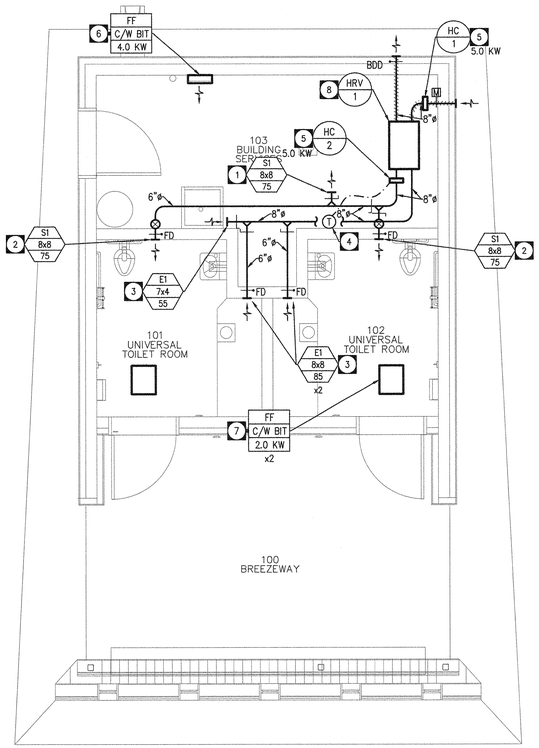
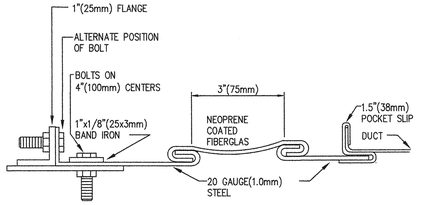


MAIN FLOOR PLAN - HVAC
SCALE: 1:50

DRAWING NOTES - HVAC

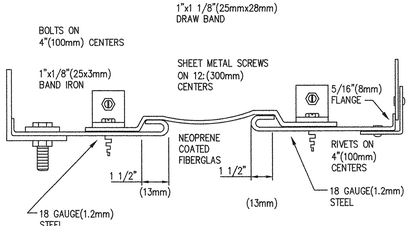
1. SUPPLY GRILLE TO BE LOCATED APPROXIMATELY AS SHOWN AT HIGH LEVEL. COORDINATE EXACT PLACEMENT ON SITE. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.
2. SUPPLY GRILLE TO BE LOCATED APPROXIMATELY AS SHOWN AT LOW LEVEL MIN. 6" AFF. COORDINATE EXACT PLACEMENT WITH ARCHITECTURAL. DUCT TO DROP DOWN TO LOW LEVEL TIGHT TO WALL. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.
3. EXHAUST GRILLE TO BE LOCATED APPROXIMATELY AS SHOWN AT HIGH LEVEL. COORDINATE EXACT PLACEMENT WITH ARCHITECTURAL. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.
4. SUPPLY AND INSTALL (LOW VOLTAGE) THERMOSTAT AT APPROXIMATE LOCATION SHOWN. MOUNT TOP OF THERMOSTAT AT 3'-11" (1200 MM) AFF. COORDINATE CONTROLS TRANSFORMER MOUNTING WITH ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION ON SITE.
5. PROVIDE AND MOUNT SCR-TYPE ELECTRIC HEATING COILS IN DUCTWORK C/W ACCESS DOORS TO FACILITATE INSPECTION/SERVICE. PROVIDE COMPLETE WITH (DUCT MOUNTED/WALL MOUNTED) THERMOSTAT AS SHOWN. TRANSITION TO COIL DUCT CONNECTIONS AS REQUIRED. SUPPLIED AND INSTALLED BY MECHANICAL SUB CONTRACTOR, AND WIRED BY ELECTRICAL SUB CONTRACTOR. REFER TO MECHANICAL EQUIPMENT SCHEDULE. HEATING VALUE INDICATES OUTPUT CAPACITY, COORDINATE WITH ELECTRICAL SUB CONTRACTOR TO ENSURE OUTPUT IS ATTAINABLE WITH AVAILABLE VOLTAGE. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS.
6. ELECTRIC FORCEFLOW UNIT TO BE SURFACE MOUNTED ON WALL APPROXIMATELY AS SHOWN. UNIT TO BE OF SIZE AND TYPE TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. HEATING VALUE INDICATES OUTPUT CAPACITY, COORDINATE WITH ELECTRICAL CONTRACTOR. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS.
7. ELECTRIC FORCEFLOW UNIT TO BE RECESSED IN CEILING APPROXIMATELY AS SHOWN. UNIT TO BE OF SIZE AND TYPE TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. HEATING VALUE INDICATES OUTPUT CAPACITY, COORDINATE WITH ELECTRICAL CONTRACTOR. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS.
8. SUPPLY AND INSTALL HRV SUSPENDED FROM STRUCTURE C/W SPRING ISOLATORS ON SUSPENSION RODS SUPPORTED FROM STRUCTURE. CONFIRM EXACT LOCATION ON SITE. INSULATE EXHAUST AND INTAKE DUCTS OVER ENTIRE RUN. EXHAUST DUCT THROUGH SIDEWALL TO STEEL WALL CAP TERMINATION C/W BIRD SCREEN AND BACKDRAFT DAMPER AT WALL LINE. INTAKE DUCT THROUGH SIDEWALL WITH STEEL WALL CAP TERMINATION C/W BIRD SCREEN. RUN CONDENSATE DRAIN TO CLOSEST STACK IN AREA. WIRE HRV TO WALL MOUNTED CONTROLLER. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS. REFER TO MECHANICAL UNIT SCHEDULE.



