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PRELIMINARY
NOT FOR CONSTRUCTION

| | |
|--------|---|
| North: | Seal: |
| |  |
| 10 | |
| 9 | |
| 8 | ISSUED FOR ADDENDUM NO. 1 2012-05-17 |
| 7 | ISSUED FOR 100% TENDER 2012-04-10 |
| 6 | ISSUED FOR 99% REVIEW 2012-03-16 |
| 5 | ISSUED FOR 90% PRICING SET 2012-03-01 |
| 4 | ISSUED FOR REVIEW 2012-02-14 |
| 3 | ISSUED FOR 66% REVIEW 2012-01-27 |
| 2 | ISSUED FOR 50% PRICING SET 2012-01-11 |
| 1 | ISSUED FOR 33% REVIEW 2011-12-09 |
| # | REVISION DATE |

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Client:
 Government of Canada / Gouvernement du Canada

Project:
**NIAGARA OFFICE
ADMINISTRATION
FACILITY**

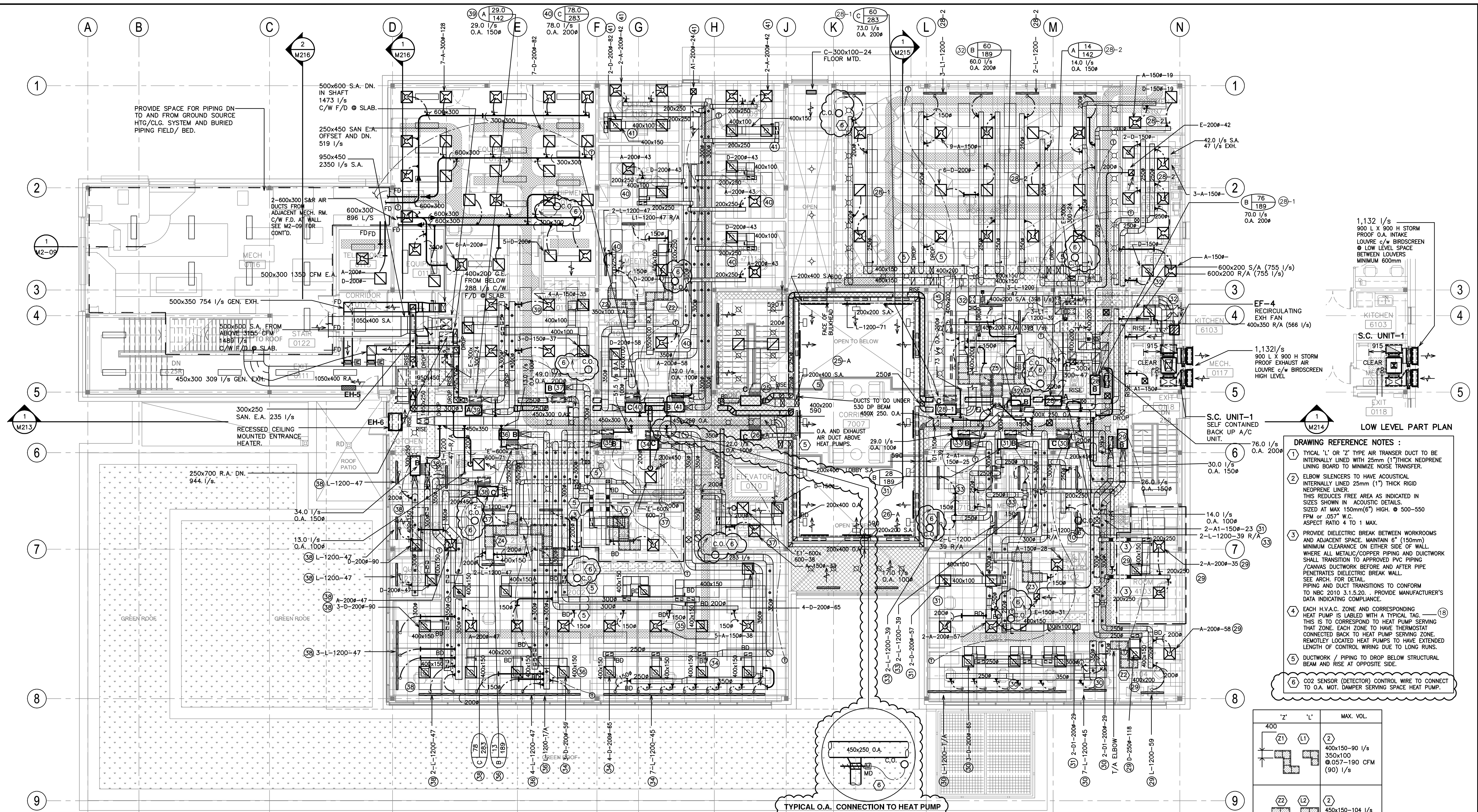
Location:
**Niagara-on-the-Lake,
Ontario**

