

ELECTRICAL ONE LINE DIAGRAM GENERAL NOTES

- A. REFER TO DWG. E-001 FOR ELECTRICAL LEGEND, ABBREVIATIONS, AND GENERAL NOTES RELATED TO THIS SHEET.
B. PROVIDE NEMA 3R ENCLOSURES FOR ALL EQUIPMENT LOCATED OUTDOORS, REFER TO DRAWINGS FOR LOCATION OF EQUIPMENT.
C. REFER TO PLANS FOR PHYSICAL RESTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT ARE WITHIN THE RESTRAINTS OF EACH SPECIFIC EQUIPMENT LOCATION.
D. ALL BUSSING SHALL BE COPPER, ALUMINUM SHALL NOT BE PERMITTED.
E. ALL CONDUCTORS SHALL BE 75C RATED. 60C CONDUCTORS SHALL NOT BE PERMITTED.
F. ALL ELECTRICAL PANELS AND DISTRIBUTION PANEL BOARDS SHALL BE FULLY RATED, SERIES RATED SYSTEMS SHALL NOT BE PERMITTED.
G. THE STAND-BY GENERATOR AND THE AUTOMATIC TRANSFER SWITCHES SHALL BE COMPATIBLE AND SHALL COMMUNICATE BETWEEN THE TWO PIECES OF EQUIPMENT.
H. REFER TO DRAWING E-500 FOR TRANSFORMER PAD DETAILS AND CONCRETE CELL-DUCT SYSTEM.
I. NEW 15KV FUSES INSTALLED WITHIN EXISTING PRIMARY SWITCH SHALL MATCH EXISTING.
J. THE CONTRACTOR SHALL NOTIFY VAMC IN WRITING MINIMUM OF (21) DAYS NOTICE ON SHUTDOWN OF BUILDING.
K. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO THE GREATEST EXTENT POSSIBLE TO MINIMIZE AND MITIGATE SHUTDOWN DOWNTIME AND DISRUPTION TO THE VAMC.
L. FOR CONTINUATION REFER TO DRAWING EP502 FOR ADDITIONAL INFORMATION.
M. REFER TO DETAILS 6/EP504, 7/EP504 AND 8/EP504 FOR ATS, TRANSFORMER AND SPD SCHEDULES.

