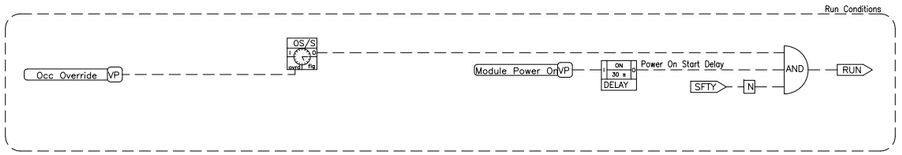


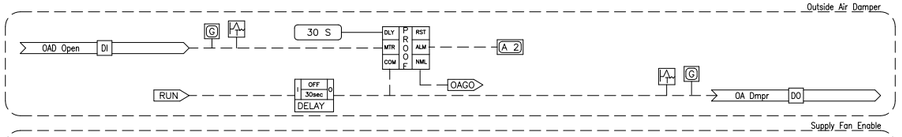


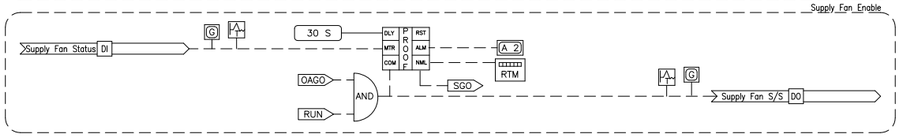


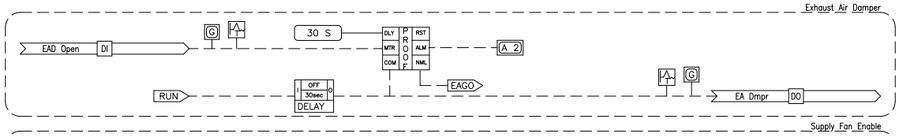


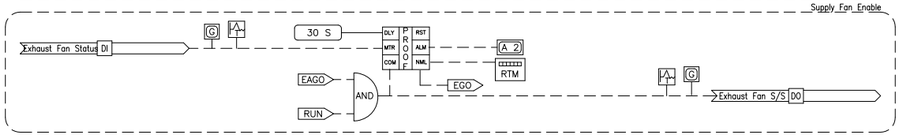


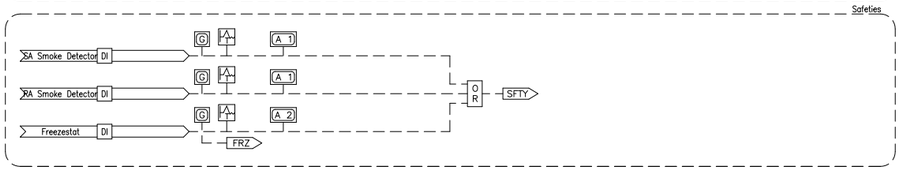


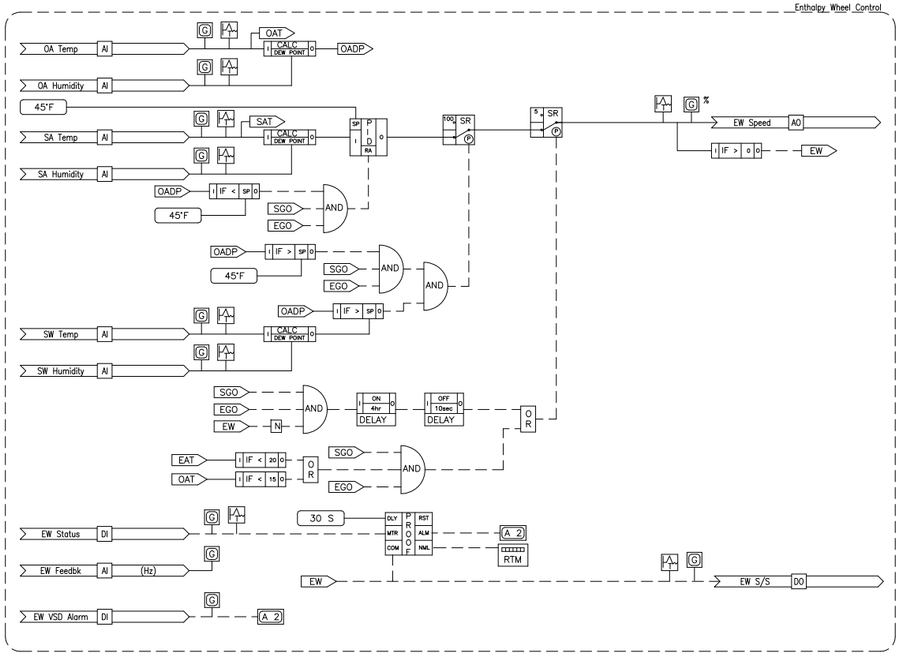

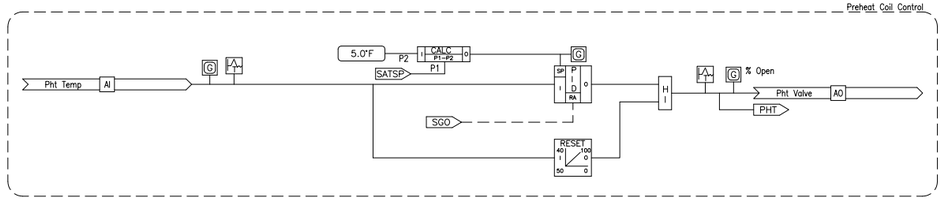


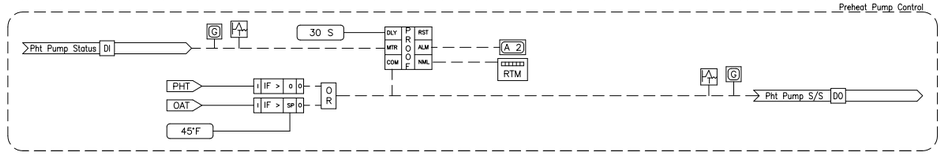


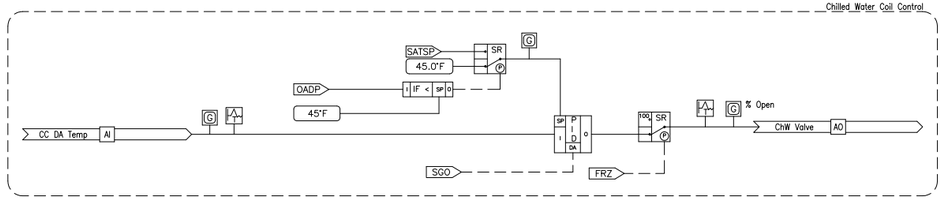


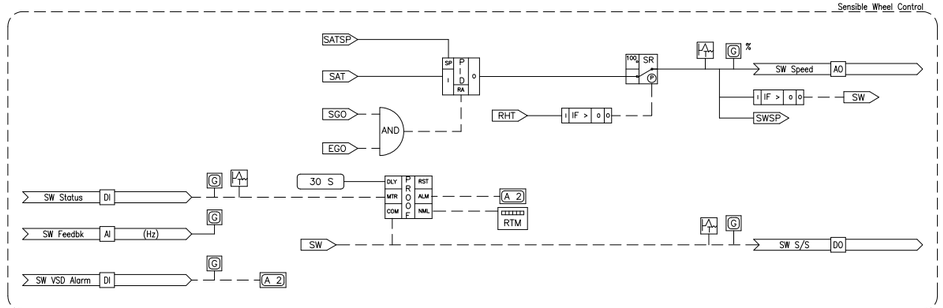


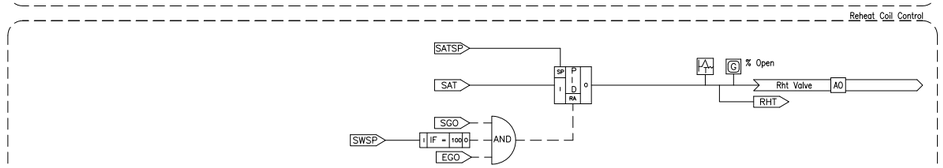

## POINTS LIST

| POINT NAME | POINT DESCRIPTOR | POINT TYPE DI | AI | DO | AO | REMARKS |
|---|---|---|---|---|---|---|
| MAUxx.SMK-RA-STS | MAUx RA Smk Det | 1 | | | | |
| MAUxx.RA-T | MAUx RA Temp | | 1 | | | |
| MAUxx.S-W-ALARM | MAUx SW VSD Alarm | 1 | | | | (may be network pt) |
| MAUxx.S-W-STS | MAUx SW Status | 1 | | | | |
| MAUxx.S-W-FDBK | MAUx SW Feedback | | 1 | | | (may be network pt) |
| MAUxx.S-W-C | MAUx SW Start/Stop | | | 1 | | |
| MAUxx.S-W-SPD-O | MAUx SW Speed | | | | 1 | |
| MAUxx.S-W-H | MAUx SW Humidity | | 1 | | | |
| MAUxx.S-W-T | MAUx SW Temp | | 1 | | | |
| MAUxx.E-W-ALARM | MAUx EW VSD Alarm | 1 | | | | (may be network pt) |
| MAUxx.E-W-STS | MAUx EW Status | 1 | | | | |
