BUILDING AUTOMATION SYSTEM
INTER-TRADE RESPONSIBILITY MATRIX

FMS = FACILITY MANAGEMENT SYSTEM/BUILDING AUTOMATION SYSTEM CONTRACTOR
23 = DIVISION 23 CONTRACTOR (PLUMBING OR HVAC)
26 = DIVISION 26 CONTRACTOR (ELECTRICAL OR FIRE ALARM CONTRACTOR)

	WORK	FURNISH	INSTALL	LOW VOLTAGE WIRE AND CONDUIT	LINE POWER AND CONDUIT
1	DUCT SMOKE DETECTORS (SHOWN ON MECHANICAL AND ELECTRICAL PLANS)	26	23	26	26
2	AUTOMATION DAMPERS	FMS	23	FMS	FMS
3	MANUAL VALVES, DAMPERS	23	23		
4	THERMOSTATS AND HUMIDISTATS	FMS	FMS	FMS	
5	FMS LOW VOLTAGE AND COMMUNICATION WIRING	FMS	FMS	FMS	
6	FMS CONDUITS AND RACEWAY	FMS	FMS	FMS	
7	FMS NETWORK ROUTERS, BRIDGES, HUBS AND ASSOCIATED CABLING	FMS	FMS	FMS	
8	FMS NODES, EQUIPMENT, HOUSINGS, ENCLOSURES AND PANELS AND POWER FROM DIV. 16 PANELS	FMS	FMS	FMS	FMS
9	THERMOSTAT/HUMIDISTAT/CO2 DETECTOR FOR CONTROL OF FRESH AIR MOTORIZED DAMPERS	FMS	23	FMS	FMS
10	FMS SOFTWARE, FIRMWARE AND PROJECT SPECIFIC SOFTWARE CONFIGURATIONS AND DATABASE ENTRIES	FMS	FMS	FMS	
11	MOTORIZED DAMPERS	FMS	23	FMS	FMS
12	EXHAUST FAN CONTROLS				26
13	SPLIT SYSTEM CONTROLLERS, DEHUMIDIFIER CONTROLLERS	FMS	FMS	FMS	26
14	CARBON MONOXIDE DETECTOR/ALARM	FMS	FMS	FMS	
15	VRF AND OUTSIDE AIR UNIT CONTROLLERS	23	FMS	FMS	

(1) SMOKE DETECTORS MUST BE COORDINATED WITH THE FIRE ALARM CONTRACTOR.

DDC SYSTEM NOTES

(1) INTERFACE ALL EQUIPMENT INTO THE EXISTING CAMPUS JCI BUILDING AUTOMATION SYSTEM. GRAPHICS, FLOOR PLANS, EQUIPMENT GRAPHICS, ETC. SHALL BE PROVIDED IN THE BUILDING AUTOMATION SYSTEM TO COORDINATE WITH PLANS.

(2) ALL EXHAUST FANS, SUPPLY FANS, ETC. SHALL BE INTERFACED TO THE BUILDING AUTOMATION SYSTEM. BUILDING AUTOMATION SYSTEM SHALL BE CAPABLE OF ON/OFF CONTROL OF FANS.

(3) ALL NEW FRESH AIR MOTORIZED DAMPERS SHALL BE CONTROLLED BY THE BUILDING AUTOMATION SYSTEM WITH OCCUPANCY SCHEDULE.

(4) ALL CONTROLS COMPONENTS INCLUDING SENSORS, DAMPERS, ETC. SHALL BE LABELED TO MATCH CONTROL DRAWINGS.

(5) ALL I.P. ADDRESSES SHALL BE LABELED.

(6) ALL CONTROL PANELS SHALL BE LABELED.

(7) LAMINATED CONTROL DRAWINGS SHALL BE INSTALLED AT CONTROL PANELS.

(8) ALL CONTROL PANELS SHALL INCLUDE BATTERY BACKUP UPS.

(9) COORDINATE DDC CONTROLLER TERMINAL ASSIGNMENTS WITH AUBURN UNIVERSITY DDC STANDARDS AND PRACTICES.

(10) DDC CONTROLS AS-BUILT DRAWINGS SHALL INCLUDE COLOR CODES FOR ALL MULTI-CONDUCTOR CABLES.

(11) CARBON MONOXIDE DETECTORS SHALL BE MACURCO MODEL CM-6 (OR APPROVED EQUAL).

(12) ALL CONTROL DEVICES SHOWN ON THE CONTROL DIAGRAMS SHALL BE FURNISHED BY THE FMS/BAS CONTRACTOR UNLESS OTHERWISE NOTED OR SPECIFIED.

(13) ALL COMPONENTS REQUIRED FOR THE SEQUENCES OF OPERATION, SHOWN AND/OR DESCRIBED ON THE CONTROL DIAGRAMS AND/OR SPECIFICATIONS, OR AS REQUIRED FOR A PROPERLY OPERATING SYSTEM SHALL BE FURNISHED AND INSTALLED BY THE FMS/BAS CONTRACTOR UNLESS OTHERWISE NOTED.

