DATE: 2013-02-28 FILE NAME: 12-0107-003.dwgM05

PROJECT No: 12-0107-003 SHEET TITLE: MECHANICAL SPECIFICATIONS

ADDRESS: 2170 MAIN STREET

MECHANICAL SPECIFICATIONS:

1.0 GENERAL:

1.1 SCOPE OF WORK:

1. REMOVE EXISTING GAS–FIRED MAKEUP AIR UNIT C/W VENTING AND GAS PIPING TO MAIN.
2. REMOVE THREE (3) EXISTING GAS–FIRED UNIT HEATERS C/W VENTING AND GAS PIPING TO MAIN.
3. REMOVE EXISTING EXHAUST FAN C/W DUCTWORK, BACKDRAFT DAMPER, AND WALL SUPPORT BRACKET.
4. REMOVE EXISTING SUPPLY AND EXHAUST DUCTWORK AND GRILLES.
5. REMOVE EXISTING MUA ACCESS PLATFORM.
6. SUPPLY AND INSTALL MAKEUP AIR UNIT MUA–1 AND ALL ASSOCIATED SUPPLY DUCTWORK, INSULATION AND GRILLES.
7. SUPPLY AND INSTALL EXHAUST FAN EF–1 AND ALL ASSOCIATED EXHAUST DUCTWORK, INSULATION AND GRILLES.
8. DESIGN, SUPPLY AND INSTALL CONTROLS IN ACCORDANCE WITH DOL REQUIREMENTS.
9. COMMISSION ALL HVAC EQUIPMENT AND CONTROLS.

1.2 SCOPE OF WORK BY OTHERS:

1. ASBESTOS REMEDIATION FROM MASONRY BLOCK WALL BY THE CITY'S OWN FORCES.

1.3 SITE COORDINATION:

1 ACCESS TO THE SITE SHALL BE COORDINATED WITH THE CITY.

1.4 DESCRIPTION OF WORK:

THE CONTRACTOR SHALL INCLUDE THE FURNISHING OF ALL LABOUR, NEW MATERIALS, EQUIPMENT AND INSTALLATION OF EQUIPMENT AND SERVICES NECESSARY FOR AND INCIDENTAL TO THE COMPLETE INSTALLATION OF THE WORK AS SHOWN AND DESCRIBED ON THESE DRAWINGS AND TO THE SATISFACTION OF THE CITY. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FOR REQUIRED WORK AND PAY ALL FEES. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL CODES, STANDARDS AND REGULATIONS. CONTRACTOR TO COORDINATE

1 ACCESS TO THE SITE WITH THE CITY AND FOLLOW HIS INSTRUCTIONS.

1.5 SUBMITTALS:

1. SUBMIT SHOP DRAWINGS FOR APPROVAL FOR EQUIPMENT SPECIFIED.
2. SUBMIT THREE (3) SETS OF O & M MANUALS.
3. PROVIDE O & M TRAINING TO THE CITY.

1 4. PROVIDE AS–BUILT MARK–UPS OF MECHANICAL DRAWINGS TO THE CONTRACT ADMINISTRATOR.

1.6 WORKMANSHIP:

WORKMANSHIP SHALL BE OF BEST QUALITY, EXECUTED BY WORKERS EXPERIENCED AND SKILLED IN RESPECTIVE DUTIES FOR WHICH THEY ARE EMPLOYED.

1.7 EXECUTION:

INSTALLATION OF EQUIPMENT:

