



# City of Richmond

March 19, 2012  
File: 02-0775-50-4650/Vol 01

**Business and Financial Services Department**  
Finance Division  
Telephone: 604-276-4218  
Fax: 604-276-4162

**Attention: To All Tenderers**

Dear Sir/Madame:

**Re: Contract T.4650 – Minoru Arena Refrigeration Upgrade – Addendum Three**

This addendum, and all previously-issued addenda, shall form part of the Tender documents and shall be read, interpreted and coordinated with all other parts. The cost of all work contained herein, and in all previously-issued addenda, shall be included in the lump sum total tendered amount. The following revisions supersede information contained in the original specifications issued for the above project.

**I. Questions and Answers:**

Please see the attached information provided by Bradley Refrigeration Consultants Ltd.

**II. Extension to Tender Closing Date:**

Please be advised that the Tender Closing Date for Tenders has been extended:

WAS: Thursday March 22, 2012 at 3:00 pm, local time.  
IS NOW: Wednesday March 28, 2012 at 3:00 pm, local time.

Tenderers are advised that the project schedule dates, including the date for completion at July 31<sup>st</sup>, 2012, shall remain the same.

Yours truly,

Kerry Lynne Gillis  
*Buyer 2*

KG:kg

pc: Peter Jansen, Maintenance Planner, Project Development and Facilities Management

# BRADLEY REFRIGERATION CONSULTANTS LIMITED

1236 Fulton Avenue  
West Vancouver, B.C. V7T 1N6

March 19, 2012

MINORU ARENAS  
REFRIGERATION UPGRADE

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TO ALL TENDERERS

ADDENDUM # R-3

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Questions:

1. Please confirm the chiller capacity of Silver rink. 120TR or 140TR?  
**Answer: The chiller capacity is 140 TR at the conditions listed in the specification.**
2. Would you please specify more details of the heating requirements to maintain each compressor room above 55 Deg. F when the large fan is in operation (specification page 22)? Air makeup unit or unit heater? the location of the unit? **Answer: The unit heater is to maintain each compressor room at 55 Deg. F when the large fan is in operation.**
3. Please confirm the electrical work scope for Stadium rink.
  - a. Provide all three phase power wiring from starters to motors?  
**Answer: New three phase power wiring is included.**
  - b. Provide all new controls, control wiring, control panels and devices to control panel? **Answer: All new controls, control wiring, control panels and devices to the MCC is included. Mypro panels are to be installed on the compressors.**
4. Please specify the details for the up blast exhaust fan of the Stadium Rink. Do we have duct the wall mounted fan to the rooftop? **Answer: The wall mounted exhaust fans for the Stadium Rink must comply with the BC Safety Authority regulations and the CSA B52 code requirements for installation.**

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REFRIGERATION UPGRADE**

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**TO ALL TENDERERS**

**ADDENDUM # R-3**

5. The ammonia detector in the Silver rink is pretty new and the one in the Stadium rink is old. Please confirm which one has to be replaced.  
**Answer: Supply and install new ammonia detectors for each of the two compressor rooms.**
6. Please confirm if the eyewash stations for both rinks are to be replaced and installed? Please confirm the installation location.  
**Answer: New eyewash assemblies are to be installed using thru wall shutoffs valves to prevent freeze up as shown in the locations on the drawings for both rinks.**
7. It seems two exhaust fans are spec'd. Can a single 2 speed unit be considered? Please clarify.  
**Answer: two separate exhaust fans are required, one emergency or high capacity and one fan for low capacity continuous ventilation.**
8. What is the start-up schedule for the 2 facilities ice plants this year?  
**Answer: July 31, 2012 is the required completion date for both the Stadium rink and the Silver Rink.**
9. Fire rating on ceiling in Silver Arena. Can spray-on product be used to minimize disruption to electrical?  
**Answer: The fire rating for the rink ceiling is to be accomplished using dry wall, not spray on material.**
10. Dwg 1160-R2 – Note 14 What grade of panic hardware is required? Sargent or Von Duprin model #?  
**Answer: Panic hardware is to be stainless steel finish using either of the suppliers noted. Lock hardware is as follows: All exterior doors are ASSA Key and Lock set only supplied by Cobra Lockmasters. No alternates.**
11. Dwg 1160-R2 – Note 18 What are acceptable types of fire rating for back of firebox? Drywall fire taped? Spray fireproof?  
**Answer: Drywall fire taped.**

