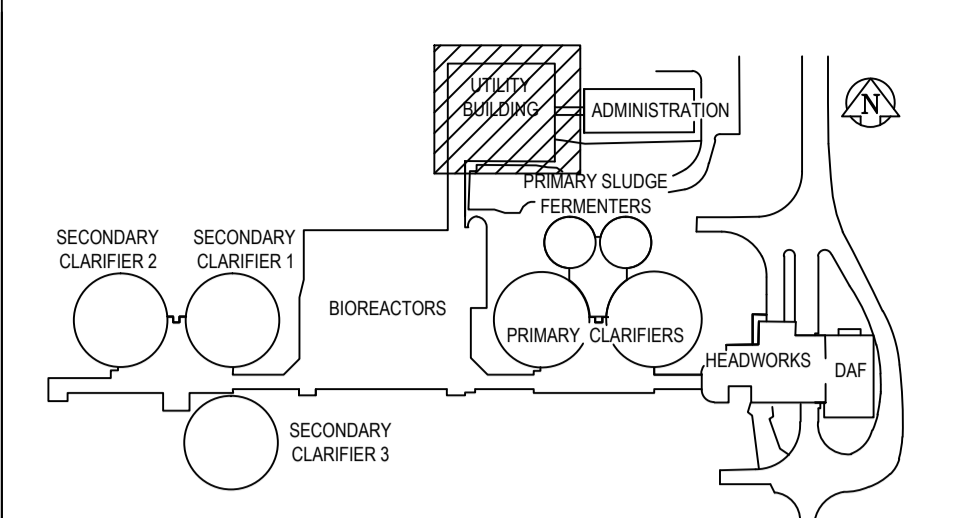


- KEY NOTES**
- PROVIDE NEW DUCT RISER TO EXISTING PENTHOUSE ON ROOF, 1350x900(±), PART OF OUTSIDE AIR INTAKE PLENUM, DUCT INSULATED.
 - NEW 300x300 COMBUSTION AIR DUCT, TERMINATE WITH INVERTED TRAP, C/W EXPANDED MESH SCREEN; OPENING MAX. 300mm FROM ROOF; TERMINATE 1000mm ABOVE ROOF, WITH SCREENED GOOSENECK
 - DROP DUCT TO U640-AHU INLET DUCT PLENUM; DUCTWORK INSULATED
 - NEW AIR HANDLER UNIT, U640-AHU INLET PLENUM, INSULATED, AT CHEMICAL STORAGE MEZZ LEVEL, TO MATCH UNIT O/A INTAKE ELEVATION; PROVIDE TRANSITION AS REQUIRED, DUCTWORK INSULATED; ENSURE INTAKE PLENUM DOES NOT INTERFERE WITH EXISTING 500x250 VERTICAL DROP A/S INTO CHEMICAL STORAGE ROOM.
 - NEW AIR HANDLING UNIT, U640-AHU, BASE UNIT DIMENSIONS, 2650 L x 1800 W x 1150 H, 1500 kg WEIGHT, AT LOCATION SHOWN, SERVICE ON RIGHT SIDE, LOOKING FROM FRONT OF UNIT; UNIT INSTALLED ON NEW 100mm CONCRETE HOUSEKEEPING PAD.
 - EXISTING LIGHT FIXTURES AT CHEMICAL STORAGE MEZZ LEVEL, TO BE RELOCATED; SEE EL. DWG E501 AND EL. SPECIFICATIONS FOR EXACT LOCATION AND DETAILS
 - EXISTING GARAGE LOW BASE LIGHT FIXTURES TO BE RELOCATED, TO SUIT NEW DUCT LAYOUT; SEE ELECTRICAL DWG. E502 AND ELECTRICAL SPECIFICATIONS AND SCOPE OF WORK, FOR EXTENT OF EL. WORK REQUIRED.
 - EXISTING 1 TON CURVED MONORAIL BEAM; MONORAIL TRAVEL SHALL BE LIMITED TO EDGE OF CHEMICAL STORAGE MEZZ.; PROVIDE SAFETY TRAVEL STOP TO PREVENT NEW DUCTWORK FROM POTENTIAL DAMAGE; NEW TRAVEL STOP LOCATION TO BE FINALIZED WITH WEWPCC PERSONNEL.
 - NEW S/A DUCT, FROM U640-AHU OUTLET OPENING TO UTIP1; PROVIDE TRANSITION TO FIT AT AIR HANDLING UNIT. RUN DUCT, SIZE AS SHOWN HIGH IN CEILING SPACE, TIGHT UNDER ROOF JOISTS. SUPPORT DUCT AS SPECIFIED FROM ROOF JOISTS.
 - NEW S/A & R/A DUCT SUPPORT, TYP.; SEE DETAIL V010
 - NEW R/A DUCT FROM UTIP2 TO AHU R/A OPENING AT TOP OF UNIT, SIZE AS SHOWN, DUCT INSULATED; PROVIDE TRANSITION AT UNIT R/A OPENING TO SUIT; RUN DUCT TIGHT U/S JOISTS; SUPPORT FROM JOISTS AS REQUIRED, OR AS SHOWN.
 - PROVIDE NEW TRANSITION BETWEEN NEW S/A DUCT RUN FROM U640-AHU AND EXISTING S/A DUCT AT UTIP1, INSULATED
 - PROVIDE NEW TRANSITION BETWEEN NEW R/A DUCT RUN TO U640-AHU AND EXISTING R/A DUCT AT UTIP2.
 - NEW O/A TRAPEZE DUCT SUPPORT; SEE DETAIL V010
 - EXISTING GARAGE VENTILATION EXHAUST DUCTWORK, TO REMAIN IN SERVICE IN EXISTING CONFIGURATION, INCLUDING RISER TO NEW EXHAUST FAN U675-EF INSTALLED ON ROOF; RE-BALANCE AIR FLOWS TO VOLUMES SHOWN; .
