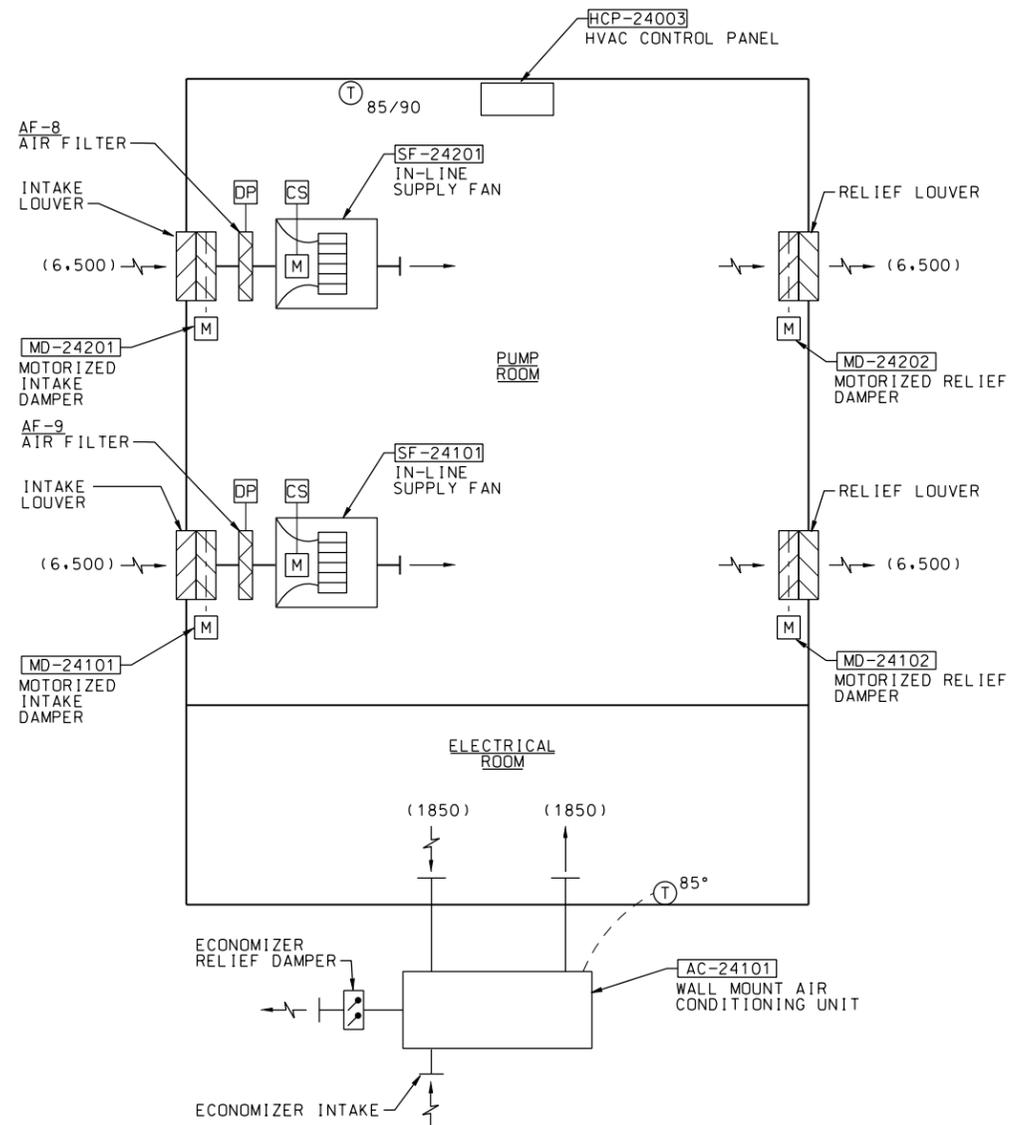


**SECTION A**  
1/8"=1'-0" H-10

**SEQUENCE OF OPERATION  
FINISHED WATER PUMP STATION  
HVAC CONTROL PANEL**

**HCP-24003**

- HCP-24003 SHALL BE DDC (DIRECT DIGITAL CONTROL).
- LOCATE HCP-24003 IN THE PUMP ROOM.
- THE FOLLOWING EQUIPMENT IS SERVED BY THIS HCP:
  - ◆ SF-24101, SF-24201, AC-24101, AND RELATED MOTORIZED DAMPERS.
- PROVIDE MANUAL ON/OFF/AUTO SWITCHES FOR SF-24101 AND SF-24201.
  - ◆ UNIT FAN SHALL BE ENABLED TO RUN AT ITS HIGHEST SPEED IN THE ON POSITION.
  - ◆ THE UNIT FAN AND COOLING AND/OR HEATING SHALL BE DISABLED IN THE OFF POSITION.
  - ◆ THE UNIT FAN, HEATING AND/OR COOLING SHALL BE CONTROLLED AS SPECIFIED HEREIN WHEN IN THE AUTO POSITION.
- PROVIDE RED ON INDICATOR LIGHTS FOR SF-24101 AND SF-24201.
- PROVIDE FLASHING AMBER UNIT FAILURE ALARM INDICATOR LIGHTS FOR SF-24101, SF-24201, AND AC-24101.
  - ◆ WHEN UNIT FAILURE IS SENSED, THE AMBER ALARM INDICATOR LIGHT FOR THAT UNIT SHALL LIGHT AND THE HCP SHALL SEND AN "HCP-24003 HVAC SYSTEM FAILURE" ALARM SIGNAL TO THE PLANT INSTRUMENTATION AND CONTROL SYSTEM.
  - ◆ WHEN THE PROBLEM IS PROVEN CORRECTED THE ALARM INDICATOR LIGHT SHALL GO OFF.
- PROVIDE FLASHING AMBER FILTER CHANGE INDICATOR LIGHTS FOR DUCT MOUNTED AIR FILTERS AF-8 AND AF-9. MONITOR FILTER PRESSURE DROP FOR EACH FILTER BANK BY MEANS OF A DIFFERENTIAL PRESSURE SWITCHES THAT CLOSE ELECTRICAL CONTACTS WHEN FILTER PRESSURE DIFFERENTIAL EXCEEDS THE ADJUSTABLE SET POINT. INITIAL SET POINT SHALL BE 1.00-INCHES WATER GAUGE.
- PROVIDE SINGLE-SPEED VENTILATION COOLING CONTROL FOR SF-24101 AND SF-24201.
  - ◆ IN THE AUTO POSITION THE FAN SHALL RUN WHEN THE WALL THERMOSTAT CALLS FOR COOLING.
  - ◆ THE FAN SHALL BE OFF WHEN THE THERMOSTAT NO LONGER CALLS FOR COOLING.
