



# Mechanical Addendum No. M02

**Project:** Watson Lake Recreation Centre – Backup Boiler Project  
**BSC Project No.:** 2023-086  
**Date Issued:** April 8, 2026  
**Page:** 1 of 1  
**Prepared by:** Colin Brown, EIT

This addendum shall be read in conjunction with and to amend the tender documents and will form part of the Contract Documents. Include in the Bid Price all revisions as outlined in the Addendum, which will become part of the Work. Perform all such work in accordance with the requirements of the Contract Documents and this Addendum. Acknowledge receipt of this Addendum by reference in the Bid Form submitted by the bidding Contractors and ensure that all parties submitting bids are aware of all items included in this Addendum. No consideration shall be allowed for increases to the Contract price due to failure of being familiar with this Addendum.

## ADDENDUM SCOPE

### 2.01 Pump Selection

Question:

Supplier cannot provide the specified pump at the intended flow and power. Can VLS 40959 7.5 hp 460v/4ph Pump with 4” combination valve and suction diffuser be used?

Response:

Refer to M011 Pump Schedule. Revise to:

TAG	DESCRIPTION	MANUFACTURER	MODEL	INLET & OUTLET SIZE (mm)	FLUID	FLOW RATE (L/s)	PR. HEAD (m)	POWER (kW)	ELECTRICAL (V/Ph/Hz)	NOTES
BP-1	NEW BOILER PUMP	B&G	4x4x9.5B	100	P. GLYCOL 50%	20.7	15	5.6	208/3/60	-

### 2.02 Boiler Specification 23 11 23

Question:

Boiler scheduled is a Patterson Kelly and specification section 23 11 23 mentions Weil Mclain. Is the Weil Mclain an option?

Response:

Specification Section 23 11 23 refers to propane piping and remains unchanged. Boiler requirements are specified in Section 23 52 23. Refer to the attached revised Section 23 52 23 (6 pages).

### 2.03 Venting Clarification on Alternates

Question:

Does the alternate boiler from Addendum-M01 require different venting requirements.

Response:

Venting for any accepted alternate boiler shall be designed and installed in accordance with the manufacturer’s installation instructions. Venting requirements may differ from those specified for the basis-of-design unit. Any resulting changes to venting configuration, materials, sizing, or routing shall be the responsibility of the Contractor. A complete venting design and supporting submittal shall be provided for Consultant review.

### 2.04 Tariffs

Question:

All taxes and tariffs are extra and not included in the price for this boiler. Please be aware that 25% or whatever value the governments decide on and what products are included in the tariffs may affect the boiler depending on when it crosses the border and when tariffs start and end. How would we make allowance for these tariffs.



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Response:

Bidders shall include all applicable duties and tariffs in effect at tender closing in their bid. Any changes to tariffs or duties after tender closing that directly impact material or equipment costs shall be addressed by change order.

### **2.05 Boiler Controls**

Question:

Is BACNet required on this boiler?

Response:

Refer to specification section 20 30 01 part 3.1.

### **2.06 Pressure Relief**

Question:

Will a 30-psi relief valve be good enough for this boiler?

Response:

Refer to 1/M010. Boilers come with an optional 30psi pressure relief valve.

### **2.07 Venting Drawing**

Question:

Flue venting, we would need a drawing that shows the boiler venting routing and elevations.

Response:

No elevation drawing available. Refer to photos 3/M010 and 4/M100. Floor to ceiling height is approximately 6m.

### **2.08 Boiler Startup**

Question:

Do we manufacture included startup on the boiler?

Response:

Provide manufacturer startup as required for warranty.

### **2.09 Condensate**

Question:

Will a condensate neutralizer be required? If so please provide specification.

Response:

Provide condensate neutralizers with boilers in accordance with Specification Section 23 11 23. Condensate neutralizer to be:

- Provide acidic condensate neutralizer sized for connected equipment, rated for minimum 3,000 MBH input and 24 GPH flow, complete with tank, fittings, and magnesium hydroxide media. Unit shall be serviceable without removal of piping and include provisions for media replacement. Treated discharge shall achieve a pH between 6.0 and 9.0 at outlet, verified by field testing; standard of acceptance: NBT-230 or equivalent.