TO NATIONAL BUILDING CODE, ALL LOCAL CODES, STANDARDS AND REGULATIONS. INSTALL ALL EQUIPMENT SPECIFIED OR INDICATED ON DRAWINGS IN A MANNER THAT WILL ENSURE ITS SATISFACTORY OPERATION UPON COMPLETION AND ACCORDING TO MANUFACTURER'S INSTRUCTIONS. THE SAFE DELIVERY TO THE SITE OF ALL MATERIALS SHALL BE ENTIRELY THE CONTRACTOR'S RESPONSIBILITY. MATERIALS AND EQUIPMENT SHALL BE HANDLED AT ALL TIMES WITH CARE TO AVOID DAMAGE. FOLLOW APPROVED MANUFACTURER'S RECOMMENDATIONS FOR SAFETY, EASY ACCESS FOR INSPECTION, MAINTENANCE AND REPAIRS. PERMIT EQUIPMENT MAINTENANCE AND DISASSEMBLY WITH MINIMUM DISTURBANCE TO ADJACENT EQUIPMENT AND WITHOUT INTERFERENCE WITH BUILDING STRUCTURE OR OTHER EQUIPMENT. BEFORE COMMENCING THE INSTALLATION, THE CONTRACTOR SHALL CONFIRM RECEIPT OF AN APPROVED COPY OF THE MANUFACTURER'S DRAWINGS AND INSTALLATION MANUAL FOR THE INSTALLATION THEREOF. DISCREPANCIES OR IRREGULARITIES IN THE WORK OR DEFECTS OR DAMAGES TO THE EQUIPMENT, ATTRIBUTABLE TO FAULTY OR INCORRECT INSTALLATION, SHALL BE RECTIFIED BY THE CONTRACTOR AT HIS OWN EXPENSE. MAINTAIN ADEQUATE ACCESS TO PROJECT SITE. COORDINATE WORK TO MINIMIZE

1 INTERFERENCE OR DISRUPTION TO THE CITY'S OPERATIONS. MAINTAIN THE WORK IN TIDY CONDITION, FREE FROM ACCUMULATION OF WASTE PRODUCTS AND DEBRIS. PROTECT EQUIPMENT AND DUCTWORK FROM ACCUMULATION OF DUST, ETC. SEAL ALL DUCT OPENINGS DURING DUST PRODUCING ACTIVITIES.

INSPECTION AND TESTING:

THE WORK SHALL BE AT ALL TIMES AVAILABLE FOR INSPECTION BY THE CITY'S

1 REPRESENTATIVE. ALL WORK SHALL BE IN ACCORDANCE WITH AND SHALL BE INSPECTED TO MEET THE REQUIREMENTS OF THIS SPECIFICATION. ALL STARTUP AND TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE CITY. NOTICE OF THE DATE OF WHEN TESTS SHALL BE PERFORMED MUST BE RECEIVED BY THE CITY. WORK SHALL NOT BE INSULATED OR CONCEALED PRIOR TO BEING TESTED OR APPROVED. OPERATE SYSTEM FOR A SUFFICIENT PERIOD OF TIME TO ENSURE COMPLETE ACCEPTANCE; DEFECTS SHALL BE REMEDIED AT CONTRACTOR'S EXPENSE.

USE OF NEW HVAC SYSTEMS DURING CONSTRUCTION:

1 1. NEW HVAC SYSTEMS SHALL NOT BE USED DURING CONSTRUCTION UNLESS APPROVED OTHERWISE BY THE CITY. (OBTAIN WRITTEN APPROVAL FROM THE CITY)
2. IF THE CITY APPROVES USE OF HVAC SYSTEMS, THE CONTRACTOR SHALL:
   1. ENSURE THAT HVAC SYSTEM IS OPERATED AS PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
   2. PERFORM REGULAR PREVENTATIVE AND OTHER MANUFACTURER'S RECOMMENDED MAINTENANCE ROUTINES AT CONTRACTOR'S OWN EXPENSE.
   3. NOT RELAX WARRANTIES AND GUARANTEES.
   4. REFURBISH ENTIRE SYSTEM BEFORE STATIC COMPLETION, CLEAN ALL DUCTWORK AND ALL AIR HANDLING EQUIPMENT INTERNALLY AND EXTERNALLY, RESTORE TO "AS NEW" CONDITION, REPLACE FILTERS IN AIR HANDLING SYSTEM.

2.0 HVAC:

2.1 PRODUCTS:

DUCTWORK:

CONFORM TO SMACNA STANDARDS FOR SUPPLY AND INSTALLATION OF DUCTWORK. PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.

FOR ALL NEW INDOOR DUCTWORK HERE INDICATED, PROVIDE 2" THICK FLEXIBLE DUCT WRAP EXTERNAL DUCT INSULATION C/W ASJ.

DUCTWORK SHALL BE RATED FOR 1" W.C. SEAL ALL DUCTWORK JOINTS USING "DURO–DYNE" DUCT SEALER.