 - EXISTING CHEMICAL STORAGE VENTILATION EXHAUST DUTWORK, TO REMAIN IN SERVICE IN EXISTING CONFIGURATION; NEW EXHAUST FAN U675-EF INSTALLED ON ROOF; RE-BALANCE AIR FLOW TO VOLUMES SHOWN.
 - PROVIDE SS GUARD RAIL AROUND EXHAUST RISER, FOR DUCT CLEARANCE, AT MAIN FLOOR LEVEL, TO PREVENT PAIL/BARRELS STORAGE AGAINST EXHAUST DUCT LOWER GRILLE; SEE DETAIL V02, DWG LM.2.1
 - NEW SUPPLY AIR FAN, U620-SF, TO PROVIDE CHEMICAL STORAGE VENTILATION S/A, VOLUME AS SHOWN; PROVIDE FAN INLET TRANSITION C/W BIRD SCREEN AND BASE SUPPORT. FAN INSTALLED ON NEW HOUSEKEEPING PAD, 100mm HIGH; FAN C/W VIBRATION ISOLATION PADS & FLEXIBLE DUCT CONNECTIONS.
 - NEW 500Ø DUCT AND FITTINGS, REQUIRED TO CONNECT SUPPLY AIR FAN TO EXISTING CHEMICAL STORAGE ROOM S/A DUCTWORK; RUN HIGH THRU JOIST WEB, AT LOCATION SHOWN; NOTE JOISTS 1000mm DEEP; PROVIDE CONC. DUCT TRANSITION AND FLEX CONNECTOR AT FAN DISCHARGE.
 - EXISTING CHEMICAL STORAGE VENTILATION AIR SUPPLY DUCT, INSULATED, TO REMAIN IN SERVICE
 - NEW U640-AHU AIR HANDLING UNIT PS CHIMNEY; PROVIDE NEW FRAMED ROOF OPENING, ROOF CURB AND FLASHING; EXTEND CHIMNEY 3000mm ABOVE ROOF LINE.
 - NEW DIRECT FIRED MAKE-UP AIR UNIT, U610-MUA, BASE UNIT DIMENSIONS, 3150 L x 1200 W x 1050 H, 900 kg WEIGHT, AT LOCATION SHOWN IN MEZZ STORAGE; CENTER THE UNIT BETWEEN ROOF JOISTS TO OPTIMIZE O/A DUCT PLENUM CONSTRUCTION; PROVIDE 100mm HIGH CONCRETE HOUSEKEEPING PAD
 - EXISTING FLUORESCENT LIGHT FIXTURE TO BE RELOCATED, IF REQUIRED, TO ACCOMMODATE NEW O/A DUCT PLENUM RISER THRU ROOF; SEE EL. DWG. E502
 - 1500x1200 O/A PLENUM RISER, INSULATED, TO ROOF BETWEEN JOISTS, TO NEW LOUVERED PENTHOUSE ON ROOF, THRU NEW CURBED ROOF OPENING; FOR ROOF OPENING DETAILS, SEE STR. DWG. US2.2 SECTION A
 - GARAGE/SHOP AND CHEMICAL STORAGE VENTILATION S/A, FROM NEW U610-MUA; S/A DUCT C/W DUCT TRANSITION TO MATCH U610 OUTLET OPENING; PROVIDE WALL SUPPLY GRILLE ON GARAGE SIDE. INSTALL FIRE DAMPER AT FIRE RATED WALL; FIRE DAMPER TO MATCH WALL RATING
 - EXISTING 200Ø ROOM VENTILATION AIR ROOF OPENING, TO REMAIN IN SERVICE.
 - NEW INDIRECT FIRED BLOWER ROOM VENTILATION AIR HANDLING UNIT U605-AHU, BASE UNIT DIMENSIONS, 3275 L x 2500 W x 1600 H, 2200 kg, AT LOCATION SHOWN (EXISTING U605 LOCATION); CONNECT EXISTING N. GAS LINE TO UNIT, C/W NEW GAS REGULATOR.



