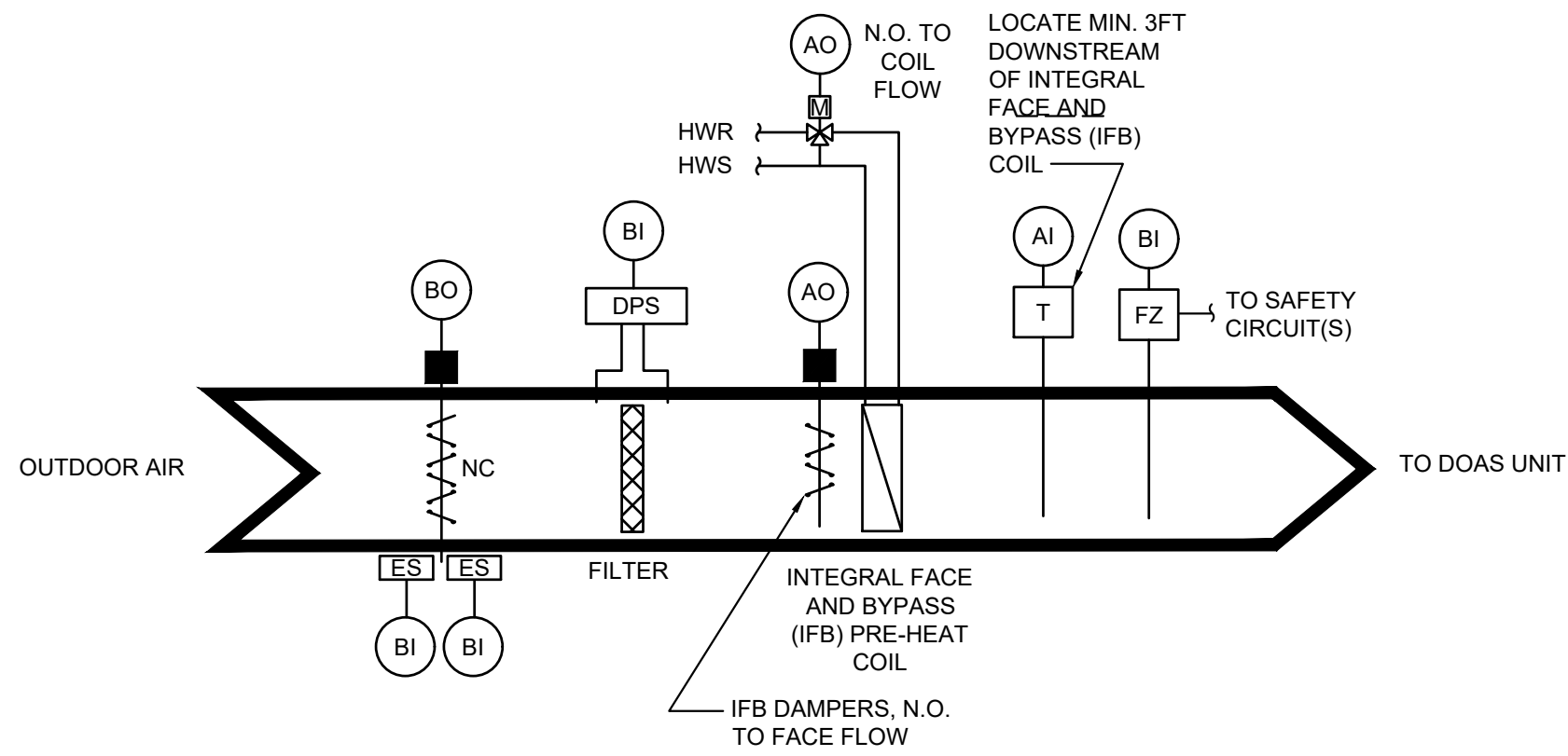