**End of Addendum**

**Part 1 General**

**1.1 SCOPE**

- .1 This Section includes gas-fired, condensing boilers for glycol heating.

**1.2 RELATED WORK SPECIFIED IN OTHER SECTIONS**

- .1 Refer to and comply with the following sections:
- |     |  |                  |
|-----|--|------------------|
| .1  | General Mechanical Provisions                          | Section 20 05 01 |
| .2  | General Documentation                                  | Section 20 05 05 |
| .3  | Systems Demonstration and Owner's Instruction          | Section 20 05 06 |
| .4  | Equipment Testing and Startup                          | Section 20 05 08 |
| .5  | Valves and Strainers                                   | Section 20 05 23 |
| .6  | Pipe and Pipe Fittings                                 | Section 20 20 10 |
| .7  | Cleaning and Chemical Treatment - General Requirements | Section 20 21 00 |
| .8  | Testing, Balancing and Adjusting                       | Section 20 22 00 |
| .9  | Controls (Series)                                      | Section 20 30    |
| .10 | Hydronic System Specialties                            | Section 23 21 30 |
| .11 | Venting for Natural Gas or Propane Fired Appliances    | Section 23 51 10 |
| .12 | Electrical   | Division 26      |

**1.3 SUBMITTALS**

- .1 Comply with Section 20 05 05, General Documentation.
- .2 Prior to close of tender, advise mechanical trade of venting requirements for this appliance (Refer to Section 23 51 10).
- .3 Product Data: Include rated capacities; shipping, installed, and operating weights; furnished specialties; and accessories for each model indicated.
- .4 Shop Drawings: Detail equipment assemblies and indicate dimensions, required clearances, and method of field assembly, components, and location and size of each field connection.
- .1 Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer-installed and field-installed wiring.
- .5 Source Quality Control Tests and Inspection Reports: Indicate and interpret test results for compliance with performance requirements before shipping.
- .6 Field Test Reports: Indicate and interpret test results for compliance with performance requirements.
- .7 Maintenance Data: Include in the maintenance manuals specified in Division 1. Include parts list, maintenance guide, and wiring diagrams for each boiler.

## **1.4 QUALITY ASSURANCE**

- .1 Listing and Labeling: Provide electrically operated components specified in this Section that are listed and labeled.
  - .1 The Terms “Listed” and “Labeled”: As defined in NFPA 70, Article 100.
  - .2 Listing and Labeling Agency Qualifications: A “Nationally Recognized Testing Laboratory” as defined in OSHA Regulation 1910.7.
- .2 ASME Compliance: Boilers shall bear ASME “H” stamp and be National-Board listed.
- .3 FM Compliance: Control devices and control sequences according to requirements of FM.
- .4 Comply with NFPA 70 for electrical components and installation.
- .5 IRI Compliance: Control devices and control sequences according to requirements of IRI (GE GAP).
- .6 CSD-1.
- .7 SCAQMD Rule 1146.2 for low NOX equipment.

## **1.5 COORDINATION**

- .1 Coordinate size and location of concrete bases. Concrete, reinforcement, and formwork requirements are specified in Division 03.

## **1.6 WARRANTY**

- .1 General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Installing contractor shall provide one year of warranty parts and labor.
- .2 Special Warranty: Submit a written warranty, executed by the contractor for the heat exchanger.
  - .1 Warranty Period: Manufacturer’s standard, but not less than 10 years from date of Substantial Completion on the heat exchanger. Warranty shall be non-prorated and not limited to thermal shock. Additional 21 year thermal shock warranty on heat exchanger.

## **Part 2 Products**

### **2.1 MANUFACTURERS**

- .1 Available Manufacturers: Manufacturer shall be a company specializing in manufacturing the products specified in this section with minimum five (5) years’ experience. Subject to compliance with requirements, manufacturers offering boilers that may be incorporated into the Work include, but are not limited to, the following.

