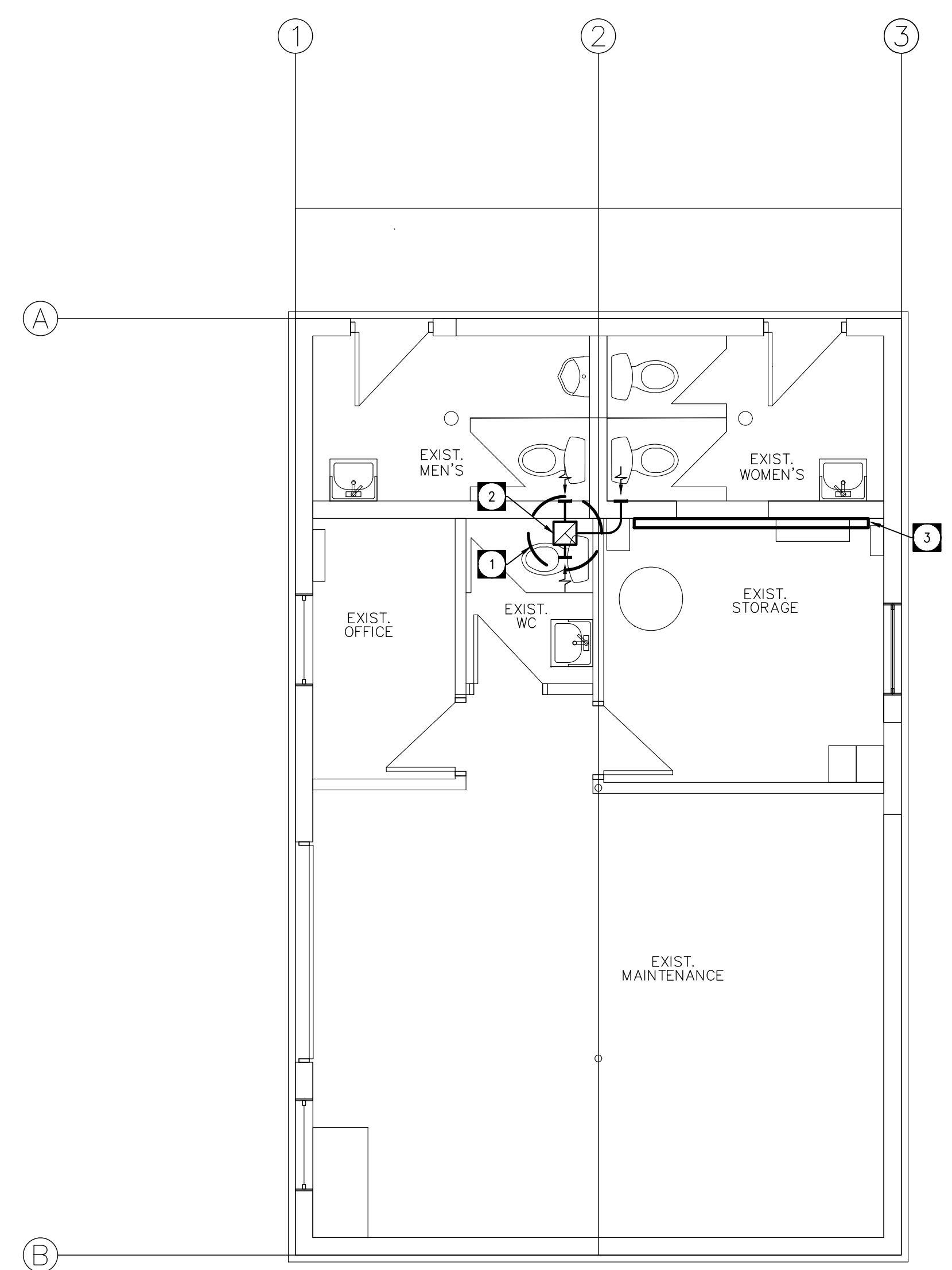


ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE CONSULTANT. NO REPRODUCTIONS MAY BE MADE WITHOUT THE CONSENT OF THE CONSULTANT AND ALL REPRODUCTIONS MUST BEAR THE NAME OF THE CONSULTANT. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AND LEVELS NOTED ON THE DRAWINGS WITH THE CONDITIONS ON SITE AND SHALL BE RESPONSIBLE FOR REPORTING ANY ERRORS OR OMISSIONS TO THE ENGINEER FOR ADJUSTMENTS. THIS DRAWING SHALL NOT BE SCALED.

