PART I. PART 1 - GENERAL

1.01 SECTION INCLUDES
   A. Operator Workstations
   B. Control System Servers
   C. Portable Operator Terminal

1.02 RELATED DOCUMENTS
   A. 15510 - Basic Mechanical Requirements.
   B. 15950 - Building Automation System (BAS) General
   C. Section 23 0900 - Building Automation System (BAS) General
   D. 15951 - BAS Basic Materials, and Devices
   E. Section 23 0913 – BAS Basic Materials, Interface Devices, and Sensors
   F. 15953 - BAS Field Panel
   G. Section 23 0903 - BAS Field Panel
   H. 15954 - BAS Communications Devices
   I. Section 23 0904 - BAS Communication Devices
   J. 15955 - BAS Software and Programming
   K. Section 23 0905 - BAS Software and Programming
   L. 15958 – BAS Sequence of Operation
   M. Section 23 0993 - Sequences of Operation
   N. 15959 – BAS Commissioning
   O. Section 23 0801 - BAS Commissioning

1.03 DESCRIPTION OF WORK
   A. Furnish and install software for Operator Interfaces and Control System Servers as required for the BAS functions specified. All installed software shall be supported by the manufacturer for a period of two years after Substantial Completion at no additional cost to the University.
   B. Refer to Section 15950 [23 0900] for general requirements.
**PART II. PART 2 - PRODUCTS**

2.01 OPERATOR WORKSTATION (OWS)
   A. Operator Workstation hardware and operating system will be provided and maintained by the University. Contractor shall coordinate hardware and operating system requirements with FMIT to meet software and specification requirements.

   *Edit the following as applicable.*
   B. Operator Workstations shall be placed as follows and as indicated on the drawings or as directed by the University.

2.02 CONTROL SYSTEM SERVER (CSS)
   A. Control System Server hardware and operating system will be provided and maintained by the University. Contractor shall coordinate hardware and operating system requirements with FMIT to meet software and specification requirements.

   *Edit the following as applicable*
   B. Control System Server shall be placed as follows and as indicated on the drawings or as directed by the University.

2.03 PORTABLE OPERATORS TERMINAL (POT)
   A. Portable Operators Terminal hardware and operating system will be provided and maintained by the University. Contractor shall coordinate hardware and operating system requirements with FMIT to meet software and specification requirements.

**PART III. PART 3 - EXECUTION**

3.01 INSTALLATION
   A. Install all software on the provided workstations and verify that the systems are fully operational. Ensure licensing is provided for all software.

   B. No license, software component, key, etc or any piece of information required to install, configure, operate, diagnose and maintain the system shall be withheld from the University.

   C. Install electronic control system Operation and Maintenance Manuals, programming guides, network configuration tools, control shop drawings etc on each OWS and CSS. Provide interface or shortcuts to guide user to the appropriate information.

   D. Set up portable operator terminal and configure it as a remote workstation. Install all software and verify that the system is fully operational.

   E. Install systems and materials in accordance with manufacturer’s instructions.

**END OF SECTION 15952 [23 0902]**