SEAL ALL JOINTS IN DUCT INSULATION VAPOR BARRIER USING TAPE AND DUCT SEALER.

BALANCE DAMPERS:

BALANCE DAMPERS TO BE CONSTRUCTED TO SMACNA STANDARDS C/W LOCKING LEVER.

BACKDRAFT DAMPER:

AUTOMATIC GRAVITY–OPERATED, MULTI–LEAF, ALUMINUM CONSTRUCTION WITH NYLON BEARINGS, COUNTERWEIGHTED. RATED FOR 3,000FPM MAX PRESSURE DROP AT 1000 FPM TO 0.05"W.C.

ACCEPTABLE PRODUCT: "WEST VENT" BDX–3C3–LB.

2.0 HVAC PRODUCTS:(CONTINUED)

GRILLES:

GRILLES AS PER GRILLE SCHEDULE ON DRAWING M02.

MAKEUP AIR UNIT (MUA–1):

MAKE–UP AIR UNIT SHALL BE AN INDOOR ENGINEERED AIR DESIGN WITH PILLOW BLOCK BEARINGS, HORIZONTAL DISCHARGE, HINGED ACCESS DOORS, FLAT FILTER SECTION WITH 2" MERV 7 PLEATED FILTERS, MIXING SECTION C/W MODULATING OPERATOR, 1" 1–1/2 LB./CU.FT. INSULATION THROUGHOUT, 18 GA. CONSTRUCTION WITH GREY ENAMEL FINISH COAT. UNIT TO BE BASE MOUNTED.

HEATING UNITS SHALL BE INDIRECT NATURAL GAS FIRED APPROVED FOR BOTH SEA LEVEL AND HIGH ALTITUDE AREAS. THE ENTIRE PACKAGE, INCLUDING DAMPER CONTROLS, FAN CONTROLS, AND ALL OTHER MISCELLANEOUS CONTROLS AND ACCESSORIES SHALL BE APPROVED BY AN INDEPENDENT TESTING AUTHORITY AND CARRY THE APPROVAL LABEL OF THAT AUTHORITY AS A COMPLETE OPERATING PACKAGE.

PROVIDE HIGH EFFICIENCY HEAT EXCHANGERS (DJX) TESTED AND CERTIFIED TO ANSI/CSA STANDARDS TO PROVIDE A MINIMUM OF 90% EFFICIENCY THROUGHOUT THE ENTIRE OPERATING RANGE AS REQUIRED BY ASHRAE 90.1. THE MANUFACTURER SHALL BE ROUTINELY ENGAGED IN THE MANUFACTURE OF THIS TYPE OF HIGH EFFICIENCY EQUIPMENT.

ALL UNITS MUST EXCEED THE ASHRAE 90.1 REQUIREMENT OF STEADY STATE EFFICIENCY AT LOW FIRE. HEAT EXCHANGER SHALL BE A PRIMARY DRUM AND MULTI–TUBE SECONDARY ASSEMBLY CONSTRUCTED OF TITANIUM STAINLESS STEEL WITH MULTI–PLANE METAL TURBULATORS AND SHALL BE OF A FLOATING STRESS RELIEVED DESIGN. HEAT EXCHANGER SHALL BE PROVIDED WITH CONDENSATE DRAIN CONNECTION. USING DUCT TYPE FURNACES AND CLOSED COUPLED BLOWERS ARE NOT ACCEPTABLE. THE HEAT EXCHANGER/BURNER ASSEMBLY SHALL BE A BLOW THROUGH POSITIVE PRESSURE TYPE AND SHALL HAVE AN INTERRUPTED PILOT IGNITION SYSTEM TO PROVIDE INCREASED SAFETY. UNITS USING CONTINUOUS OR INTERMITTENT PILOTS ARE NOT ACCEPTABLE.

FLAME SURVEILLANCE SHALL BE FROM THE MAIN FLAME AFTER IGNITION NOT THE PILOT FLAME. ATMOSPHERIC BURNERS OR BURNERS WITH POWER ASSISTED VENTING ARE NOT ACCEPTABLE.

