PROJECT INFORMATION:

Project Name: **Replace Switch and Repair Underground Electric near B293**

Project No: **XTLF 26-1019**

Project Location: VANCE AFB, ENID OKLAHOMA

Project Status: FOR CONSTRUCTION Issue Date: 30 SEP 2025 G001

SHEET INDEX

SHEET NUMBER	SHEET NAME	REVISIONS	DATE
G001	TITLE, INDEX & COORDINATION		
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G003	GENERAL NOTES AND LEGENDS		
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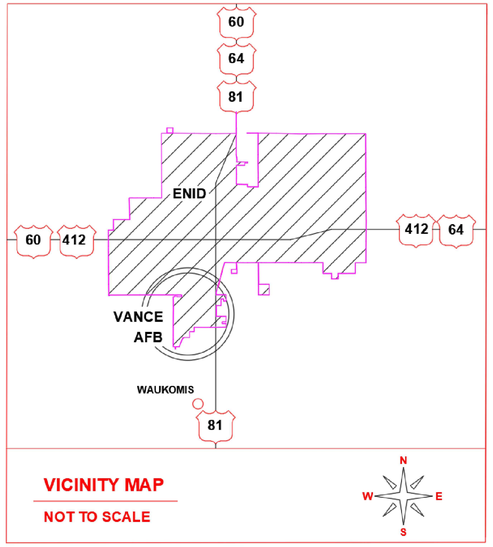
E102	SWITCH SW4-410 INSTALLATION AND WIRE REPLACEMENT LAYOUT AND ONE-LINE		
E301	DEMOLITION ONE LINE DIAGRAM		
E302	NEW CONSTRUCTION ONE LINE DIAGRAM		
E501	SWITCH DETAILS		

RELEVANT CODE DOCUMENTS

DOCUMENT TITLE	
UFC 3-501-01 ELECTRICAL ENGINEERING	2024
UFC 3-550-01 EXTERIOR ELECTRICAL POWER DISTRIBUTION	2016
NFPA 70 - NATIONAL ELECTRIC CODE	2023



VICINITY MAP

NOT TO SCALE

EXECUTION OF WORK DESCRIBED WITHIN THIS PLAN SET SHALL BE IAW 48 CFR SUBPART 25.2 - BUY AMERICAN - CONSTRUCTION MATERIALS AND ALL SUBSEQUENT PARTS RELATED TO SUCH REFERENCE.

UNITED STATES AIR FORCE AIR EDUCATION TRAINING COMMAND
VANCE AFB, OKLAHOMA

LICENSED PROFESSIONAL ENGINEER
RYAN SUDLOW
31220
OKLAHOMA
15 OCT 2025

ASRC FEDERAL
Field Services
140 Channel Street, Suite 205
Vance AFB, Oklahoma 73705
(580) 213-7787
Certificate of Authorization# 8716
Expires: June 30, 2026

1 1/2"(ACTUAL SIZE)

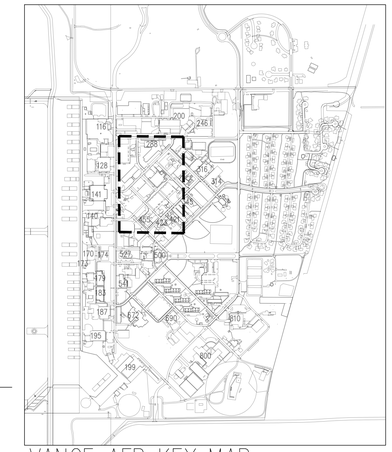
DRAWING SIZE INTENDED TO BE 24" x 36"

GENERAL NOTES

1. WIRE SHOWN ON THIS SHEET BETWEEN SWITCHES AND/ OR 600A SECTIONALIZERS SHALL BE 250 MCM CU 15KV CABLE..
2. WIRE SHOWN ON THIS SHEET BETWEEN SWITCHES AND TRANSFORMERS SHALL BE #2AWG CU 15KV CABLE.
3. NEW CONDUIT SHALL BE 5-IN SCHEDULE 40 PVC CONDUIT FOR OPEN TRENCH INSTALLATION OR 5-IN SDR9 HDPE PIPE FOR HORIZONTAL DIRECTIONAL DRILL INSTALLATION.
4. MATCH CONDUIT SIZE WHEN CONNECTING TO EXISTING CONDUIT.
5. ALL CONDUIT INSTALLED IN THIS PROJECT SHALL HAVE A MINIMUM OF AT LEAST ONE SPARE EMPTY CONDUIT INSTALLED OF THE SAME SIZE, CONNECTING TO THE SAME EQUIPMENT. PULL STRING SHALL BE INCLUDED IN ALL SPARE DUCTS.

