Corporate Finance Department
Materials Management Division

ADDENDUM NO. 1
BID OPPORTUNITY NO. 15-2004

CITY OF WINNIPEG OFFICE ADDITION AND RENOVATION
1155 PACIFIC AVENUE, WINNIPEG, MANITOBA

ISSUED: June 18, 2004
BY: Coleen Groening /clg
TELEPHONE NO. (204) 986-2491

URGENT

PLEASE FORWARD THIS DOCUMENT TO WHOEVER IS IN POSSESSION OF THE BID OPPORTUNITY

THIS ADDENDUM SHALL BE INCORPORATED INTO THE BID OPPORTUNITY AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS

Template Version: 20040128

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid Opportunity, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid may render your Bid Submission non-responsive.

PART B – BIDDING PROCEDURES

Revise: B2.1 to read:
B2.1 The Submission Deadline is 12:00 noon Winnipeg time, June 25, 2004.

PART E – SPECIFICATIONS

Note: The Geotechinical Report is available for viewing at the office of Friesen Tokar Architects, located at 200-2033 Portage Avenue, Winnipeg or by contacting the Contract Administrator.

Revise: Section 00864 DOOR, FRAME AND HARDWARE SCHEDULE as follows:
- Door EN.WW-20. Revise Door Number to: " 1* ".
- Door EN.WW-46. Revise Door Number to: " 1* ".
- Door BS.PW-25. Revise Door Number to: " 1 ".
- Door EN.PW-24. Revise Door Schedule columns to read as follows: Door Number:1*, Door Width: 900, Door Height: 2150, Door Thickness: 44, Door Material: HM, Door Finish: PT, Door Type:1, Frame Material: PS, Frame Finish: PT, Frame Type:1, Frame Details: 6, Hardware Group:23, Fire Label: (not required), Notes: 1
- Door FA.PW-10. Revise Door Number to: " 1* ".
- Existing Exterior Door EX2B: add Hardware Group: "32".

Revise: Section 03300 CAST-IN-PLACE CONCRETE as follows:
Refer to 2.2 Mix Proportions. Delete 5.1 thru 5.7.Refer to structural drawings for mix designs.

Revise: Section 06400 ARCHITECTURAL WOODWORK as follows:
Refer to 2.5 "Casework":
- Delete item 2.5.1.13 "All surfaces not receiving plastic laminate are to be wood veneer finish."
- Delete item 2.5.1.14 "All exposed edges and non-post formed countertops to be 3 mm PVC."
- Add the following " Refer to millwork drawings 11.1 and 11.2 for countertop edge finish"
- Add the following item: "Interior of all **exposed/open** cabinets and shelving to be plastic laminate finish"
- Add the following item: "Interior of all **closed** cabinets to be 19mm Melamine finish."

Revise: Section 07465 PREFORMED METAL SIDING PANELS, ROOFING, SOFFITS AND RAINWEAR as follows:
Refer to 2.1.1.1. Delete the word 'corrugated' from Type 1 metal siding description.
Refer to 2.3. Move Item .4 "Linear Bar Grilles" to Section 09510 ACOUSTICAL CEILINGS under 2 'Products'.
Refer to 2.6. This item is included to provide information only. Work is responsibility of Section 09250.

Revise: Section 08710 DOOR HARDWARE as follows:

Refer to 2.2 Door Hardware Materials and Group Codes

- HW Group: 26 - add: "1 EA ELECTROMAG LOCK 390+ 628 LOC".
- HW Group: 27 - add: "1 EA ELECTROMAG LOCK 390+ 628 LOC".
- HW Group: 36 - add: "1 EA ELECTROMAG LOCK 390+ 628 LOC".

Refer to 2.5 Keying:

- Delete .5.
- Revise .6 to read: All locks to be keyed to the existing Schlage GMK system.

Revise: Section 09510 ACOUSTICAL CEILINGS as follows:

Refer to section 2.1.1 "ACT-1"

- Delete reference to Armstrong "Fine Fissured" square lay-in tile, model no. 1810. Dimensions: 600mm x 1200mm x 15mm.
- Add Armstrong "Fine Fissured" square lay-in tile model no. 1830. Dimensions: 24"x 48" x 5/8".

Revise: Section 09665 RESILIENT SHEET FLOORING as follows:

Refer to section 2.1 "Materials"

- Add Forbo Linoleum Resilient Sheet Vinyl. Marmoleum, Fresco, 2.5mm to acceptable products.
- Allow for 5 colors total to be selected from either the Marmoleum Real or Fresco lines.
- Adhesive type to be Forbo Lino-Tac.

Revise: Section 09900 PAINTING as follows:

Refer to section 2.1 "Materials"

- Add item 9: In the addition, where all exposed joists, beams, deck, mechanical and electrical are to be painted, allow for two colors. (ex. Open office area as one color, corridor as another color)
- Add item 10: Allow for 12 colors total for painted drywall partitions and bulkheads.

Revise: Section 12510 ROLLERBLINDS as follows:

Refer to section 2.2 "Location"

- Section 2.2.6.1 (Open office area EN.PW-23) should read "In above listed room: 3 exterior blinds @ approx. 1600mm W x 1200 mm H."

