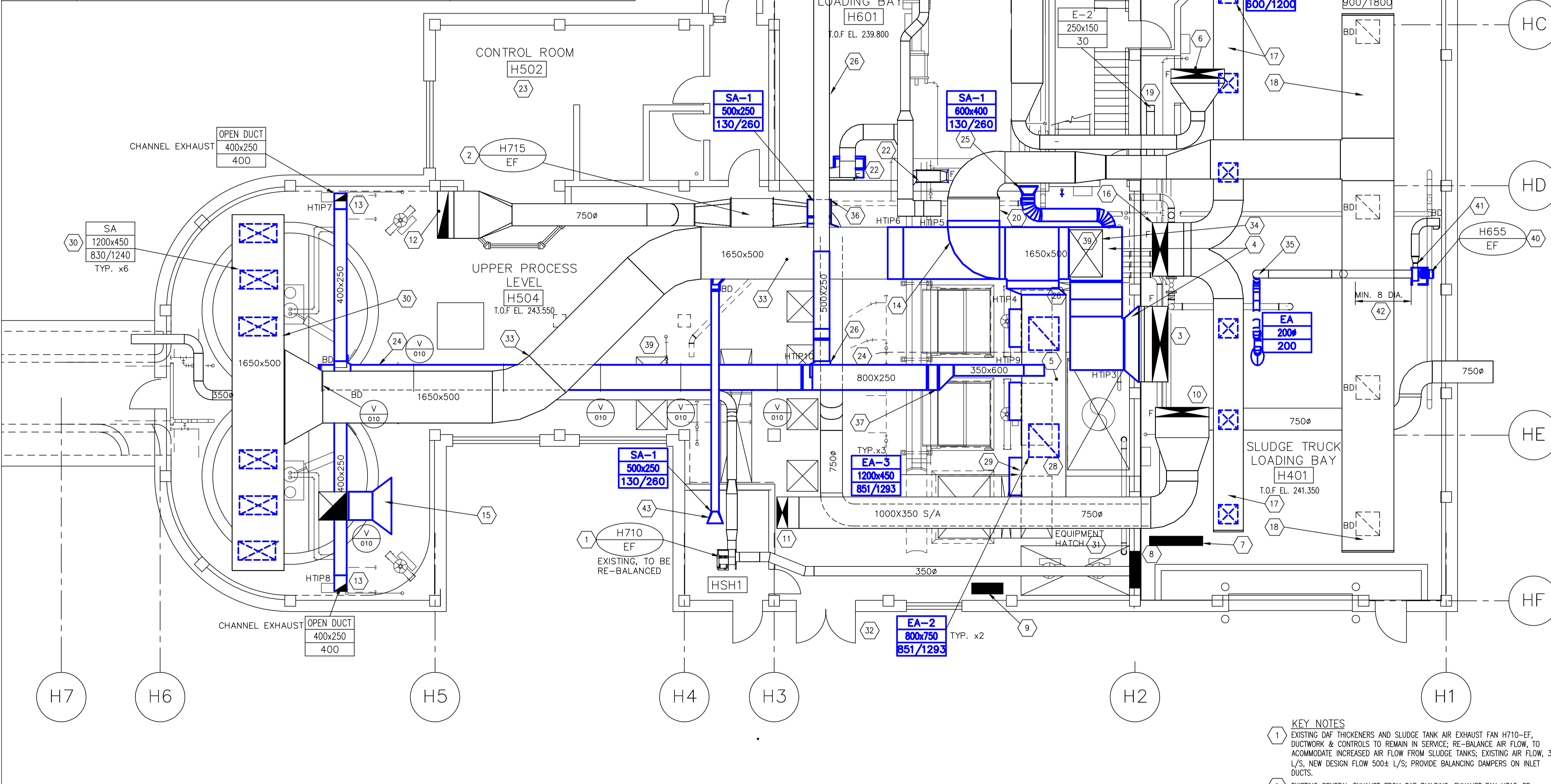
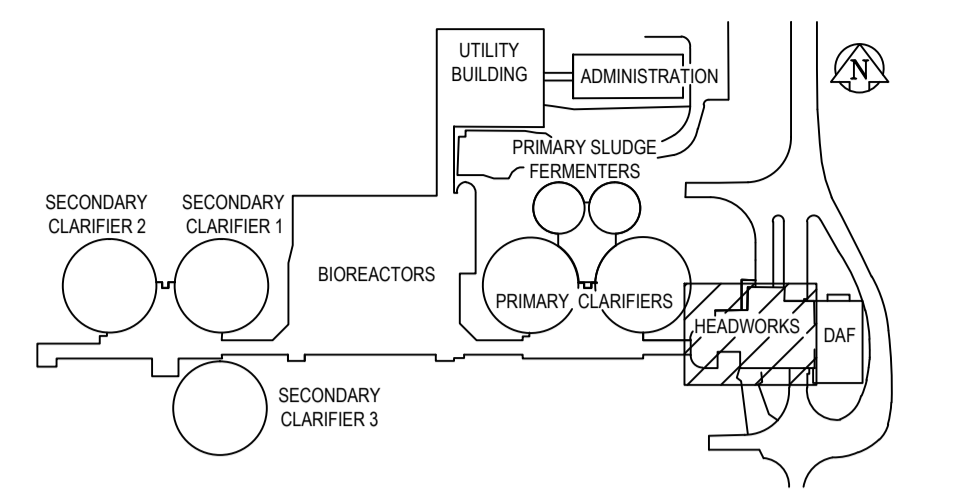