KEYNOTES

1. NEW COOPER 15KV TYPE 6W2 PAD MOUNTED SWITCH SW4-293
2. NEW COOPER 15KV TYPE 9 PAD MOUNTED SWITCH SW4-410
3. NEW COOPER 15KV 600A 4WAY 3ϕ SECTIONALIZER
4. NEW 15KV 250MCM CU CABLE IN EXISTING CONDUIT
5. NEW 15KV #2AWG CU CABLE IN EXISTING CONDUIT
6. NEW 15KV 250MCM CU CABLE IN NEW CONDUIT
7. NEW 15KV #2AWG CU CABLE IN NEW CONDUIT
8. INTERCEPT EXISTING CONDUIT AND CONNECT NEW CONDUIT
9. NEW 2X1 5-IN SCH 40 PVC CONDUIT DUCT BANK
10. HORIZONTAL DIRECTIONAL DRILL DUCT WITH 2X1 5-IN SDR9 HDPE PIPE.
11. EXISTING PAD MOUNTED SWITCH
12. DEMOLISH EXISTING ELECTRICAL DUCT BANK AFTER POWER RE-ROUTED

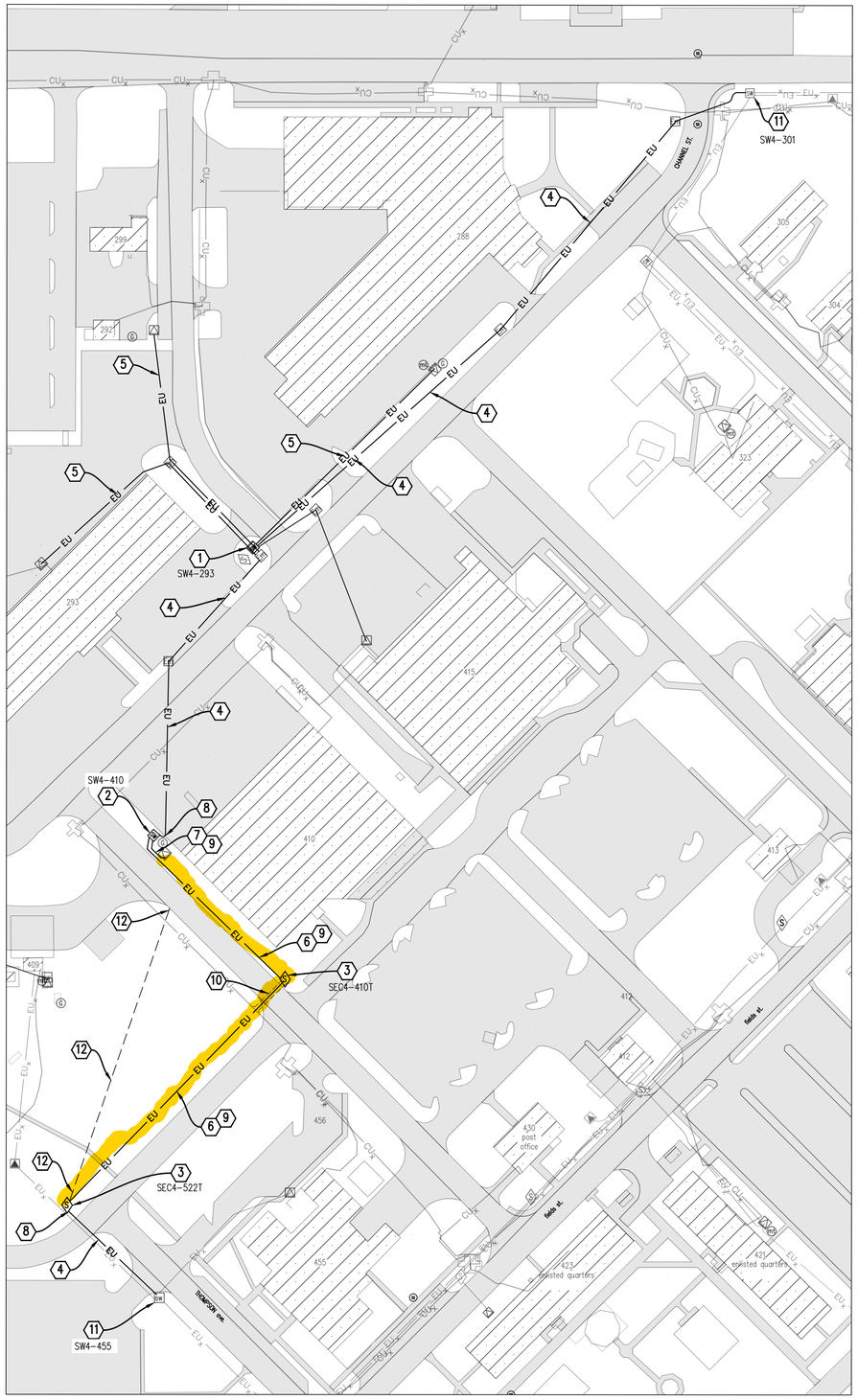


VANCE AFB KEY MAP

NOT TO SCALE

RECOMMENDED SEQUENCE OF OPERATION

1. ENSURE EQUIPMENT PAD AT SW4-293 IS READY FOR NEW TYPE 6W2 SWITCH TO BE INSTALLED.
2. PARK CABLES TO SWITCH SW4-0293 IN T-0410. MINIMIZE OUTAGE TIMES ON T-0410 IF TRANSFORMER TURNED OFF TO PARK CABLES.
3. TAKE OUTAGE ON SW4-0293 BY SHUTTING OFF AT SWITCH SW4-301.
4. REMOVE ALL CONNECTIONS FROM EXISTING SWITCH SW4-293.
5. REMOVE EXISTING SWITCH SW4-293.
