

**GENERAL NOTES:**  
(NOTES APPLY TO SHEETS FA110B THROUGH FA121)

1. CONTRACTOR SHALL INSTALL DUCT SMOKE DETECTORS DOWNSTREAM OF THE AIR FILTERS AND AHEAD OF ANY BRANCH CONNECTIONS IN AIR SUPPLY SYSTEMS HAVING A CAPACITY GREATER THAN 2,000 CFM, PER NFPA 90A. CONTRACTOR SHALL ALSO INSTALL DUCT DETECTORS AT EACH STORY PRIOR TO THE CONNECTION TO A COMMON RETURN AND PRIOR TO ANY RECIRCULATION OR FRESH AIR INLET CONNECTION IN AIR RETURN SYSTEMS HAVING A CAPACITY GREATER THAN 15,000 CFM AND SERVING MORE THAN ONE STORY, PER NFPA 90A. PROVIDE REMOTE TEST STATIONS FOR EACH DUCT DETECTOR. CONTRACTOR SHALL CONNECT NEW DUCT DETECTORS TO THE NEW FIRE ALARM CONTROL PANEL. NEW RELAYS (NOT SHOWN) SHALL BE INSTALLED IN-LINE WITH THE POWER FEED TO EACH AHU TO SHUT DOWN ALL AHU'S IN THE EVENT THAT SMOKE IS DETECTED IN THE BUILDING. REFER TO THE ED SHEETS FOR APPROXIMATE LOCATIONS AND CMF'S OF EXISTING HVAC EQUIPMENT. REFER TO VOLUME 2 FOR AS-BUILT INFORMATION OF THE HVAC SYSTEM.

2. THE NEW FIRE ALARM/MASS NOTIFICATION SYSTEM SHALL BE CONTRACTOR DESIGNED AND INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS INCLUDING BUT NOT LIMITED TO NFPA 70, NFPA 72, AND NFPA 101. NUMBER AND LOCATIONS OF DEVICES SHOWN ARE CONCEPTUAL AND GENERIC. FINAL PLACEMENT AND QUANTITIES SHALL BE DETERMINED BY CONTRACTOR'S DESIGN.

3. FINAL LOCATIONS OF ALL CEILING MOUNTED INITIATING AND NOTIFICATION DEVICES SHALL BE COORDINATED TO AVOID CONFLICTS WITH EXISTING LIGHTING, HVAC, ETC.

4. NEW FIRE ALARM AND MASS NOTIFICATION CONTROL PANELS SHALL BE FED FROM THE SAME SOURCE AS THE EXISTING FIRE ALARM CONTROL PANEL. THE EXISTING BREAKER FEEDING THE EXISTING FIRE ALARM CONTROL PANEL SHALL BE REPLACED AS NECESSARY TO ACCOMMODATE THE NEW CONTROL PANEL. ANY NEW CIRCUIT BREAKERS INSTALLED TO SUPPLY FIRE ALARM EQUIPMENT SHALL BE COLORED RED AND BE IDENTIFIED AS "FIRE ALARM CIRCUIT" PER NFPA 70 ARTICLE 760.41(B).

5. ALL NEW WALL MOUNTED EQUIPMENT SHALL BE SURFACE MOUNTED. CONTRACTOR SHALL PAINT THE EXPOSED CONDUIT TO MATCH THE COLOR OF THE SUPPORTING SURFACE.

6. CONDUIT ASSOCIATED WITH NEW DEVICES CEILING MOUNTED ON SUSPENDED CEILINGS SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING TO THE GREATEST EXTENT POSSIBLE.