HEADWORKS UPPER PROCESS AREA TIP SCHEDULE

TIP NO.	DESCRIPTION.	NOTES
HTIP3	TIE INTO EXISTING 2400x500 S/A RISER	FROM MECH ROOM MUA'S S/A DUCT MAIN
HTIP4	TIE INTO RE-ASSIGNED E/A DUCT	FORMER S/A DUCT, CUT AT NORTH END TO SUIT
HTIP5	TIE INTO EXISTING E/A RISER TO LOWER FLOOR	CUT & ROTATED EXIST. SR ELBOW
HTIP6	TIE INTO RE-ASSIGNED S/A DUCT	-
HTIP7	TIE INTO NORTH CHANNEL EXHAUST RISER	CUT RISER TO SUIT NEW MAIN ELEVATION
HTIP8	TIE INTO SOUTH CHANNEL EXHAUST RISER	CUT RISER TO SUIT NEW MAIN ELEVATION
HTIP9	TIE NEW CHANNEL EXHAUST MAIN INTO RE-ASSIGNED E/A DUCT	NEW EXHAUST DUCT
HTIP10	TIE INTO NEW EXHAUST MAIN FROM CHANNELS	EXTEND EXISTING MEZZ. EXHAUST DUCT TO NEW EXHAUST MAIN FROM CHANNELS



