



MAIN FLOOR PLAN
SCALE: 1:100

GENERAL NOTES:

- IT IS RECOMMENDED THAT THE BIDDERS EXAMINE THE SITE & EXISTING CONDITIONS THAT AFFECT THE PROJECT. EXAMINE THE COMPLETE SET OF CONTRACT DOCUMENTS TO ENSURE THAT THE WORK CAN BE CARRIED OUT WITHOUT SIGNIFICANT CHANGES TO THE INTENT OF THE DOCUMENTS. NO FUTURE ALLOWANCE WILL BE MADE FOR CHANGES UNLESS THE ENGINEER HAS BEEN NOTIFIED IN WRITING OF ANY DISCREPANCIES OR INTERFERENCES PRIOR TO THE CLOSE OF TENDERS. NO ALLOWANCE WILL BE MADE FOR ITEMS THAT SHOULD HAVE BEEN NOTED DURING PRE-TENDER SITE INSPECTION.
- THE LOCATION, ROUTING & ELEVATION OF ALL NEW AND EXISTING SERVICES & UTILITIES AS SHOWN ON THE DRAWING ARE TO BE CONSIDERED AS APPROXIMATIONS ONLY. VERIFY EXACT LOCATIONS, ROUTINGS & ELEVATIONS OF ALL SERVICES PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL RETAIN RESPONSIBILITY FOR ANY DAMAGE TO EXISTING SERVICES AND UTILITIES.
- ALL ASPECTS OF THE INSTALLATION MUST COMPLY WITH THE MOST STRINGENT OF THE APPLICABLE BUILDING CODES, LOCAL REGULATIONS, BY-LAWS, & BUILDING GUIDELINES.
- PROVIDE ALL LABOR, MATERIALS, & EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN ON DRAWINGS & AS SPECIFIED HEREIN.
- COORDINATE EXACT ROUTING OF DUCTWORK WITH PIPING, SITE CONDITIONS, ALL OTHER TRADES, ETC.
- COORDINATE EXACT LOCATION OF GRILLES AND DIFFUSERS ON SITE WITH THE ELECTRICAL SUBCONTRACTOR, CONTRACTOR, ARCHITECTURAL REFLECTED CEILING PLAN, LIGHTING LAYOUT, ETC. TO ENSURE THAT THERE ARE NO CONFLICTS DURING INSTALLATION.
- PROVIDE BALANCE DAMPERS AS SHOWN AND AS REQUIRED TO ALLOW PROPER BALANCING OF THE SYSTEMS. PROVIDE OPPOSED BLADE DAMPERS WITH THE DIFFUSER AND ADJUSTABLE FROM THE DIFFUSER FACE WHEN A DUCT MOUNTED BALANCE DAMPER WOULD NOT BE ACCESSIBLE.
- AN AABC CERTIFIED BALANCE CONTRACTOR SHALL BALANCE THE SYSTEM TO PROVIDE THE INDICATED AIR FLOWS.
- ALL DUCT DIMENSIONS DENOTE INTERNAL "FREE" AREA OF THE DUCT.
- ALL DUCTWORK, UNLESS OTHERWISE NOTED, PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED FOR A MINIMUM DISTANCE OF 10'-0" BACK FROM THE BUILDING PENETRATION. INSULATION TO BE AS SPECIFIED IN MECHANICAL SPECIFICATIONS.
- REFER TO ARCHITECTURAL DRAWINGS AND PROVIDE FIRE DAMPERS IN ALL WALLS DENOTED AS FIRE SEPARATIONS WHETHER SHOWN ON THE MECHANICAL PLANS OR NOT.

- COORDINATE THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT, DUCT OPENINGS AND DUCT LOCATIONS WITH STRUCTURAL.
- PROVIDE SINGLE THICKNESS TURNING VANES WITH A TRAILING EDGE IN ALL "SQUARE ELBOWS". REFER TO MECHANICAL DETAILS FOR CONSTRUCTION.
- PROVIDE FLEXIBLE CONNECTIONS ON THE INLET AND OUTLET OF ALL FANS AND ON THE INLET AND OUTLET OF ALL EQUIPMENT WITH FANS INSIDE.
- DIFFUSER & REGISTER TAG:
QUANTITY ?
MODEL TYPE -
FACE SIZE -
AIR CAPACITY ?X?
NECK SIZE ?