- .2 Contractor shall furnish and install full condensing boiler[s] with input and output capacity as scheduled on the drawings with construction and performance as noted in these specifications.
- .3 Copper fin designs, or designs requiring "add-on" secondary condensing exchangers will not be considered.

## **2.2 GENERAL DESCRIPTION**

- .1 Boiler to be large AASS water tube type complete with factory fabrication and assembly of burner, boiler, fittings, and automatic controls. The boiler, with all piping and wiring, shall be a complete factory integrated package. Each boiler shall be neatly finished, safety and fire tested, and properly packaged for shipping.
- .2 The entire Boiler design and construction shall be in accordance with Section IV of the ASME Code for hot water heating boilers with a maximum operating temperature of 210°F and maximum working pressure of 160 PSIG. The boiler shall be cULus certified as an indirect or direct vent boiler and comply with ASME CSD-1 Code requirements.

## **2.3 PERFORMANCE**

- .1 Ratings based on 684m altitude.

## **2.4 WATER TUBE STAINLESS STEEL BOILER**

- .1 General: modulating, sealed combustion, power-vented, high efficiency gas-fired boilers with stainless steel water-tube heat exchangers that use outside air for combustion (direct vent).
- .2 Efficiency: 95.0% AFUE, minimum DOE efficient as required by National Energy Conservation Act or ASHRAE 90.1.
- .3 Air quality: Independent laboratory rating of < 20 PPM for Oxides of Nitrogen (NOx) to meet the requirements of South Coast Air Quality Management District in Southern California and the requirements of Texas Commission on Environmental Quality.
- .4 Boilers to be suitable for heating inhibited propylene glycol solutions as specified.
- .5 Heat exchanger:
  - .1 Water-tube stainless steel heat exchanger.
  - .2 The boiler must have non-metallic condensate collector to capture condensate from both, the vent system and heat exchanger.
  - .3 Water-tube stainless steel heat exchanger to be fire tested and hydrostatically pressure tested at factory in accordance with ASME requirements
- .6 Factory Assembled and Tested.
- .7 Boiler(s) main components:
  - .1 The combustion chamber will be sealed and located at the top which will be of counter flow design to assure that sediment and any lime that might form will fall to the bottom away from the crown sheet area.

- .2 Boiler(s) shall be supplied with a gas valve designed with negative pressure regulation (fan venturi effect "pulls" gas through valve rather than gas pressure "pushing" gas through valve). Negative pressure regulation enables the boiler to operate in a safe condition at 3.5" W.C. inlet gas pressure. The inlet (natural or propane) gas pressure to the boiler gas valve should be a minimum of 3.5" W.C. and a maximum of 14" W.C. If inlet gas pressure exceeds 13" W.C., a 100% lock-up type gas pressure regulator of adequate size must be installed in gas supply piping and adjusted to prevent pressure in excess of 13" W.C.
- .3 The burner shall be premix combustion type, made with stainless steel and a woven metal fiber outer covering to provide a wide range of modulating firing rates.
- .4 The boiler shall be equipped with a variable speed blower system capable of modulating the boiler firing rate.
- .5 The boiler shall be equipped with a device capable of controlling the air/fuel ratio through a 10 to 1 turndown ratio.
- .8 Controls:
  - .1 The control system shall have an electronic display for boiler set-up, boiler status, and boiler diagnostics.
  - .2 High limit temperature control with manual reset.
  - .3 Flue gas, outlet water temperature, and return water temperature sensors.
  - .4 Low water protection with manual reset.
  - .5 Boiler controller:
    - .1 cUL 353 listed.
    - .2 Built-in MODBUS communication.
    - .3 4 circulator contacts.
    - .4 Auxiliary input/output capability.
    - .5 Variable temperature zones that require no mixing valves.
    - .6 3 thermostat inputs.
    - .7 Outdoor reset for each priority.
    - .8 Zone and priority based setup options.
    - .9 2 Network and 2 local priorities available on each cascaded boiler.
    - .10 Flue gas, outlet water temperature, and return water temperature sensors.
    - .11 LCD display and 5 button interface.
    - .12 Alarm contact that triggers during manual lockout, flame failure, high temperature limit and low water cut off.
    - .13 Remote modulation capable of interfacing with Building Automation Systems and Multiple Boiler Systems.
    - .14 Ability to control additional heat demand.
    - .15 Built-in freeze protection.
- .9 Venting and Combustion Air