**REFER TO  
DRAWING M0.0  
FOR LEGEND**

**GENERAL NOTES - HVAC**

- MECHANICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
- 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.
- REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
- MECHANICAL CONTRACTOR SHALL CAREFULLY REMOVE & RELOCATE EXISTING EQUIPMENT AS PER OWNERS REQUIREMENTS.
- ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
- 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.
- 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.
- ALL DUCT DIMENSIONS DENOTE INTERNAL "OPEN" AREA OF THE DUCT.
- ALL DUCTWORK PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED A MINIMUM 10'-0" BACK FROM THE BUILDING PENETRATION.
- 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.
- COORDINATE THE EXACT LOCATIONS OF EQUIPMENT, DUCT OPENINGS, AND DUCT LOCATIONS WITH THE EXISTING STRUCTURE AND THE STRUCTURAL CONSULTANT.
- 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.
- 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 OFFICE OF THE FIRE COMMISSIONER.
- 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.
- 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.
- FOR STRUCTURES REQUIRING NEW OR CONTAINING EXISTING FIRE PROTECTION/SPRINKLER SYSTEMS, THE OWNER, 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 SYSTEMS.
- 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.
- PROVIDE MINIMUM 4" (100MM) FLEXIBLE NEOPRENE CONNECTION ON DISCHARGE AND INTAKE DUCT CONNECTIONS.
- ALL CONTROL WIRING BY MECHANICAL CONTRACTOR UNLESS OTHERWISE SPECIFIED.
- 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.
- THERMOSTATS SHALL BE INSTALLED WITH TOP OF THERMOSTAT AT 3'-11" (1200 MM) AFF.



**MAIN FLOOR PLAN - HVAC (DEMO)**  
SCALE: 1/4"=1'-0"

**DRAWING NOTES - DEMO**

- EXISTING EXHAUST FAN AND ASSOCIATED DUCTWORK, CONTROLS AND MATERIALS TO BE DEMOLISHED. CONFIRM EXACT LOCATION ON SITE.
- EXISTING EXHAUST OPENING TO BE PATCHED. COORDINATE PATCHING OF ROOF WITH GENERAL CONTRACTOR.
- EXISTING ELECTRIC BASEBOARD HEATER AND ASSOCIATED CONTROLS AND MATERIALS TO BE DEMOLISHED. CONFIRM EXACT LOCATION ON SITE.

**GRILLES, DIFFUSERS, AND LOUVRES SCHEDULE**

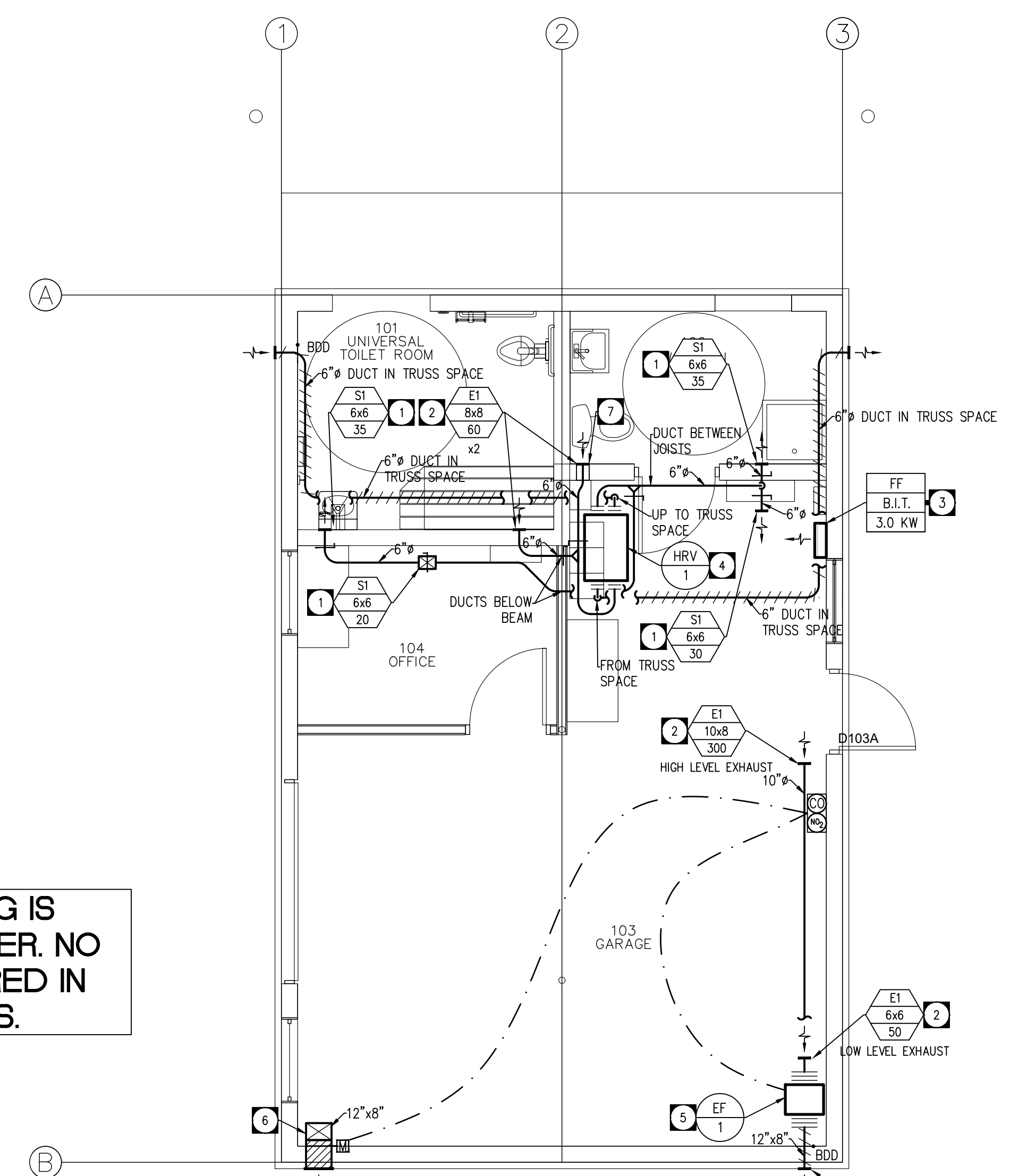
TAG	MANUFACTURER	MODEL	TYPE	NOTES	APPROVED EQUALS
S1	EH PRICE	510/F/L/A/B12	LOUVERED GRILLE	FACE SIZES ON DRAWING	NAILOR, TITUS, VENTEX (TO MEET OR EXCEED SPECIFICATIONS)
E1	EH PRICE	5300/F/L/A/B12	EXHAUST GRILLE	FACE SIZES ON DRAWING	
L1	EH PRICE	DE635	OUTDOOR LOUVRE	FACE SIZES ON DRAWING	