Revise: Section 15010 as follows:

- Replace the specified condensing boilers with cast iron of equivalent capacity, provide a primary-secondary piping loop with two additional pumps, 3-way valve, piping, pressure and temperature gauges, suction diffusers, triple-duty valves.
- Delete the carbon dioxide sensors and associated controls for the ventilation system.
- Delete the Variable frequency drives for the air handling units and associated controls.
- Delete the variable frequency drives for the pumps and associated controls.

Refer to Part B bidding procedures. Separate price #1. This price is to include all of the work by division 15 to accommodate the new skylights, including relocation of ducts, diffusers, and piping.

Revise: Section 15051 as follows:

Clause 1.2 Equipment or Materials and Approved Manufacturers: Refer to paragraph .3 – Plumbing

- Refer to .8 Drainage Specialties; add Mifab
- Refer to .21 Plumbing Brass; add Delta Commercial
- Refer to .27 Electric Water Heaters; add Bradford White Water Heaters
- Refer to .30 Shower Controls; add Delta Commercial
- Add .36 Shower Stalls; add Fiat and American Standard

Refer to paragraph .7 – Controls/Instrumentation: Refer to .2 IAQ Sensor; add Johnson Controls

- Sterling, Peerless, Bell & Gossett, and Aurora pumps are approved manufacturers for the fire pump.
- Trane and Rittling are approved for Fan Coil Units, Force Flow heaters, unit heaters and wall fin radiation.
- Ventrol Custom Air Handling units are approved for the custom air handling units.
- Carel is an approved manufacturer for humidifiers.
- Penn and Greenheck are approved for the specified Cook fans.
- Fulton and Aerco are approved manufacturers for condensing boilers.
- Danfoss VLT 6000 Series Variable Frequency Drives are approved.

Revise: Section 15400 as follows: Clause 2.11 Plumbing Fixtures and Equipment:

Refer to paragraph .2 Fixtures

- Add Drinking Fountain DF-1 Oasis model P8AM refrigerated drinking fountain c/w all standard features and optional stainless steel cabinet enclosure.
- Add lavatory basin thermostatic mixing valves. Hamlet & Garneau Model HG10-10-04 ½" mixing valve, check, c/w stainless recessed cabinet, lock and key.
- Urinal #3 to be battery type in lieu of hard wired.
- Supply and install Truebro LAV GUARD undersink protective p-trap/water stop, cover and insulation assembly for each handicap basin.

Refer to paragraph .3 Equipment Revise .5 Hydropneumatic Tank to read: "HG spec model BFA-12 Expanflex ASME rated 5 gallon total volume expansion tank for domestic hot water systems with ¾" system connection and air charge valve."

Revise: Section 15500 as follows: Clause 2.1 Materials: Refer to paragraph .14.3:

Revise mounting height of operation instructions to 1.2M above finished floor in lieu of 1.5M indicated.

Revise: Section 15600 as follows:

Clause 2.3 Automatic Flow Control Valves:

- The combination flow control/control valve assemblies are to be Griswold PIC-V type.

Clause 2.27 Packaged Outdoor Air Handling Units

- The revisions noted here to be incorporated into the specification:
  - Service corridor
  - Service corridor shall be a minimum of 60" wide.
  - Provide hinged access door with Leverlock handles and 12" x 12" double pane hermetic safety glass window.
  - Provide piping chase for heating coils (piping vestibule not required). Provide solid liner over 2" 3 Lb./cu.ft. insulation.
- Unit construction
  - Dampers - TAMCO 9000 outside air/TAMCO 1000 return air,
  - Construction - 18 gauge construction, 2" 3 Lb./cu.ft. insulation throughout.
  - Liners - 22 ga. Solid liners at coil & filter sections, 24 ga. Perforated liner in remainder.
  - Base frame - Steel Channel base frame with channel crossmembers for rigidity & support.
  - Fans - Forward curve DIDW blowers.
  - Filters - 30% efficient pre-filters, 80 to 85% efficient cartridge filters - maximum 500 fpm.
  - Humidifier section shall be 24" long* with drain pan. (*Length to be determined by humidifier supplier - revise accordingly.)
- Cooling
  - Units shall be of fully packaged design in single casing. Use *of* split system condensing units piped to air handling unit NOT acceptable.
  - Packaged units shall operate down to 50° F (10° C) as standard. Multiple refrigeration circuits shall be separate from each other. Refrigeration circuits shall be complete with liquid line filter-driers, combination sight-glass moisture indicators and service ports fitted with Schraeder fittings. Units with hermetic compressors shall also incorporate load compensated thermal expansion valves with external equalizers. The complete piping system shall be purged and pressure tested with dry nitrogen, then tested again under vacuum. Each system shall be factory run and adjusted prior to shipment.
  - Provide a minimum of 3 to 5 compressors (as scheduled) for all VAV systems. Compressors to be individually circuited. Provide alternate tube circuiting on the DX coil.
  - Provide hot gas bypass on the lead compressor to maintain adequate suction pressure in the event of low loads.
  - Compressors shall be housed inside the service corridor.
  - Controls for hermetic compressor units shall include compressor and condenser fan motor contactors, supply fan contactors and overload protection control circuit transformer, cooling relays, ambient compressor lockout, high pressure controls and automatic reset low pressure controls. Head pressure actuated fan cycling control shall be provided on all multiple condenser fan units.