7. EXISTING CONCEALED CONDUIT MAY BE REUSED FOR NEW WIRING WHEREVER PRACTICAL.

8. REFER TO SHEET FA601 FOR INFORMATION REGARDING THE LOCATION OF HVAC EMERGENCY SHUTDOWN SWITCHES (EPO).

9. NO EQUIPMENT OR CONDUIT SHALL BE MOUNTED TO THE BOTTOM FACE OF ANY CONCRETE BEAM.

10. REFER TO SHEET FA501 FOR CONDUIT INSTALLATION INFORMATION.

11. THE SECURITY SYSTEM INSTALLED WITHIN THE FORT PECK POWERHOUSES SHALL UTILIZE EQUIPMENT THAT IS FULLY COMPATIBLE WITH THE EXISTING SOFTWAREHOUSE C-CURE 9000 AND AVIGILON CONTROL CENTER SOFTWARE..

12. CABLE TUNNELS ARE SUBJECT TO HIGH HUMIDITY AND LOW/HIGH TEMPERATURES. ALL EQUIPMENT AND DEVICES INSTALLED WITHIN THESE LOCATIONS SHALL BE RATED FOR INSTALLATION IN THIS ENVIRONMENT WITHOUT AN APPRECIABLE EFFECT ON THE OPERATIONAL LIFE OF THE EQUIPMENT OR DEVICE.

13. ALL CONDUIT, JUNCTION BOXES, COVERS, AND COUPLINGS ASSOCIATED WITH THE FIRE/MASS NOTIFICATION SYSTEM MUST BE FACTORY PAINTED RED WHERE INSTALLED IN UNFINISHED LOCATIONS, INCLUDING INSTALLATIONS ABOVE SUSPENDED CEILINGS.

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14. ALL SMOKE DETECTORS INSTALLED WITHIN ELEVATOR SHAFTS SHALL BE SPECIFICALLY DESIGNED FOR INSTALLATION IN THAT TYPE OF SPACE.

15. CONTRACTOR SHALL UTILIZE A REBAR DETECTOR TO LOCATE REBAR WITHIN CONCRETE WALLS PRIOR TO BORING THROUGH CONCRETE WALLS.

16. ALL MAGNETIC LOCKS INSTALLED SHALL FAIL IN THE UNLOCKED POSITION.

17. THE NEW FIRE ALARM AND MASS NOTIFICATION RECEIVING STATION SHALL HAVE ADEQUATE CAPACITY TO TIE ALL OF THE OUTBUILDINGS (TOTAL OF 6 SITES) INTO THE SYSTEM. IT IS ASSUMED THAT EACH OF THESE SITES WILL BE EQUIPPED WITH ITS OWN COMBINED FCP/ACU. THIS WORK IS TO BE COMPLETED IN THE FUTURE BY OTHERS.

18. UPON COMPLETION OF CONSTRUCTION, THE SECURITY SYSTEM SHALL HAVE ADEQUATE SPARE CAPACITY TO TIE ALL OF THE OUTBUILDINGS (TOTAL OF 5 SITES) INTO THE SYSTEM. THE CONTRACTOR SHALL PROVIDE CAPACITY FOR A MINIMUM OF 60 CCTV CAMERAS AND 45 CARD READERS TO ACCOMMODATE THE FUTURE OUTBUILDING SECURITY INSTALLATION BY OTHERS.

19. ALL PERSONNEL DOORS TO BE EQUIPPED WITH BALANCED MAGNETIC SWITCHES, EXCLUDING DOORS USED FOR CONTROL ROOM ACCESS, SHALL ALSO BE EQUIPPED WITH REQUEST TO EXIT MOTION DETECTORS. REFER TO SHEETS EY503 AND EY602 FOR MORE INFORMATION.

20. ALL NEW EXIT LIGHTS INSTALLED WITHIN PP1 SHALL BE FED FROM THE SAME CIRCUIT OF THE NEW CCTV ELECTRICAL PANEL LOCATED IN THE PP1 TELEPHONE ROOM. REFER TO SHEETS FA501 AND EP601 FOR ADDITIONAL INFORMATION.

