

### HVAC CONTROL CONTRACT DOCUMENT REQUIREMENTS

All HVAC controls specified on Contract Drawings shall comply with M. D. Anderson Cancer Center standards.

Each piece of mechanical equipment which requires building automation shall have the following 5 pieces of information specified in one construction document for each piece or system of mechanical equipment:

- I. Sequence of operation. Detailed specific directions on how this equipment or system was designed to operate.
- II. Schematic drawing of the mechanical equipment or system of mechanical equipment. Schematic shall display the exact mechanical hardware in the correct physical orientation to the equipment that is specified to be installed. All building automation control sensors and apparatus shall be represented in this schematic in the correct physical orientation and tagged with a logical acronym and a unique number identification.
- III. Material list of building automation sensors and apparatus spreadsheet. Five columns shall be divided with the following information specified in the rows:
  - a) Control Device - Corresponding logical acronym and a unique number identification used in the schematic drawing
  - b) QTY - The quantity of the apparatus specified
  - c) Product Number - Space is left blank unless a specific model number is required to meet the design intent
  - d) Manufacturer - Space is left blank unless a specific Manufacturer's product is required to meet the design intent
  - e) Description - Phrase which accurately describes the apparatus
- IV. Building Automation points summary spreadsheet. Four columns shall be divided with the following information specified in the rows:
  - a) BAS Acronym - To be left blank to be populated by Owner
  - b) Point Descriptor - Short description of the building automation point required
  - c) Point type
    - i. DI (digital input)
    - ii. AI (analog input)
    - iii. DO (digital output)
    - iv. AO (analog output)
  - d) Remarks
- V. Installation Notes. Any additional directions necessary to ensure the functional and design intent is achieved shall be listed and tagged.

The engineer shall organize these 5 categories of information in the one construction document when ever possible as follows:

- Top Right - Building Automation points summary spreadsheet
- Bottom Right - Material list of building automation
- Top Center - Sequence of operation
- Top Left - Installation Notes
- Bottom Left - Schematic drawing of the mechanical equipment

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**Note: Controlled documents are maintained electronically. Printed documents are UNCONTROLLED. Prior to relying on a printed document, verify that it is current.**