- Provide cooling controller (CTRAC or Johnson Metasys) with integral anti- cycle timers and interstage time delay timers. Temperature control system with the capability of providing up to 5 stages of cooling control to maintain discharge temperature. The minimum run and off time for compressors shall be 4 minutes at full load startup, and may range up to 8 minutes under part load conditions. The controller shall incorporate a PI (proportional/integral) control scheme that reduces temperature droop by resetting to the set point after each stage is cycled on. The Controller shall include modulating discharge air control with BMS re-set control (0-10 V, or *4-20* ma) with built in modulating high and low limit.

- Electrical
  - Provide single point power connection for all unit electrical including: cooling; service corridor lighting; duplex receptacles and blowers. Provide motor starters and overloads for all blowers not operating with VFD's.

Revise: Section 15800

Clause 2.25 Variable Volume Valves

- Section 15800 to provide a bare VAV box with airflow sensor, section 15900 to provide all other required material.

Revise: Section 15900

Clause 1.2 Work Included

- Revise 1.2.6 to read “The central BMS is comprised of existing Operator Work Stations located at 510 Main St., Winnipeg, MB and connected to this building via N2 protocol. The existing N2 bus shall remain, and the BMS contractor shall supply and install a new Network Control Module (NCM). The DDC controls in the new addition shall be connected to the new NCM via N2 protocol. BMS contractor shall supply and install N2 compatible leased line modems for connection to owner supplied leased lines.”
- Refer to sub-paragraph .8; Delete requirement to enable HVAC system based on security access. Provide override button with programmable override time for after-hours operation. Central Control at 510 Main St will also have on-off override capability.

. Clause 1.9 Submittals

- Refer to paragraph .1 Shop Drawings, add sub-paragraph “All control drawings, sequence descriptions, schedules and program descriptions to be on 11”x17” paper complete with production/revision dates.

Clause 2.1 Identification of Equipment

- Lamacoids are only to be installed on main/large cabinets, all other items are to be identified with laminated mylar labeling tape, black letters on white tape, “Brother TZ tape” or equal, lettering to be BOLD style, with letter height in appropriate proportion to object being identified.
- All cables to have unique cable ID numbers on the shop drawings/as-built drawings and on each cable adjacent to all termination points tagged with mylar tape or equivalent permanent marking system.

Clause 2.3 Identification of Equipment Controlled by BMS

- Append to item .4 “Tag wording to be submitted to and approved by Public Works Dept., Building Services Div., Contracted Maintenance Services Branch (100 Main St) prior to manufacture.

Clause 2.4 System Architecture

- Provide a conduit complete with a 4 conductor 22 AWG cable from the main MTS telephone backboard to the new modem location. The owner will rent a dedicated phone line and arrange the final connections.
- For all new HVAC, Lighting and security points, provide Metasys graphics to the same standard as the existing graphics currently installed for the 1155 Pacific Metasys control system.

Clause 2.9 Input Devices

- Delete item .2.3 Room temperature sensors with integral display.

Clause 2.10 Output Devices

- Refer to .1.1.1 revise to “Damper and valve actuators shall be pneumatic or electric, as required.”

Clause 2.14 New Roof Top Units (Typical of 4)

- Revise .14.1.7 to “Return air humidity”
- Move .14.1.6 “ Supply duct high pressure limit” to .14.3.4 (binary inputs)
- Add “Return air temperature” to analogue inputs.

Clause 2.16 Hot Water Heating Boiler Control

- Provide the following input/output points:
- “Boiler status” and “boiler failure” for each boiler
- “Pump start/stop command” and “pump failure alarm” points.

Clause 2.17 Plate and Frame Water/Glycol Heat Exchanger

- Provide the following input/output points:
- “Pump start/stop command” and “pump failure alarm” points.

Clause 2.18 Crawlspace Control
- Refer to .3 clarification: The duct providing make-up air to the crawlspace has two two-position dampers, one damper connects the duct to a rooftop intake, the other damper connects the duct to an open duct in the ceiling return air space.
- Provide a filter differential switch for each fan coil unit and a “high humidity limit”.
- For the crawlspace exhaust fan, provide “start/stop” point, a “fan failure” point and “air change over damper position”

Clause 2.23 Sump Pump Monitoring
- Revise “OWS” to “Central Control- 510 Main St”
- Add “Pump status” and “pump failure” points.

