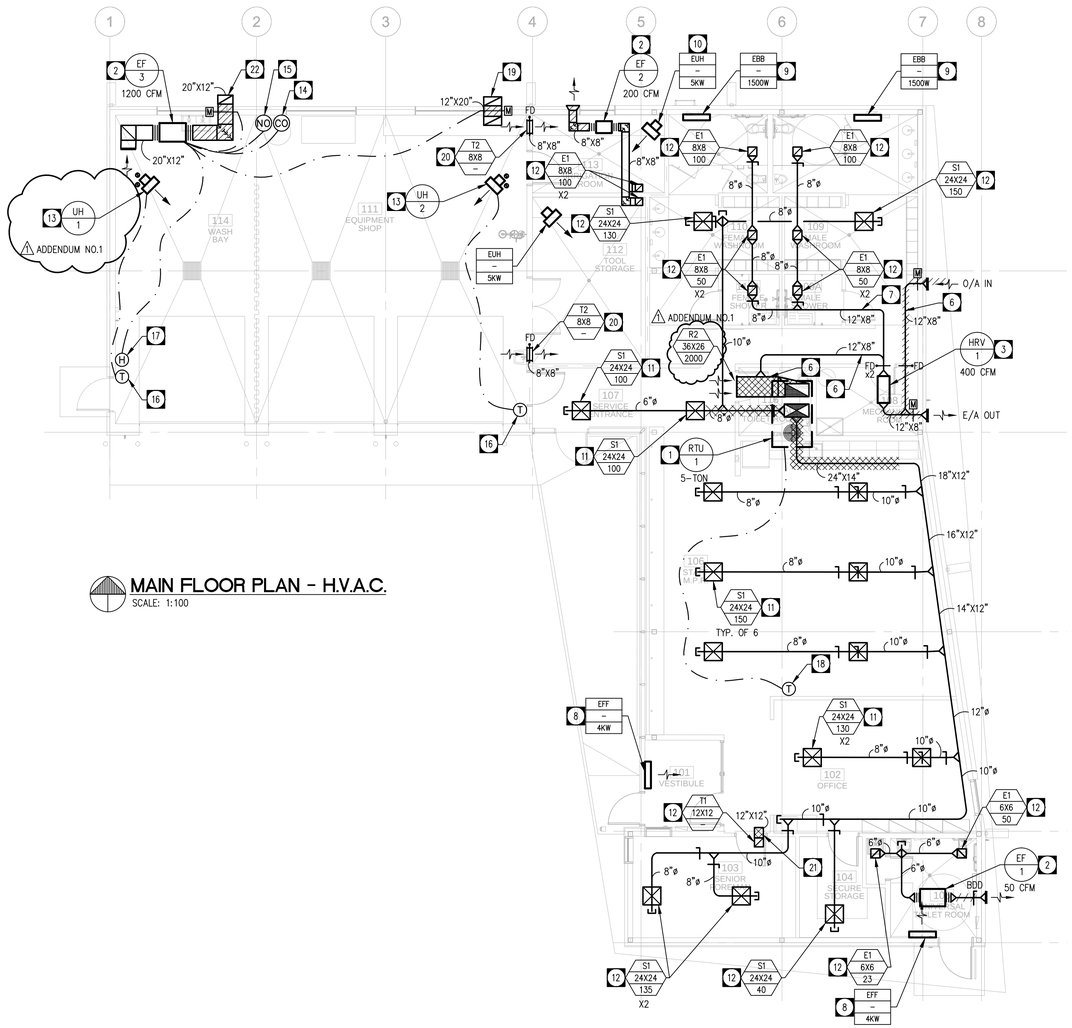

MAIN FLOOR PLAN - H.V.A.C.