DRAWING NOTES:

- 350ø E/A DUCT TO TRANSITION TO 450x150 AND DROP DOWN IN WALL TO SERVE GRILLE AT LOW LEVEL BEHIND SERVICE DESK. COORDINATE FINAL INSTALLATION W/ ARCHITECT & INTERIOR DESIGNER.
- 550x300 E/A DUCT UP FROM CRAWLSPACE TIGHT TO CORNER OF JANITOR ROOM. COORDINATE FINAL INSTALLATION W/ ARCHITECT, INTERIOR DESIGNER, & ALL OTHER DISCIPLINES.
- INSTALL ANGLE SILENCER AT CHANGE IN DIRECTION OF F/A DUCT FROM VERTICAL TO HORIZONTAL. INSTALL AS HIGH AS POSSIBLE.
- ACTIVE CHILLED BEAM (ACB) TO BE SUSPENDED FROM STRUCTURE ABOVE C/W VIBRATION ISOLATORS. ACB TO BE INSTALLED IN GYPSUM BULKHEAD PROVIDED BY ARCHITECTURAL/INTERIOR DESIGNER.
- ACTIVE CHILLED BEAM (ACB) TO BE SUSPENDED FROM STRUCTURE ABOVE C/W VIBRATION ISOLATORS. ACB TO BE INSTALLED IN T-BAR CEILING.
- ACTIVE CHILLED BEAM (ACB) TO BE SUSPENDED FROM STRUCTURE ABOVE C/W VIBRATION ISOLATORS. ACB TO BE INSTALLED EXPOSED W/ OPTIONAL WING & CASING EXTENSION. COORDINATE FINAL LOCATION ON SITE W/ ALL DISCIPLINES.

- RADIANT CEILING PANEL (RP) TO BE SUSPENDED FROM STRUCTURE ABOVE C/W VIBRATION ISOLATORS. RP TO BE INSTALLED IN T-BAR CEILING.
- RADIANT CEILING PANEL (RP) TO BE SUSPENDED FROM STRUCTURE ABOVE C/W VIBRATION ISOLATORS. RP TO BE INSTALLED EXPOSED C/W OPTIONAL WING & CASING EXTENSION. COORDINATE FINAL LOCATION ON SITE W/ ALL DISCIPLINES.
- PROVIDE BACK DRAFT DAMPER PRIOR TO CONNECTION OF GENERAL EXHAUST TO MAIN W/R EXHAUST FEED.
- F/A DUCT TO BE INSTALLED CONCEALED WITHIN BULKHEAD ABOVE ACTIVE CHILLED BEAMS. TYPICAL.
- F/A DUCT TO BE INSTALLED CONCEALED WITHIN BULKHEAD AT HIGH LEVEL.
- LINEAR F/A SUPPLY GRILLES TO BE INSTALLED BENEATH UNDERSIDE OF STEEL TRUSS. COORDINATE INSTALLATION WITH WOOD LINEAR WALL SYSTEM AT THIS LOCATION. PROVIDE SUITABLE MOUNTING & FRAMING TO FORM ONE CONTINUOUS LOOKING STRIP OF BAR GRILLE.
- TRANSFER AIR GRILLE TO BE INSTALLED AT LOW LEVEL APPROXIMATELY 150mm TO 600mm A.F.F. COORDINATE FINAL LOCATION ON SITE W/ ALL OTHER DISCIPLINES. INSIDE OF DUCT TO BE PAINTED A PER ARCHITECT/INTERIOR DESIGNER'S INSTRUCTIONS.
- TRANSFER FAN (TF-1) TO BE SUSPENDED FROM STRUCTURE C/W VIBRATION ISOLATORS AT HIGH LEVEL OF STORAGE ROOM. OFFSET E/A AT LEVEL. THEN RETURN DROP DOWN TO SERVE GRILLES AT LOW LEVEL APPROXIMATELY AS SHOWN. ACOUSTICALLY INSULATE ALL TRANSFER AIR DUCTWORK.
- 450ø TRANSFER AIR DUCT DOWN FROM TF-1 TO SERVE CRAWLSPACE.
- TRANSFER AIR DUCTWORK TO RUN AT LOW LEVEL BENEATH DISPLAY CASES, BENCH, ETC... COORDINATE FINAL LOCATION ON SITE W/ ALL OTHER DISCIPLINES. ACOUSTICALLY INSULATE ALL TRANSFER AIR DUCTWORK.
- FAN COIL UNIT (FC) TO BE SUSPENDED @ HIGH LEVEL FROM STRUCTURE ABOVE C/W VIBRATION ISOLATORS.
- PROVIDE S/A GRILLE ON TOP AND BOTTOM OF DUCT.