Clause 2.25 Variable Frequency Drives
- Delete the IEEE Standard 519-1992 requirement.
- Delete the VFD bypass noted in .14 Special Features, (Retain only sub-paragraph .7)

Operating Instructions and As-Built Information
- Delete paragraph 3.2.3
- Append to 3.2.2: “Provide a copy of all as-built information in both MS Visio and Adobe PDF file formats”

Clause 3.5 Room Thermostats
- Revise mounting height to 1200 mm above finished floor.
- Refer to paragraph .14.3
  - Revise mounting height of operation instructions to 1.2M above finished floor

Include the following sequences of operations
- Force Flow control
  - Provide a line voltage space thermostat, which will control force flow to maintain setpoint.
  - Provide an aquastat on the hot water return to prevent the force flow fans from operation on a low temperature indication.
  - The thermostat will be provided with a locking metal guard.
- Unit Heater control
  - Provide a line voltage space thermostat, which will control unit heater fan to maintain setpoint.
- Boiler Room Ventilation System
  - Room thermostat shall cycle unit heater fan, ventilation fan and modulate the OA and return dampers in sequence to maintain room temperature.
  - Discharge air low limit control shall prevent discharge air temperature from dropping below 13°C. Provide heavy-duty thermostat guard.
- Interconnecting Piping Valve
  - The control valve that connects the new boiler system to the existing building heating plant will be controlled by the BAS. The system will be interconnected seasonally based on an adjustable schedule. When the systems are interconnected the existing boilers will be locked out.

Security System and Fire Alarm system. Refer to Division 16 for requirements to interface with METASYS system.

Revise: Mechanical Schedule MS-11 as follows:

Add unit heater UH-5 Eng-A model H-3 (same capacity as UH-4), complete with Griswold flow control device. T-stat to cycle fan.

Revise: Mechanical Specification Detail Sheets as follows:
- Replace MD-29 with MD-29R1 (attached).
- Replace MD-30 with MD-30R1 (attached).
- Replace MD-34 with MD-34R1 (attached).

Revise: Division 16000 as follows:
- Replace Panel Schedule PM with PM-R1 (attached).
- Replace Panel Schedule PP with PP-R1 (attached).
- Replace Panel Schedule PN with PN-R1 (attached).
- Replace Panel Schedule PT with PT-R1 (attached).

PART E – SPECIFICATIONS

Revise: the following drawings:

15-2004_Drawing_A1.1-R0 Site Survey: Replace with drawing **15-2004_Drawing_A1.1-R1** to revise sheet orientation.

15-2004_Drawing_A1.2-R0 Site Plan Civil: Replace with drawing **15-2004_Drawing_A1.2-R1** for general civil revisions as related to parking lot revisions.

15-2004_Drawing_A1.3-R0 Site Plan Architectural: Replace with drawing **15-2004_Drawing_A1.3-R1** for relocation of fire lane and related general parking lot revision.

15-2004_Drawing_A1.4-R0 Site Plan Details: Refer to Signs & Sign Schedule. Revise number of signs for sign type 4 "small car only" from 2 to 6.

15-2004_Drawing_A1.5-R0 Landscape Plan: Replace with drawing **15-2004_Drawing_A1.5-R1** for general landscape revisions as related to parking lot revisions.

15-2004_Drawing_A2.3-R0 Existing Building Demolition Plan - North: Replace with drawing **15-2004_Drawing_A2.3-R1**. Revised items as follows:

- Remove existing wall as required for new door.

15-2004_Drawing_A2.4-R0 Existing Building Demolition Plan - South: Replace with drawing **15-2004_Drawing_A2.4-R1**. Revised items as follows:

- Remove existing door and reinstall with reverse hand swing as per construction plan.

15-2004_Drawing_A2.5-R0 Main Floor Plan Part A: Replace with drawing **15-2004_Drawing_A2.5-R1.** Revised items as follows:

- Revise Door EN.WW-20 swing direction.
- Revise Door EN.WW-46 swing direction. Relocate Door EN.WW-44 to accommodate.
- Revise Door BS.PW-25 swing direction.
- Note new and revised fire hose cabinets locations and required furring as per mechanical drawing. Door FA.WW-07 relocated to accommodate.
- Add note to rooms GEN.WW-21 and GEN.WW-16 as follows: Provide millwork shelf to coat closets in both rooms GEN.WW-21 and GEN.WW-16. Shelf detail to be similar shelf described in millwork section 31 page A11.2 and to run entire length of closet. Provide 1 5/16" diameter chrome plate finish heavy coat rod (comes with wall brackets). Shelf to be mounted at 1525mm above finished floor to top of shelf.
- Add note to room Gen.WW-25: Provide millwork in First Aid Room Gen.WW-25 as shown on page A2.5. Millwork to have two equal sized upper cabinets and two equal sized lower cabinets. See millwork section 13/A11.1 for a similar detail. Millwork to contain similar upper cabinets. Counter to be post-form top at 900 a.f.f. and with 100mm backsplash. Include lower cabinets (instead of open-below) and 100mm high by 65mm deep toe-kick space. Flooring scheduled for this room to be coved up the front of the toe-kick space. All finishes to be plastic laminate. Interior of closed cabinets to be melamine.

15-2004_Drawing_A2.6-R0 Main Floor Plan Part B: Replace with drawing **15-2004_Drawing_A2.6-R1.**
Revised items as follows:

- Revise Door EN.PW-24 swing direction. Relocate wall as shown to suit.
- Remove existing door between Corridors TR.PW-08 and TR.PW-17.
- Note new and revised fire hose cabinets locations and required furring as per mechanical drawing.