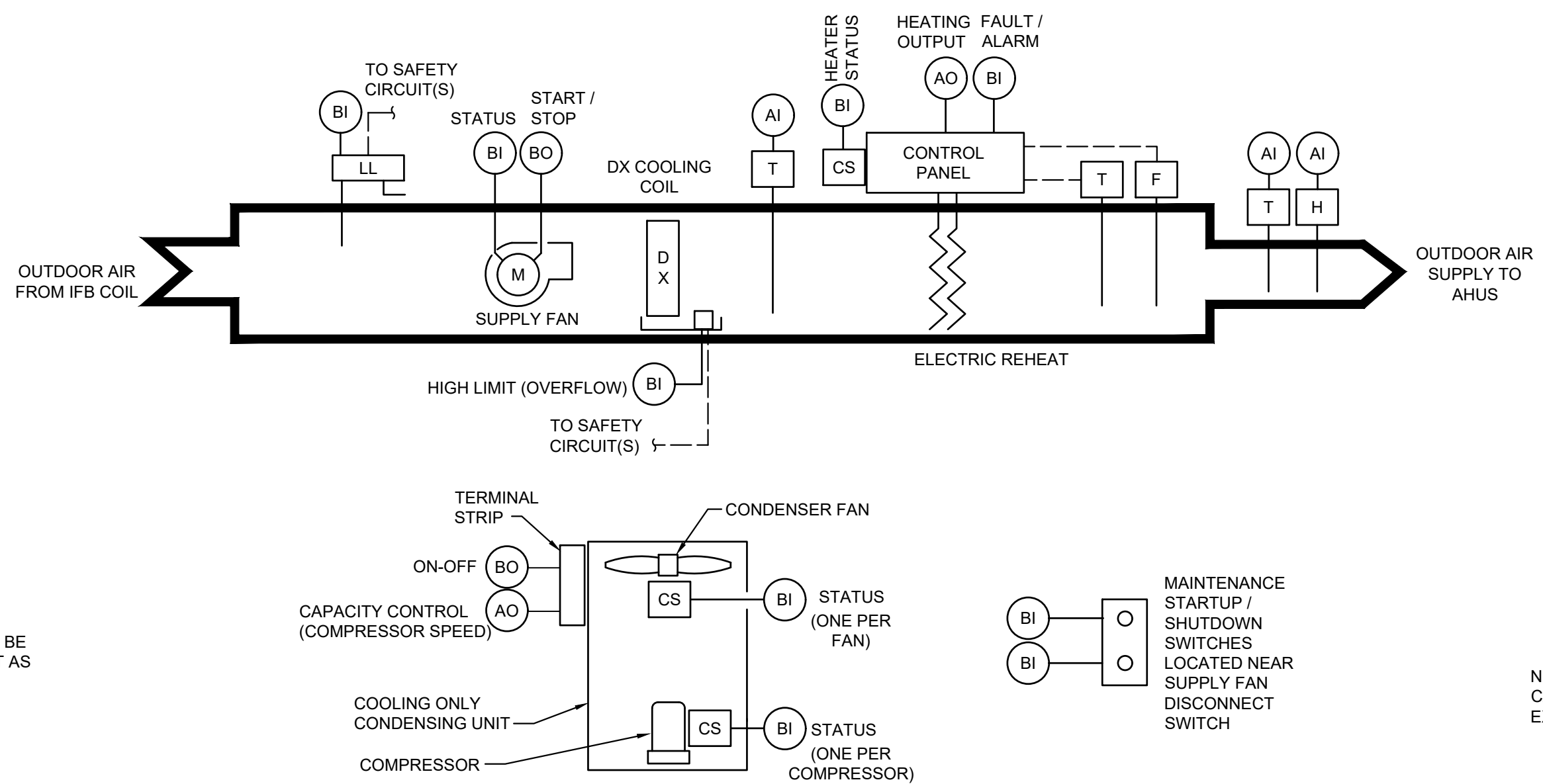