**KEYED NOTES:**   
(NOTES APPLY TO SHEETS FA110B THROUGH FA121)

1. THIS SPACE SHALL BE PROVIDED WITH BEAM TYPE SMOKE DETECTION. CONTRACTOR SHALL INSTALL BEAM TYPE SMOKE DETECTOR'S IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

2. THIS AREA IS A CAVERNOUS SPACE SUBJECT TO HIGH HUMIDITY AND LOW TEMPERATURES. CONTRACTOR SHALL INSTALL LINEAR HEAT DETECTOR IN ACCORDANCE WITH NFPA 72 AND MANUFACTURER'S INSTRUCTIONS.

3. THIS AREA IS SUBJECT TO HIGH VOLUMES OF AIRFLOW. SMOKE DETECTOR'S INSTALLED WITHIN THIS SPACE SHALL BE RATED FOR THE ENVIRONMENT.

4. CONTRACTOR SHALL REPLACE EXISTING FIRE/SECURITY ANNUNCIATOR WITH NEW UNIT CAPABLE OF DISPLAYING ALARM AND TROUBLE CONDITIONS FOR FIRE ALARM AND SECURITY FOR EACH FACILITY TO INTERFACE WITH ANNUNCIATOR. NEW FIRE/SECURITY ANNUNCIATOR SHALL BE SUSPENDED FROM THE CEILING ABOVE SWITCHBOARD. ANNUNCIATOR SHALL HAVE AN OPERATOR INTERFACE BOX LOCATED ON THE OPERATOR'S DESK WITHIN THE CONTROL ROOM. REFER TO SHEET FA502.

5. CONTRACTOR SHALL INSTALL TWO NEW CEILING MOUNTED FLAT CCTV MONITORS EACH HAVING APPROXIMATELY THE SAME SIZE AND ASPECT RATIO AS THE LARGEST EXISTING MONITOR. ASSUME SIZE OF NEW MONITORS SHALL BE 40". NEW MONITORS SHALL BE SUSPENDED FROM THE CEILING USING A COMMERCIALY AVAILABLE CEILING MOUNT RATED FOR THE MONITOR SIZE PROVIDED. CONTRACTOR SHALL COORDINATE THE FINAL LOCATIONS OF THE NEW MONITORS WITH THE USER THROUGH THE COR.

6. LOC SHALL BE INSTALLED IN A LOCKABLE BREAK GLASS ENCLOSURE TO PREVENT TAMPERING. HVAC SHUTDOWN SWITCH (EPO) AT THIS LOCATION SHALL BE INSTALLED WITHIN THE BREAK GLASS ENCLOSURE WITH THE LOC.

7. DOOR SHALL BE EQUIPPED WITH A MAGNETIC HOLD OPEN DEVICE AND AN AUTOMATIC DOOR CLOSER. RELEASE OF HOLD OPEN DEVICE SHALL BE CONTROLLED BY PP1 FCP.

8. NEW RELAY PANEL FOR AUTO-DIALER.

9. NEW AUTO-DIALER.

10. ROOM SHALL BE CONSIDERED A CLASS 1 DIVISION 2 HAZARDOUS LOCATION. ALL NEW EQUIPMENT INSTALLED WITHIN THIS ROOM SHALL BE RATED FOR INSTALLATION IN HAZARDOUS LOCATIONS. ALL CONDUIT INSTALLED IN THIS LOCATION SHALL BE RIGID METAL CONDUIT OR INTERMEDIATE METAL CONDUIT WITH LISTED THREADLESS FITTINGS. ALL CONDUIT LEAVING THE HAZARDOUS AREA SHALL HAVE A CONDUIT SEAL INSTALLED WITHIN 10 FEET ON EITHER SIDE OF THE BOUNDARY.

11. MOUNT SMOKE DETECTOR INSIDE EXISTING CABLE TRAY ENCLOSURE.

12. CONTRACTOR SHALL ASSUME AN EXISTING ELECTRIC STRIKE IS INSTALLED IN DOOR. CONTRACTOR SHALL WIRE NEW CARD READER WITH BUILT IN KEYPAD TO EXISTING ELECTRIC STRIKE. REFER TO SHEET EY503 FOR ADDITIONAL DETAILS.

