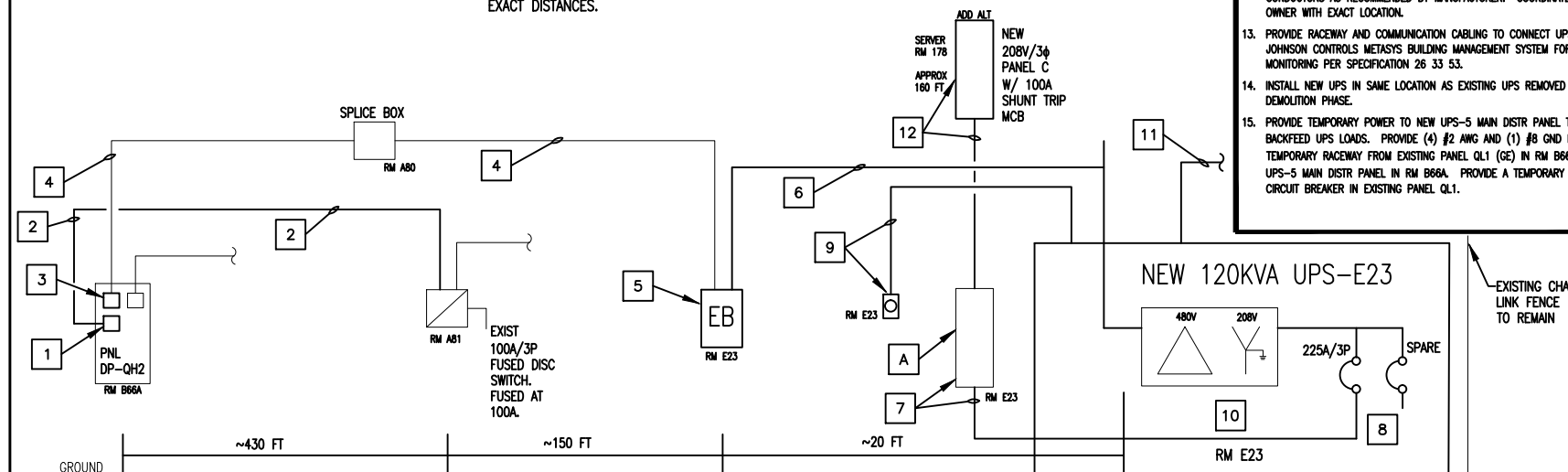
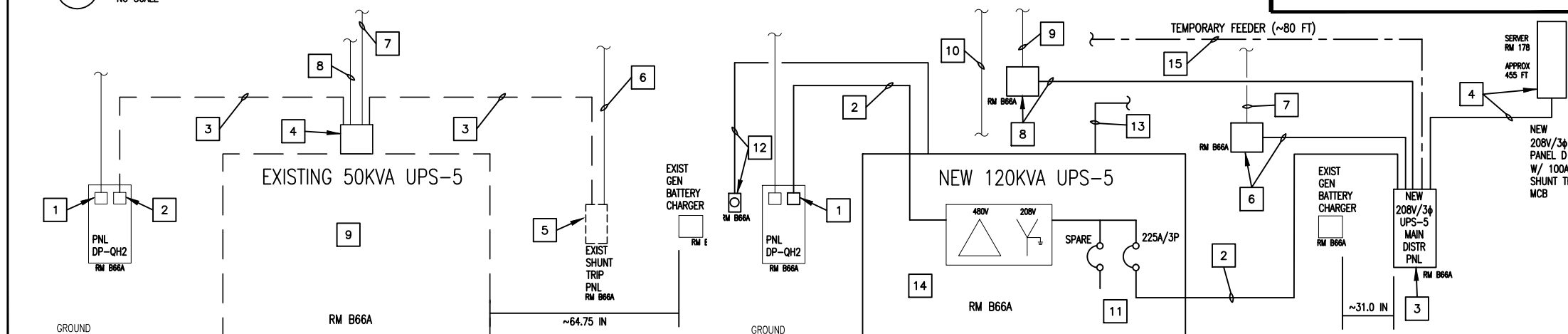


B1 E23 DEMOLITION RISER DIAGRAM
NO SCALE

NOTE: ALL DISTANCES SHOWN ON THIS SHEET ARE APPROXIMATIONS. CONTRACTOR TO FIELD VERIFY EXACT DISTANCES.