CONTROL DIAGRAM SYMBOL LEGEND

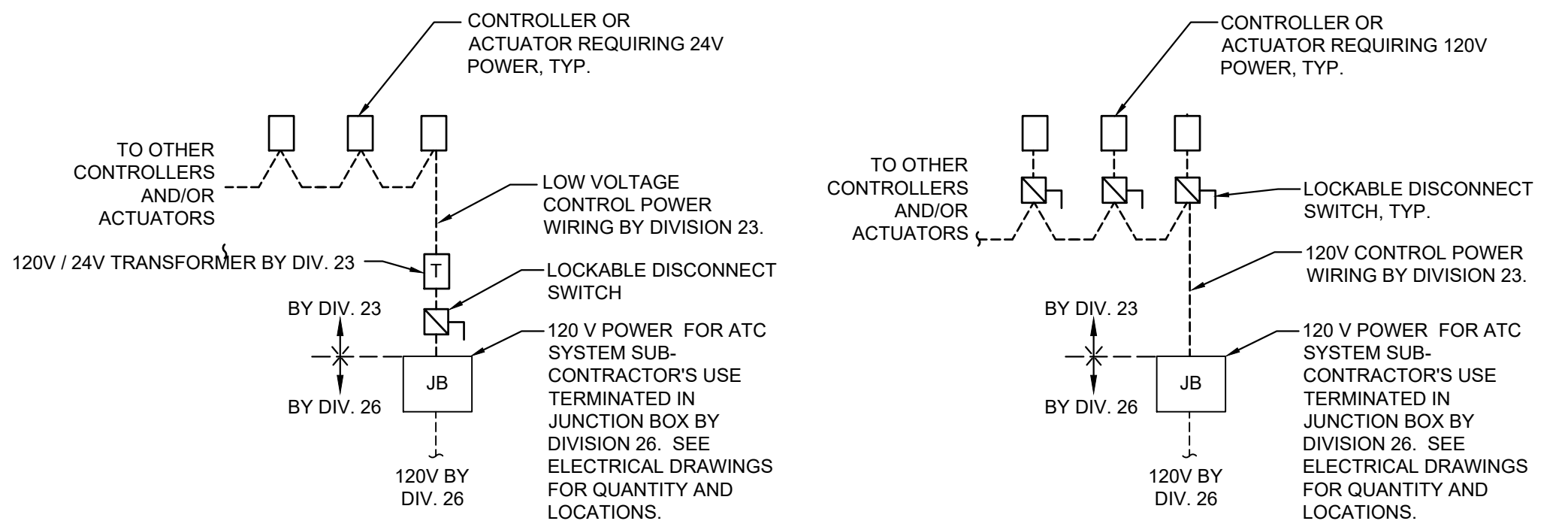
AO	FIELD APPLIED ANALOG OUTPUT FROM DDC SYSTEM
AI	FIELD APPLIED ANALOG INPUT TO DDC SYSTEM
BI	FIELD APPLIED BINARY INPUT TO DDC SYSTEM
BO	FIELD APPLIED BINARY OUTPUT FROM DDC SYSTEM
W-AV, AO	WRITE ANALOG VALUE, ANALOG OUTPUT FROM DDC SYSTEM - COMMUNICATION POINT
R-AV, AI	READ ANALOG VALUE, ANALOG INPUT TO DDC SYSTEM - COMMUNICATION POINT
R-BV, BI	READ BINARY VALUE, BINARY INPUT TO THE DDC SYSTEM - COMMUNICATION POINT
W-BV, BO	WRITE BINARY VALUE, BINARY OUTPUT FROM DDC SYSTEM - COMMUNICATION POINT
N.O.	NORMALLY OPEN (FAIL / SPRING RETURN OPEN)
N.C.	NORMALLY CLOSED (FAIL / SPRING RETURN CLOSED)
FZ	FREEZESTAT
H	RELATIVE HUMIDITY SENSOR
T	TEMPERATURE SENSOR
CS	CURRENT SWITCH OR SENSOR
SP	DUCT PRESSURE SENSOR
HL	HIGH LIMIT DUCT PRESSURE SWITCH
LL	LOW LIMIT DUCT PRESSURE SWITCH
DPS	DUCT DIFFERENTIAL PRESSURE SENSOR OR SWITCH
M	MOTORIZED CONTROL DAMPER (NOTE: DAMPER CONFIGURATION - PARALLEL OR OPPOSED BLADES, SHALL BE AS SPECIFIED OR EXPLICITLY INDICATED ELSEWHERE, NOT AS GRAPHICALLY DEPICTED IN THE CONTROL DIAGRAMS).
ES	CONTROL DAMPER END SWITCH
AFMS	AIRFLOW MEASURING STATION
M	2-WAY CONTROL VALVE
M	3-WAY CONTROL VALVE
VFD	VARIABLE FREQUENCY DRIVE
MS	MAGNETIC MOTOR STARTER
C	CONTACTOR OR RELAY COIL
FM	FLOW METER
F	FLOW SWITCH - WATER
DP	WATER PIPING DIFFERENTIAL PRESSURE SWITCH OR SENSOR WITH ISOLATION VALVES
LS	CABLE TYPE LEAK SENSOR
LS	SINGLE POINT TYPE LEAK SENSOR
M	MOTOR