**MECHANICAL EQUIPMENT SCHEDULE**

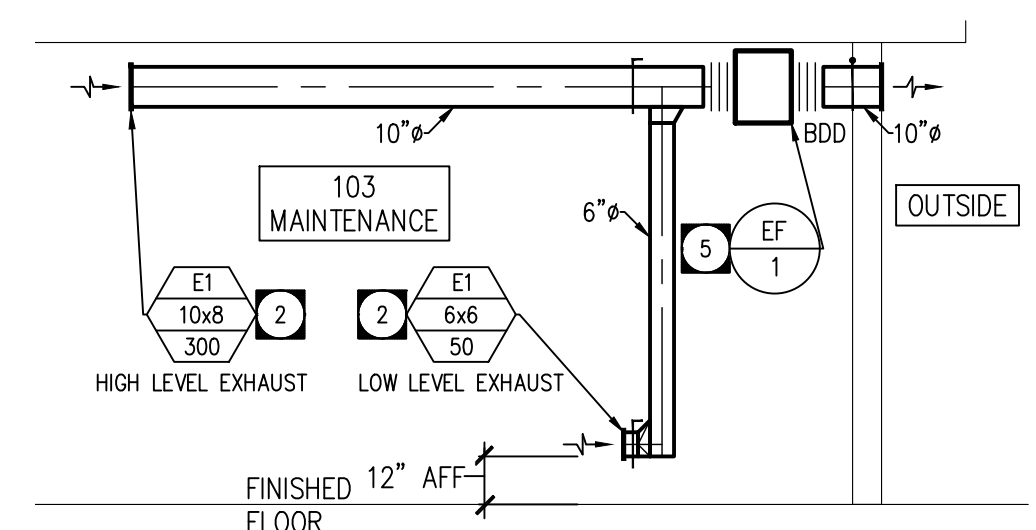
TAG	LOCATION	QUANTITY	MANUFACTURER	MODEL	AIRFLOW	EFFICIENCY	MOTOR	CONTROL	ELECTRICAL	NOTES	APPROVED EQUALS
HRV-1	MAINTENANCE AREA	1	FAN TECH	FIT 120H #75064	120 CFM 0.35" ESP	65% RECOVERY	FRAC	TIME CLOCK	170 W 1.4 A 120/1/60	ULTRA LOW PROFILE (11") HRV C/W DUAL LOW-SPEED CONTROL W/ LOW CONTINUOUS VENTILATION CONTROL, CONTROLS TRANSFORMER, INTAKE DISCHARGE WEATHER HOODS, CONDENSATE DRAIN, & SPRING ISOLATORS ON SUSPENSION RODS SUPPORTED FROM STRUCTURE	NU-AIR (TO MEET OR EXCEED SPECIFICATIONS INCLUDING 11" PROFILE)
EF-1	WASHROOM	1	GREENHECK	CSP-A510-VG	350 CFM 0.3" ESP	-	FRAC HP	CO/NO2 SENSOR	61 W 2.45 FLA 120/1/60	INLINE MOUNTED, DIRECT DRIVE EXHAUST FAN C/W EC MOTOR, BACK-DRAFT DAMPER, VIBRATION ISOLATORS FOR SUSPENSION RODS AND STEEL WALL CAP	LOREN COOK, PENNBARRY (TO MEET OR EXCEED SPECIFICATIONS)