6. RE-WORK CABLES FROM T-0410 BY REMOVING STRESS CONE AND INSTALL 200A LOAD BREAK ELBOWS.
7. RE-WORK CABLES TO T-0292, T-0293, T-299 BY REMOVING STRESS CONE AND INSTALL 200A LOAD BREAK ELBOWS.
8. REMOVE LOAD BREAK ELBOWS FOR T-0288 AND T-0415 FROM SECTIONALIZER BUSHINGS ADJACENT TO SWTICH AND PULL BACK TO SWITCH VAULT
9. REMOVE JUMPER CABLES FROM SWITCH TO SECTIONALIZER.
10. SET NEW TYPE 6W2 SWITCH SW4-293
11. CONNECT CABLES FROM T-0410 TO 200A VFI TAP ON SW4-293
12. CONNECT CABLES FROM T-0288 TO 200A VFI TAP ON SW4-293
13. CONNECT CABLES FROM T-0415 TO 200A VFI TAP ON SW4-293
14. CONNECT CABLES FROM T-0292, T-0293, T-0299 TO 200A VFI TAP ON SW4-293
15. UN-PARK CABLES TO SW4-293 AT TRANSFORMER T-0410
16. RESTORE POWER TO SW4-293 BY CLOSING VFI TAP FROM T-0410
17. RESTORE POWER TO TEH OTHER BUILDINGS CONNECTED BY CLOSING THEIR RESPECTIVE VFI TAPS.
18. REPLACEMENT OF INDIVIDUAL FEEDER CABLES TO TRANSFORMERS TO BE SCHEDULED WITH CONSTRUCTION MANAGER. OUTAGES TO BE SCHEDULED SUCH THAT THEY MINIMIZE IMPACT TO BUILDING OPERATIONS.