- PROVIDE S/A GRILLE ON BOTTOM OF DUCT ONLY.
- INSTALL ERV-1 ON 100mm HIGH HOUSEKEEPING PAD. COORDINATE W/ STRUCTURAL.
- INSTALL EQUIPMENT ON 100mm HIGH HOUSEKEEPING PAD. COORDINATE W/ STRUCTURAL.
- ELECTRIC FORCE FLOW HEATER TO BE INSTALLED RECESSED IN WALL. ELECTRIC HEATER SHALL BE SUPPLIED & INSTALLED BY ELECTRICAL DIVISION. SIZE SHALL BE AS NOTED. ELECTRIC HEATERS SHALL BE SUPPLIED W/SUITABLE CONTROL/POWER RELAY SO THAT UNIT CAN BE CONTROLLED BY THE BUILDING DDC SYSTEM. COORDINATE W/ ELECTRICAL.
- PROVIDE ACB C/W CUSTOM ORDER CONDENSATE DRAIN PAN, PIPED AS PER PLUMBING DRAWING.
- DUCT MOUNTED HEATING/COOLING COIL (H/CC-1) AT HIGH LEVEL C/W S/S DRAIN PAN TO EXTEND BENEATH H/CC-1, RHP-1, & HUMIDIFIER DISPERSION TUBE; REFER TO PLUMBING DRAWINGS & DETAILS FOR FURTHER INFORMATION.
- DUCT MOUNTED DX ENERGY RECOVERY HEAT PIPE (RHP-1) AT HIGH LEVEL TO BE INSTALLED IN F/A DUCT DIRECTLY AFTER H/CC-1. PROVIDE S/S DRIP PAN AS PER DRAWING NOTE #24 ABOVE.

- DUCT MOUNTED DX ENERGY RECOVERY HEAT PIPE (RHP-2) AT HIGH LEVEL TO BE INSTALLED IN E/A DUCT PRIOR TO ENTERING ERV-1. PROVIDE S/S DRAIN PAN; REFER TO PLUMBING DRAWINGS & DETAILS FOR FURTHER INFORMATION.
- CONCENTRIC VENT FOR BOILER THROUGH SIDEWALL AT HIGH LEVEL. MAINTAIN MINIMUM 36" CLEARANCE FROM ANY OTHER APPLIANCE COMBUSTION AIR INTAKE AS PER CSA B149.1, MB GAS NOTICES, & THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- HUMIDIFIER H-1 TO BE MOUNTED ON WALL OF MECHANICAL ROOM APPROX. 1.52m (60") A.F.F. COORDINATE FINAL HEIGHT & LOCATION ON SITE W/ ALL OTHER DISCIPLINES.
- RETURN/TRANSFER GRILLE TO BE INSTALLED AT HIGH LEVEL OF SPACE C/W DOWNTURNED ACOUSTICALLY LINED ELBOW IN MPR STORAGE ROOM. COORDINATE FINAL LOCATION ON SITE WITH ALL OTHER DISCIPLINES.
- TRANSFER GRILLE TO BE MOUNTED ON WALL APPROXIMATELY 2.44m (8FT.) A.F.F. C/W ACOUSTICALLY LINED UPTURNED TRANSFER ELBOW.
- TRANSFER FAN (TF-2) & COOLING COIL (CC-TF-2) TO BE INSTALLED APPROXIMATELY 2.44m (8FT.) A.F.F. OFFSET ALL DUCTWORK AS REQUIRED. PROVIDE S/S DRAIN PAN BENEATH CC-TF-2; REFER TO PLUMBING DRAWINGS & DETAILS FOR FURTHER INFORMATION.

