

IOWA STATE PENITENTIARY

9370.00 DOC ISP PERIMETER FENCE DETERRENT SYSTEM REPLACEMENT



PROJECT
LOCATION

DRAWING INDEX

SHEET	REV	TITLE
GENERAL		
G00	0	COVER SHEET AND DRAWING INDEX
ELECTRICAL & CONTROLS		
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E02	0	ENLARGED ELECTRICAL PLAN
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E04	0	ELECTRICAL NOTES & ONE-LINE DIAGRAM
E05	0	PROJECT PHOTOS

ALL DOWN TIME SHALL BE MONDAY-FRIDAY 8AM TO 5PM.
COORDINATE PHASING/SEQUENCING WITH REPRESENTATIVE TO
MINIMIZE SHUTDOWN TIME. NORMAL CONSTRUCTION TO OCCUR DURING
DAYLIGHT HOURS.



IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES
CENTRAL PROCUREMENT ENTERPRISES (CPE)
HOOVER STATE OFFICE BUILDING, LEVEL 3
1305 EAST WALNUT
DES MOINES, IA 50319-0105

9370.00 DOC ISP PERIMETER
FENCE DETERRENT SYSTEM
REPLACEMENT
2111 330TH AVE
FT. MADISON, IOWA 52627

OUT FOR BID	DATE	DESCRIPTION
1	08/01/2024	

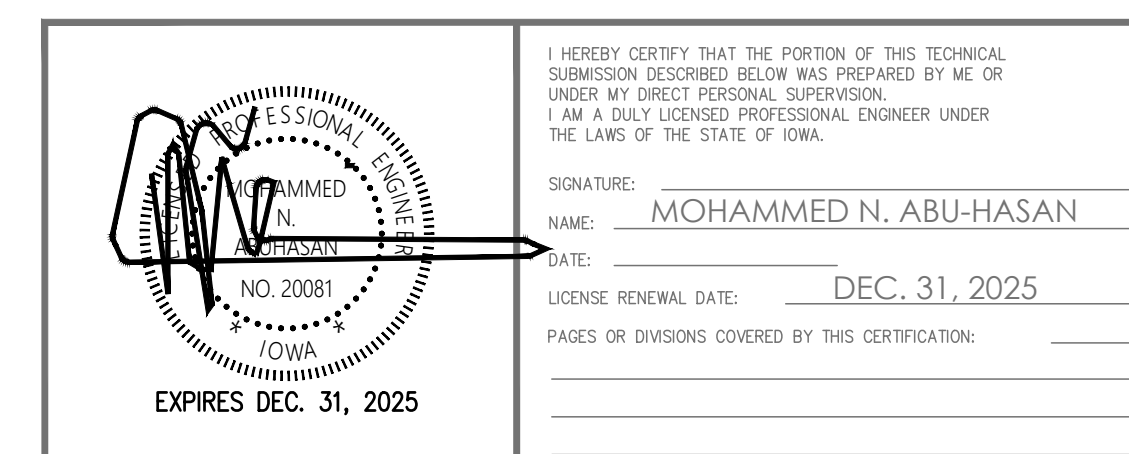
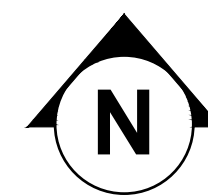
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SHEET TITLE