- PROVIDE LEAD/LAG UNIT CONTROL FOR SF-24101 AND SF-24201.
  - ◆ OPERATE DESIGNATED UNITS IN LEAD/LAG ARRANGEMENT. AUTOMATICALLY ALTERNATE THEIR STATUS ON WEEKLY BASIS.
  - ◆ THE INITIAL COOLING SET POINTS SHALL BE 85 DEG FOR THE LEAD FAN AND 90 DEG FOR THE LAG FAN. THE SET POINTS SHALL BE ADJUSTABLE.
  - ◆ IF EITHER LEAD OR LAG UNIT FAILS TO OPERATE ON COMMAND, LOCK IT OUT, REASSIGN LAG UNIT TO REPLACE IT, AND INITIATE FAN FAILURE ALARM.
- PROVIDE PACKAGED AIR CONDITIONING SYSTEM CONTROL FOR 2ACU-30001.
  - ◆ CONTROL COOLING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT SET POINT. INITIAL SET POINT SHALL BE 85 DEG, ADJUSTABLE.
  - ◆ THE AIR CONDITIONING UNIT MANUFACTURER'S UNIT MOUNTED CONTROL PANEL SHALL COORDINATE OPERATION OF THE INDOOR AIR SUPPLY FAN, COOLING COIL, ECONOMIZER, AND THE REFRIGERATION SECTION IN RESPONSE TO THE ROOM THERMOSTAT.
  - ◆ ALL CONTROL MODES SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA TITLE 24 ENERGY EFFICIENCY STANDARDS.
- PROVIDE MOTORIZED DAMPER CONTROL FOR MD-24101 AND MD-24102, INTERLOCKED WITH SF-24101, AND MD-24201 AND MD-24202, INTERLOCKED WITH SF-24201. INTERLOCK THE MOTORIZED DAMPERS TO THE RESPECTIVE FAN TO OPEN WHEN THE FAN IS CALLED TO START, BEFORE THE FAN STARTS, AND TO CLOSE WHEN THE FAN IS OFF.



**AIR FLOW AND CONTROL DIAGRAM**  
NTS



DATE: 10/05/09

REVISIONS	DATE	APPROVAL

**FINISHED WATER PUMP STATION  
SECTION, DIAGRAM AND SEQUENCE**

EASTERN MUNICIPAL WATER DISTRICT  
PERRIS DESALINATION FACILITY  
PERRIS, CALIFORNIA

DESIGNED BY: K. WELP  
DRAWN BY: S. HOSTETLER  
CHECKED BY: B. GIFFORD

U.S. ARMY ENGINEER DISTRICT  
LOS ANGELES  
CORPS OF ENGINEERS

ART. JUNG, P.E.  
CHIEF DESIGN BRANCH

SPEC. NO.: NOT APPLICABLE  
L.A. DISTRICT FILE NO. XXX-XXXX  
CADD FILE NAME: P05m505d.dgn