THE HEAT EXCHANGER/BURNER ASSEMBLY SHALL INCLUDE 15:1 TURNDOWN. THE HIGH TURN DOWN HEAT EXCHANGER/BURNER ASSEMBLY MINIMUM INPUT SHALL BE CAPABLE OF CONTROLLING 6.7% OF ITS RATED INPUT, EXCLUDING THE PILOT ASSEMBLY, WITHOUT ON/OFF CYCLING AND INCLUDE BUILT IN ELECTRONIC LINEARIZATION OF FUEL AND COMBUSTION AIR. EFFICIENCY SHALL INCREASE FROM HIGH TO LOW FIRE.
PROVIDE ELECTRONIC DJM MODULE COMPLETE WITH PROPORTIONAL / INTEGRAL CONTROL AND DISCHARGE AIR SENSOR TO MAINTAIN SET POINT TEMPERATURE. COMBUSTION AIR MOTOR SPEED VARIES PROPORTIONALLY IN RESPONSE TO THE MODULATION OF GAS FLOW TO PROVIDE OPTIMUM FUEL/AIR MIXTURE AND EFFICIENCY AT ALL CONDITIONS. TWO SPEED OR STEP SPEED COMBUSTION BLOWERS ARE NOT ACCEPTABLE.

THE DJM3 HEATING MODULE SHALL INCLUDE THE FOLLOWING STANDARD FEATURES:
" SERVICE ANALYZER WITH DIAGNOSTIC LIGHTS FOR EASE OF SET–UP AND SERVICE
" –40°F(–40°C) MINIMUM OPERATING AMBIENT TEMPERATURE
" NON–RECYCLING AUTO BY–PASS LOW LIMIT WITH ALARM CONTACTS AND BUILT–IN SENSOR CHECKING
" SEPARATE GAS AND AIR ACTUATORS INDEPENDENTLY CONTROLLED TO GIVE THE CORRECT AIR TO FUEL RATIO THOUGH OUT THE ENTIRE FIRING RANGE.

COMBUSTION EFFICIENCY OF HIGH EFFICIENCY HEAT EXCHANGERS SHALL INCREASE BY UP TO 4 5% FROM HIGH FIRE TO LOW FIRE WHILE TURNING DOWN ON UNITS INCORPORATING 15:1 TURNDOWN (HT BURNER).

CONDENSATE DRAIN AND NEUTRALIZING TANK SHALL BE SUPPLIED BY THE MANUFACTURER FOR FIELD INSTALLATION BY CONTRACTOR.

PROVIDE A MAKE UP AIR REVERSE AIRFLOW HIGH LIMIT SWITCH IN SERIES WITH THE STANDARD HIGH LIMIT SWITCH MOUNTED IN THE BLOWER DISCHARGE.

BH TYPE VENTING (SUPPLIED BY CONTRACTOR) REQUIRED FOR ALL INDOOR UNITS.

MIXING SECTION SHALL OPERATE AT 100% RETURN AIR UNDER NORMAL CONDITIONS. ON CALL FROM GAS DETECTION SYSTEM (BY OTHERS), DAMPERS WILL MODULATE TO 100% OUTSIDE AIR UNTIL THE CALL FOR VENTILATION IS SATISFIED. UNIT SHALL OPERATE WITH ECONOMIZER FUNCTION FOR FREE COOLING (RELIEF IS REMOTE TO THE UNIT) WITH HIGH AMBIENT SETBACK.

PROVIDE A TE7600 SPACE THERMOSTAT FOR ROOM CONTROL. PROVIDE A UNIT MOUNTED PANEL C/W UNIT ON/OFF SWITCH & LIGHT, HEAT ON SWITCH & LIGHT, TIMECLOCK AND SPRING WOUND OVERRIDE TIMER.

PROVIDE A DAMPER LIMIT SWITCH ON OUTSIDE AIR DAMPER.

UNIT SCHEDULE:

MUA–1:
MODEL DJX60, 5,000 CFM AT 1.0" ESP, 600 MBH INPUT, 540 MBH OUTPUT, 100 DEGREE HEATING TEMPERATURE RISE, 5 H.P. 208/3/60 ODP MOTOR, 15/15 FORWARD CURVE BLOWER.

EXHAUST FAN (EF–1):

SIDEWALL BELT DRIVE EXHAUST FAN, ALUMINUM HOUSING, TEFC ENCLOSURE, PROVIDE A WALL SLEEVE FOR BACKDRAFT DAMPER.

