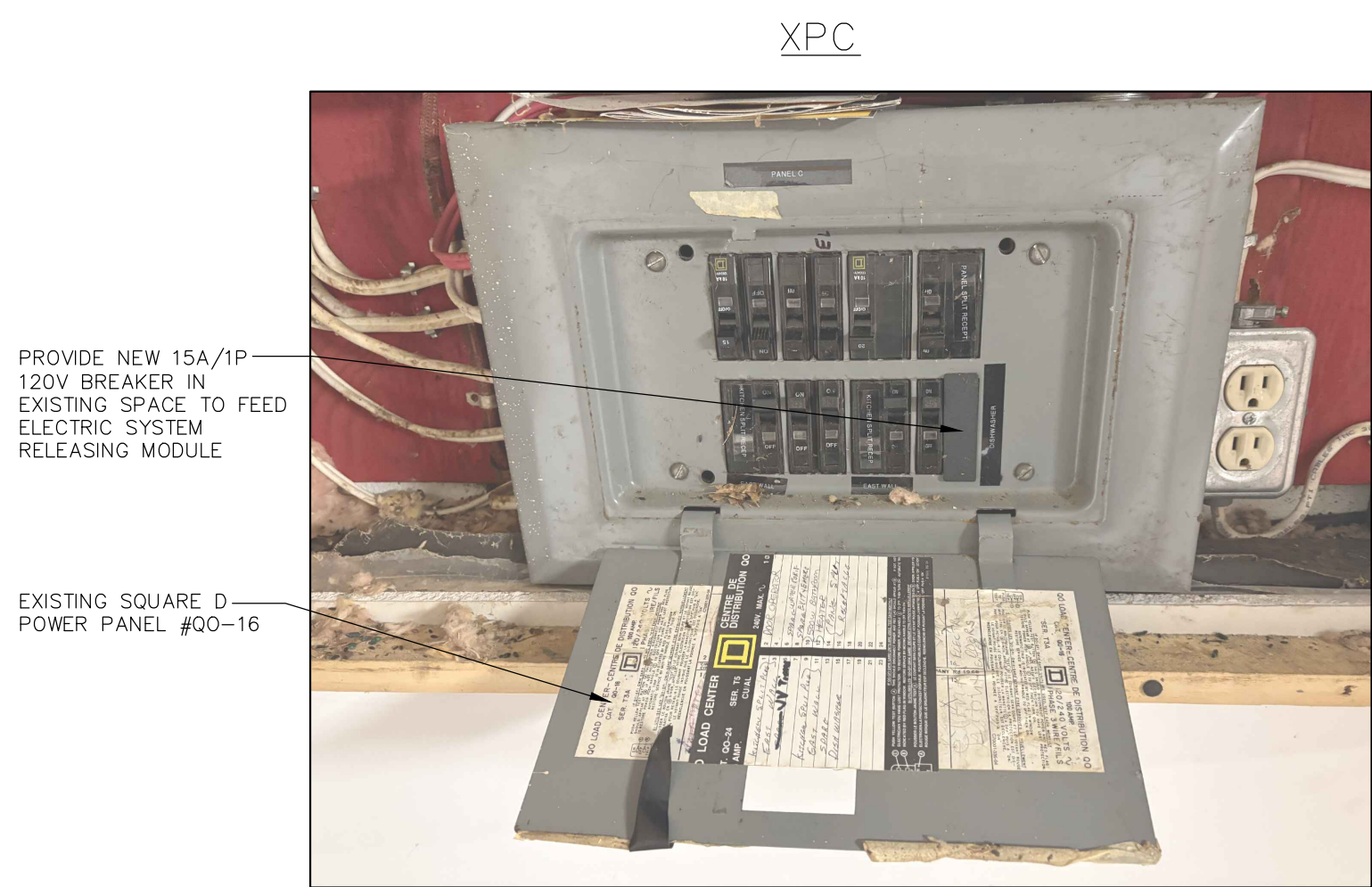
• SCALE: 1/2" = 1'-0"