(14) ALL POWER WIRING AND TRANSFORMERS FOR SENSORS, ACTUATORS, AND OTHER CONTROL COMPONENTS AS REQUIRED FOR THE FMS AND/OR DDC SYSTEMS TO FUNCTION PROPERLY, SHALL BE FURNISHED AND INSTALLED BY THE FMS CONTRACTOR UNLESS OTHERWISE SHOWN, NOTED, OR SPECIFIED.

(15) ALL POWER WIRING FOR SENSORS, ACTUATORS, AND OTHER DEVICES SHALL BE FROM THE DDC PANEL OR THE FMS/BAS PANEL OF THE ASSOCIATED SYSTEM.

(16) ALL CONTROL, INTERLOCK, AND POWER WIRING SHALL BE INSTALLED PER THE ELECTRICAL SPECIFICATION, LOCAL, STATE, AND NATIONAL CODES. RACEWAY SHALL BE INSTALLED PER THE ELECTRICAL SPECIFICATIONS.

(17) ALL CONTROL POINTS SHOWN ON THE CONTROL DIAGRAMS/SPECIFICATIONS SHALL BE PROVIDED AND INTEGRATED INTO A FMS/BAS SYSTEM GRAPHIC REPRESENTATIVE OF THE CONTROL DIAGRAMS.

(18) ALL CONTROL BANDS, SETPOINTS, SETPOINT LIMITS, SETPOINT INCREMENT VALUES, SETPOINT DECREMENT VALUES, ALARM LIMITS, AND OTHER PARAMETERS SHALL BE ADJUSTABLE FROM THE FMS/BAS.

(19) ALL SETPOINTS SHALL BE ADJUSTABLE FROM THE FMS/BAS SYSTEM GRAPHIC(S).

(20) SPACE SETPOINTS SHALL BE ADJUSTABLE FROM THE ROOM SENSOR UNLESS OTHERWISE SHOWN ON DRAWINGS OR SPECIFIED.

(21) THE FMS/BAS SYSTEM GRAPHICS SHALL BE LINKED WITH ASSOCIATED BUILDING FLOOR PLANS FROM THE SPACE SENSOR OR AREA SERVED.

(22) WHERE ONE SYSTEM IS ASSOCIATED WITH ANOTHER SYSTEM, THE SYSTEM GRAPHIC SHALL BE LINKED TO THE ASSOCIATED GRAPHIC AS WELL AS THE BUILDING FLOOR PLAN GRAPHIC.

(23) THE BUILDING FLOOR PLAN SHALL DISPLAY THE SPACE TEMPERATURE AT EACH SPACE SENSOR LOCATION WITH AREA SERVED DISPLAYED IN SEPARATE COLORS BASED ON THE CONDITION OF THE ZONE. EXAMPLE – ALARM, NORMAL, HIGH OR LOW TEMPERATURE, HIGH OR LOW HUMIDITY, ETC.

(24) ALL BUILDING FLOOR PLANS AND SYSTEM GRAPHICS SHALL DISPLAY OUTSIDE AIR TEMPERATURE AND HUMIDITY.

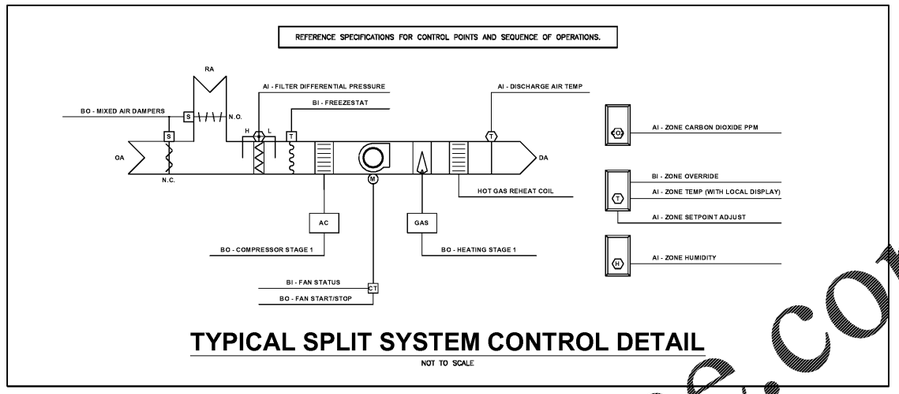
(25) THE FLOOR PLAN GRAPHICS SHALL BE LINKED TO A BUILDING GRAPHIC WITH A DIGITAL PHOTOGRAPH BACKGROUND OF THE ACTUAL BUILDING. DURING CONSTRUCTION A TEMPORARY GRAPHIC MAY BE USED THAT IS REPRESENTATIVE OF THE BUILDING.