1 INTEGRAL FACE AND BYPASS COIL CONTROL DIAGRAM  
NOT TO SCALE

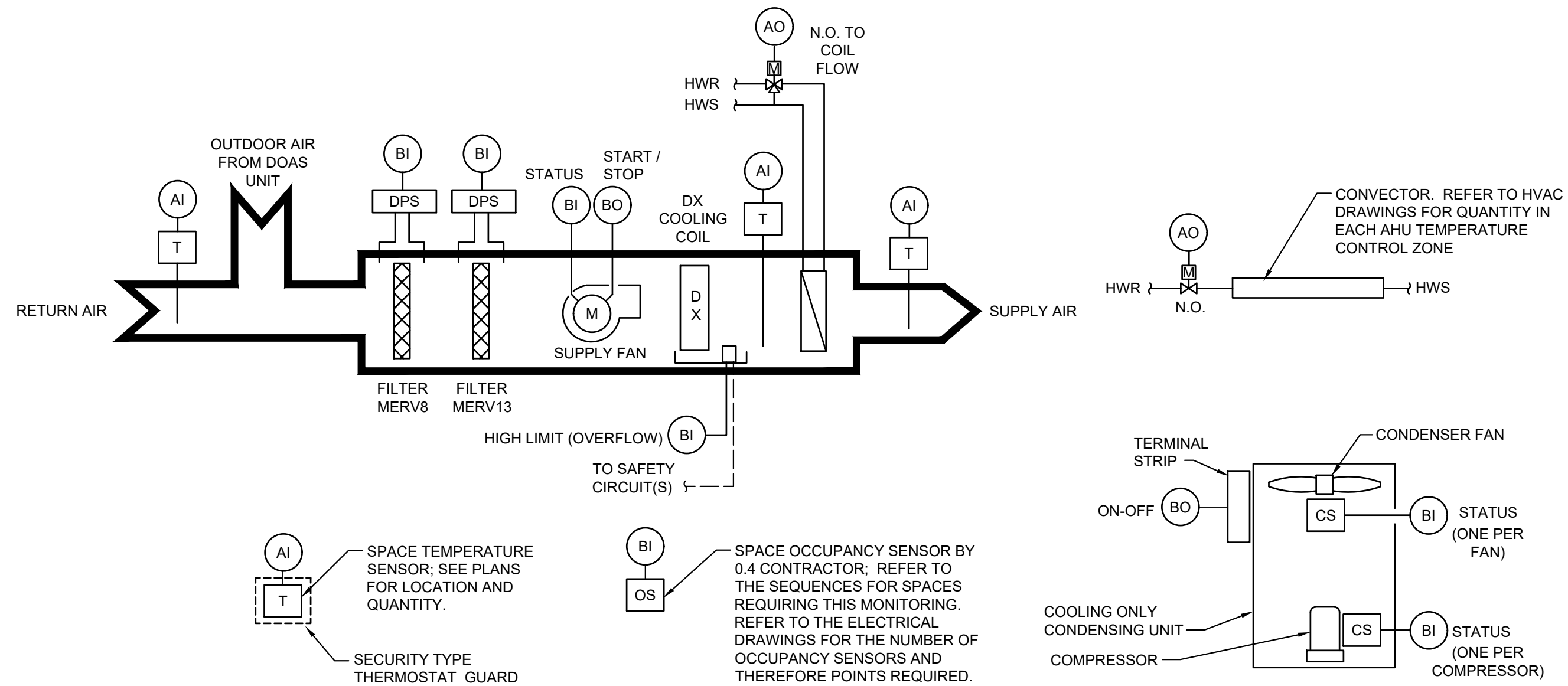


2 DEDICATED OUTDOOR AIR SYSTEM (DOAS-1, DOAS-2) CONTROL DIAGRAM  
NOT TO SCALE



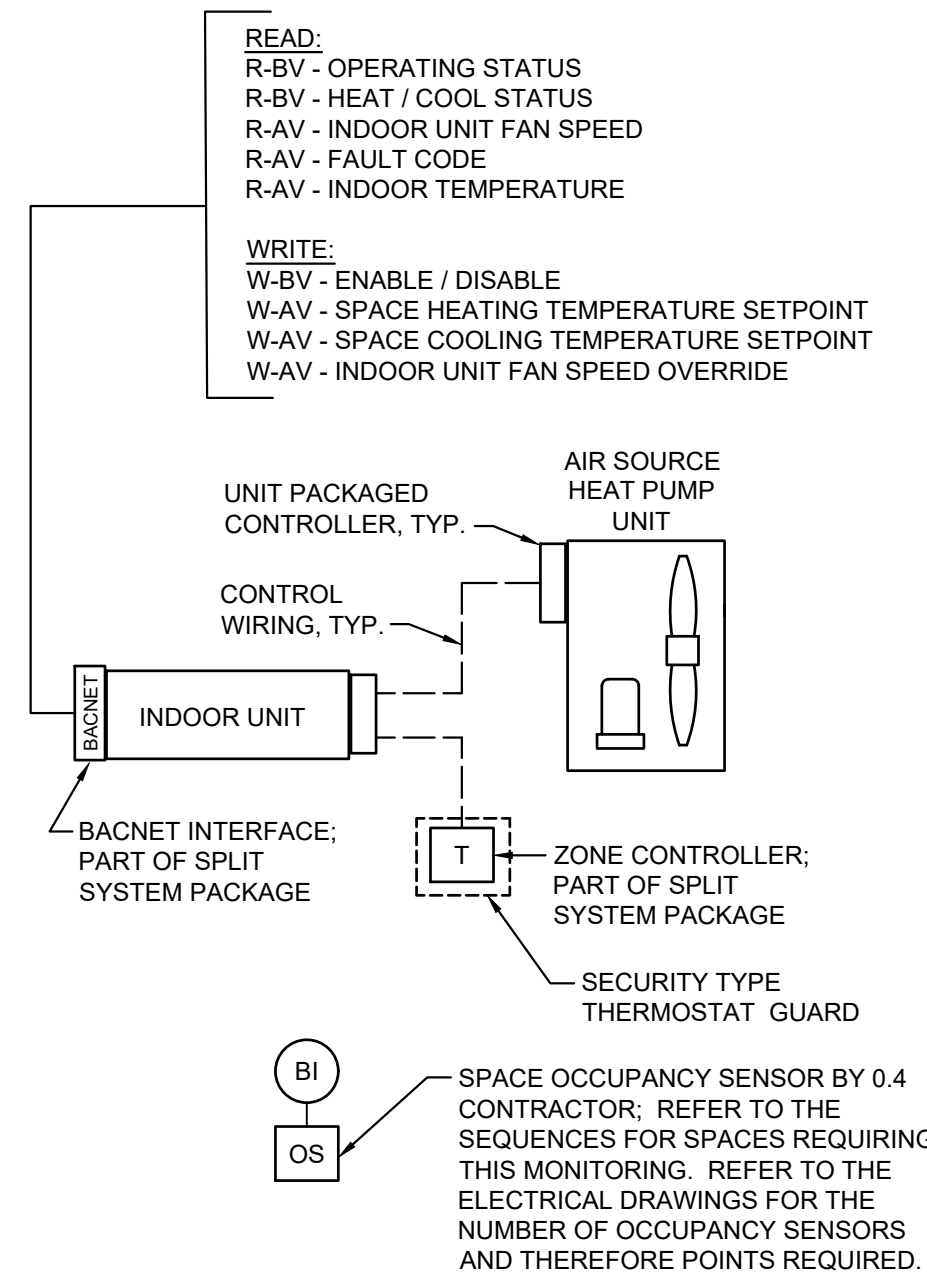
- NOTES:
- POWER WIRING TO ATC SYSTEM PANELS AND ELECTRIC MOTOR OPERATED DAMPERS WILL BE PROVIDED UNDER DIVISION 26 ONLY WHERE SUCH WORK IS EXPLICITLY SHOWN ON THE ELECTRICAL DRAWINGS. WHERE SUCH REQUIRED WORK IS NOT INDICATED ON THE ELECTRICAL DRAWINGS, POWER WIRING FOR CONTROL SYSTEMS AND EQUIPMENT SHALL BE PROVIDED UNDER DIVISION 23 BY THE ATC SUB-CONTRACTOR.