SCALE: 1:100

DRAWING NOTES

1. PROVIDE AND INSTALL NEW PACKAGED ROOFTOP UNIT APPROXIMATELY AS SHOWN. EXACT LOCATION TO BE COORDINATED WITH STRUCTURAL AND ROOFING TRADE. SUPPLY AND RETURN DUCTS TO DROP DOWN THROUGH ROOF AND TRANSITION AS SHOWN. PROVIDE ACOUSTIC DUCT LINING A MINIMUM OF 5'-0" PAST FIRST ELBOW IN ALL DIRECTIONS.
2. PROVIDE AND INSTALL NEW INLINE EXHAUST FAN HUNG FROM UNDERSIDE OF STRUCTURE C/W VIBRATION ISOLATORS AND FLEXIBLE CONNECTORS. REFER TO CONTROLS SECTION OF SPECIFICATIONS.
3. PROVIDE AND INSTALL NEW HEAT RECOVERY, VENTILATOR WITHIN MECHANICAL ROOM AS SHOWN. UNIT TO BE HUNG FROM UNDERSIDE OF STRUCTURE C/W FLEXIBLE DUCT CONNECTORS AND VIBRATION ISOLATORS. REFER TO CONTROLS SECTION OF SPECIFICATIONS.
4. HRV EXHAUST DUCT TO EXTEND FROM UNIT CONNECTION TO BUILDING EXTERIOR C/W MOTORIZED DAMPER AT WALL LINE AS SHOWN. INSULATE DUCT OVER ENTIRE RUN. PROVIDE FIRE DAMPER AS WALL LINE.
5. HRV OUTDOOR AIR DUCT TO EXTEND FROM UNIT CONNECTION TO BUILDING EXTERIOR C/W MOTORIZED DAMPER AT WALL LINE AS SHOWN. INSULATE DUCT OVER ENTIRE RUN. PROVIDE FIRE DAMPER AT WALL LINE.
6. HRV TEMPERED AIR SUPPLY DUCT TO EXTEND FROM UNIT AND CONNECT TO RTU RETURN AIR DUCT AS SHOWN. PROVIDE FIRE DAMPER AT WALL LINE.
7. HRV EXHAUST DUCT FROM WASHROOM TO EXTEND TO FROM UNIT CONNECTION TO EXHAUST GRILLES AS SHOWN. PROVIDE FIRE DAMPER AT WALL LINE.
8. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ELECTRIC FORCE FLOW HEATER AS SHOWN C/W BUILT-IN THERMOSTAT.
9. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ELECTRIC BASE BOARD HEATER AS SHOWN C/W BUILT-IN THERMOSTAT.
10. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ELECTRIC UNIT HEATER AS SHOWN C/W BUILT-IN THERMOSTAT. UNIT TO BE HUNG FROM UNDERSIDE OF STRUCTURE.
11. DIFFUSER TO BE LOCATED AT HIGH LEVEL APPROXIMATELY AS SHOWN. EXACT POSITION TO BE COORDINATED ON SITE.
12. CENTER GRILLE/DIFFUSER IN ARCHITECTURAL CEILING APPROXIMATELY AS SHOWN. EXACT POSITION TO BE COORDINATED ON SITE.
13. SEPARATED COMBUSTION UNIT HEATER TO BE SUSPENDED FROM STRUCTURE APPROXIMATELY WHERE SHOWN. COMBUSTION AIR AND VENT TO EXTEND UP THROUGH ROOF TO TERMINATION UNIT PROVIDED BY MANUFACTURER.
14. PROVIDE AND INSTALL COMBUSTION CARBON MONOXIDE DETECTOR AND CONTROL PANEL ON WALL APPROXIMATELY AS SHOWN. MOUNTING HEIGHT TO BE AS PER MANUFACTURER'S REQUIREMENTS. REFER TO CONTROLS SECTION.
15. PROVIDE AND INSTALL NITROGEN DIOXIDE REMOTE SENSOR AT HIGH LEVEL ON WALL APPROXIMATELY AS SHOWN. MOUNTING HEIGHT TO BE AS PER MANUFACTURERS REQUIREMENTS. REFER TO CONTROLS SECTION.
16. PROPOSED LOCATION FOR UNIT HEATER WALL MOUNTED THERMOSTAT.
17. PROPOSED LOCATION FOR HUMIDISTAT. REFER TO CONTROLS SECTIONS.
18. PROPOSED LOCATION FOR RTU THERMOSTAT. EXACT LOCATION TO BE COORDINATED ON SITE.
19. FRESH AIR INTAKE TO BE DOWN TURNED ON BUILDING INTERIOR AND EXTERIOR AS SHOWN. INSULATE OVER ENTIRE RUN. PROVIDE MOTORIZED DAMPER AT WALL LINE.
20. AIR TRANSFER DUCT C/W FIRE DAMPER TO BE LOCATED AT HIGH LEVEL AS SHOWN. PROVIDE GRILLE ON EACH SIDE.
21. 90 DEGREES AIR TRANSFER DUCT TO BE LOCATED AS SHOWN. DUCT SIZE TO MATCH GRILLE SIZE.
22. EXHAUST DUCT TO EXTEND THROUGH EXTERIOR WALL AND DOWN TURN AS SHOWN. INSULATE DUCT FROM FAN OUTLET OVER ENTIRE RUN. PROVIDE MOTORIZED DAMPER AT WALL LINE.