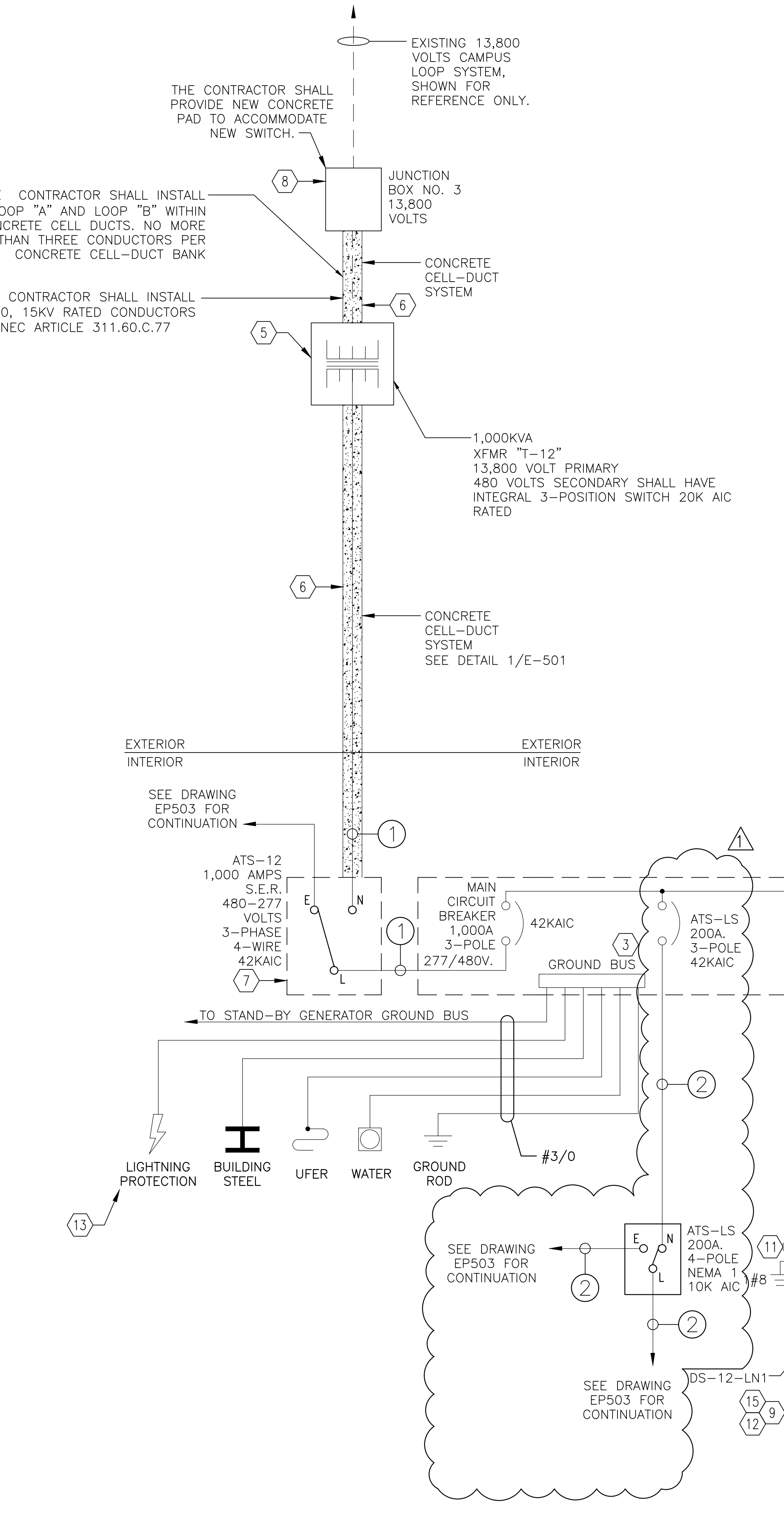
ELECTRICAL ONE LINE DIAGRAM NOTES

- 1. PROVIDE NEW ELECTRICAL PANEL AS INDICATED, REFER TO EP600 SERIES DRAWINGS FOR FURTHER INFORMATION.
2. PROVIDE SPD (SURGE PROTECTION DEVICE) 125KA MINIMUM, CONNECT TO 30/3 CIRCUIT BREAKER WITHIN PANEL BOARD, BASIS OF DESIGN SHALL BE MANUFACTURED BY CURRENT TECHNOLOGY, MODEL NO. "TG3" SERIES, REFER TO DRAWING EP504 FOR ADDITIONAL INFORMATION. REFER TO DETAIL 1/EP504 FOR CUT SHEET INFORMATION.
3. PROVIDE MAIN GROUNDING ELECTRODE AS INDICATED, REFER TO DETAIL 5/E-501 F02 FOR ADDITIONAL INFORMATION.
4. PROVIDE "12-MDP", SHALL BE 1,000 AMPS, 277-480 VOLT, 3-PHASE, 4-WIRE, 42KAIC, 1,000 AMP MCB, S.E.R. (SERVICE ENTRANCE RATED).
5. THE CONTRACTOR SHALL PROVIDE NEW 1,000KVA DRY-TYPE, TRANSFORMER, 13,8KV PRIMARY SHALL BE: 13,800 VOLTS, 480 VOLTS SECONDARY, 3-PHASE, 3-WIRE, TRANSFORMER SHALL HAVE INTEGRAL 3-POSITION SWITCH TO SWITCH BETWEEN LOOP "A", LOOP "B" AND "OFF". REFER TO DRAWING E-902 FOR PICTURE INFORMATION OF EXISTING TRANSFORMER AT SITE WITH 3-POSITION SWITCH.
6. THE CONTRACTOR SHALL INSTALL CONDUIT AND FEEDER CONDUCTORS WITHIN CONCRETE CELL-DUCT SYSTEM, REFER TO DETAIL 1/E-501 THIS DRAWING FOR ADDITIONAL INFORMATION.
7. "ATS-12" SHALL BE 1,000 AMP RATED, 480-277 VOLT, 3-PHASE, 4-WIRE, 42KAIC, S.E.R. (SERVICE ENTRANCE RATED) AND SHALL BE WALL MOUNTED.
8. THE CONTRACTOR SHALL DISCONNECT, REMOVE AND REPLACE EXISTING JUNCTION BOX NO. 3 AND REPLACE WITH NEW. BASIS OF DESIGN SHALL BE MANUFACTURED BY HUBBELL, EACH PHASE SHALL BE 200 AMP RATED, SHALL BE 13,800 VOLTS, 3-PHASE, AND FIVE INTERFACE POINTS.
9. PROVIDE 30KVA, DRY-TYPE, TRANSFORMER, 480 VOLT PRIMARY, 120-208 VOLT SECONDARY, 3-PHASE, 4-WIRE, PAD MOUNTED, 4.5% Z.
10. PROVIDE 75KVA, DRY-TYPE TRANSFORMER, 480 VOLT PRIMARY, 120-208 VOLT SECONDARY, 3-PHASE, 4-WIRE, PAD MOUNTED, 4.5% Z.
11. CONNECT TO TRANSFORMER BUS-BAR, REFER TO DETAILS 4 & 5/E-501 FOR ADDITIONAL INFORMATION.
12. TRANSFORMER SHALL BE PAD MOUNTED ON FLOOR.