(26) ALL GRAPHICS SHALL BE SUBMITTED IN COLOR WITH THE FMS/BAS SUBMITTAL.

(27) POWER WIRING (PWR) FROM POWER SOURCE TO DDC AND FMS/BAS PANELS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED ON DRAWINGS.

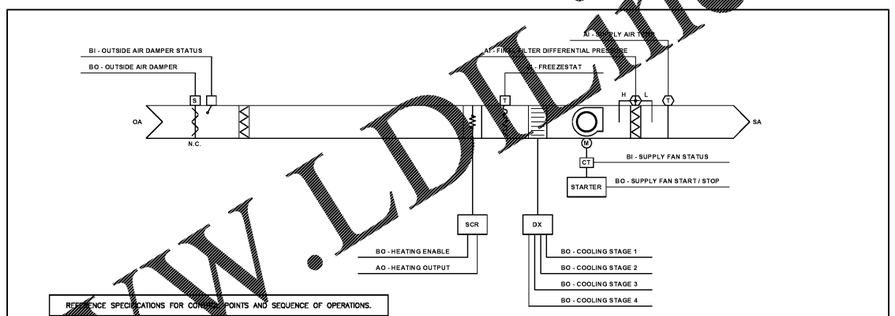
(28) REFERENCE SPECIFICATIONS FOR CONTROL POINTS AND SEQUENCE OF OPERATIONS.

(29) VRF EQUIPMENT SHALL BE COMPLETELY INTERFACED TO THE BUILDING AUTOMATION SYSTEM.



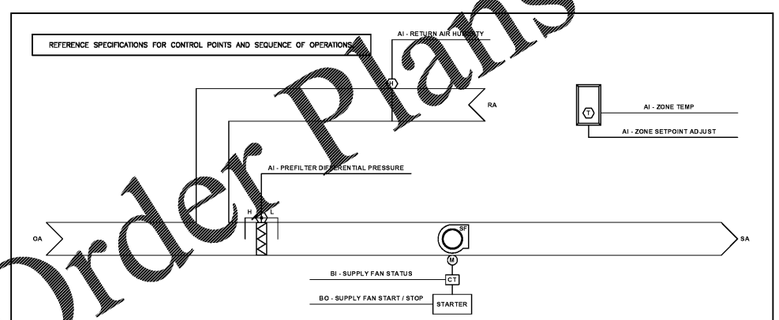
TYPICAL SPLIT SYSTEM CONTROL DETAIL

NOT TO SCALE



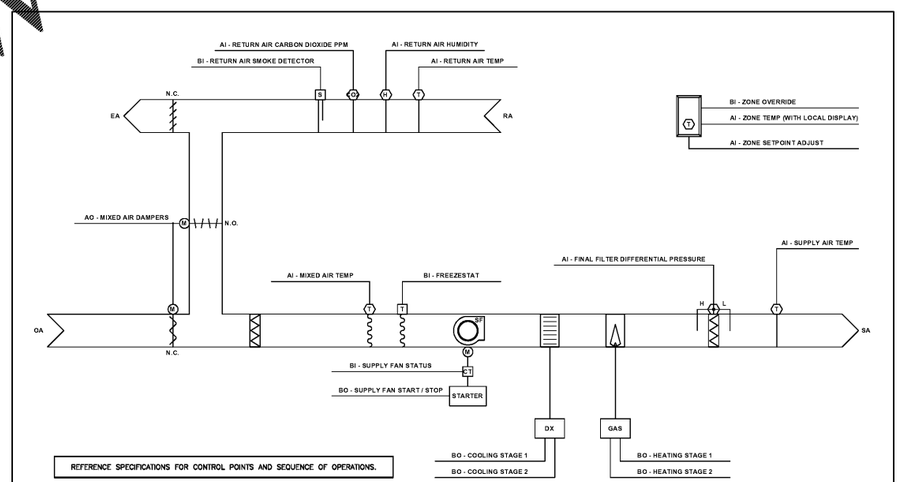
TYPICAL OUTSIDE AIR UNIT CONTROL DETAIL

NOT TO SCALE



TYPICAL DEHUMIDIFIER CONTROL DETAIL

NOT TO SCALE



TYPICAL PACKAGED UNIT CONTROL DETAIL

NOT TO SCALE

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HVAC DETAILS

WHORTON ENGINEERING, INC.
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WHORTON ENGINEERING PROJECT NO. 19212

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Safety is our first priority.
Think Safety. Act Safely.

No.	Revision	Date

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Ham Wilson Arena Renovations
Project Number 19-451

SHEET TITLE:
HVAC DETAILS

DRAWN BY:
JH

CHECKED BY:
RDW

DATE:
JANUARY 21, 2021

FILE NUMBER:

PROJECT NUMBER:
19-451

SHEET NUMBER:
M2.3