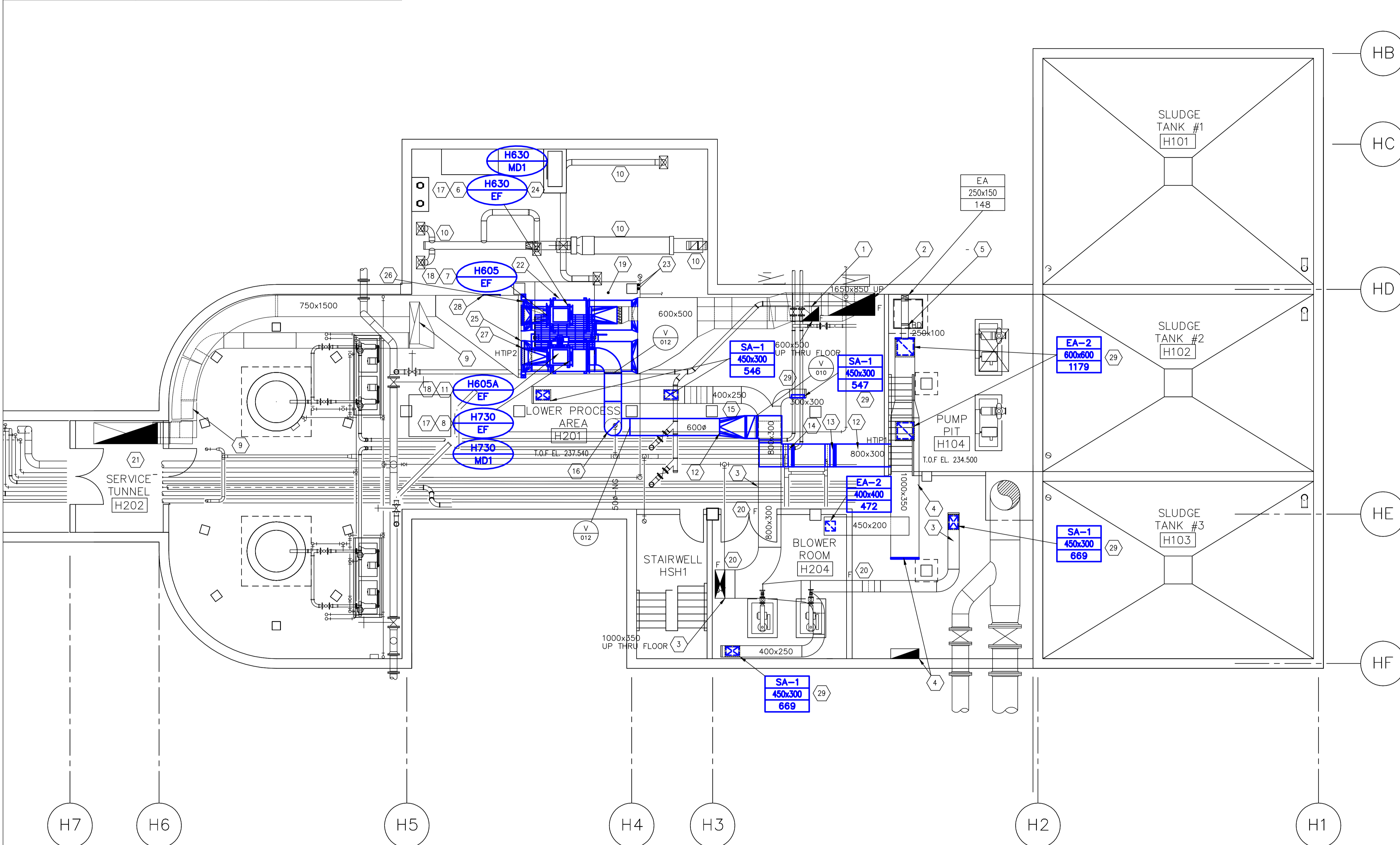
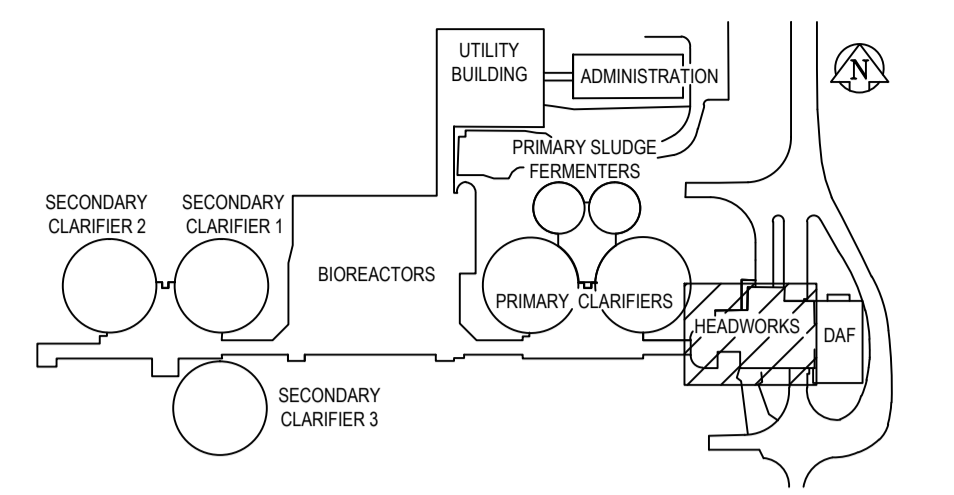