15-2004_Drawing_A2.7-R0 Main Floor Plan Part C: Replace with drawing **15-2004_Drawing_A2.7-R1.**
Revised items as follows:

- Revise Door FA.PW-10 swing direction. Alter existing wood frame to suit. Relocate wood stops and hinges to suit revised swing. Patch wood frame and refinish door to match existing.

15-2004_Drawing_A6.6-R0 Wall and Canopy Sections: Refer to Section 4/A6.6, Curved Fascia Wall Type E4. Add note: "Provide 100 mm vertical z-bars. Attach z-bars to steel stud infill. Over vertical z-bars install 19mm 'hat' section furring bars to suit radius to support vertical metal panels."

15-2004_Drawing_A10.1-R0 Miscellaneous Details: Refer to Detail 7/A10.1 Crawlspace Separation Construction. At note: "CORRUGATED GALVANIZED METAL PANELS FULL HEIGHT ONE SIDE" add "26 GAUGE".

15-2004_Drawing_S1.1-R0 Main Floor and Foundation Framing Plans: Add the following note: "Provide 100x100x6 angle framing each side of crawlspace access hatch openings and duct penetrations larger than 300 x 300 typical."

15-2004_Drawing_S2.2-R0 Sections and Details: Refer to Section 14/S2.2 and 15/S2.2 - Add the following text. “Provide 350x16x350 Beam bearing plates c/w 4-16mm diameter anchor bolts to pile cap”

15-2004_Drawing_S4.1-R0 Exterior Girt Elevations and Details, General Notes: Add the following section to the General Notes:

D1. STRUCTURAL STEEL

1. Fabrication and erection of structural steel shall be performed in accordance with CSA S16 – steel structures for buildings. Verify all dimensions prior to fabrication.
2. Hollow structural sections shall be in accordance with CSA G40.21, Grade 350W Class C. All other structural sections shall be in accordance with CSA G40.21, Grade 350W.
3. All structural steel connections shall be in accordance with CSA G40.21, Grade 300 W.
4. Provide masonry anchors 38 X 3 X 400 Leg @ 400 O/C on all columns and beams adjacent to masonry.
5. No holes are permitted in top flange of beams where beams are continuous over columns.
6. All beams continuous over supports shall have a minimum of two web stiffeners each side to the same thickness as the beam web.
7. Provide galvanizing of members to CSA G164 as shown on drawings.
8. Welding shall be undertaken by a company with proven capability in this type of work and shall have the approval of the Canadian welding bureau to the requirements of CSA W47.1.
9. Welding shall conform to the requirements of the latest issue of CSA W59.
10. Structural steel to receive one coat of CISC CPMA standard 1-73A primer.
11. Columns below main floor slab to receive one coat of asphalt base paint.
12. Submit shop drawings including connection details and clearly indicating profiles, sizes, spacing and locations of structural members, cambers, and loads.
13. Design, fabricate and erect steel deck in accordance with CSA S136 and S136.1 standards.

15-2004_Drawing_M0.1-R0: Refer to the radiation unit designation, revise the tag such that the output is the middle number and the physical length is the bottom number.

15-2004_Drawing_M1.1-R0 and **15-2004_Drawing_M1.1-R0**

- Delete reference to 6” fire main. The main is to be hydraulically sized in accordance with MBC.

15-2004_Drawing_ M-1.4R0: Replace with drawing **15-2004_Drawing_ M-1.4R1** for revisions to fire hose cabinets.

15-2004_Drawing_ M-1.5R0: Replace with drawing **15-2004_Drawing_ M-1.5R1** for revisions to fire hose cabinets.

15-2004_Drawing_ M-2.3R0: Refer to room EN.WW-22, VAV box ID is VAV-184, provide thermostat in space for control.

15-2004_Drawing_ M-2.4R0:

- Refer to the former garage area, to be included in the demolition is the removal of the existing controls and gas detection equipment.
- Refer to mechanical room, provide a fire damper in the 800ø duct at approximately gridline 5-P
- Provide fire dampers at penetrations to the janitor’s room and storage room at between gridlines 5 and 6 near gridline R.
- Refer to the Mechanical Room plan, the glycol piping to and from the heat exchanger should be 2 ½”.
- Refer to mechanical room plan, provide unit heater UH-5. Mount in boiler room directed towards the combustion air intake, provide ¾” supply and return lines to nearest mains.
- Refer to drawing notes 18 and 19, the model number for the MiniMate 2 is MMD96E-C0EL0 (Evaporator section), and PFH096A-YL3 (Condensing unit), the unit is to be complete with hot gas bypass, electric reheat and lee temp kit. 3750 CFM. Provide a 24x24 egg-crate return grille, equal to Price series 80, for each unit and two 24x24 supply diffusers equal to Price SMD 21”x21”. The return duct to be 24”x20”, supply to be 24”x20” branching to two 24”x12” ducts. Co-ordinate with lights and architectural reflected ceiling plan.
- Refer to the existing building plans. The return grilles shown with a heavier line weight are new type D grilles 600x300.