| MAUxx.E-W-FDBK | MAUx EW Feedback | | 1 | | | (may be network pt) |
| MAUxx.E-W-C | MAUx EW Start/Stop | | | 1 | | |
| MAUxx.E-W-SPD-O | MAUx EW Speed | | | | 1 | |
| MAUxx.EA-T | MAUx EA Temp | | 1 | | | |
| MAUxx.EXH-FN-C | MAUx EF Start/Stop | | | 1 | | |
| MAUxx.EXH-FN-STS | MAUx EF Status | 1 | | | | |
| MAUxx.EA-D-C | MAUx EAD Command | | | 1 | | |
| MAUxx.EA-D-STS | MAUx EAD Status | 1 | | | | |
| MAUxx.OA-D-C | MAUx OAD Command | | | 1 | | |
| MAUxx.OA-D-STS | MAUx OAD Status | 1 | | | | |
| MAUxx.OA-T | MAUx OA Temp | | 1 | | | |
| MAUxx.OA-H | MAUx OA Humidity | | 1 | | | |
| MAUxx.PMP-PH-C | MAUx PhtP Start/Stop | | | 1 | | |
| MAUxx.PMP-PH-STS | MAUx PhtP Status | 1 | | | | |
| MAUxx.PH-V-C | MAUx Pht Valve | | | | 1 | |
| MAUxx.PH-T | MAUx Pht Temp | | 1 | | | |
| MAUxx.L-T-A | MAUx Low Temp Alm | 1 | | | | |
| MAUxx.CHW-V-C | MAUx CHW Valve | | | | 1 | |
| MAUxx.CC-T | MAUx CC DA Temp | | 1 | | | |
| MAUxx.RH-V-C | MAUx Rht Valve | | | | 1 | |
| MAUxx.S-FN-C | MAUx SF Start/Stop | | | 1 | | |
| MAUxx.S-FN-STS | MAUx SF Status | 1 | | | | |
| MAUxx.SA-T | MAUx SA Temp | | 1 | | | |
| MAUxx.SA-H | MAUx SA Humidity | | 1 | | | |
| MAUxx.SMK-SA-STS | MAUx SA Smk Det | 1 | | | | |
| | TOTALS | 12 | 12 | 7 | 5 | |