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**TO ALL TENDERERS**

**ADDENDUM # R-3**

12. Dwg 1160-R2 – Note 19 The 3 x 3 concrete pad to be level with the compressor room slab needs to be 12-14” high.
- a. Is a step and guardrail required? **Answer: Step and guard rail to be installed as required by the Building Code.**
  - b. There is an insulated water line and hose bib box in the current door location. Can door be moved over approx. 1'-6"”? **Answer: The door can be relocated.**
13. Dwg 1160-R2 – Note 20 What are acceptable fire rating types of infill to close and seal existing vestibule? Full size concrete block infill? Drywall? **Answer: Full size concrete block infill.**
14. Dwg 1160-R2 – Note 21 What are acceptable fire rating type for infill at the trench? Masonry? **Answer: Masonry or concrete.**
15. Dwg 1160-R3 – Note 4 What are acceptable products to one hour fire rate at existing windows? Drywall? Spray fireproofing? Insulation at windows required? **Answer: Masonry or concrete. Insulation is not required.**
16. Dwg 1160-R3 – Note 9 What are acceptable products to “close and seal existing door to Zamboni area with one hour rating”? Weld existing door to frame? Drywall? Concrete Block infill? **Answer: Full size concrete block infill.**
17. Dwg 1160-R3 – Note 11
- a. Is chain link fence only enclosure acceptable? Note calls for chainlink fence and steel stud. **Answer: Chain link fence is acceptable with a lockable gate into the storage space.**
  - b. The two doors in the storage room require an L-shaped enclosure with an added chain link fence gate in the room. Is this acceptable? **Answer: Yes.**

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**MINORU ARENAS  
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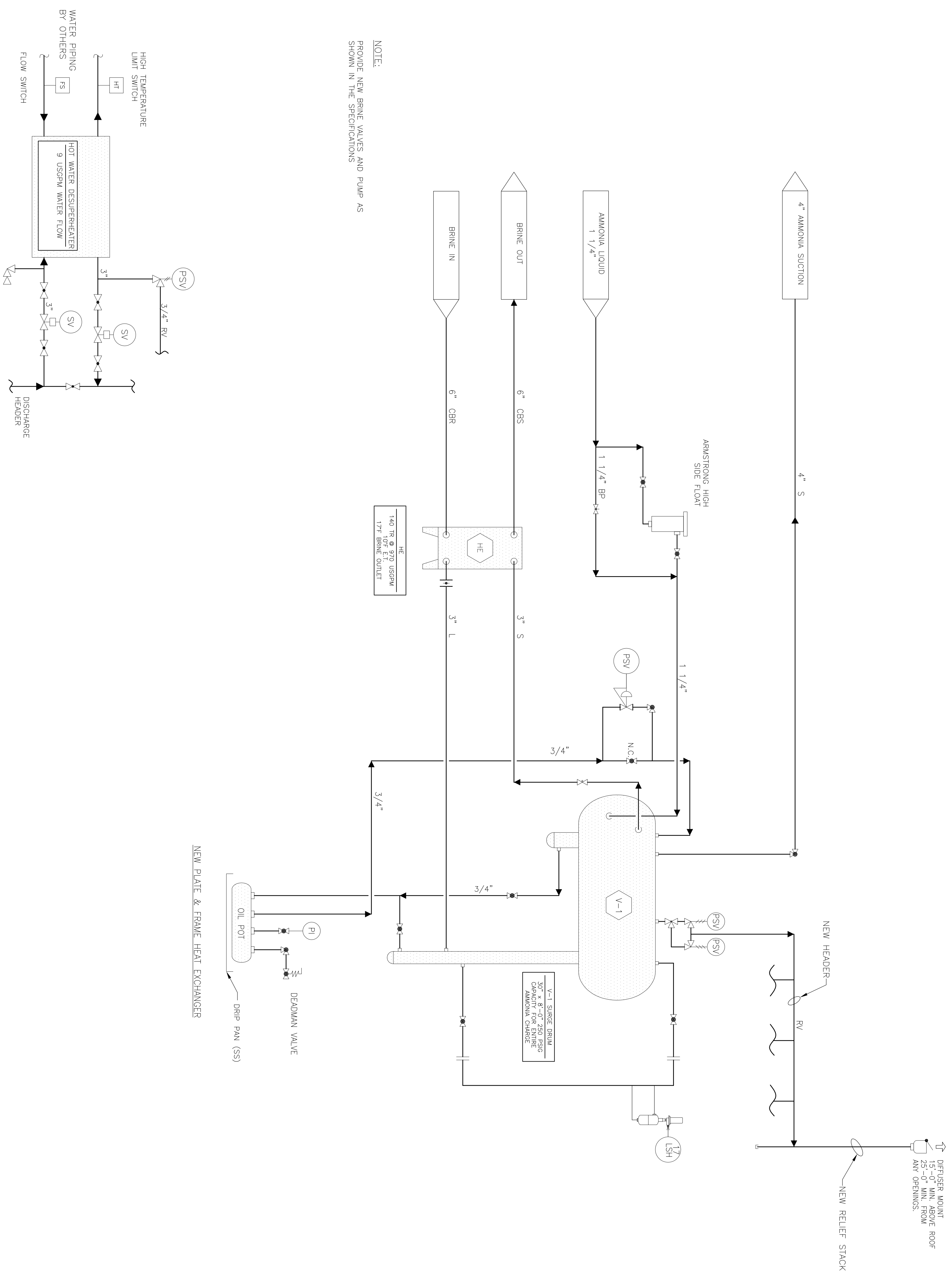
**TO ALL TENDERERS**