GENERAL NOTES - HVAC

1. MECHANICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
2. MECHANICAL CONTRACTOR SHALL ALLOW IN HIS TENDER QUOTATION FOR ALL REQUIRED MODIFICATIONS TO EXISTING HVAC SYSTEMS AND EQUIPMENT (I.E.) RE-ROUTING AND RE-BALANCING OF EXISTING DUCTWORK AS DEEMED NECESSARY DUE TO RENOVATION WORK.
3. REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
4. MECHANICAL CONTRACTOR SHALL CAREFULLY REMOVE & RELOCATE EXISTING EQUIPMENT AS PER OWNERS REQUIREMENTS.
5. ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
6. COORDINATE THE EXACT LOCATION OF THE GRILLES AND DIFFUSERS ON SITE WITH THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR, ARCHITECTURAL CEILING PLAN, LIGHTING LAYOUT, ETC. TO ENSURE THAT THERE ARE NOT ANY CONFLICTS DURING INSTALLATION.
7. PROVIDE BALANCE DAMPER FOR EACH SUPPLY/EXHAUST AIR GRILLE OR DIFFUSER TO ALLOW FOR THE PROPER BALANCING OF THE SYSTEM. PROVIDE OPPOSED BLADE DAMPERS WITH THE DIFFUSER AND ADJUSTABLE FROM THE DIFFUSER FACE WHEN A DUCT MOUNTED BALANCE DAMPER WOULD NOT BE ACCESSIBLE.
8. ALL DUCT DIMENSIONS DENOTE INTERNAL "OPEN" AREA OF THE DUCT.
9. ALL DUCTWORK PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED A MINIMUM 10'-0" BACK FROM THE BUILDING PENETRATION, OR AS DETAILED IN SPECIFICATIONS.
10. REFER TO ARCHITECTURAL DRAWINGS AND PROVIDE FIRE DAMPERS IN ALL WALLS DENOTED AS FIRE SEPARATIONS. PROVIDE ACCESS DOORS AT ALL FIRE DAMPERS TO ALLOW FOR INSPECTION/TESTING.
11. COORDINATE THE EXACT LOCATIONS OF EQUIPMENT, DUCT OPENINGS, AND DUCT LOCATIONS WITH THE EXISTING STRUCTURE AND THE STRUCTURAL CONSULTANT.
12. ALL WORK SHALL COMPLY IN EVERY RESPECT WITH ALL NATIONAL, PROVINCIAL AND LOCAL CODES AND BY-LAWS, WHICH SHALL BE CONSIDERED PART OF THE SPECIFICATION. IN THE CASE OF CONFLICTING REQUIREMENTS, BE GOVERNED BY THE MOST STRINGENT REGULATIONS.
13. THE MECHANICAL CONTRACTOR SHALL INSTALL HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS IN COMPLETE ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL/PROVINCIAL BUILDING CODE, ASHRAE, SMACNA LATEST EDITION DUCT STANDARDS, AND MANITOBA DEPT. OF LABOUR REQUIREMENTS.