COVER SHEET &
DRAWING
INDEX

G00

A
G00 IOWA STATE PENITENTIARY
NO SCALE

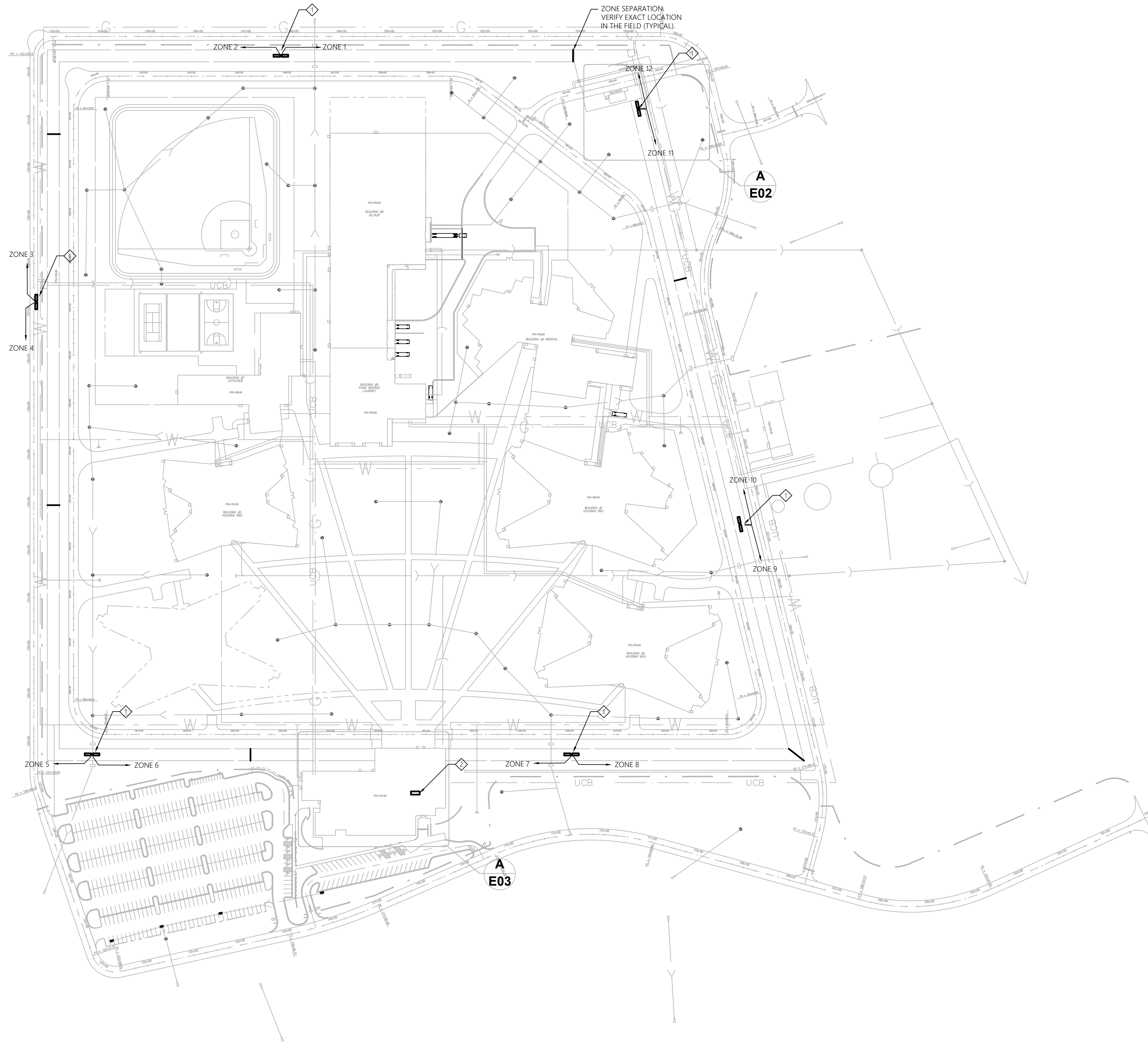


I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL
SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR
UNDER MY DIRECT PERSONAL SUPERVISION,
I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF IOWA.

SIGNATURE: _____
NAME: MOHAMMED N. ABU-HASAN
DATE: _____
LICENSE RENEWAL DATE: DEC. 31, 2025
PAGES OR DIVISIONS COVERED BY THIS CERTIFICATION: _____

MEP ENGINEER:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 | F 319.351.0070
www.InnovativeEngineersInc.com



GENERAL ELECTRICAL DEMOLITION NOTES:

E.C. SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING BID.

THE E.C. SHALL VISIT THE SITE TO VERIFY DEVICES AND EQUIPMENT NOT SHOWN.

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN DEMOLITION REMOVAL, CAPPING, ABANDONING, DISCONNECTING OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.

THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES AND EQUIPMENT BEING REMOVED AND NOT REUSED.