  - CONTROL SIGNAL AND INTERLOCK WIRING FOR HVAC CONTROL SYSTEMS SHALL BE PROVIDED UNDER DIVISION 23 BY THE ATC SUB-CONTRACTOR.
  - THE DIVISION 26 CONTRACTOR WILL BE PROVIDING 120V, 20A CIRCUITS TERMINATED IN JUNCTION BOXES THROUGHOUT THE BUILDING FOR THE ATC SYSTEM SUB-CONTRACTOR'S USE IN PROVIDING POWER TO CONTROLLERS AND CONTROL DEVICES REQUIRING POWER, INCLUDING VAV BOXES AND SIMILAR TERMINAL CONTROL EQUIPMENT. POWER SOURCES TO SOME SPECIFIC ATC EQUIPMENT MAY ALSO BE EXPLICITLY INDICATED ON THE ELECTRICAL DRAWINGS. CONTROL POWER WIRING WORK FROM THESE DIVISION 26-PROVIDED POWER SOURCES TO THE CONTROL SYSTEM CONTROLLERS AND OTHER DEVICES, INCLUDING ANY REQUIRED CONTROL TRANSFORMERS, ARE THE RESPONSIBILITY OF THE ATC SYSTEM SUB-CONTRACTOR, AS DEPICTED ABOVE.
  - PROVIDE DISCONNECT (TOGGLE) SWITCHES AT ALL 120V POWER SUPPLY CONNECTIONS TO CONTROL DEVICES / EQUIPMENT / CONTROLLERS. THIS INCLUDES, BUT IS NOT LIMITED TO, ELECTRIC ACTUATORS, TRANSMITTERS, AND CONTROL PANELS.
  - ALL ELECTRICAL WORK PROVIDED UNDER DIVISION 23 SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AND APPLICABLE DIVISION 26 SPECIFICATIONS.

