**CSI 3-Part Specification for BTHS-1000A**

1. **General**
   1. **Summary**
      1. Related Documents
         1. Drawings and general provisions of the Subcontract apply to this Section.
         2. Review these documents for coordination with additional requirements and information that apply to the work under this section.
      2. Section Includes
         1. Water Heater
   2. **References**

General

* + - 1. The following documents form part of the Specifications to the extent stated. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
      2. Unless otherwise noted, the referenced standard edition is the current one at the time of commencement of the Work.
      3. Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.
  1. **Submittals**

Submit shop drawings/product data sheets for all products specified in Part 2 of this Section.

* 1. **Quality Assurance**

All materials shall meet or exceed all applicable referenced standards, federal, provincial/state and local requirements, and conform to codes and ordinances of authorities having jurisdiction.

1. **Products**
   1. **Water Heater**
      * 1. Commercial water heater (Natural or Propane) gas water heater(s) shall be A. O. Smith Cyclone XL model BTHS-1000A with minimum 97% thermal efficiency, storage capacity of 120 US gallons (451 litres), an input rating of 1,000,000 BTU/h, a recovery rating of 1176 gallons per hour (gph) (4452 litres per hour (Lph)) at 100°F (55°C) rise and a maximum hydrostatic working pressure of 160 psi (1103kPa).
        2. Modulating down-fired gas power burner designed for precise mixing of air and gas for optimum efficiency, requiring no special calibration on start-up, and that automatically adjusts the input based on demand.
        3. Integrated solid-state temperature and ignition control with graphical user interface, integral diagnostics, fault history, temperature and operating status. No-charge connectivity shall be provided allowing for remote monitoring and fault notification via app.
        4. Powered anodes that are non-sacrificial and maintenance-free.
        5. ASME-certified steel tank with seamless glass lining applied to all water-side surfaces after the tank has been assembled and welded.
        6. Foam insulation and includes a CSA-certified and ASME-rated T&P relief valve.
        7. Approved for 0” clearance to combustibles.
        8. Suitable for standard power venting using 6” diameter ULC S636 pipe up to 100 equivalent feet (30.5 equivalent metres) of vent piping. Suitable for power direct venting using 6˝ diameter ULC S636 pipe up to 100 equivalent feet (30.5 equivalent metres) of vent piping and 100 equivalent feet (30.5 equivalent metres) of intake air piping.
        9. Operation of the water heater(s) in a closed system where no provisions for thermal expansion have been made (with a properly sized thermal expansion tank) will void the warranty.

Basis of Design:

* + - * 1. A.O. Smith BTHS-1000A

1. **Certifications & Regulatory Compliance**
   1. Model is designed certified by Underwriters Laboratories (UL), Inc., to ANSI Z21.10.3- CSA 4.3 standards governing storage type water heaters.
   2. Model meets the thermal efficiency and standby loss requirements of Natural Resources Canada (NRCan) and current edition ASHRAE/IES 90.1
   3. Model is certified by Underwriters Laboratories to NSF standard 5 for 180°F (62°C) water.
   4. ASME-certified tank construction standard.
2. **Execution**
   1. **Demolition**

Refer to demolition requirements specified in Section entitled Demolition and Revision Work.

* 1. **Installation**

Installed in accordance with manufacturer’s instructions.

**End of Section**