15-2004_Drawing_ M-2.5R0:

- Refer to basement floor plan. There is an existing supply duct to be capped off where it enters Work Room BM-PW-02.

- Refer to the existing building plans. The return grilles shown with a heavier line weight are new type D grilles 600x300.

15-2004_Drawing_ M-2.6R0:

- Refer to valve noted as “Valve to enable pipe connection. Controlled by BMS”. Provide isolating valves on either side of this device.
- Refer to “interconnecting pipe to existing heating system”; provide an isolation valve upstream of the Griswold flow control assembly.
- Refer to plate heat exchanger, on glycol heating supply side move thermometer to other side of the isolation valve. On Hot water supply side provide an additional thermometer between the heat exchanger and the isolation valve.
- On all heating elements with control valves locate the valve inside of the isolation valves to facilitate servicing.
- Refer to Variable Volume air handling unit control schematic:
  - Provide a binary input signal for compressor failure to be monitored and alarmed by the building management system.

  Current transmitter not required for supply fan status, information retrieved from VFD.
  - Supply fan VFD fault not required.
- -
  - HW coil and piping should be Glycol Heating piping.
  - Smoke detector by Division 16.
  - The building static pressure sensor will modulate exhaust air damper on unit and modulate space relief dampers to maintain the space static pressure.
- Refer to typical VFD/Motor control interface; delete “BV-In Bypass”.
- Refer to VFD Pump control, delete current transmitter, use VFD points for pump status.

15-2004_Drawing_E1.1-R0 Site Plan: Replace with drawing **15-2004_Drawing_E1.1-R1** for general electrical revisions as related to parking lot revisions.

FLOOR MOUNTED WATER CLOSET

ALL MOUNTING HEIGHTS AS INDICATED ARE MEASURED FROM THE FINISHED FLOOR TO THE TOP OF THE BOWL.

1) NORMAL INSTALLATION 15" (380mm)
2) WHEELCHAIR 16" (410mm)

WALL HUNG LAVATORY

ALL MOUNTING HEIGHTS AS INDICATED ARE MEASURED FROM THE FINISHED FLOOR TO THE TOP OF THE BOWL.

1) NORMAL INSTALLATION 31" (790mm)
2) WHEELCHAIR 34" (863mm)

SMS ENGINEERING

SMS Engineering Ltd. Consulting Engineers
770 Bradford Street Winnipeg MB Canada R3H 0N3
Telephone 204.775.0291 Fax 204.772.2153
sms@smseng.com

SPECIFICATION DETAIL

PLUMBING FIXTURES INSTALLATION HEIGHT

Drawn By	Approved By	Reference
SMS	SMS	4180
File No.	Date	Detail Sheet
02-018-01	MAY 2004	MD-29R1

FIXTURE HEIGHT ROUGH-IN SCHEDULE

WALL HUNG URINAL

ALL MOUNTING HEIGHTS AS INDICATED ARE MEASURED FROM THE FINISHED FLOOR TO THE TOP OF THE BOWL.

1) NORMAL INSTALLATION 22" (560mm)
2) WHEELCHAIR 19" (430mm)

WALL HUNG DRINKING FOUNTAIN

ALL MOUNTING HEIGHTS AS INDICATED ARE MEASURED FROM THE FINISHED FLOOR TO THE TOP OF THE BOWL.

1) NORMAL INSTALLATION 40" (1015mm)
2) WHEELCHAIR 32" (815mm)