| | |
|------------------|------------|
| Project Manager: | |
| Project Number: | 1322-003 |
| Tender: | 2012-04-10 |
| Date: | |
| Scale: | 1:100 |
| Drawn By: | LG |
| Checked By: | DH |

Drawing Title:
**2ND FLOOR PLAN
HVAC**

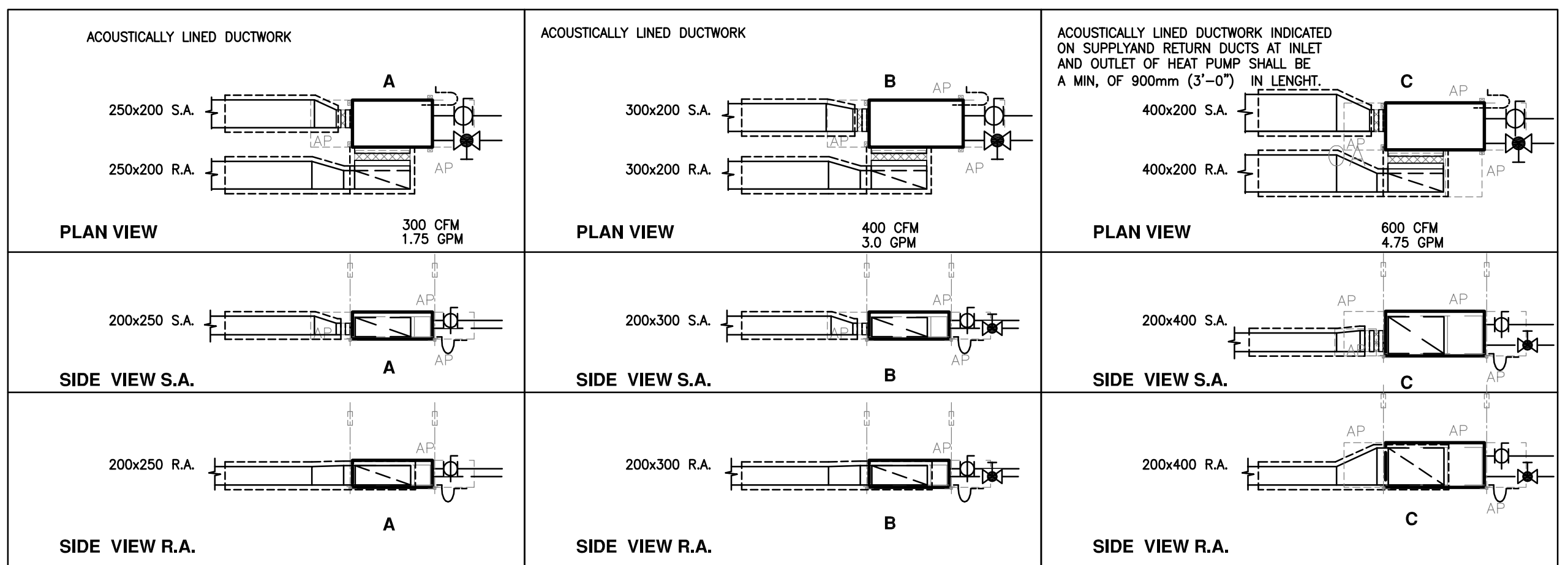
Drawing:

M2-07



- DRAWING REFERENCE NOTES :**
1. TYPICAL 'L' OR 'Z' TYPE AIR TRANSFER DUCT TO BE INTERNALLY LINED WITH 25mm (1") THICK NEOPRENE LINING BOARD TO MINIMIZE NOISE TRANSFER.
 2. ELBOW SILENCERS TO HAVE ACOUSTICAL INTERNALLY LINED 25mm (1") THICK RIGID NEOPRENE LINER. THIS REDUCES FREE AREA AS INDICATED IN SIZES SHOWN IN ACOUSTIC DETAILS. SIZED AT MAX 150mm(6") HIGH. @ 500-550 FPM or .057" W.C. ASPECT RATIO 4 TO 1 MAX.
 3. PROVIDE DIELECTRIC BREAK BETWEEN WORKROOMS AND ADJACENT SPACE. MAINTAIN 6" (150mm) MINIMUM CLEARANCE ON EITHER SIDE OF WALL. WHERE ALL METALLIC/COPPER PIPING AND DUCTWORK SHALL TRANSITION TO APPROVED PVC PIPING /CANVAS DUCTWORK BEFORE AND AFTER PIPE PENETRATES DIELECTRIC BREAK WALL. SEE ARCH. FOR DETAIL. PIPING AND DUCT TRANSITIONS TO CONFORM TO NBC 2010 3.1.5.20. PROVIDE MANUFACTURER'S DATA INDICATING COMPLIANCE.
 4. EACH H.V.A.C. ZONE AND CORRESPONDING HEAT PUMP IS LABELED WITH A TYPICAL TAG. THIS IS TO CORRESPOND TO HEAT PUMP SERVING THAT ZONE. EACH ZONE TO HAVE THERMOSTAT CONNECTED BACK TO HEAT PUMP SERVING ZONE. REMOTELY LOCATED HEAT PUMPS TO HAVE EXTENDED LENGTH OF CONTROL WIRING DUE TO LONG RUNS.
 5. DUCTWORK / PIPING TO DROP BELOW STRUCTURAL BEAM AND RISE AT OPPOSITE SIDE.
 6. CO2 SENSOR (DETECTOR) CONTROL WIRE TO CONNECT TO O.A. MOT. DAMPER SERVING SPACE HEAT PUMP.

| REF. | DESCRIPTION | ENTERING AIR | | | REQUIRED COOLING CAPACITY (KW) | | REQUIRED HEATING CAPACITY (KW) | FLUID FLOW (L/S) | AIR EXT. S.P. (KPa) |
|------|----------------------|------------------|-----------------|-----------------|--------------------------------|----------|--------------------------------|------------------|---------------------|
| | | SUPPLY AIR (L/S) | COOLING D.B. °C | HEATING W.B. °C | TOTAL | SENSIBLE | | | |
| A | HORIZONTAL HEAT PUMP | 141.6 | 23.9 | 17.2 | 2.4 | 2 | 2.67 | 0.136 | 125 |
| B | HORIZONTAL HEAT PUMP | 188.8 | 23.9 | 17.2 | 3.64 | 2.52 | 3.59 | 0.214 | 125 |
| C | HORIZONTAL HEAT PUMP | 283.2 | 23.9 | 17.2 | 5.86 | 4.43 | 5.48 | 0.357 | 125 |
| D | HORIZONTAL HEAT PUMP | 896.8 | 23.9 | 17.2 | 19.94 | 15.11 | 17.95 | 1.345 | 125 |



| Z" | L' | MAX. VOL. |
|----|----|-----------|
| 21 | 11 | 2 |
| 22 | 12 | 2 |
| 23 | 13 | 2 |
| 24 | 14 | 2 |
| 25 | 15 | 4 |

TYPICAL ACOUSTICALLY LINED DUCT ELBOWS
NOTE: 1 2