**A** AREA H – UPPER PROCESS LEVEL & SLUDGE TRUCK BAY – NEW CONDITIONS PLAN  
SCALE 1:75



KEY PLAN

- 5 EXISTING 1400x1000 RE-ASSIGNED E/A DUCT (FORMER S/A DUCT & GRILLES); INSTALL NEW EXHAUST GRILLES, C/W BALANCING DAMPERS
- 6 EXISTING 1700x300 S/A RISER FROM H725, IN MECH ROOM, SERVING GRIT TRUCK LOADING, TO REMAIN IN SERVICE; NO DUCTWORK CHANGES AT UPPER FLOOR.
- 7 EXISTING 1000x350 H700-MUA R/A DUCT FLOOR OPENING TO MECHANICAL ROOM FLOOR TO BE SEALED; REMOVE EXISTING FIRE DAMPER.
- 8 EXISTING 1000x350 R/A DUCT OPENING IN WALL BETWEEN SCREEN ROOM & SLUDGE TRUCK BAY TO BE CLOSED; REMOVE FIRE DAMPER; FIRE RATING TO MATCH WALL; SEE DETAIL 4, STR. DWG. LS2.1
- 9 EXISTING 1000x350 R/A DUCT FLOOR PENETRATION; REMOVE FIRE DAMPER; SEAL OPENING, FIRE RATED TO MATCH FLOOR RATING, SEE DETAIL V021, DWG. LM2.4.
- 10 EXISTING 1700x300 S/A RISER FROM H700-MUA IN MECHANICAL ROOM TO REMAIN IN SERVICE.
- 11 EXISTING S/A DUCT THRU FLOOR TO LOWER LEVEL VENTILATION SYSTEM TO REMAIN IN SERVICE.
- 12 EXISTING 1500x350 DAF GENERAL EXHAUST DUCT THRU FLOOR AT LOWER LEVEL, TO REMAIN IN SERVICE
- 13 EXISTING 400x250 EFFLUENT CHANNEL EXHAUST DUCTS, CUT VERTICAL RISER TO MATCH LOWER EXHAUST MAIN ELEVATION; RECONNECT HORIZONTAL RUNS WITH EXISTING END ELBOW TO TRIMMED RISERS, RE-USE EXISTING BALANCING DAMPERS TO AIR FLOWS INDICATED
- 14 RE-USE EXISTING SHARP THROAT ELBOW CUT AT NECK, ROTATE 180° AND TIE IN TO 1400x1000 E/A DUCT (RE-ASSIGNED 1400x1000 S/A); VERTICAL OFFSET AND FABRICATED TRANSITION REQUIRED TO CONNECT DUCTS
- 15 NEW ROOF INSTALLED UPBLAST FAN, H672-EF, INLET DUCTWORK; EXISTING ROOF OPENING 980x980, FIELD CHECK; DUCT TO SUIT OPENING UP THRU ROOF; PROVIDE NEW INLET TRANSITION, 1800x1050, C/W FACE BIRD SCREEN. SUPPORT NEW DUCTWORK FROM ROOF WITH SS ROD HANGERS
- 16 EXISTING 1700x500 S/A RISER FROM MECHANICAL ROOM, TO REMAIN IN SERVICE, SLUDGE TRUCK BAY AIR SUPPLY
- 17 EXISTING 950x500 S/A DUCT, TO REMAIN IN SERVICE; EXTEND DUCT BOOTS, INSTALL NEW SUPPLY AIR GRILLES AND BALANCING DAMPERS, BALANCE TO AIR FLOW VOLUMES SHOWN.
- 18 EXISTING 1650x500 E/A DUCT, TO REMAIN IN SERVICE; BALANCE AIR FLOW TO VOLUMES SHOWN
- 19 EXISTING 250x150 WASHROOM E/A DUCT, CONNECTED TO TRUCK BAY EXHAUST, TO REMAIN IN SERVICE, BALANCE TO AIR FLOW SHOWN.
- 20 EXISTING 1650x850 EXHAUST MAIN RISER DOWN TO LOWER LEVEL EXHAUST DUCTWORK; REMOVE EXISTING E/A DUCT ELBOW AND VERTICAL OFFSET. MAIN EXHAUST DUCT RISER SHALL BE CONNECTED TO EXISTING S/A DUCT MAIN ABOVE SCREENS (RE-ASSIGNED AS EXHAUST)
- 21 EXISTING 250x900 S/A DOWN RISER, FROM GRIT COLLECTION MEZZ. ABOVE, TO BE EXTENDED DOWN TO LOWER ELEVATION INTO GRIT TRUCK LOADING BAY;
- 22 EXISTING 250x900 E/A DOWN RISER, TO GRIT COLLECTION MEZZ. ABOVE, TO REMAIN IN SERVICE; LOWER AND MODIFY DUCT TO SUIT NEW ARRANGEMENT.
- 23 CONTROL ROOM DEDICATED HVAC SYSTEM, NIC
- 24 NEW 800x250 E/A DUCT, RUN FROM WEST END OF SCREEN ROOM TO 1400x1000 E/A DUCT; OFFSET VERTICAL UP AND RUN ABOVE EXISTING MONORAIL; TIE-IN AT TOP OF 1400x1000 E/A DUCT
- 25 NEW 400x S/A DUCT FROM NEW S/A DUCT EXTENSION, DIRECTED AT GRIT/SCREENINGS RECEIVING MEZZ. LEVEL, C/W S/A GRILLE & BALANCING DAMPER; BALANCE TO AIRFLOW SHOWN.
- 26 EXISTING 500x250 GRIT/SCREENINGS RECEIVING MEZZ. LEVEL PROCESS AREA EXHAUST AIR DUCT; EXTEND AND CONNECT TO NEW 800x250; ALLOW FOR MIN. 2 VERT. OFFSETS
- 27 EXTEND EXISTING EXHAUST BOOTS, RE-USE EXISTING GRILLES AND BALANCING DAMPERS, AS CLOSE AS POSSIBLE TO GRIT/SCREENINGS HOPPER. FINAL CONFIGURATION TO BE DETERMINED ON SITE; NEW ARRANGEMENT SHALL NOT INTERFERE WITH CLEARANCES REQUIRED FOR EQUIPMENT OPERATION AND SERVICE..
- 28 PROVIDE NEW EXHAUST GRILLES AT BOTTOM OF 1400x1000 E/A HEADER, C/W BALANCING DAMPERS; BALANCE TO AIRFLOW SHOWN, x2.
- 29 NEW DUCT BOOTS AND GRILLES ON 1400x1000 E/A HEADER; C/W BALANCING AIR DAMPER; BALANCE TO AIRFLOW SHOWN.
- 30 EXISTING BOOTS, BALANCING DAMPERS AND GRILLES AT BOTTOM OF 1650x500 S/A DUCT, TYP.x6 TO REMAIN IN SERVICE; GRILLES BALANCED TO AIR FLOWS SHOWN.
- 31 NOTE ALL NEW DUCTWORK SHALL NOT INTERFERE WITH EXISTING EQUIPMENT HATCHES AND MONORAILS OPERATION.
- 32 NOTE ACCESS TO UPPER FLOOR FROM PLANT, THRU 900mm WIDE MAN DOOR ONLY; FOR LARGE SIZE FABRICATED DUCTWORK AND FITTINGS, USE OUTSIDE DOOR OR EXISTING ROOF EQUIPMENT ACCESS HATCH.
- 33 EXISTING 1650x500 (FORMER E/A) RE-ASSIGNED TO S/A DUCT, NOT INSULATED
- 34 EXISTING 1830x1070 PURGE AIR INTAKE DUCT SLEEVE, TO REMAIN IN SERVICE. PROVIDE NEW INSULATED MOTORIZED CONTROL DAMPER; SIZE TO MATCH EXISTING DUCT. INTAKE LOUVERED PENTHOUSE ON ROOF TO REMAIN IN SERVICE.
- 35 NEW 200x PICK-UP HOOD & EXTRACTION ARM, FOR FOUL AIR REMOVAL DURING SLUDGE TRUCK LOADING; ASSEMBLY SHALL BE INSTALLED BY CONTRACTOR, UPON FIELD CHECKS AND CO-ORDINATION WITH PLANT OPERATING PERSONNEL; FLEXIBLE RETRACTABLE ARM SHALL BE POSITIONED TO SUIT SLUDGE TRUCK VENT LOCATION
- 36 NEW 500x250 TAKE OFF FROM RE-ASSIGNED S/A DUCT, C/W BALANCING DAMPER & S/A GRILLE, FOR GRIT SCREENING/RECEIVING MEZZ AREA; BALANCE TO AIR FLOW SHOWN.
- 37 TRANSITION NEW E/A DUCT TO SUIT LOCATION ALONG FLOOR BEAM, TO CLEAR ROOF HATCH AND MONORAIL PATH.
- 38 EXISTING E/A DUCT FROM SCRUBBER PLATFORM, TO REMAIN IN SERVICE, N.I.C.
- 39 RELOCATE EXISTING LOW BASE LIGHT FIXTURE, AS REQUIRED, TYP.
- 40 NEW TRUCK LOADING FOUL AIR ARM EXHAUST FAN, AT EXISTING FAN LOCATION; REWORK KNEE BRACE SUPPORT TO SUIT NEW FAN BASE FRAME; PROVIDE BASE FRAME C/W VIBRATION ISOLATORS; CONTRACTOR SHALL ENSURE THAT FAN INSTALLATION SHALL HAVE ALL SERVICE CLEARANCES REQUIRED.
- 41 PROVIDE NEW DUCT TRANSITIONS AND FLEX CONNECTORS TO SUIT
- 42 MODIFY U655-EF INLET DUCT; ALLOW FOR MIN. 8 STRAIGHT DIAM. DUCT LENGTH
- 43 FIELD RUN NEW 250x A/S TO STAIRWELL ROOF, FOR SPACE VENTILATION; C/W SUPPLY GRILLE & BALANCING DAMPER, BALANCE TO AIR FLOW SHOWN.