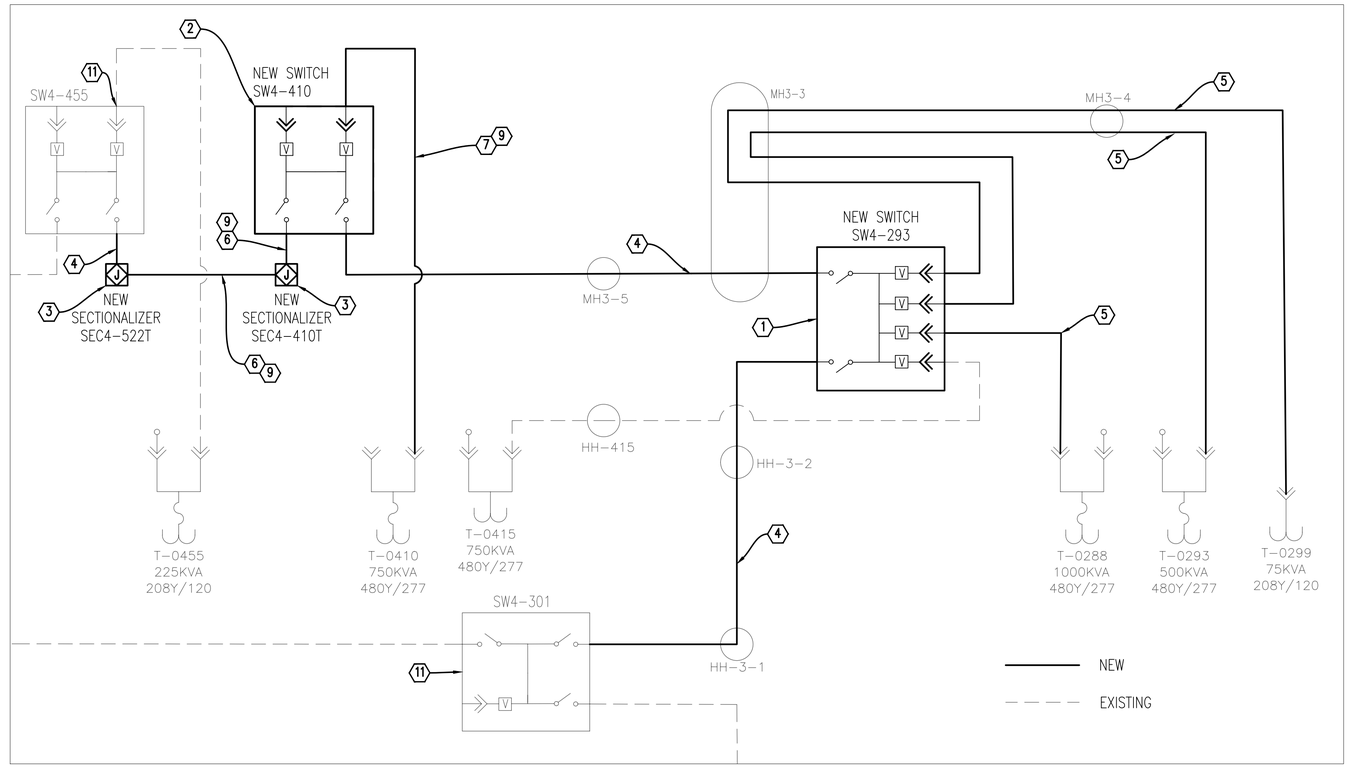
A E102 SWITCH 293 REPLACEMENT LAYOUT

1" = 75'

N

0 75 150'

SCALE: 1" = 75'



B E102 SWITCH SW4-410 INSTALLATION AND WIRE REPLACEMENT ONE-LINE DIAGRAM

NOT TO SCALE

UNITED STATES AIR FORCE
AIR EDUCATION
TRAINING COMMAND
VANCE AIR FORCE BASE
ENID, OKLAHOMA

ASRC FEDERAL
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140 Channel St., Suite 205
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(580) 213-7772
CA# 8716 EXPIRES
JUNE 30, 2026

Revision Number	Description	Date

REGISTERED PROFESSIONAL ENGINEER RYAN SUDLOW 31220 OKLAHOMA 30 SEP 2025

DRAWN BY: RLS CHECKED BY: RLS

PROJECT NO.: XTLF 26-1019

DATE: 30 SEP 2025

DESIGN STAGE: FOR CONSTRUCTION

REPLACE SWITCH AND REPAIR UNDERGROUND ELECTRIC NEAR B293

SWITCH SW4-410 INSTALLATION AND WIRE REPLACEMENT LAYOUT AND ONE-LINE

E102