3 CONTROL EQUIPMENT CONTROL POWER DETAIL  
NO SCALE

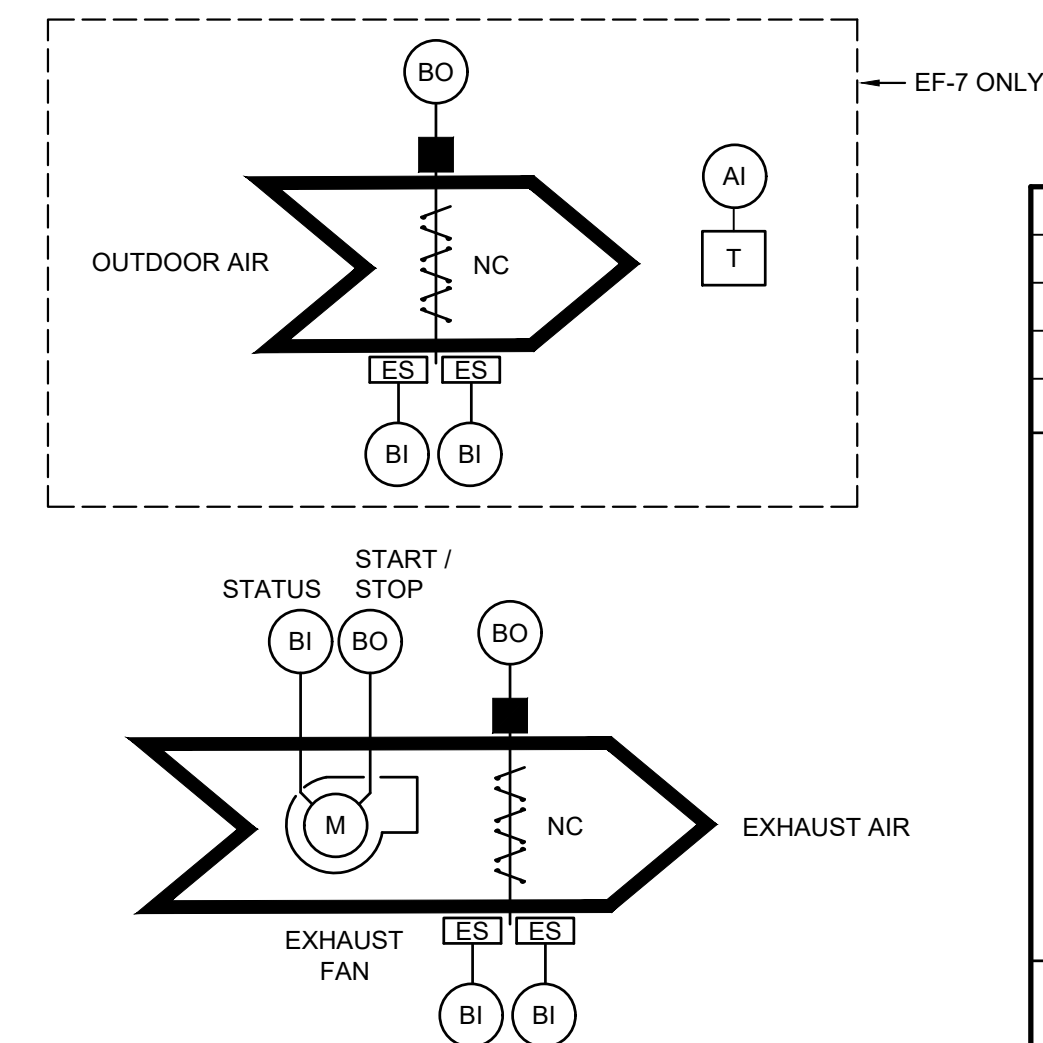


4 AIR HANDLING UNIT (AHU-X) CONTROL DIAGRAM  
NOT TO SCALE

5 OUTDOOR AIR SENSORS  
NOT TO SCALE



6 TYP. DUCTLESS SPLIT SYSTEM  
NOT TO SCALE



7 TYPICAL EXHAUST FAN  
NOT TO SCALE

GENERAL NOTE:

A CONTROL DIAGRAM HAS NOT BEEN PREPARED FOR ALL SYSTEMS AND EQUIPMENT REQUIRING CONTROLS. REFER TO THE SPECIFICATIONS AND SEQUENCES OF OPERATION FOR ADDITIONAL CONTROL WORK REQUIRED.

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:  
0 1  
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL.

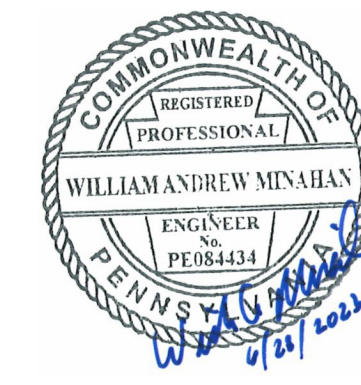
DRAWN BY  
W. MINAHAN  
CHECKED BY  
T. HOVAN

DATE  
27 JUNE 2023  
SCALE  
AS NOTED

SHEET No.

M-503

RECORD REVISIONS



PROFESSIONAL'S SIGNATURE DATE

**UpStreet** ARCHITECTS, INC.  
541 PHILADELPHIA ST. 911 MENOHER BLVD.  
INDIANA, PA 15701 JOHNSTOWN, PA 15905

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF GENERAL SERVICES  
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.  
**C-0588-0015 PHASE 1**

**LOYSVILLE YOUTH DEVELOPMENT CENTER- RENOVATIONS TO ZIMMERMAN-BINGAMAN (ZB) COTTAGE**  
DEPARTMENT OF HUMAN SERVICES  
LOYSVILLE, TYRONE TOWNSHIP, PERRY COUNTY, PA

CONTROL DIAGRAMS