SPECIFIC ELECTRICAL KEYED NOTES - DETAIL A:

◇ EXISTING ZONE CONTROLLER CABINETS TO REMAIN. REFERENCE DETAIL A/E03 FOR ADDITIONAL INFORMATION. (TYPICAL OF 6).

◇ PROVIDE A NEW MAINTENANCE TERMINAL, GALLAGHER 6000 NETWORK CONTROLLER OR APPROVED EQUAL.

ADDITIONAL PROGRAMMING WILL BE REQUIRED BY ACCURATE CONTROLS TO VIEW SEPARATION OF EXTERIOR AND INTERIOR FENCE AT THE TERMINAL. COORDINATE WITH JEROME DAHLKE # 920-748-6603.

ALTERNATE-1

ZONE	INTERIOR LINEAR FEET	EXTERIOR LINEAR FEET
1	586	586
2	494	520
3	468	492
4	490	490
5	478	500
6	494	520
7	584	584
8	450	482
9	472	506
10	506	506
11	418	418
12	474	SALLYPORT
	5914	5604

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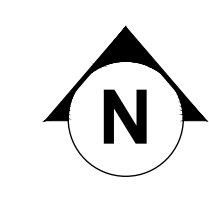
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SHEET TITLE

ELECTRICAL PLAN

E01



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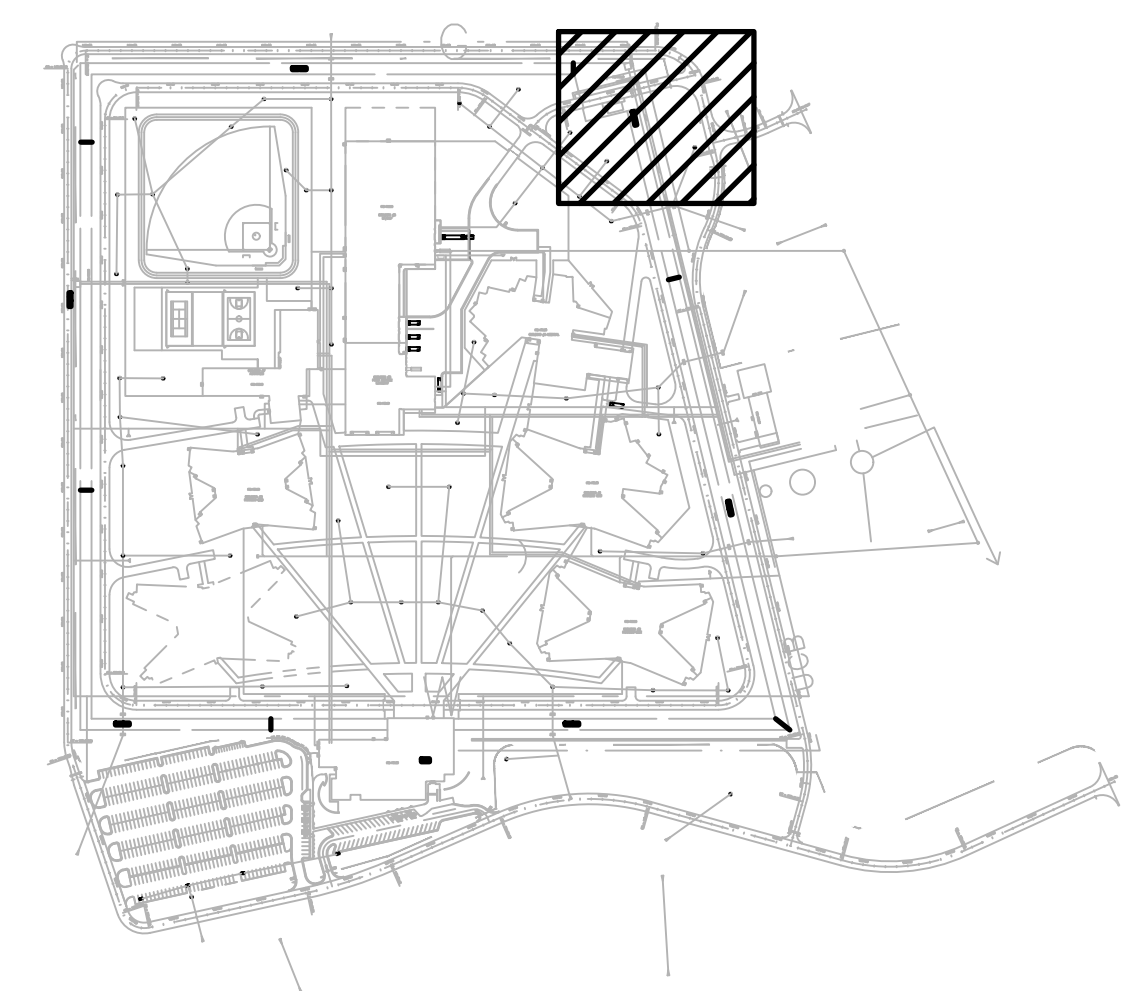
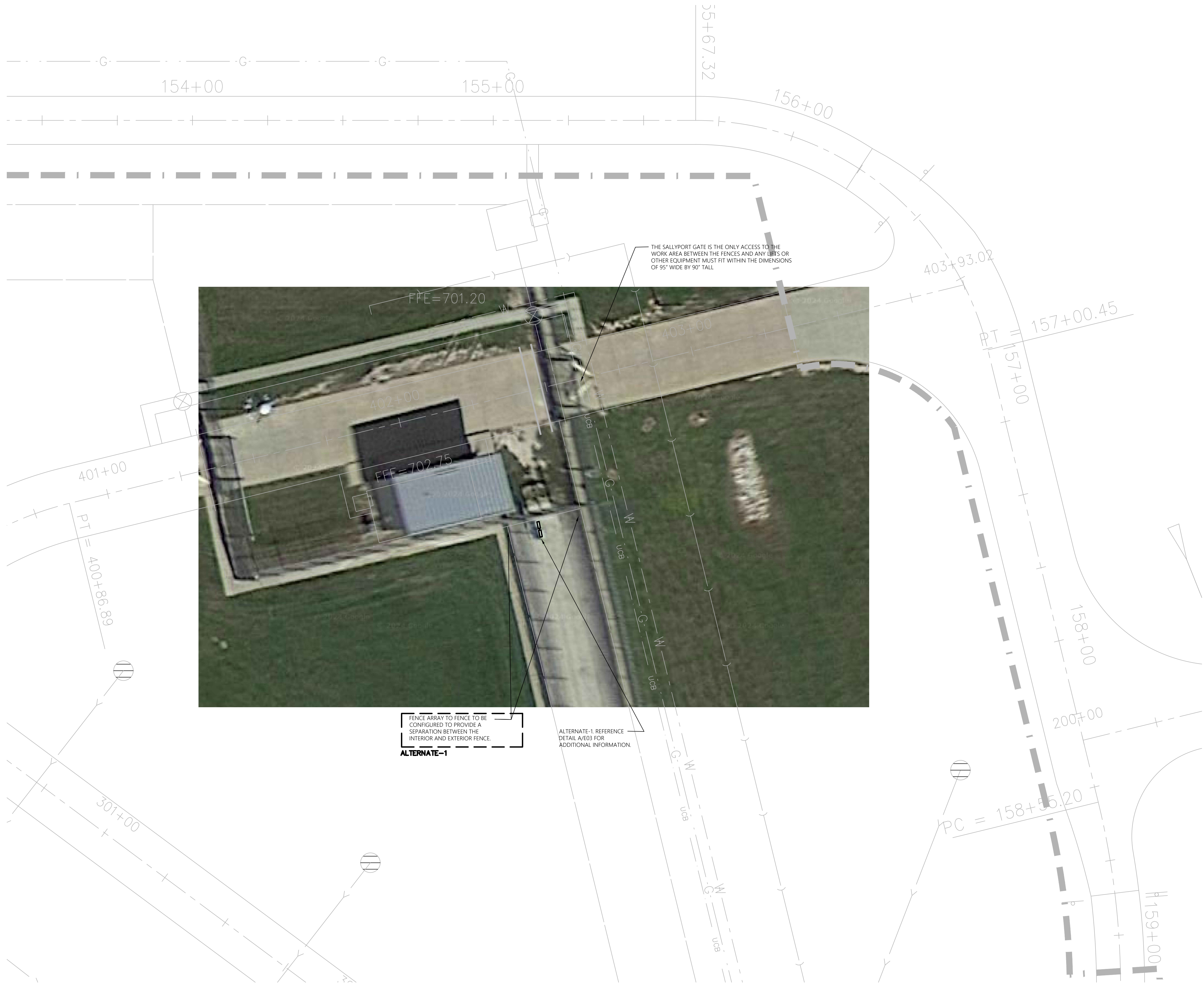
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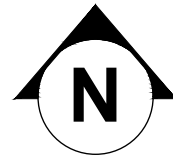
SHEET TITLE