- .1 Boiler(s) must be capable of using outside air piped directly to boiler for combustion. Inlet and termination of these pipes must be connected to either through-the-roof or sidewall terminations as recommended by the manufacturer.
- .10 Boiler Trim
  - .1 Combination pressure-temperature gauge. Gauge dial clearly marked and easy to read.
  - .2 ASME certified pressure relief valve set to relieve at 30 PSIG maximum.
- .11 Condensate neutralizer:
  - .1 Factor installed within enclosure.
  - .2 Replaceable neutralization media, corrosion resistant, low profile tank, baffle or similar designed to ensure backflow cannot occur, NPT union connections or similar.
  - .3 Sized for appliance flow under typical duty operating cycle. Use of single neutralizer for multiple boilers is acceptable.
  - .4 Condensate trap as required.

## **2.5 BOILER FLUE VENTING**

- .1 The Boiler shall be UCL certified as a direct vent boiler. Venting shall be accomplished with a stainless steel, double-wall, vent piping installed in accordance with applicable National and Local codes.
- .2 Venting to be stainless steel Type BH to Section 23 51 10, Venting for Natural Gas or Propane Fire Appliances.
- .3 Direct vent combustion air: to manufacturers listing and Section 23 51 10, Venting for Natural Gas or Propane Fire Appliances.
- .4 Heat exchanger may incorporate separate boiler and economizer sections constructed to ASME Section IV and Section VIII as applicable.

## **2.6 CAPACITY**

- .1 See Equipment Schedules on drawing

## **2.7 ACCEPTABLE MATERIAL**

- .1 Acceptable material: Patterson Kelly SC-3000

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Examine area to receive boiler for compliance with requirements for installation tolerances and other conditions affecting boiler performance. Do not proceed with installation until unsatisfactory conditions have been corrected.

### **3.2 INSTALLATION**

- .1 Boiler Manufacturer to advise mechanical trade on venting requirements (Refer to Section 23 51 10).

- .2 Comply with Section 20 05 08, Equipment Testing and Startup.
- .3 Install boilers level and plumb, according to manufacturer's written instructions and referenced standards.
- .4 Install gas and propane-fired boilers according to NFPA 54; CAN/CSA B149.1-10.
- .5 Support boilers on a minimum 100 mm thick concrete base, 100 mm larger on each side than base of unit.
- .6 Install electrical devices furnished with boiler, but not specified to be factory mounted.

### **3.3 CONNECTIONS**

- .1 Connect gas piping and individual regulator, full size, to boiler gas-train inlet with union. Provide for each of the propane and natural gas-trains.
- .2 Connect hot water piping to supply and return boiler tapings with shutoff valve and union or flange at each connection.
- .3 Install piping from safety-relief valves to nearest floor drain.
- .4 Connect breeching to boiler outlet, full size of outlet. The boiler shall operate under positive (Category IV) stack pressure. Vent material must be listed AL29-4C Stainless Double Wall Stack for condensing appliances.
- .5 Electrical: Comply with applicable requirements in Division 26. Provide transformers integrally factory wired where required.
- .6 Ground Equipment
  - .1 Tighten electrical connectors and terminals according to manufacturer's published torque tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

### **3.4 CLEANING**

- .1 Flush and clean boilers on completion of installation, according to manufacturer's written instructions.
- .2 After completing boiler installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finishes including chips, scratches, and abrasions with manufacturer's stainless steel polish.

END OF SECTION