**DRAWING NOTES - HVAC**

- SUPPLY GRILLE TO BE LOCATED APPROXIMATELY AS SHOWN C/W BALANCING DAMPER. PROVIDE BALANCING DAMPER. COORDINATE EXACT PLACEMENT ON SITE. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.
- EXHAUST GRILLE TO BE LOCATED APPROXIMATELY AS SHOWN. COORDINATE EXACT PLACEMENT ON SITE. PROVIDE BALANCING DAMPER. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.
- ELECTRIC FORCEFLOW UNIT TO BE SURFACE MOUNTED 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.
- SUPPLY AND INSTALL HRV SUSPENDED FROM STRUCTURE C/W SPRING ISOLATORS ON SUSPENSION RODS SUPPORTED FROM STRUCTURE. CONFIRM EXACT LOCATION ON SITE. EXHAUST DUCT THROUGH SIDEWALL TO STEEL WALL CAP TERMINATION C/W BIRD SCREEN AND BACKDRAFT DAMPER AT WALL LINE. INSULATE DUCT A MINIMUM OF 10'-0" BACK FROM WALL PENETRATION. INSULATE EXHAUST AND INTAKE DUCTS OVER ENTIRE RUN. RUN CONDENSATE DRAIN TO CLOSEST DRAIN IN AREA. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS. REFER TO MECHANICAL UNIT SCHEDULE.
- SUPPLY AND INSTALL INLINE EXHAUST FAN AS SHOWN C/W FLEXIBLE DUCT CONNECTION. EXHAUST DUCT THROUGH SIDEWALL TO STEEL WALL CAP TERMINATION C/W BIRD SCREEN AND BACKDRAFT DAMPER AT WALL LINE. INSULATE DUCT A MINIMUM OF 10'-0" BACK FROM WALL PENETRATION. WIRE EXHAUST FAN TO CO/NO2 SENSOR FOR CONTROL. REFER TO LOW LEVEL EXHAUST DETAIL. UNIT TO BE INSTALLED TO ACCOMMODATE MANUFACTURER'S RECOMMENDED SERVICE AND INSTALLATION CLEARANCE REQUIREMENTS. REFER TO MECHANICAL UNIT SCHEDULE.
- 10"x8" AIR DUCT TO FORM COLD AIR TRAP C/W MOTORIZED DAMPER AND APPROPRIATE EXTERIOR DUCT TERMINATION. WIRE MOTORIZED DAMPER TO CO/NO2 SENSOR AND INDICATED EXHAUST FAN ON INTERLOCK. REFER TO VENTILATION AIR INTAKE DETAIL.
- EXISTING WALL OPENING FROM PREVIOUS DUCT TO BE REUSED.
- EXHAUST LOUVRE TO BE LOCATED APPROXIMATELY AS SHOWN. TRANSITION DUCT TO LOUVRE AS REQUIRED. COORDINATE EXACT PLACEMENT ON SITE. REFER TO GRILLES, DIFFUSERS AND LOUVRES SCHEDULE.



**MAIN FLOOR PLAN - HVAC**  
SCALE: 1/4"=1'-0"



**LOW LEVEL EXHAUST DETAIL**  
SCALE: NTS

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Revisions

Date	Revision
2021-11-12	Mechanical Equipment Equals Addendum
2021-10-20	Issued for Tender, Permit, and Construction

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Nova 3 Engineering Ltd.  
No.962 Date: 2021-11-12

Stamp: **P.J. CORTENS** Member 31511  
REGISTERED PROFESSIONAL ENGINEER

Project: City of Winnipeg  
Churchill Park Maintenance Building Renovation  
430 Churchill Dr  
Winnipeg, Manitoba

drawing title: MECHANICAL - MAIN FLOOR PLAN - HVAC

scale	as noted	designed by	HC
date	2021-11-12	drawn by	HC
project no.	21.190	reviewed by	JHG
reference no.		sheet	M2.0 REV. 1