**ADDENDUM # R-3**

18. Drawing 1160 R-1, Rev. 3 (appended) is issued showing the desuperheater piping and controls. The contractor (refrigeration) is to install and wire the flow switch and high limit thermostats in the water lines in wells supplied by others as part of the desuperheater installation.

Eric C. Bradley, P. Eng.

SYMBOL LEGEND			
	PRESSURE SAFETY VALVE		CHECKVALVE WITH MANUAL LIFT STEM
	PRESSURE CONTROL VALVE		GATE VALVE
	MOTOR		NEEDLE VALVE
	LEVEL SWITCH - HIGH		GLOBE VALVE
	SOLENOID VALVE		ATMOSPHERIC RELIEF VALVE
	PRESSURE INDICATOR		SOLENOID VALVE
	TEMPERATURE INDICATOR		BUTTERFLY VALVE
	TEMPERATURE TRANSMITTER		CONTROL VALVE
	PRESSURE TRANSMITTER		CHECKVALVE
	PUMP		STRAINER
	WELDED CAP		SCREWED CAP
	DEADMAN VALVE		FLUGGED VALVE
	MOTORIZED BALL VALVE		BALL VALVE



NOTE:  
PROVIDE NEW BRINE VALVES AND PUMP AS SHOWN IN THE SPECIFICATIONS

AMMONIA DESUPERHEATER DETAIL

NEW PLATE & FRAME HEAT EXCHANGER

NOTES:

1. VALVES FOR AMMONIA SERVICE (UNLESS OTHERWISE NOTED);
2. SECOND CHOICE SHALL BE GLOBE VALVES
3. FULL PORT BALL VALVES ON SUCTION LINE
4. AMMONIA SUCTION LINES SHALL BE INSTALLED TO AVOID ALL POCKETS AND TRAPS.
5. REFRIGERATION CONTRACTOR TO VERIFY PORT SIZES FOR CONTROL VALVES.
6. ALL REFRIGERANT PIPING IS INSULATED. OIL POTS NOT TO BE INSULATED.

no.	date	revision	remarks
3	MAR 14/12	ISSUED FOR ADDENDUM R-1	
2	FEB 22/12	ISSUED FOR FINAL REVIEW	
1	FEB 15/12	ISSUED FOR 50% REVIEW	

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CITY OF RICHMOND  
MINORU ARENA SILVER RINK  
NEW CHILLER P & I DIAGRAM

drawn	PDM	checked	ECB
date	FEB 9/12	scale	NTS
issued		project	1160
drawing number	1160-R1	revision	3