| HEADWORKS LOWER PROCESS AREA TIP SCHEDULE |  |                              |
|---|--|------------------------------|
| TIP NO.                                   | DESCRIPTION.                             | NOTES                        |
| HTIP1                                     | TIE INTO EXISTING RE-ASSIGNED DUCT (E/A) | TO NEW H605-A EF             |
| HTIP2                                     | TIE INTO EXISTING E/A PLENUM             | DISCHARGE FROM NEW H605-A EF |



**A** AREA H - LOWER PROCESS LEVEL - NEW CONDITIONS PLAN  
SCALE: 1:75



**KEY PLAN**

- KEY NOTES**
- EXISTING 500x600 EXHAUST DUCT, FROM GRIT TRUCK BAY EXHAUST SYSTEM (E/A DUCTWORK FOR H725-MUA); EXISTING DUCTWORK TO REMAIN IN SERVICE. NO DUCTWORK CHANGES REQUIRED ON THIS AREA.
  - EXISTING 1650x850 EXHAUST DUCT FROM UPPER PROCESS AREA AND SLUDGE TRUCK BAY (EXHAUST DUCTWORK FOR NEW H600/H650 MUA'S); DUCTWORK SHALL BE REWORKED AT UPPER LEVEL AND AS REQUIRED AT LOWER LEVEL FOR NEW H630/H730 EF'S INSTALLATION.
  - EXISTING 1000x350 S/A DUCT FROM UPPER LEVEL (DUCT FROM NEW H700-MUA); DUCTWORK TO REMAIN IN SERVICE IN EXISTING CONFIGURATION OUTSIDE MECHANICAL ROOM.
  - EXISTING 1000x350 R/A DUCT RETURN AIR DUCT TO BE TERMINATED. CAP R/A DUCT AT START OF VERTICAL OFFSET (REMOVED, SEE DWG. HM1.8) CAP FLOOR OPENING ON FLOOR ABOVE, & REMOVE EXISTING FIRE DAMPER; SEE DETAIL V020, DWG. LM2.4; REMAINING R/A DUCTWORK AT LOWER LEVEL, SHALL BE RE-ASSIGNED TO EXHAUST DUCT, PART OF H605A-EF EXHAUST SYSTEM; RETAIN EXISTING GRILLES AND BALANCE TO AIR FLOW VOLUMES SHOWN; REMOVE DUCT THRU OUT TO MECHANICAL ROOM.
  - EXISTING 250x100 R/A DUCT, OPEN BOTTOM FROM LOWER PUMP PIT AREA; DUCTWORK SHALL REMAIN AS IT IS, REBALANCE TO NEW FLOW RATE INDICATED; DUCTWORK SHALL BE PART OF NEW H605A-EF EXHAUST SYSTEM.
  - NEW SS EXHAUST FAN, H630-EF, TO REPLACE EXISTING; REMOVE TRANSITIONS, FLEX CONNECTORS, SUPPORTS, VIBRATION ISOLATORS AND ADAPTER FLANGES AS REQUIRED. NOTE NEW SUPPORTS, VIBRATION ISOLATORS, FLANGES, TRANSITIONS AND FLEX CONNECTORS REQUIRED; SEE DETAIL V024 DWG. LM2.5.
  - NEW SS EXHAUST FAN, H730-EF, TO REPLACE EXISTING; REMOVE TRANSITIONS, FLEX CONNECTORS, SUPPORTS, VIBRATION ISOLATORS AND ADAPTER FLANGES AS REQUIRED. NEW FAN INSTALLATION REQUIRES NEW TRANSITIONS, FLEX CONNECTORS, SUPPORTS, FLANGES & VIBRATION ISOLATORS; SEE DETAIL V024 DWG. LM2.5.