D1 E23 NEW RISER DIAGRAM
NO SCALE



F1 B66A DEMOLITION RISER DIAGRAM (ADD ALT)
NO SCALE

F4 B66A NEW RISER DIAGRAM (ADD ALT)
NO SCALE

B66A DEMOLITION RISER DIAGRAM KEYNOTES (ADD ALT)

- 225A/3P CIRCUIT BREAKER PROVIDED IN BASE BID.
- EXISTING 225A/3P CIRCUIT BREAKER WITH 80A TRIP SETTING FEEDING EXISTING UPS. EXISTING CIRCUIT BREAKER SHALL BE REUSED FOR NEW UPS.
- REMOVE EXISTING RACEWAY AND CONDUCTORS.
- EXISTING J-BOX MOUNTED TO TOP OF EXISTING UPS-5.
- REMOVE AND SALVAGE EXISTING 100A SHUNT TRIP PANEL AND CIRCUIT BREAKERS. RETURN TO OWNER.
- EXISTING FEEDER TO PANEL B IN SERVER ROOM 178.
- EXISTING RACEWAY TO UPS PANEL 5 IN ROOM F15.
- EXISTING 1-1/4" CONDUIT FROM UPS TO AN UNDETERMINED LOCATION. CONTRACTOR SHALL VERIFY WHERE CONDUIT TERMINATES.
- REMOVE EXISTING UPS. COORDINATE REMOVAL OF UPS WITH PROJECT ENGINEER.

B66A NEW RISER DIAGRAM KEYNOTES (ADD ALT)

- ADJUST EXISTING CIRCUIT BREAKER FOR A 225A TRIP SETTING.
- PROVIDE (3) #4/0 AWG COPPER PHASE CONDUCTORS AND (1) #4 AWG COPPER GND IN 2-1/2" CONDUIT.
- PROVIDE A NEW 30 SPACE LIGHTING AND APPLIANCE, 225A PANELBOARD WITH A 225A MAIN CIRCUIT BREAKER. PROVIDE (1) 100A/3P BRANCH CIRCUIT BREAKER TO FEED EXISTING UPS5 PANEL IN RM F15, (1) 100A/3P SHUNT TRIP CIRCUIT BREAKER TO FEED EXISTING PANEL B IN RM 178, AND (1) 100A/3P CIRCUIT BREAKER TO FEED NEW PANEL D. THIS PANELBOARD SHALL BE INSTALLED PRIOR TO REMOVING THE EXISTING UPS SO THAT THE PANEL CAN TEMPORARY BACKFEED EXISTING LOADS WHILE THE EXISTING UPS IS OFFLINE. ALSO SEE KEYNOTE #15 FOR B66A NEW RISER DIAGRAM KEYNOTES (ADD ALT).
- PROVIDE A NEW 100A, 42 SPACE PANELBOARD W/ A 100A SHUNT-TRIP MAIN CIRCUIT BREAKER IN SERVER RM 178. COORDINATE EXACT LOCATION W/ PROJECT ENGINEER. PROVIDE PANEL W/ (6) 20A/1P & (4) 20A/2P CIRCUIT BREAKERS. CONNECT SHUNT-TRIP TO FIRE ALARM SYSTEM IN SERVER RM 178 SIMILAR TO OTHER SHUNT-TRIP BREAKERS FEEDING RM 178. PROVIDE (4) #4/0 COPPER CONDUCTORS, (1) #4 GND IN A 2-1/2" CONDUIT. COORDINATE RACEWAY ROUTING WITH PROJECT ENGINEER.
- NOT USED.
- PROVIDE A JUNCTION BOX, SIZED AS REQUIRED, TO EXTEND EXISTING RACEWAY AND CONDUCTORS FROM PANEL B IN SERVER ROOM 178 TO NEW LOCATION FOR SHUNT TRIP PANEL. MATCH EXISTING CONDUCTORS. SPLICE PER SPECIFICATIONS.
- EXISTING RACEWAY AND CONDUCTORS TO SERVER ROOM 178 PANEL B.
- PROVIDE JUNCTION BOX, SIZED AS REQUIRED, TO EXTEND EXISTING RACEWAY AND CONDUCTORS FROM UPS-5 PANEL IN ROOM F15 TO NEW UPS-5 MAIN DISTR PANEL. MATCH EXISTING CONDUCTORS. SPLICE PER SPECIFICATIONS.
- EXISTING RACEWAY AND CONDUCTORS TO EXISTING UPS-5 PANEL IN ROOM F15.
- SEE KEYNOTE #8 FOR B66A DEMOLITION RISER DIAGRAM (ADD ALT). CONTRACTOR SHALL INCLUDE ALL WORK ASSOCIATED WITH TRACING THIS CIRCUIT(S) AND WORK REQUIRED TO EXTEND. CONTRACTOR SHALL ATTEND PRE-BID MEETINGS TO DETERMINE ALL REQUIREMENTS ASSOCIATED WITH THIS WORK AND SHALL INCLUDE ALL NECESSARY REQUIREMENTS IN THE ADD ALTERNATE PRICING.
- (2) UPS OUTPUT CIRCUIT BREAKERS W/ ADJUSTABLE TRIP SETTING FROM 100A-250A.