- KEY NOTES**
- 1 EXISTING DAF THICKENERS AND SLUDGE TANK AIR EXHAUST FAN H710-EF, DUCTWORK & CONTROLS TO REMAIN IN SERVICE; RE-BALANCE AIR FLOW, TO ACCOMMODATE INCREASED AIR FLOW FROM SLUDGE TANKS; EXISTING AIR FLOW, 344 L/S, NEW DESIGN FLOW 500x L/S; PROVIDE BALANCING DAMPERS ON INLET DUCTS.
  - 2 EXISTING GENERAL EXHAUST FROM DAF BUILDING, EXHAUST FAN H715-EF, DUCTWORK & CONTROLS TO REMAIN IN SERVICE
  - 3 EXISTING 2400x500 S/A RISER DUCT FROM H600-MUA/H650-MUA IN MECHANICAL ROOM, TO REMAIN IN SERVICE
  - 4 NEW TRANSITION FROM 2400x500 SS S/A INSULATED ELBOW, TO SS 1650x500 E/A (RE-ASSIGNED S/A DUCT) VERTICAL DOWN OFFSET REQUIRED TO CLEAR EXISTING DUCT; DUCT NOT INSULATED

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

<b>APEGN</b> Certificate of Authorization Alliance Engineering Services Inc. No.2906 Date: _____		B.M. ELEV.	FIELD BOOK #:
POSTED TO LBS			
00 ISSUED FOR TENDER	2010-12-21	AFG	
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**ALLIANCE**  
Engineering Services Inc.

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DRAWN BY: AS	APPROVED BY:
HOR. SCALE: 1:75	RELEASED FOR CONSTRUCTION
VERTICAL	DATE: 2010-06-23

ENGINEER'S SEAL

**A.F.G. GOSSEN**  
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. HM2.9

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

2010 HVAC REPLACEMENT AND ASSOCIATED WORKS  
WEWPCC

AREA H – HEADWORKS  
UPPER PROCESS LEVEL AND SLUDGE TRUCK BAY – NEW CONDITIONS

SHEET 1 OF 1  
CITY DRAWING NUMBER  
1-01036-M0025-001