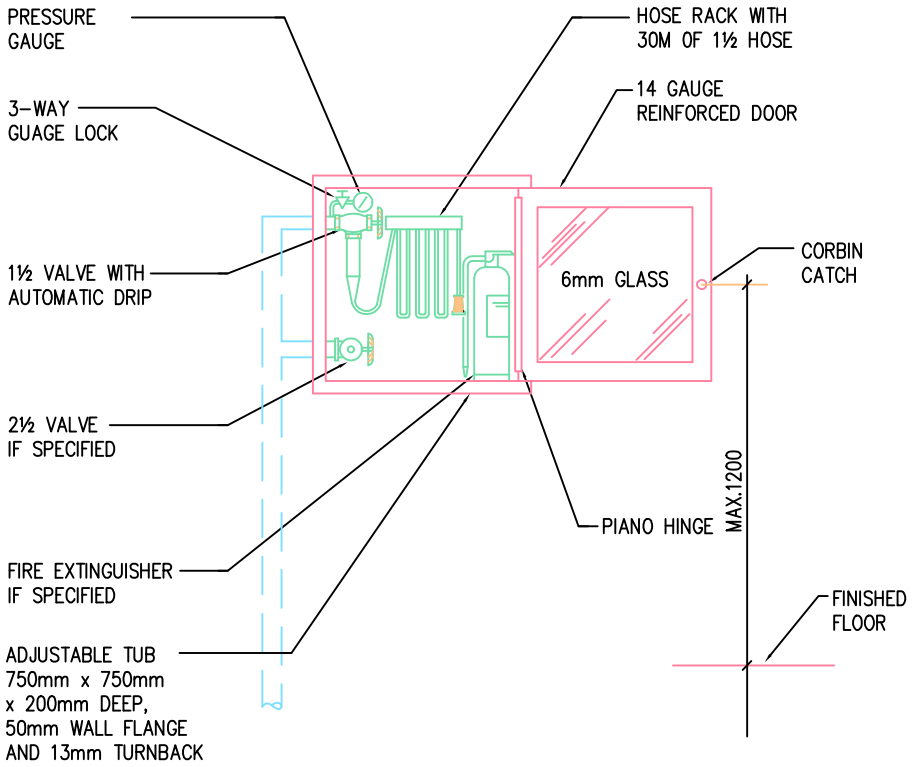
SMS ENGINEERING

SMS Engineering Ltd. Consulting Engineers
770 Bradford Street Winnipeg MB Canada R3H 0N3
Telephone 204.775.0291 Fax 204.772.2153
sms@smseng.com

SPECIFICATION DETAIL

PLUMBING FIXTURES INSTALLATION HEIGHT

Drawn By	Approved By	Reference
SMS	SMS	4181
File No.	Date	Detail Sheet
02-018-01	MAY 2004	MD-30R1



GENERAL NOTE:
SUPPLY AND INSTALL AT EACH 1½" HOSE VALVE A PRESSURE REDUCING DISC TO MAINTAIN 65 PSI RESIDUAL PRESSURE.

RECESSED MOUNTED FIRE HOSE CABINET

N.T.S.

SMS ENGINEERING
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sms@smseng.com

SPECIFICATION DETAIL

RECESSED MOUNTED FIRE HOSE CABINET

Drawn By	Approved By	Reference
SMS	SMS	5000
File No.	Date	Detail Sheet
02-018-01	MAY 2004	MD-34R1

PANEL: **PM(R1)** LOCATION: PARKING LOT SOUTH WEST

FED FROM: CDP-CC LOCATION: PARKING LOT SOUTH WEST

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
PARKING STALLS	1200	15	1	A	22	15	1200	PARKING STALLS
	1200	2P	2	B	23	2P	1200	
PARKING STALLS	1200	15	3	C	24	15	1200	PARKING STALLS
	1200	2P	4	A	25	2P	1200	
PARKING STALLS	1200	15	5	B	26	15	1200	PARKING STALLS
	1200	2P	6	C	27	2P	1200	
PARKING STALLS	1200	15	7	A	28	15	1200	PARKING STALLS
	1200	2P	8	B	29	2P	1200	
PARKING STALLS	1200	15	9	C	30	15	1200	PARKING STALLS
	1200	2P	10	A	31	2P	1200	
PARKING STALLS	1200	15	11	B	32	15	1200	PARKING STALLS
	1200	2P	12	C	33	2P	1200	
PARKING STALL	1200	15	13	A	34	15	1200	PARKING STALLS
PARKING STALL	1200	15	14	B	35	2P	1200	
SPACE			15	C	36	15	1200	PARKING STALLS
SPACE			16	A	37	2P	1200	
SPACE			17	B	38			SPACE
SPACE			18	C	39			SPACE
SPACE			19	A	40			SPACE
SPACE			20	B	41			SPACE
PARKING PANEL LIGHT	100	15	21	C	42			SPACE

VOLTAGE: **120/208V,3Ø,4W** LOADS - PH.A 13200

CAPACITY: 225A PH.B 12000

MOUNTING: CUSTOM PH.C 10900

REMARKS: TOTAL **36100**

REFER TO PARKING PANEL DETAIL

SMS ENGINEERING

SMS Engineering Ltd. Consulting Engineers

770 Bradford Street Winnipeg MB Canada R3H 0N3

Telephone 204.775.0291 Fax 204.772.2153

PANEL SCHEDULE PM(R1)

PROJECT: 1155 Pacific

FILE: 02-018-01

DATE: 14-Jun-04

PANEL: **PN(R1)** LOCATION: PARKING LOT SOUTH WEST

FED FROM: CDP-CC LOCATION: PARKING LOT SOUTH WEST

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
PARKING STALLS	1200	15	1	A	22	15	1200	PARKING STALLS
	1200	2P	2	B	23	2P	1200	
PARKING STALLS	1200	15	3	C	24	15	1200	PARKING STALLS
	1200	2P	4	A	25	2P	1200	
PARKING STALLS	1200	15	5	B	26	15	1200	PARKING STALLS
PARKING STALLS	1200	15	6	C	27	2P	1200	
PARKING STALLS	1200	15	7	A	28	15	1200	PARKING STALLS
	1200	2P	8	B	29	2P	1200	
PARKING STALLS	1200	15	9	C	30	15	1200	PARKING STALLS
	1200	2P	10	A	31	2P	1200	
PARKING STALLS	1200	15	11	B	32	15	1200	PARKING STALLS
	1200	2P	12	C	33	2P	1200	
PARKING STALLS	1200	15	13	A	34	15	1200	PARKING STALLS
	1200	2P	14	B	35	2P	1200	
PARKING STALLS	1200	15	15	C	36	15	1200	PARKING STALLS
PARKING STALLS	1200	15	16	A	37	2P	1200	
PARKING STALLS	1200	15	17	B	38	15	1200	PARKING STALLS
	1200	2P	18	C	39	2P	1200	
PARKING STALLS	1200	15	19	A	40	15	1200	PARKING STALLS
PARKING STALLS	1200	15	20	B	41	2P	1200	
SPACE			21	C	42	15	100	PARKING PANEL LIGHT