GENERAL SHEET NOTES

- PROVIDE A TEMPORARY GENERATOR TO BACKFEED E23 UPS PANEL DURING THE REMOVAL OF THE EXISTING UPS AND THE INSTALLATION OF THE NEW UPS. GEN SET EXHAUST SHALL NOT ENTER THROUGH ANY AIR INTAKES.
- UPS LOADS SHALL REMAIN ON TEMPORARY POWER WHILE THE EXISTING UPS IS OFFLINE AND REMAIN ON TEMPORARY POWER TILL THE NEW UPS IS FULLY OPERATIONAL.
- ALL OUTAGES TO UPS LOADS SHALL BE COORDINATED WITH THE PROJECT ENGINEER PRIOR TO ANY SHUTDOWN.
- PROJECT ENGINEER SHALL BE NOTIFIED 7 BUSINESS DAYS PRIOR TO ANY UPS SHUTDOWN.
- GROUND ALL SYSTEMS PER THE CURRENT NATIONAL ELECTRICAL CODE.

E23 DEMOLITION RISER DIAGRAM KEYNOTES

- REMOVE EXISTING 200A CIRCUIT BREAKER FROM PANEL DP-QH2. RETURN CIRCUIT BREAKER TO OWNER FOR FUTURE USE.
- REMOVE EXISTING CONDUCTORS FROM PANEL DP-QH2 TO UPS 200A FUSED DISCONNECT SWITCH. EXISTING RACEWAY SHALL REMAIN IN PLACE.
- REMOVE EXISTING 200A/3P FUSED DISCONNECT SWITCH. RETURN DISCONNECT SWITCH AND FUSES TO OWNER FOR FUTURE USE.
- REMOVE EXISTING CONDUCTORS AND RACEWAY FROM DISCONNECT SWITCH TO UPS.
- EXISTING UPS 225A MCB PANELBOARD AND BRANCH CIRCUITS TO REMAIN.
- EXISTING 100A/3P DISCONNECT SWITCH TO REMAIN.
- EXISTING RACEWAY AND CONDUCTORS TO TRANSFORMER TR-ADP TO REMAIN.
- REMOVE EXISTING CONDUCTORS AND RACEWAY FROM 100A/3P DISCONNECT SWITCH BACK TO SPLICE BOX IN ROOM A80.
- EXISTING 80A/3P CIRCUIT BREAKER AND RACEWAY TO REMAIN IN BASE BID.
- REMOVE EXISTING UPS. COORDINATE REMOVAL OF UPS WITH PROJECT ENGINEER.