- TRANSFER GRILLE TO BE INSTALLED AS HIGH AS POSSIBLE.
- OPEN ENDED DUCT LOCATED IN OVERHANG/SOFFIT SPACE. INSIDE OF DUCT TO BE PAINTED A PER ARCHITECT/INTERIOR DESIGNER'S INSTRUCTIONS.
- 400x400 TRANSFER AIR DUCT DROPPING DOWN TO LOW LEVEL IN ENCLOSURE PROVIDED BY ARCHITECT/ INTERIOR DESIGNER. ACOUSTICALLY INSULATE ALL TRANSFER AIR DUCTWORK.
- VAV ACTUATED DAMPER SUPPLIED W/ ACB TO BE FIELD INSTALLED W/ FULL ACCESS FROM ACCESS PANEL. COORDINATE FINAL LOCATION W/ ARCHITECT & ELECTRICAL. REFER ALSO TO SECTIONS.
- 5"ø EXHAUST/8"ø COMBUSTION AIR INTAKE DUAL PIPE DIRECT VENTING FROM NATURAL GAS FIRE PLACE TO EXTEND TO PENETRATE ROOF ABOVE. VENTING & VENTING COMPONENTS SHALL BE EQUAL TO: WOLF STEEL MODEL W175-0170 DURAVENT, AMERICAN METAL MODEL 5D5C-N2 AMERVENT, SELKIRK MODEL 5DT-AAN DIRECT TEMP, OR METAL-FAB MODEL 5DMA SUPERSAL. INSTALL FIRE PLACE AS PER MANUFACTURER'S INSTRUCTIONS, THE NATURAL GAS CODE (CAN/CSA-B149.1), MB GAS NOTICES.

- MAINTAIN CLEARANCE FROM COMBUSTIBLES AS PER MANUFACTURER'S INSTALLATION, THE NATURAL GAS CODE (CAN/CSA-B149.1), MB GAS NOTICES. A MINIMUM OF 1" (25MM) ALL AROUND THE VENT PIPE ON ALL VERTICAL RUNS TO COMBUSTIBLES IS REQUIRED EXCEPT FOR CLEARANCES IN APPLIANCE ENCLOSURES. VERTICAL VENT SECTIONS WITHIN ENCLOSURES REQUIRE A MINIMUM CLEARANCE OF 1" (25MM) AROUND THE VENT PIPE.
- THE VENT SYSTEM MUST BE SUPPORTED EVERY 3'-0" (0.9m) FOR VERTICAL RUNS. USE SUPPORT RING ASSEMBLY W010-0067 OR EQUIVALENT NON-COMBUSTIBLE STRAPPING TO MAINTAIN THE MINIMUM CLEARANCE TO COMBUSTIBLES FOR VERTICAL RUNS. SPACERS ARE ATTACHED TO THE INNER PIPE AT PREDETERMINED INTERVALS TO MAINTAIN AN EVEN AIR GAP TO THE OUTER PIPE. THIS GAP IS REQUIRED FOR SAFE OPERATION. A SPACER IS REQUIRED AT THE START, MIDDLE, AND END OF EACH ELBOW TO ENSURE THIS GAP IS MAINTAINED. THESE SPACES MUST NOT BE REMOVED.
- REFER TO BULKHEAD SECTIONS ON DRAWING M2.3 FOR FURTHER INFORMATION.
- PROVIDE VOLUME FLOW REGULATOR (VFR), BASED ON PRICE VFR SERIES, TO BE INSTALLED W/ FULL ACCESS FROM ACCESS PANEL. COORDINATE FINAL LOCATION W/ ARCHITECT & ELECTRICAL.
- PROVIDE LINEAR BAR GRILLE C/W SUITABLE INSULATED PLENUM ATTACHMENT. BASIS OF DESIGN: PRICE MODEL UP UNIVERSAL INSULATED PLENUM.

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MAIN FLOOR - HVAC LAYOUT

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