PERFORMANCE: 5,000 CFM @ 0.25" W.G., ¾ HP, 208V/1PH/60HZ, 1725 MOTOR RPM.

ACCEPTABLE PRODUCT: "GREENHECK" MODEL SBE–2I20–7.

2.2 HVAC CONTROLS:

THE CONTROLS CONTRACTOR SHALL BE IN THE CONTROLS BUSINESS SUCH AS BARCOL CONTROLS OR OTHER SIMILAR CONTRACTOR PRIOR TO PREPARING SHOP DRAWINGS FOR CONTROLS. SUBMIT SHOP DRAWINGS FOR APPROVAL WITH DETAILED SEQUENCE OF OPERATION FOR ALL SYSTEMS. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS.

SCOPE OF WORK:

SCOPE OF WORK INCLUDES THE DESIGN, SUPPLY, INSTALLATION, COMMISSIONING AND TRAINING FOR A NEW ELECTRIC CONTROLS SYSTEM FOR THE FOLLOWING:
1. MUA–1 INTERLOCKED TO EF–1 C/W ASSOCIATED MOTORIZED DAMPERS. CONTROLLED BY THE EXISTING GAS DETECTION, NEW BUILDING PRESSURE CONTROL PANEL, AND NEW THERMOSTAT IN THE SHOP. CONFORM TO DEPARTMENT OF LABOUR REQUIREMENTS.
2. PROVIDE BUILDING PRESSURE CONTROL PANEL C/W PRESSURE SENSORS AND SWITCHES, ENTHALPY CONTROLS, WALL–MOUNTED THERMOSTAT, AND ALL REQUIRED SENSORS, WIRING AND CONTROLS FOR A FULLY FUNCTIONING SYSTEM AS APPROVED BY THE CONSULTANT.

DIFFERENTIAL PRESSURE SENSOR:

DWYER A–420A OUTSIDE AIR PICK–UP PORT WITH EU ENCLOSURE, 0" TO –0.1" W.G., WIND PROOF STABILIZING PLATE.

DWYER A–417A STAINLESS STEEL WALL PLATE, STATIC PRESSURE PICK–UP. 60 MICRON FINE MESH FILTER ON SENSOR.

AIRFLOW PROVING SWITCH:

JOHNSON CONTROLS P–32AG–2, SPDT WITH ADJUSTABLE SCALE PLATE. 0.05"–5" W.C., DIFFERENTIAL MIN 0.04, MAX. 0.20.

2.2 HVAC CONTROLS: (CONTINUED)

CURRENT SENSING RELAY:

SENVA MODEL C–2300 DIGITAL SWITCH, SELF–CALIBRATING SET–POINT, CAPABLE OF MONITORING 2.5A TO 100A, RESET BUTTON TO MANUALLY SET THRESHOLD IF REQUIRED.

CARBON MONOXIDE/DIESEL DETECTOR:

PROVIDE BY OTHER (ALREADY ON SITE) VULCAIN E3 POINT MODELS E3SARSCO AND E3SRMNO2.

SEQUENCE OF OPERATION:

REFER TO DRAWING M04.

THERMOSTATS:

ALL THERMOSTATS SHALL HAVE A PROTECTIVE COVER OR ACCESS CODE TO PREVENT TAMPERING.

TRAINING:

1 PROVIDE TRAINING FOR THE CITY REGARDING OPERATION OF ALL CONTROLS.

2.3 AIR BALANCING:

1 CONTACT CONTRACT ADMINISTRATOR PRIOR TO COMMENCEMENT OF BALANCING FOR FINAL INSTRUCTIONS. SCOPE OF WORK:
1. TAB OF MUA–1 AND EF–1.

GENERAL:

1 FOLLOW STARTUP PROCEDURES AS RECOMMENDED BY THE CITY UNLESS OTHERWISE SPECIFIED. INSTALL SHEAVES SUPPLIED BY EQUIPMENT SUPPLIERS IF REQUIRED TO ACHIEVE FINAL AIR BALANCE.

QUALIFICATIONS: PERSONNEL PERFORMING AIR BALANCING TO BE CURRENT MEMBER IN GOOD STANDING OF AABC.