KEY PLAN

- RE-CONNECT NEW UNIT TO EXISTING S/A DUCT, C/W TRANSITION AS REQUIRED FOR NEW UNIT S/A OPENING SIZE, DUCT INSULATED
- RE-CONNECT NEW UNIT TO EXISTING R/A DUCT, C/W TRANSITION AS REQUIRED FOR NEW UNIT R/A OPENING SIZE
- REMOVE EXISTING RELIEF AIR PLENUM; FILL WALL OPENING BEHIND LOUVER; SEAL AIR TIGHT; SEE STR. DWG. US2.3 SECTION C, EXISTING AND MODIFIED
- EXISTING BLOWER ROOM R/A DUCT, C/W 3 SIDE WALL GRILLES, BD'S & FIRE DAMPERS, TO REMAIN IN SERVICE IN EXISTING CONFIGURATION; BALANCE TO AIR VOLUMES SHOWN.
- RE-CONNECT EXISTING O/A INTAKE PLENUM TO NEW U605 UNIT; PROVIDE DUCT TRANSITION AS REQUIRED FOR NEW U605 O/A OPENING SIZE; ALL NEW O/A DUCTWORK INSULATED.
- FIELD RUN U605-AHU HEAT EXCHANGER 20Ø CONDENSATE DRAIN LINE TO EXISTING FLOOR DRAIN
- NEW BLOWER ROOM EXHAUST AIR FAN, U625-EF, PROGRAMMED TO OPERATE WITH U610-AHU; PROVIDE NEW 900x900 FRAMED WALL OPENING AND WALL SLEEVE; FAN C/W BACKDRAFT DAMPER; DISCHARGE TO OUTDOORS SHALL BE LOUVERED, 900x900 C/W BIRD SCREEN; LOCATE FAN HIGH IN CEILING SPACE, UNDER ROOF JOISTS.
- NEW 200x200 VENTILATION AIR INTAKE; DUCT U/S ROOF INSULATED; PROVIDE INVERTED TRAP, C/W EXPANDED METAL MESH BIRDSCREEN
- FIELD RUN CONTROL WIRING FROM NEW U605-AHU TO NEW THERMOSTAT IN BLOWER ROOM
- FIELD RUN CONTROL WIRING FROM NEW U640-AHU TO NEW THERMOSTAT IN ROOM U224
- 2100 wide x1800± HIGH NEW WALL OPENING, FOR U605 & U610 ACCESS TO DESIGNATED LOCATIONS OPENING LOCATED BETWEEN WALL PILLARS; START PILING AT WEST PILLAR, UP TO EXISTING SUPPLY AIR DUCT TO MAIN FLOOR LEVEL, TO PREVENT PAIL/BARRELS STORAGE AGAINST EXHAUST DUCT LOWER GRILLE; SEE DETAIL V02, DWG LM.2.1
- NEW U610-MUA N. GAS REGULATOR RELIEF VENT THRU ROOF, C/W NEW PITCH POCKET; TERMINATE VENT WITH GOOSENECK, 450mm MIN. ABOVE ROOF LINE; KEEP AWAY FROM AIR INTAKE LOUVERED PENTHOUSE, MIN. 3000mm
- NEW U640-AHU N. GAS REGULATOR RELIEF VENT THRU ROOF, C/W NEW PITCH POCKET; TERMINATE VENT WITH GOOSENECK, 450mm MIN. ABOVE ROOF LINE