**ENLARGED
 ELECTRICAL
 PLAN**

E02



A ENLARGED ELECTRICAL PLAN
 E02 SCALE 1/16" = 1'-0"



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FENCE CONTROLLER SPECIFICATIONS & FEATURES:

1. EACH CONTROLLER SHALL HAVE THE FOLLOWING FEATURES:
2. 2 ZONE FENCE CONTROLLER. CONTROLLER CAN BE INSTALLED AS STANDALONE OR NETWORKED WITH OTHER FENCE CONTROLLERS. ONBOARD DIPSWITCH CONFIGURATION FOR STANDALONE INSTALLATION.
3. VISUAL FENCE HEALTH AND ALARM STATUS DISPLAY AT THE FENCE CONTROLLER
4. PROVIDE A SERVICE MODE OPERATION FOR EASE MAINTENANCE WITH MAGNETIC KEY
5. HIGH VOLTAGE ZONE SEPARATION SUCH AS IF AN INTRUDER ATTACKS ONE ZONE OF THE FENCE, THE PERFORMANCE OF THE REMAINING ZONES WILL NOT BE AFFECTED
6. LV & HV PULSE SYNCHRONIZATION FEATURE ALLOWS THE FENCE CONTROLLER TO BE INTEGRATED WITH OTHER ELECTRIC FENCES IN CLOSE PROXIMITY
7. SMART BATTERY MANAGEMENT MAINTAINS SITE SECURITY IF AC POWER FAILS, AUTO BACKUP TESTING AND REPORTING FOR MAINTENANCE PURPOSES
8. AUTO TEMPERATURE MONITORING AND PULSE MANAGEMENT FOR RELIABLE OPERATION IN HOSTILE ENVIRONMENTS
9. CONTROLLER DELIVERS 2.3J OUTPUT PER CIRCUIT
10. ALARMS FOR FENCE ZONE, BATTERY MISSING, BATTERY TEST FAILURE, TAMPER, OVER-TEMPERATURE, LV SIGNAL LOSS, CONFLICTING SYNC MASTERS, OR SERVICE MODE ENABLED
11. FIVE DAY HISTORIC ALARM RETENTION
12. SUPPORT FOR EXTERNAL POWER MANAGEMENT OPTIONS
13. VOLTAGE AND TEMPERATURE REPORTING
14. AUTOMATIC SOFTWARE UPGRADE
15. INTERNAL TEMPERATURE MONITORING.
16. STANDARD COMPLIANCE: RCM, FCC, ROHS, CE, ASNZS 60335.2.78:2003 Edition 2.1 Inc A1, A2, A3, IEC 60335-2-78:2002 Edition 2.2 Inc A1:2006 + A2:2013, SANS 60335-2-78:2006 Edition 2.1

GENERAL CONTROL NOTES:

PROVIDE A COMPLETE WORKING NON-LETHAL ELECTRIC SECURITY FENCE. REMOVE TROPHY 6 CONTROLLER AND REPLACED WITH GALLAGHER F32 CONTROLLERS OR APPROVED EQUAL.

EACH ZONE TO CONSIST OF (2) GALLAGHER F32 CONTROLLERS OR APPROVED EQUAL PER ZONE. EACH CONTROLLER HAS 2- CHANNELS TO ALLOW FOR A CHANNEL SIMILAR CONFIGURATION AS EXISTING.

INCLUDE AN ALLOWANCE FOR CONTROLS PROGRAMING FOR THE AMOUNT OF \$3850. PROGRAMING WILL BE PERFORMED BY ACCURATE CONTROLS. REFER TO SHEET E02 FOR THEIR CONTACT INFORMATION.