## NETWORK INTERFACE POINT LIST

| POINT | POINT DESCRIPTOR | POINT TYPE READ | WRITE | UNITS |
|---|---|---|---|---|
| (Variable Speed/Freq Drives) | | | | |
| VSD.SPD | Speed | Y | | RPM |
| VSD.FREQ | Output Frequency | Y | | Hz |
| VSD.AMPS | Current | Y | | A |
| VSD.TORQ | Torque | Y | | % of motor |
| VSD.PWR | Power | Y | | kW |
| VSD.DCBV | DC Bus Voltage | Y | | V |
| VSD.OV | Output Voltage | Y | | V |
| VSD.ACC | Accelerate | Y | Y | Hz per second |
| VSD.DEC | Decelerate | Y | Y | Hz per second |
| VSD.LOCAL | Panel Local | Y | | ON/OFF |
| VSD.FAULT | Fault Status | Y | | Mfg Code |
| VSD.DRV | Drive Status | Y | | Mfg Code |
| VSD.KWHR | Kilowatt Hours | Y | | KWh |

## LOGIC VARIABLES

| BINARY | ANALOG | DESCRIPTION | # |
|---|---|---|---|
| RUN | | ON WHEN UNIT COMMANDED TO START | 5 |
| OAGO | | ON WHEN OUTSIDE AIR DAMPER ENERGIZED AND STATUS PROVEN | 2 |
| SGO | | ON WHEN SUPPLY FAN ENERGIZED AND STATUS PROVEN | 7 |
| EAGO | | ON WHEN EXHAUST AIR DAMPER ENERGIZED AND STATUS PROVEN | 2 |
| EGO | | ON WHEN EXHAUST FAN ENERGIZED AND STATUS PROVEN | 5 |
| SFTY | | ON WHEN Smoke Detector or Freezestat ARE ON | 2 |
| EW | | ON WHEN ENTHALPY WHEEL COMMANDED TO START | 2 |
| SW | | ON WHEN SENSIBLE WHEEL COMMANDED TO START | 2 |
| FRZ | | ON WHEN Freezestat IS ON | 2 |
| | OAT | VARIABLE VALUE OF OUTSIDE AIR TEMPERATURE | 3 |
| | OADP | VARIABLE VALUE OF OUTSIDE AIR DEW POINT | 5 |
| | SAT | VARIABLE VALUE OF SUPPLY AIR TEMPERATURE | 3 |
| | SATSP | VARIABLE VALUE OF SUPPLY AIR TEMPERATURE SETPOINT | 5 |
| | PHT | VARIABLE CALCULATED VALUE OF PREHEAT VALVE POSITION | 2 |
| | SWSP | VARIABLE CALCULATED VALUE OF SENSIBLE WHEEL SPEED | 2 |
| | RHT | VARIABLE CALCULATED VALUE OF REHEAT VALVE POSITION | 2 |
| | EAT | VARIABLE VALUE OF EXHAUST AIR TEMPERATURE | 2 |

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Facility Dynamics ENGINEERING
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UNIVERSITY of VIRGINIA
FACILITIES MANAGEMENT

HVAC CONTROLS STANDARDS

| | |
|---|---|
| Eng | DMC |
| Drawn | DMC |
| Chkd | HJN |
| Appd | --- |
| Issued | 8/4/11 |
| Job No. | 10080 |
| Scale | N/A |
| Proj Code | |

STANDARD

MAKE UP AIR UNIT (LOGIC)

10 OF 30
SHEET NUMBER

C-1.3b
DWG NUMBER

CONTROL LOGIC