✳ SEALING COMPOUND APPLIED BETWEEN FABRIC BAND AND 18 GAUGE (1.2mm) STEEL BEFORE ASSEMBLY

✳ SEALING COMPOUND APPLIED BETWEEN FLEXIBLE CONNECTION AND FAN CASING BEFORE ASSEMBLY

DUCT CONNECTION DETAILS
N.T.S.



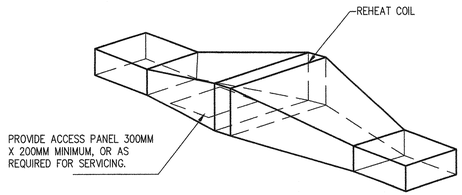
✳ REQUIRED ON HIGH PRESSURE SYSTEM ONLY

GENERAL NOTES - HVAC

1. MECHANICAL SUB CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
2. REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
3. MECHANICAL SUB CONTRACTOR SHALL CAREFULLY REMOVE & RELOCATE EXISTING EQUIPMENT AS PER CITY'S REQUIREMENTS.
4. ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
5. COORDINATE THE EXACT LOCATION OF THE GRILLES AND DIFFUSERS ON SITE WITH THE ELECTRICAL SUB CONTRACTOR, GENERAL CONTRACTOR, ARCHITECTURAL CEILING PLAN, LIGHTING LAYOUT, ETC. TO ENSURE THAT THERE ARE NOT ANY CONFLICTS DURING INSTALLATION.
6. 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.
7. ALL DUCT DIMENSIONS DENOTE INTERNAL "OPEN" AREA OF THE DUCT.
8. ALL DUCTWORK PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED A MINIMUM 10'-0" BACK FROM THE BUILDING PENETRATION.
9. REFER TO ARCHITECTURAL DRAWINGS AND PROVIDE FIRE DAMPERS IN ALL WALLS DENOTED AS FIRE SEPARATIONS. FIRE DAMPER RATING TO BE EQUAL TO OR EXCEED WALL ASSEMBLY RATING. PROVIDE ACCESS DOORS AT ALL FIRE DAMPERS TO ALLOW FOR INSPECTION/TESTING.
10. COORDINATE THE EXACT LOCATIONS OF EQUIPMENT, DUCT OPENINGS, AND DUCT LOCATIONS WITH STRUCTURAL.
11. 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.
12. THE MECHANICAL SUB 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, MANITOBA ENERGY CODE FOR BUILDINGS REQUIREMENTS AND MANITOBA OFFICE OF THE FIRE COMMISSIONER.
13. 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 MANITOBA ENERGY CODE FOR BUILDINGS REQUIREMENTS.
14. 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.
15. FOR STRUCTURES REQUIRING NEW OR CONTAINING EXISTING FIRE PROTECTION/SPRINKLER SYSTEMS, THE CITY, PROPERTY MANAGER, TENANT AND/OR GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF A SPRINKLER CONTRACTOR/ENGINEER TO PROVIDE COMPLETE SPRINKLER SYSTEM DESIGN (HYDRAULIC LOAD CALCULATIONS, LAYOUTS, HEAD TYPES AND LOCATIONS, ETC). DESIGN TO INCLUDE PROVISIONS FOR FREEZE PROTECTION IN ALL MECHANICAL AND SERVICE ROOMS UTILIZING DRY AND/OR GLYCOL SYSTEMS.
16. 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.
17. PROVIDE MINIMUM 4" (100MM) FLEXIBLE NEOPRENE CONNECTION ON DISCHARGE AND INTAKE DUCT CONNECTIONS.
18. ALL CONTROL WIRING BY MECHANICAL SUB CONTRACTOR UNLESS OTHERWISE SPECIFIED.
20. ALL DUCT INSULATION AND COVERINGS SHALL MEET THE REQUIREMENTS OF CAN/ULC-S110 'TEST FOR AIR DUCTS' AND HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED CLASSIFICATION NOT EXCEEDING 50. THIS SHALL INCLUDE ALL TAPES, SEALANTS, AND MISCELLANEOUS PRODUCTS ASSOCIATED WITH THE INSTALLATION.