VOLTAGE: **120/208V,3Ø,4W** LOADS - PH.A 16800

CAPACITY: 225A PH.B 16800

MOUNTING: CUSTOM PH.C 14500

REMARKS: TOTAL **48100**

REFER TO PARKING PANEL DETAIL

SMS ENGINEERING

SMS Engineering Ltd. Consulting Engineers

770 Bradford Street Winnipeg MB Canada R3H 0N3

Telephone 204.775.0291 Fax 204.772.2153

PANEL SCHEDULE PN(R1)

PROJECT: 1155 Pacific

FILE: 02-018-01

DATE: 14-Jun-04

PANEL: **PP(R1)** LOCATION: PARKING LOT SOUTH

FED FROM: CDP-CC LOCATION: PARKING LOT SOUTH WEST

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
PARKING STALLS	1200	15	1	A	22	15	1200	PARKING STALLS
	1200	2P	2	B	23	2P	1200	
PARKING STALLS	1200	15	3	C	24	15	1200	PARKING STALLS
	1200	2P	4	A	25	2P	1200	
PARKING STALLS	1200	15	5	B	26	15	1200	PARKING STALLS
	1200	2P	6	C	27	2P	1200	
PARKING STALLS	1200	15	7	A	28	15	1200	PARKING STALLS
	1200	2P	8	B	29	2P	1200	
PARKING STALLS	1200	15	9	C	30	15	1200	PARKING STALLS
	1200	2P	10	A	31	2P	1200	
PARKING STALLS	1200	15	11	B	32	15	1200	PARKING STALLS
	1200	2P	12	C	33	2P	1200	
PARKING STALLS	1200	15	13	A	34	15	1200	PARKING STALLS
PARKING STALLS	1200	15	14	B	35	2P	1200	
PARKING STALLS	1200	15	15	C	36	15	1200	PARKING STALLS
PARKING STALLS	1200	15	16	A	37	2P	1200	
	1200	2P	17	B	38	15	1200	PARKING STALLS
PARKING STALLS	1200	15	18	C	39	2P	1200	
	1200	2P	19	A	40			SPACE
PARKING STALLS	1200	15	20	B	41			SPACE
	1200	2P	21	C	42	15	100	PARKING PANEL LIGHT

VOLTAGE: **120/208V,3Ø,4W** LOADS - PH.A 15600

CAPACITY: 225A PH.B 15600

MOUNTING: CUSTOM PH.C 15700

REMARKS: TOTAL **46900**

REFER TO PARKING PANEL DETAIL

SMS Engineering Ltd. Consulting Engineers
770 Bradford Street Winnipeg MB Canada R3H 0N3
Telephone 204.775.0291 Fax 204.772.2153

PANEL SCHEDULE PP(R1)

PROJECT: 1155 Pacific

FILE: 02-018-01

DATE: 14-Jun-04

PANEL: **PT(R1)** LOCATION: PARKING LOT SOUTH WEST

FED FROM: CDP-DD LOCATION: PARKING LOT NORTH WEST

Designation	Load (VA)	Ckt. Trip	bkr. No.	Phase	Ckt. No.	bkr. Trip	Load (VA)	Designation
PARKING STALLS	1200	15	1	A	22	15	1200	PARKING STALLS
	1200	2P	2	B	23	2P	1200	
PARKING STALLS	1200	15	3	C	24	15	1200	PARKING STALLS
	1200	2P	4	A	25	2P	1200	
PARKING STALLS	1200	15	5	B	26	15	1200	PARKING STALLS
	1200	2P	6	C	27	2P	1200	
PARKING STALLS	1200	15	7	A	28	15	1200	PARKING STALLS
	1200	2P	8	B	29	2P	1200	
PARKING STALLS	1200	15	9	C	30	15	1200	PARKING STALLS
	1200	2P	10	A	31	2P	1200	
SPACE			11	B	32			SPACE
SPACE			12	C	33			SPACE
SPACE			13	A	34			SPACE
SPACE			14	B	35			SPACE
SPACE			15	C	36			SPACE
SPACE			16	A	37			SPACE
SPACE			17	B	38			SPACE
SPACE			18	C	39			SPACE
SPACE			19	A	40			SPACE
SPACE			20	B	41			SPACE
SPACE			21	C	42	15	100	PARKING PANEL LIGHT

VOLTAGE: **120/208V,3Ø,4W** LOADS - PH.A 9600

CAPACITY: 225A PH.B 7200

MOUNTING: CUSTOM PH.C 7300

REMARKS: TOTAL **24100**

REFER TO PARKING PANEL DETAIL

SMS ENGINEERING

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Telephone 204.775.0291 Fax 204.772.2153

PANEL SCHEDULE PT(R1)

PROJECT: 1155 Pacific

FILE: 02-018-01

DATE: 14-Jun-04