13. NEW ELECTRIC STRIKE SHALL BE INSTALLED IN NEW DOOR. CONTRACTOR SHALL WIRE NEW CARD READER WITH BUILT IN KEYPAD TO NEW ELECTRIC STRIKE. REFER TO SHEET EY503 AND ARCHITECTURAL SHEETS FOR ADDITIONAL DETAILS.

14. MOUNT DETECTOR ON WALL ABOVE ELEVATOR DOORS. DETECTOR SHALL BE MOUNTED WITHIN 60" OF THE TOP OF THE ELEVATOR DOORS.

15. CONDUIT FOR CARD READER SHALL BE RUN EXPOSED ON WALL IN RGS CONDUIT.

**KEYED NOTES (CONTINUED):**   
(NOTES APPLY TO SHEETS FA110B THROUGH FA121)

16. THIS AREA IS A CAVERNOUS SPACE SUBJECT TO HIGH HUMIDITY AND LOW/HIGH TEMPERATURES. ALL EQUIPMENT AND DEVICES INSTALLED WITHIN THIS LOCATION SHALL BE RATED FOR INSTALLATION IN THIS ENVIRONMENT WITHOUT AN APPRECIABLE EFFECT ON THE OPERATIONAL LIFE OF THE EQUIPMENT OR DEVICE. CONTROL EQUIPMENT SUCH AS LOCs INSTALLED WITHIN THIS AREA SHALL BE EQUIPPED WITH THERMOSTAT CONTROLLED HEATERS UNLESS RECOMMENDED OTHERWISE BY THE MANUFACTURER.

17. DOOR SHALL BE EXIT ONLY. NO ELECTRIC STRIKE OR KEYPAD/CARD READER IS TO BE INSTALLED.

18. DOOR SHALL BE EQUIPPED WITH NEW MAGNETIC LOCK. THE FIRE ALARM SYSTEM SHALL BE TIED INTO THE SECURITY CABINET TO UNLOCK THE DOOR 15 SECONDS AFTER ACTIVATION OF THE FIRE ALARM SYSTEM. ONCE THE MAGNETIC LOCK HAS BEEN RELEASED BY THE FIRE ALARM SYSTEM IT SHALL REMAIN UNLOCKED UNTIL THE FIRE ALARM HAS BEEN ADDRESSED AT THE FCP.

19. AN ALARM SHALL BE INSTALLED IN THE VICINITY OF THE DOOR SUCH THAT RELEASE OF THE MAGNETIC LOCK BY THE FIRE ALARM SYSTEM SHALL ACTIVATE AN AUDIBLE SIGNAL.

20. EXISTING INTERPRETIVE CENTER FIRE ALARM SLAVE PANEL. CONTRACTOR SHALL TIE EXISTING SLAVE PANEL INTO THE NEW FIRE ALARM AND MASS NOTIFICATION RECEIVING STATION.

21. CONTRACTOR SHALL REPLACE THE EXISTING SECURITY RACK WITH NEW. ALL EXISTING EQUIPMENT FROM THE EXISTING SECURITY RACK SHALL BE RELOCATED TO THE NEW RACK. THE NEW RACK SHALL BE EQUIPPED WITH A VERTICAL RACKMOUNT POWERSTRIP.

22. THE NUMBER AND DURATION OF OUTAGES IMPACTING THE ACCESS CONTROL AND SECURITY SYSTEM SERVING THIS SPACE SHALL BE MINIMIZED. ALL OUTAGES EXCEEDING ONE WORKING DAY IN LENGTH SHALL BE SUBMITTED TO THE COR A MINIMUM OF 1 WEEK IN ADVANCE FOR APPROVAL.



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U.S. ARMY CORPS OF ENGINEERS  
OMAHA DISTRICT  
OMAHA, NEBRASKA

FORT PECK DAM, MONTANA  
POWER HOUSE FIRE AND SECURITY  
SYSTEM REPLACEMENT

PP1 - FIRE AND SECURITY  
FLOOR PLAN NOTES

SHEET ID  
**FA110A**