QUALITY ASSURANCE: PERFORM AIR BALANCE UNDER DIRECTION OF SUPERVISOR QUALIFIED BY AABC.

REFERENCE STANDARDS: DO TAB OF COMPLETE MECHANICAL SYSTEMS OVER ENTIRE OPERATING RANGE IN ACCORDANCE WITH MOST STRINGENT CONDITIONS OF SELECT STANDARDS:
1. AABC (ASSOCIATED AIR BALANCE CONTROLS)
2. SMACNA (SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION)

ACCURACY: DO TAB WITHIN ±5% OF DESIGN VALUES.

INSTRUMENT CALIBRATION: TO BE IN ACCORDANCE WITH TAB REF. STANDARD, BUT WITHIN 3 MONTHS OF COMMENCEMENT.

REPORT: FORMAT TO BE IN ACCORDANCE WITH TAB SCHEMATICS SHOWN RESULTS OF TAB.

SUBMIT ONE COPY OF DRAFT TAB REPORT FOR VERIFICATION AND APPROVAL OF THE CITY.

SUBMIT THREE FINAL COPIES WITH REVIEW COMMENTS INCORPORATED.

AIR MOVING SYSTEMS:

GENERAL: MEASUREMENTS AS REQUIRED BY REFERENCED STANDARDS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING MEASUREMENTS:
1. AIRFLOW
2. STATIC PRESSURE
3. BHP
4. SET AIRFLOW TO ALL SUPPLY AND EXHAUST GRILLES. AIR BALANCE ALL EQUIPMENT SPECIFIED.
5. SET OUTDOOR AIR RATES TO VALUES NOTED.
6. PROVIDE NEUTRAL PRESSURE IN NORTH SHOP.

NOTES:

THESE DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL VISIT THE SITE AND SATISFY ONESELF ALL DIMENSIONS, DATUM, AND DETAILED INFORMATION SHOWN ARE CORRECT.

THE CONTRACTOR IS TO REVIEW AND COORDINATE ALL MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL OPENINGS THROUGH FLOORS, WALLS, AND CEILINGS FOR DUCT, PIPE & ELECTRICAL RISERS AND ALL OPENINGS NOT SHOWN ON DRAWINGS.

ALL PRODUCTS AND MATERIALS TO BE USED AND INSTALLED SHALL CONFORM WITH MANUFACTURERS SPECIFICATIONS & APPLICABLE CODES.

THE CONTRACTOR SHALL BE RESPONSIBLE TO PATCH AND MAKE GOOD ALL EXISTING CONSTRUCTION AFFECTED BY THE REMOVAL OF ALL ITEMS FORMING THE PART OF THE RENOVATION WORK.

DRAWING LIST

SHEET No:	SHEET TITLE
M01	NORTH SHOP - EXISTING HVAC DEMOLITION PLAN
M02	NORTH SHOP - NEW HVAC RENOVATION PLAN
M03	NORTH SHOP - SECTION & DETAILS
M04	MECHANICAL CONTROLS SCHEMATIC
M05	MECHANICAL SPECIFICATIONS

No.	REVISION/DESCRIPTION	BY	DATE
1	ISSUED FOR CONSTRUCTION	RBB	2013 02/08
0	ISSUED FOR TENDER	RBB	2012 07/17

SEAL

PROVINCE OF MANITOBA · R.B. BODNAR · Feb 8/13 · REGISTERED PROFESSIONAL ENGINEER

DRAWN	RLR	CHECKED		DESIGNED	RLG	APPROVED	RBB
DATE	2012.04.16	USER APPROVAL					

Winnipeg

THE CITY OF WINNIPEG
PLANNING, PROPERTY AND DEVELOPMENT DEPARTMENT
MUNICIPAL ACCOMMODATIONS DIVISION
3–65 GARRY STREET, R3C 4K4

PROJECT
NORTH SHOP 2170 MAIN STREET
HVAC UPGRADE

APEGM Certificate of Authorization KGS Group No. 245

SHEET TITLE
MECHANICAL SPECIFICATIONS

SCALE	PROJECT No:	SHEET No:
AS SHOWN	12-0107-003	M05

DRAWING SHEET SIZE: A1 (841mm x 594mm) PLOT 1:1