**CSI 3-Part Specification for DSE**

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**
      1. 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.
   3. **Submittals**
      1. Submit shop drawings/product data sheets for all products specified in Part 2 of this Section.
   4. **Quality Assurance**
      1. All materials shall meet or exceed all applicable referenced standards, federal, Province/State and local requirements, and conform to codes and ordinances of authorities having jurisdiction.
2. **Products**
   1. **Water Heater**
      * 1. The heater(s) shall be Custom DSE Xi™ Series Commercial Electric Model Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_ as manufactured by A. O. Smith. Heater(s) shall be rated at \_\_\_\_\_\_\_\_\_kW, \_\_\_\_\_\_\_volts, \_\_\_\_\_\_\_\_\_\_\_\_ phase, 50/60 cycle AC.
        2. Tank(s) shall be \_\_\_\_\_\_\_\_ (5, 10, 20, 30, 40, 50, 65, 80,100 or 120) gallon capacity
        3. Tanks shall have\_\_\_\_\_\_\_\_\_\_\_ 160 psi working pressure.
        4. All internal surfaces of the tank shall be glass-lined with an alkaline borosilicate composition that has been fused-to-steel by firing at a temperature of 1600°F.
        5. Tank shall be cathodically protected with a combination of sacrificial and powered anodes.
        6. The entire vessel is to be enclosed in a round steel enclosure with baked enamel finish.
        7. Water heater shall have an electronic control with large LCD displaying current water heater status; provide real time element status and sensing, low water cut-off and economy mode operation.
        8. Shall have 120 volt control circuit transformer, transformer fusing, magnetic contactor(s), element fusing per N.E.C., and commercial grade incoloy elements.
        9. Temperature controls include limiting switch which will require resetting manually in the event the temperature reaches 202°F.
        10. The Operating Set Point is adjustable from 90°F/42°C to 190°F/88°C. The factory setting is 120°F/49°C.
        11. Approved for 180°F/82°C sanitizing applications.
        12. BACnet or Modbus compatible with optional ICC Gateway.
        13. Heater tank shall have a three-year limited warranty as outlined in the written warranty.

Basis of Design:

* + - * 1. A.O. Smith DSE

1. **Certifications & Regulatory Compliance**
   1. All models are designed certified by Underwriters’ Laboratories and classified to The National Sanitation Foundation Standard No. 5.
   2. Insulation shall meet the thermal efficiency and/or standby loss requirements of NRCan and current edition of ASHRAE/IES 90.1.
   3. All models meet National Sanitation Foundation NSF-5 requirements.
   4. Manufacturer shall supply a CSA Certified and ASME Rated T&P relief valve and drain valve.
   5. ASME tank construction standard on all model sizes
2. **Execution**
   1. **Demolition**
      1. Refer to demolition requirements specified in Section entitled Demolition and Revision Work.
   2. **Installation**
      1. Installed in accordance with manufacturer’s instructions.

**End of Section**