LEGEND - HVAC

	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	DOOR GRILLE
T	THERMOSTAT
H	HUMIDISTAT
CO	CARBON DIOXIDE DETECTOR
$	ON / OFF SWITCH (BY ELECTRICAL)
	DUCTWORK LOCATED IN FLOOR
	BALANCING DAMPER
FD	FIRE DAMPER
BDD	BACK DRAFT 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



REHEAT COIL ACCESS DOOR
N.T.S.

GRILLES, DIFFUSERS, AND LOUVRES SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	NOTES
S1	NAILOR	51DH	LOUVERED GRILLE	FACE SIZES ON DRAWING
E1	NAILOR	6145H	EXHAUST GRILLE	FACE SIZES ON DRAWING

MECHANICAL EQUIPMENT SCHEDULE

TAG	LOCATION	QUANTITY	MANUFACTURER	MODEL	AIRFLOW	COOLING	HEATING	EFFICIENCY	VOLT/PH	NOTES
HRV-1	BUILDING SERVICES	1	NU-AIR	NU305	225 CFM 0.40" ESP	-	-	65% RECOVERY	170 W 120V/1PH	HRV C/W DUAL LOW-SPEED CONTROL W/ LOW CONTINUOUS VENTILATION CONTROL, CONTROLS TRANSFORMER, INTAKE DISCHARGE WEATHER HOODS, CONDENSATE DRAIN, ELECTRIC PRE-HEAT & REHEAT COIL & SPRING ISOLATORS ON SUSPENSION RODS SUPPORTED FROM STRUCTURE
HC-1	BUILDING SERVICES	1	THERMOLEC	-	-	-	5.0 KW	-	5.0 KW 208V/1PH	PREHEAT COIL C/W AIR PROVING SWITCH, CONTROLS TRANSFORMER, HIGH-LIMIT CUT-OFF, CONTROL TRANSFORMER, PROTECTIVE SCREEN GUARDS, INLINE DUCT MOUNTED/REMOTE WALL-MOUNT THERMOSTAT & SCR CONTROL SILENT MAG CONTACTORS.
HC-2	BUILDING SERVICES	1	THERMOLEC	-	-	-	5.0 KW	-	5.0 KW 208V/1PH	REHEAT COIL C/W AIR PROVING SWITCH, CONTROLS TRANSFORMER, HIGH-LIMIT CUT-OFF, CONTROL TRANSFORMER, PROTECTIVE SCREEN GUARDS, INLINE DUCT MOUNTED/REMOTE WALL-MOUNT THERMOSTAT & SCR CONTROL SILENT MAG CONTACTORS.

VENTILATION SUMMARY
(BASED ON ASHRAE STANDARD 62-2010 TABLES 6.1 & 6.4)

1) EXHAUST AIR

	AREA [FT²]	HEIGHT [FT]	FIX [#]	EXHAUST RATE		EXHAUST AIR [CFM]
UNIVERSAL WASHROOM	-	-	1	50	[CFM/FIX]	50
UNIVERSAL WASHROOM	-	-	1	50	[CFM/FIX]	50
JANITOR SINK	-	-	1	50	[CFM/FIX]	50

REFER TO CONTROLS SECTION OF SPECIFICATIONS.

ISSUED FOR CONSTRUCTION

NOVA 3 ENGINEERING LTD.
CONSULTING ENGINEERS
201-120 FORT STREET TEL.: (204) 943-6142
WINNIPEG, MANITOBA R3C 1C7 FAX.: (204) 942-1276
WWW.NOVA3.CA JN.: 36-232

Winnipeg

Revisions

Date	Revision
May 17, 2018	Issued for Construction

Northern Sky Architecture Inc.
100-128 Arthur Avenue, Winnipeg, Manitoba, Canada R3B 1S6
Phone: 204.943.6767
Fax: 204.956.7979
204.943.6767

APEGM
Certificate of Authorization
Nova 3 Engineering Ltd.
No.962 Date: 2018/05/24

Stamp

Stamp

Project

New La Barriere Park Washroom Project

La Barriere Park, Manitoba

drawing title
MECHANICAL - MAIN FLOOR PLAN - HVAC

scale	as noted	designed by	kbb
date	May, 2018	drawn by	hc
project no.	16.235	reviewed by	hc
bid opp. no.	436-2018	sheet M2.0	REV.