3
E.2

EXISTING POWER PANEL LOCATIONS

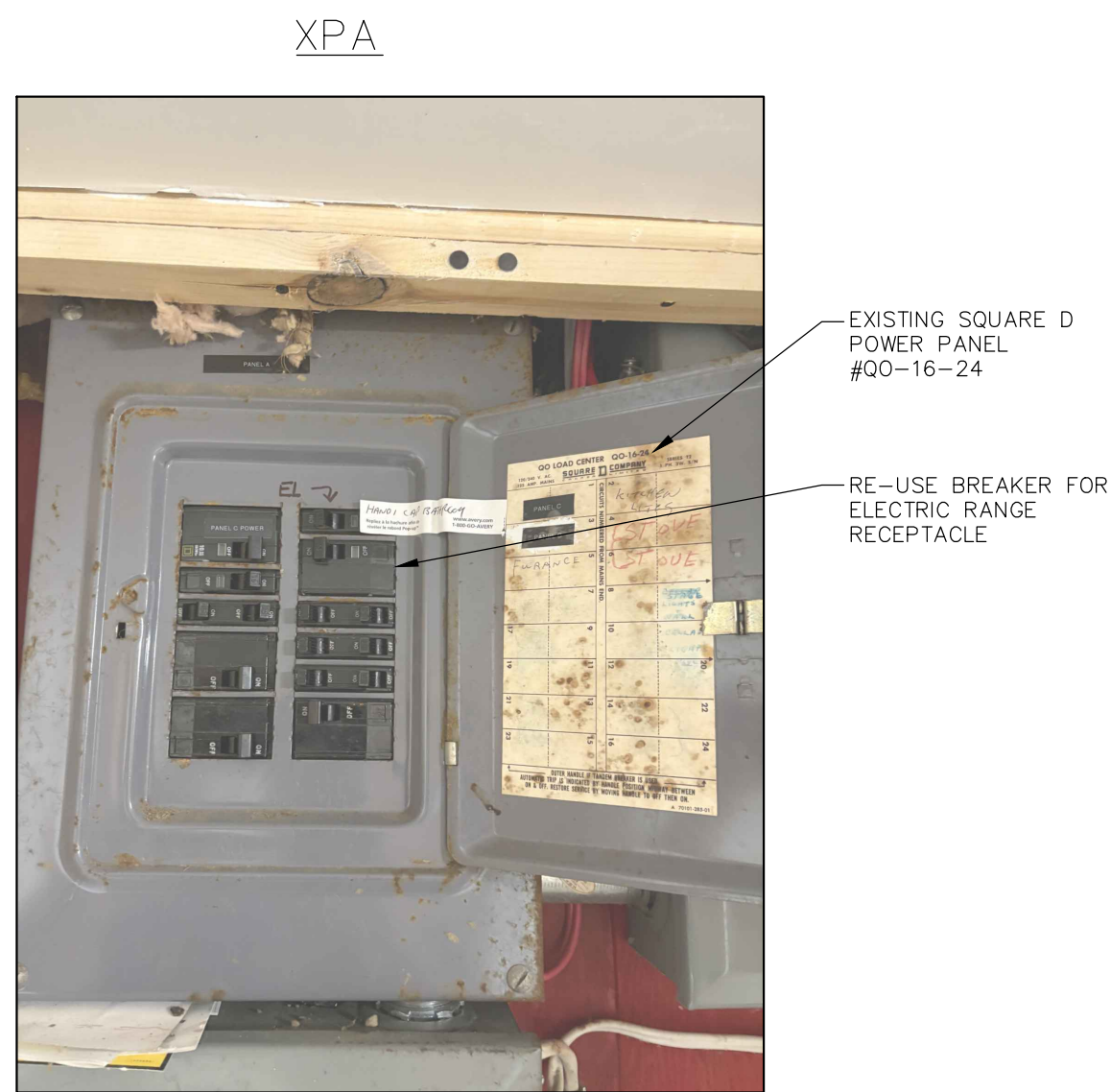
• SCALE: NTS



4
E.2

EXISTING POWER PANEL MODIFICATIONS

• SCALE: NTS



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BENCHMARKS

NOTES

No.	REVISION DESCRIPTION	DATE
1.	ISSUED FOR CLIENT REVIEW	JUNE/2025
2.	ISSUED FOR TENDER	JULY/2025

ENGINEER STAMP



ULLSWATER COMMUNITY CENTRE

TOWNSHIP OF MUSKOKA LAKES

ELECTRICAL

BUILDING LAYOUTS



DESIGN: MCG / PP	FILE: 225022	DWG: E.2
DRAWN: MCG	DATE: MAY 2025	
CHECK: SRT	SCALE: AS SHOWN	