14. ALL INSULATING MATERIALS, METHODS, SIZES AND TYPES OF INSULATION FOR ALL DUCT WORK SHALL BE INSTALLED TO THE REQUIREMENTS OF THE ASHRAE STANDARDS 90.1-2010 "ENERGY STANDARD FOR BUILDING EXCEPT LOW-RISE RESIDENTIAL BUILDING", STANDARD 90.2 "ENERGY EFFICIENT DESIGN OF LOW-RISE RESIDENTIAL BUILDINGS", THERMAL INSULATION ASSOCIATION OF CANADA (TIAC) STANDARDS AND NATIONAL (MANITOBA) ENERGY CODE FOR BUILDINGS REQUIREMENTS.
15. VENTILATION CONTRACTOR SHALL ENSURE THAT ALL DUCTWORK THAT MAY CONVEY OUTSIDE AIR BE LOCATED A MINIMUM OF 6" (150 MM) AWAY FROM ANY SPRINKLER PIPING. DUCTWORK IN SUCH LOCATIONS SHALL BE PROTECTED WITH A MINIMUM OF 2" (50MM) RIGID DUCT INSULATION WITH VAPOR RETARDING FOIL FINISH. ALTER LOCATION OF DUCTWORK TO SUIT.
16. FOR STRUCTURES REQUIRING OR CONTAINING EXISTING FIRE PROTECTION/SPRINKLER SYSTEMS, THE OWNER, PROPERTY MANAGER, TENANT AND/OR GENERAL CONTRACTOR SHALL RETAIN A SPRINKLER CONTRACTOR TO PROVIDE FREEZE PROTECTION IN ALL MECHANICAL AND SERVICE ROOMS UTILIZING DRY AND/OR GLYCOL SYSTEMS.
17. ALL CONTROL / ELECTRICAL WIRING TO MEET OR EXCEED FLAME SPREAD RATING OF 25 AND DEVELOPED SMOKE RATING OF 50 AND BE SUITABLE FOR INSTALLATION IN AIR PLENUMS.

LEGEND - HVAC

	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	DOOR GRILLE
T	THERMOSTAT
H	HUMIDISTAT
CO_2	CARBON DIOXIDE DETECTOR
NO_2	NITROGEN DIOXIDE DETECTOR
$	ON / OFF SWITCH (DIV. 16)
	DUCTWORK DEMO
	BALANCING DAMPER
FD	FIRE DAMPER
M	MOTORIZED DAMPER
	FLEXIBLE DUCT CONNECTION
	THERMAL INSULATION
	ACOUSTIC INSULATION
TYPE / SIZE / CFM / NECK Ø	GRILLE / DIFFUSER TAG
EQ NO	EQUIPMENT TAG
TYPE / SIZE / OUTPUT	ALTERNATE EQUIPMENT TAG
1	DRAWING NOTE TAG

No.	DATE	REVISION / ISSUANCE
4	YY.MM.DD	-
3	YY.MM.DD	-
2	YY.MM.DD	-
1	2017-08-22	ADDENDUM NO.1
0	2017-07-06	ISSUED FOR CONSTRUCTION

Seal

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Project

BID OPPORTUNITY 450-2017
KILDONAN PARK
MAINTENANCE BUILDING

Sheet Title

H.V.A.C.

Project No. 1559

Date JULY 6, 2017

Sheet M3.0R1