  - NEW SS EXHAUST FAN, H730-EF, TO REPLACE EXISTING; REMOVE TRANSITIONS, FLEX CONNECTORS, SUPPORTS, VIBRATION ISOLATORS AND ADAPTER FLANGES AS REQUIRED. NOTE NEW SUPPORTS, VIBRATION ISOLATORS, FLANGES, TRANSITIONS AND FLEX CONNECTORS REQUIRED. SEE DETAIL V024 DWG. LM2.5.
  - EXISTING DUCT FROM UPPER FLOOR, PART OF DAF BUILDING EXHAUST SYSTEM, PART OF BNR UPGRADE/2006; DUCTWORK AND EQUIPMENT TO REMAIN IN SERVICE; NO WORK RELATED TO THIS SYSTEM REQUIRED IN THIS CONTRACT IN THIS AREA.
  - EXISTING AIR SCRUBBER & HVAC SYSTEM FOR CONTROL ROOM ABOVE, NIC.
  - NEW SS EXHAUST FAN, H605A-EF, TO BE INSTALLED. NOTE NEW SUPPORTS, VIBRATION ISOLATORS, TRANSITIONS, FLANGES AND FLEX CONNECTORS REQUIRED. SEE DETAIL V024, DWG. LM2.5.
  - NEW SS DUCT, SIZE AS SHOWN; FIELD RUN DUCT FROM NEW E/A DUCT (EXISTING DUCT, RE-ASSIGNED R/A) TO NEW IN LINE EXHAUST FAN, H605A-EF. SUPPORT DUCT FROM CONCRETE STRUCTURE ABOVE WITH TRAPEZE HANGERS; ALLOW FOR MIN. 4 VERTICAL OFFSETS AND 2 TRANSITIONS THROUGHOUT DUCT RUN, TO AVOID EXISTING PROCESS PIPING, ELECTRICAL CABLE TRAYS & INSTRUMENT RACES SEE KEY NOTES BELOW.
  - 800x300 SS DUCT VERTICAL OFFSET DOWN BETWEEN PROCESS 150# DRAIN AND 75# PROCESS WATER LINES; FIELD CHECK AVAILABLE SPACE PRIOR TO FABRICATION; ANY DUCT DIMENSIONAL CHANGE SHALL BE PART OF SCOPE OF CONTRACTOR WORK.
  - 800x300 SS DUCT VERTICAL OFFSET UP PASS CONCRETE BEAM; RUN DUCT ON TOP OF EXISTING S/A DUCT; SUPPORT FROM CONCRETE STRUCTURE; FIELD CHECK AVAILABLE SPACE PRIOR TO FABRICATION; ANY DUCT DIMENSIONAL CHANGE SHALL BE PART OF CONTRACTOR SCOPE OF WORK.
  - 800x300 SS DUCT VERTICAL OFFSET DOWN, TRANSITION TO 600# ROUND AND RUN TIGHT TO CONCRETE COLUMNS; SUPPORT DUCT FROM CONCRETE STRUCTURE.
  - 600# SS DUCT UP TO H605A-EF ELEVATION; RUN NORTH AND CONNECT TO EF WITH FLEXIBLE CONNECTOR.
  - EXHAUST FANS H630 & H730 SHALL HAVE THE EL. MOTOR AND BELT DRIVE ORIENTED AT 90° DOWN, TO ALLOW FOR DRIVE SERVICE AND MAINTENANCE AT FLOOR LEVEL.
  - EXHAUST FANS H605 & H605A SHALL HAVE THE EL. MOTOR AND BELT DRIVE ORIENTED UP, TO ALLOW FOR DRIVE SERVICE AND MAINTENANCE AT NEW SERVICE PLATFORM LEVEL, LOCATED ABOVE H630 & H730 DUCTWORK.
  - SERVICE PLATFORM FOR H605 & H605A MAINTENANCE AND SERVICE; PLATFORM C/W HANDRAIL AND ACCESS LADDER; SEE STRUCTURAL DWG. HS2.3 FOR DETAILS.