13. THE CONTRACTOR SHALL CONNECT TO BUILDING GROUNDING SYSTEM AS INDICATED PER ARTICLE 250 OF NEC, REFER TO DETAIL 2/E-501 FOR ADDITIONAL INFORMATION.
14. PROVIDE 400 AMP DISCONNECT SWITCH, FUSED WITH 3-225 AMP FUSES, NEMA 1 ENCLOSURE.
15. PROVIDE 100 AMP DISCONNECT SWITCH FUSED WITH 3-100 AMP FUSES, NEMA 1 ENCLOSURE.
16. THE CONTRACTOR SHALL PROVIDE COMBINATION MOTOR STARTER/DISCONNECT SWITCH. REFER TO MOTOR EQUIPMENT SCHEDULE ON EM600 SERIES DRAWINGS FOR ADDITIONAL MOTOR STARTER INFORMATION.
17. THE CONTRACTOR SHALL PROVIDE ASTRODIAL PROGRAMMABLE DIGITAL TIMECLOCK "TC-1" AS INDICATED.
18. THE CONTRACTOR SHALL PROVIDE LIGHTING CONTACTOR "LC-1", IT SHALL BE 4-POLE, 120 VOLT CONTACTS, 120 VOLT COIL, ELECTRICALLY HELD IN NEMA 1 ENCLOSURE.
19. VARIABLE FREQUENCY DRIVE (VFD) PROVIDED BY THE DIVISION 26 CONTRACTOR.
20. TO BUILDING AUTOMATION SYSTEM PANEL, REFER TO DRAWING EP101 FOR EXACT LOCATION OF PANEL.
21. THE CONTRACTOR SHALL PROVIDE 60 AMP, NON-FUSED, 3-POLE, NEMA 1 DISCONNECT SWITCH MOUNTED AT MOTOR.
22. PROVIDE LIGHTING RELAY PANEL "RP-1" AS INDICATED, REFER TO DRAWING EL503 FOR ADDITIONAL INFORMATION.

Table with 6 columns: CURRENT RATINGS AMPS, AMPS, PHASE CONDUCTORS THHW-THWN (75 DEGREE), SETS, EQUIPMENT GROUNDING CONDUCTOR, CONDUIT SIZE. Rows 1-8.

2 NORMAL POWER / STAND-BY POWER ONE-LINE DIAGRAM SCALE NOT TO SCALE

SEE DRAWING EP502 FOR CONTINUATION OF MDP-12.



1 NORMAL POWER / STAND-BY POWER ONE-LINE DIAGRAM SCALE NOT TO SCALE

Table with 2 columns: Revisions, Date. Includes ADDENDUM 3 and 01-24-2025.

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1/24/2025

Office of Construction and Facilities Management
U.S. Department of Veterans Affairs

Drawing Title: NORMAL POWER ONE-LINE DIAGRAM
Approved: Project Director

Phase: 100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED

Project Title: SIOUX FALLS BOILER PLANT
Location: VAMC-Sioux Falls: 2501 W 22nd St, Sioux Falls, SD 57105
Issue Date: 06/25/2024
Checked: WLM
Drawn: KMB

Project Number: 438-22-900
Building Number: 12
Drawing Number: EP501