E23 NEW RISER DIAGRAM KEYNOTES

- PROVIDE A NEW 110A/3P CIRCUIT BREAKER IN EXISTING PANEL DP-QH2. MATCH AIC RATING OF EXISTING PANEL.
- PROVIDE (3) #2 AWG COPPER PHASE CONDUCTORS AND (1) #6 AWG COPPER GND IN A 1-1/4" CONDUIT FROM PANEL DP-QH2 TO EXISTING 100A/3P FUSED DISCONNECT SWITCH. COORDINATE ON-SITE WITH PROJECT ENGINEER FOR EXACT CONDUIT ROUTING. PROVIDE PULL BOXES AS REQUIRED.
- PROVIDE A NEW 225A/3P CIRCUIT BREAKER IN EXISTING PANEL DP-QH2. MATCH AIC RATING OF EXISTING PANEL.
- PROVIDE (3) #4/0 AWG COPPER PHASE CONDUCTORS AND (1) #4 AWG COPPER GND IN EXISTING 2" CONDUIT FROM PANEL DP-QH2 TO NEW 400A/3P DISCONNECT SWITCH.
- PROVIDE A NEW NEMA 1 225A ENCLOSED CIRCUIT BREAKER IN SAME LOCATION AS THE EXISTING FUSED DISCONNECT SWITCH THAT WAS REMOVED DURING DEMOLITION PHASE. RECONNECT EXISTING 2" CONDUIT TO ENCLOSED CIRCUIT BREAKER. EXTEND RACEWAY AS REQUIRED.
- PROVIDE (3) #4/0 AWG COPPER PHASE CONDUCTORS AND (1) #4 AWG COPPER GND IN A NEW 2" CONDUIT FROM 400A/3P DISCONNECT SWITCH TO NEW UPS.
- EXISTING 225 MCB PANELBOARD. PROVIDE (4) #4/0 AWG COPPER CONDUCTORS (PH,N) AND (1) #4 AWG COPPER GND IN A 2-1/2" CONDUIT FROM UPS TO EXISTING UPS PANEL.
- (2) UPS OUTPUT CIRCUIT BREAKERS W/ ADJUSTABLE TRIP SETTING FROM 100A-250A.
- PROVIDE EMERGENCY POWER OFF (EPO) SWITCH TO SHUTDOWN UPS. PROVIDE A RED MUSHROOM HEAD HEAVY DUTY PUSHBUTTON. PROVIDE ENGRAVED NAMEPLATE. INTERLOCK PUSHBUTTON WITH UPS PER MANUFACTURER'S REQUIREMENTS. PROVIDE RELAYS, ETC. FOR REQUIRED INTERLOCKING TO REMOVE POWER TO UPS. PROVIDE RACEWAY AND CONDUCTORS AS RECOMMENDED BY MANUFACTURER. COORDINATE EXACT LOCATION WITH PROJECT ENGINEER.
- INSTALL NEW UPS IN SAME LOCATION AS EXISTING UPS REMOVED DURING DEMOLITION PHASE. EXISTING CHAIN LINK FENCE IN UPS ROOM E23 SHALL REMAIN AS IS.
- PROVIDE RACEWAY AND COMMUNICATION CABLEING TO CONNECT UPS TO JOHNSON CONTROLS METASTS BUILDING MANAGEMENT SYSTEM FOR REMOTE MONITORING PER SPECIFICATION 26 33 53.
- ADD ALT: PROVIDE A NEW 100A, 42 SPACE PANELBOARD W/ A 100A SHUNT-TRIP MAIN CIRCUIT BREAKER IN SERVER RM 178. COORDINATE EXACT LOCATION W/ PROJECT ENGINEER. PROVIDE PANEL W/ (6) 20A/1P & (4) 20A/2P CIRCUIT BREAKERS. CONNECT SHUNT-TRIP TO FIRE ALARM SYSTEM IN SERVER RM 178 SIMILAR TO OTHER SHUNT-TRIP BREAKERS FEEDING RM 178. PROVIDE A 100A/3P CIRCUIT BREAKER IN EXISTING UPS PANEL TO FEED NEW PANEL C. PROVIDE (4) #1 COPPER CONDUCTORS, (1) #6 GND IN A 2" CONDUIT. COORDINATE RACEWAY ROUTING WITH PROJECT ENGINEER.

CONSULTANTS:		ARCHITECT/ENGINEERS:		Drawing Title UPS RISER DIAGRAM	Project Title BUILDING 5 UPS REPLACEMENT	Project Number 438-13-123	Office of Construction and Facilities Management Department of Veterans Affairs
				Approved: Project Director	Location 438 SIOUX FALLS SD	Building Number 5	
				VAPAHCS PLANNING AND ENGINEERING	Date DECEMBER 2012	Drawing Number E1	
					Checked TRM	Dwg.1 of 1	