  - FIRE DAMPER, TYP. TO REMAIN IN SERVICE AT EXISTING LOCATIONS.
  - NEW EQUIPMENT, MATERIALS AND TOOLS ACCESS THRU TUNNEL.
  - 1 TON MONORAIL BEAM, SPAN TO ALLOW FAN & FAN MOTOR REMOVAL; MONORAIL C/W END STOPS AND CHAIN HOIST TROLLEY.
  - RELOCATED 20# CONDENSATE DRAINS TO SUIT PLATFORM SUPPORTS, LOCATION TO BE FIELD DETERMINED.
  - 1100 X 1100 MOTORIZED CONTROL DAMPER ON NEW H630-EF DISCHARGE, H630-MD1, FAN INTERLOCKED; PROVIDE FLANGES ON TRANSITION AND PLENUM FOR DAMPER INSTALLATION.
  - 1100 X 1100 MOTORIZED CONTROL DAMPER ON NEW H730-EF DISCHARGE, H730-MD1, FAN INTERLOCKED; PROVIDE FLANGES ON TRANSITION AND PLENUM FOR DAMPER INSTALLATION.
  - 600x600 (APPROX.) BACKDRAFT DAMPER ON H605-EF DISCHARGE; PROVIDE FLANGES ON TRANSITION AND PLENUM FOR DAMPER INSTALLATION.
  - 600 X 600 (APPROX.) BACKDRAFT DAMPER ON H605A-EF DISCHARGE; PROVIDE FLANGES ON TRANSITION AND PLENUM FOR DAMPER INSTALLATION.
  - NEW FRAMED PLENUM ACCESS DOOR, FOR DAMPER SERVICE & INSPECTION, DOOR SIZE, 600Wx1200H; LOCATION TO SUIT, FREE OF OBSTRUCTIONS; SITE CHECK BEFORE DOOR FABRICATION.
  - EXTEND GRILLE MOUNTING BOOTS AND INSTALL BALANCING DAMPER, TYP. ALL S/A & E/A GRILLES AT THIS LEVEL, UNLESS BALANCING DAMPER SHOWN; ALL GRILLES NEW WHERE DUCT BOOT MODIFICATION REQUIRED.

- 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:       |                |
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| 00 ISSUED FOR TENDER | 2010-12-21 AFG |
| NO. REVISIONS        | DATE BY        |

**ALLIANCE**  
Engineering Services Inc.

|                    |                            |
|--------------------|----------------------------|
| DESIGNED BY: JC/AS | CHECKED BY: AFG            |
| DRAWN BY: AS       | APPROVED BY:               |
| HOR. SCALE: 1:75   | RELEASED FOR CONSTRUCTION: |
| VERTICAL:          | DATE:                      |
| 2010-06-23         |                            |

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
A.F.G. GOSSEN  
REGISTERED PROFESSIONAL ENGINEER  
CONSULTANT DRAWING NO. HM2.8

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

2010HVAC REPLACEMENT AND ASSOCIATED WORKS  
WEWPCC  
AREA H - HEADWORKS  
LOWER PROCESS LEVEL - NEW CONDITIONS PLAN

SHEET 1 OF 1  
CITY DRAWING NUMBER  
1-0103G-M0024-001