- EXISTING ELECTRICAL ROOM VENTILATION SYSTEM TO REMAIN IN EXISTING CONFIGURATION, NIC; BALANCE AIR FLOW TO VOLUME SHOWN.
- 3000± WIDE x1800± HIGH NEW WALL OPENING, FOR U605 ACCESS TO MECH. MEZZANINE; NOTE OWJ BEARING WALL; OPENING FRAMED TO SUPPORT EXISTING LOADS; UPON UNITS INSTALLATION, WALL OPENING TO REMAIN; SEE STR. DRAWINGS US2.1 & US2.3
- FIELD RUN 3Ø PVC CONDENSATE DRAIN FROM O/A INTAKE PLENUM, TO SERVICE SINK EXPOSED LINE, ABOVE FLOOR; PROVIDE CLEANOUTS TO CODE. CHECK U610-MUA SHOP DRAWING FOR CONDENSATE DRAIN LOCATION
- PROVIDE 600Wx1500H OUTSIDE AIR PLENUM SERVICE ACCESS DOOR, INSULATED, SEE STANDARD DETAIL V009.
- FIELD RUN U640-AHU 3Ø HEAT EXCHANGER CONDENSATE DRAIN LINE TO SERVICE SINK DRAIN, C/W RUNNING TRAP, TRAP TO SERVE PLENUM AHN HEAT EXCHANGER DRAINS; RUN LINE TIGHT TO WALL, ABOVE DOOR BAYS; CLIP TO WALL AND SLOPE DN. 2% MIN.
- FIELD RUN U640-AHU 3Ø O/A INTAKE PLENUM DRAIN AND CONNECT TO U640-AHU HEAT EXCHANGER CONDENSATE DRAIN LINE; RUN LINE TIGHT TO WALL, ABOVE DOOR BAYS; CLIP TO WALL AND SLOPE DN. 2% MIN.
- PROVIDE NEW O/A INTAKE PLENUM ACCESS DOOR, 600Wx1200H, FRAMED & INSULATED
- INSTALL NEW R/A GRILLE, SIZE AND AIR FLOW AS SHOWN, TO SERVICE STORAGE ROOM; BOOT C/W BALANCING DAMPER
- PROVIDE ALL DUCTWORK, FITTINGS, FLEX CONNECTIONS AND SUPPORTS, NECESSARY FOR NEW U635-EF TIE-IN TO NEW FUME HOOD AND 200Ø TRUNK ARM.
- RELOCATE EXISTING DUPLEX 120V RECEPTACLES TO NEW LOCATION TO SUIT; SEE ELECTRICAL DWG. E502 AND EL. SPECIFICATIONS FOR COMPLETE SCOPE OF WORK
- RELOCATE EXISTING DUPLEX 120V RECEPTACLES TO NEW LOCATION TO SUIT; SEE ELECTRICAL DWG. E502 AND EL. SPECIFICATIONS FOR COMPLETE SCOPE OF WORK
- EXISTING 2100x2000 (REF) OUTSIDE AIR INTAKE PLENUM, FULL BUILDING HEIGHT; PLENUM SHALL BE FITTED WITH AN OPEN GRATING SERVICE PLATFORM AND ACCESS DOOR AT MAIN FLOOR; LOWER PART OF INTAKE LOUVER SHALL HAVE REMOVABLE BIRD SCREEN; SEE DWG. UM6.14, LM2.6 AND US2.1 AND US2.4 FOR DETAILS.

UTILITY BUILDING TIP SCHEDULE

TIP NO.	DESCRIPTION.	NOTES
UTIP1	TIE INTO EXISTING SUPPLY AIR MAIN	NEW S/A DUCT FROM U640-AHU
UTIP2	TIE INTO EXISTING RETURN AIR MAIN	NEW R/A TO U640-AHU
UTIP3	TIE SUPPLY AIR FAN DISCHARGE DUCT INTO EXISTING S/A DUCT TO CHEMICAL STORAGE	-
UTIP4	TIE NEW U605-AHU INTO EXISTING A/S PLENUM	-
UTIP5	TIE NEW U605-AHU INTO EXISTING R/A DUCT	-
UTIP6	TIE NEW U640-AHU O/A DUCT TO EXISTING PENHOUSE AND DUCT RISER	-

AREA U - MAIN LEVEL & MEZZ. NEW VENTILATION PLAN
SCALE 1:75

- GENERAL NOTES**
- PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND PROVINCIAL MECHANICAL ENGINEERING & INSPECTIONS BRANCH REQUIREMENTS.
 - COORDINATE WORKS WITH OTHER SUB-TRADES. REFER TO SPECIFIC DETAILS FOR CUTTING AND SEALING PENETRATIONS THROUGH OPENINGS & FIRE SEPARATIONS.
 - REFER TO TECHNICAL SPECIFICATIONS FOR EQUIPMENT AND MATERIAL SPECIFICATIONS AND INSTALLATION CONSTRUCTION AND PHASING REQUIREMENTS.
 - INSULATE DUCTWORK WHERE INDICATED AND SPECIFIED.
 - SUPPORT ALL DUCTWORK TO MEET CODE REQUIREMENTS & ESTABLISHED INDUSTRY TRADE PRACTICES, (SMACNA, ASHRAE).
 - INVESTIGATE SITE PRIOR TO CONSTRUCTION TO CONFIRM ALL DIMENSIONS AND INSTALLATION REQ'S.
 - PERFORM ALL CUTTING & PATCHING NECESSARY FOR ANY REQUIRED OPENINGS.
 - PROVIDE TAB TO ENSURE AIR DISTRIBUTION TO VOLUMES INDICATED.
 - NOT ALL EQUIPMENT/PIPING, ETC. IS SHOWN.

APEGN
Certificate of Authorization
Alliance Engineering Services Inc.
No.2906 Date: _____

B.M. ELEV.	FIELD BOOK #:
POSTED TO LBS	
DESIGNED BY AFG/JF	CHECKED BY AFG
DRAWN BY AS	APPROVED BY
HOR. SCALE 1:75	RELEASED FOR CONSTRUCTION
VERTICAL	
00 ISSUED FOR TENDER 2010-12-21 AFG	
NO. REVISIONS	DATE BY
	DATE 2010-08-23

ALLIANCE
Engineering Services Inc.

ENGINEER'S SEAL
PROVINCE OF MANITOBA
A.F.G. GOSSEN
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. UM6.3

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

2010 HVAC REPLACEMENT AND ASSOCIATED WORKS
WEWPCC
AREA U - UTILITY BUILDING
MAIN LEVEL & MEZZANINE VENTILATION - NEW CONDITIONS

SHEET 1 OF 1
CITY DRAWING NUMBER
1-0103V-M0043-001