ALTERNATE-1

GENERAL CONTROL NOTES:

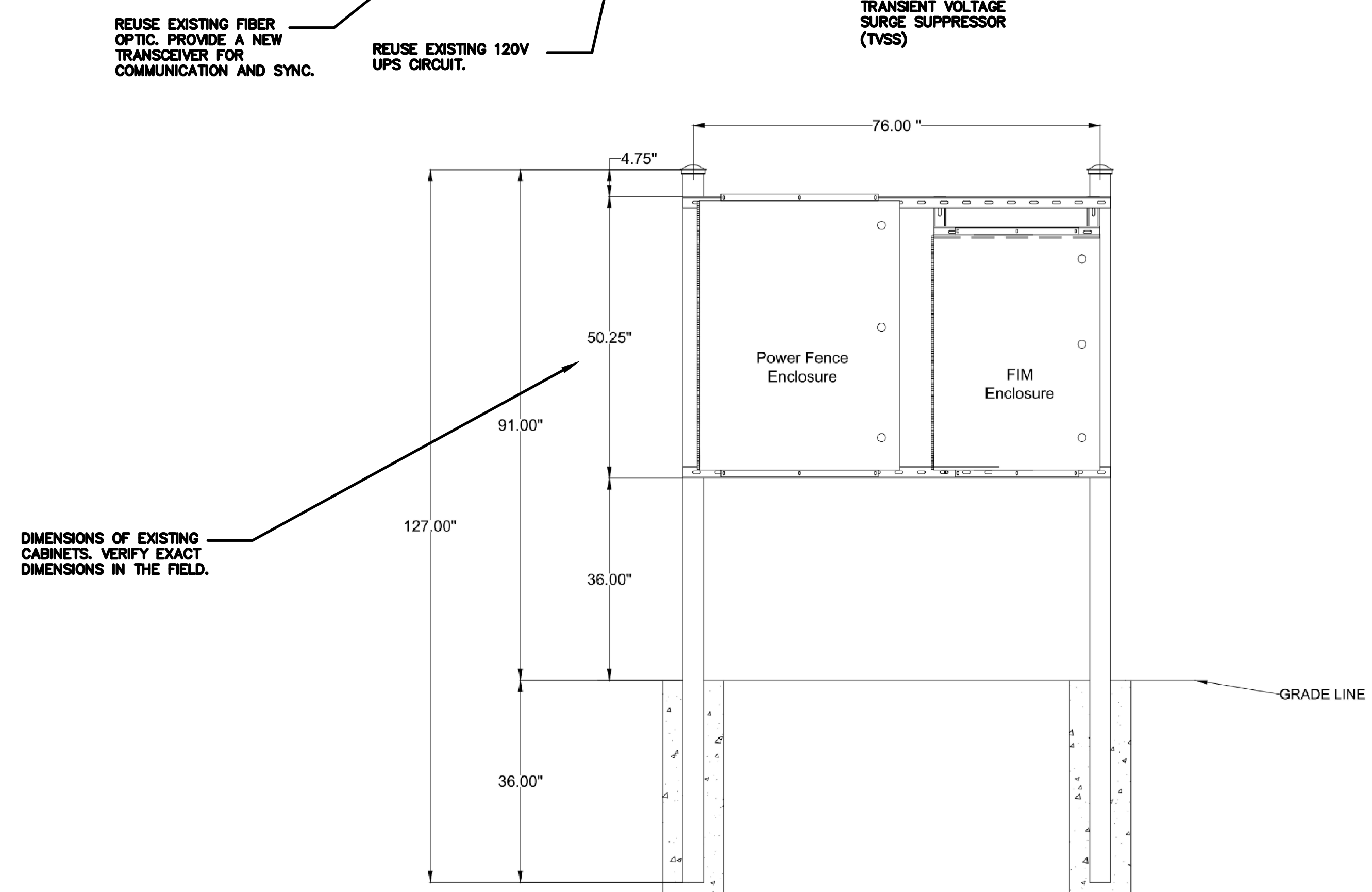
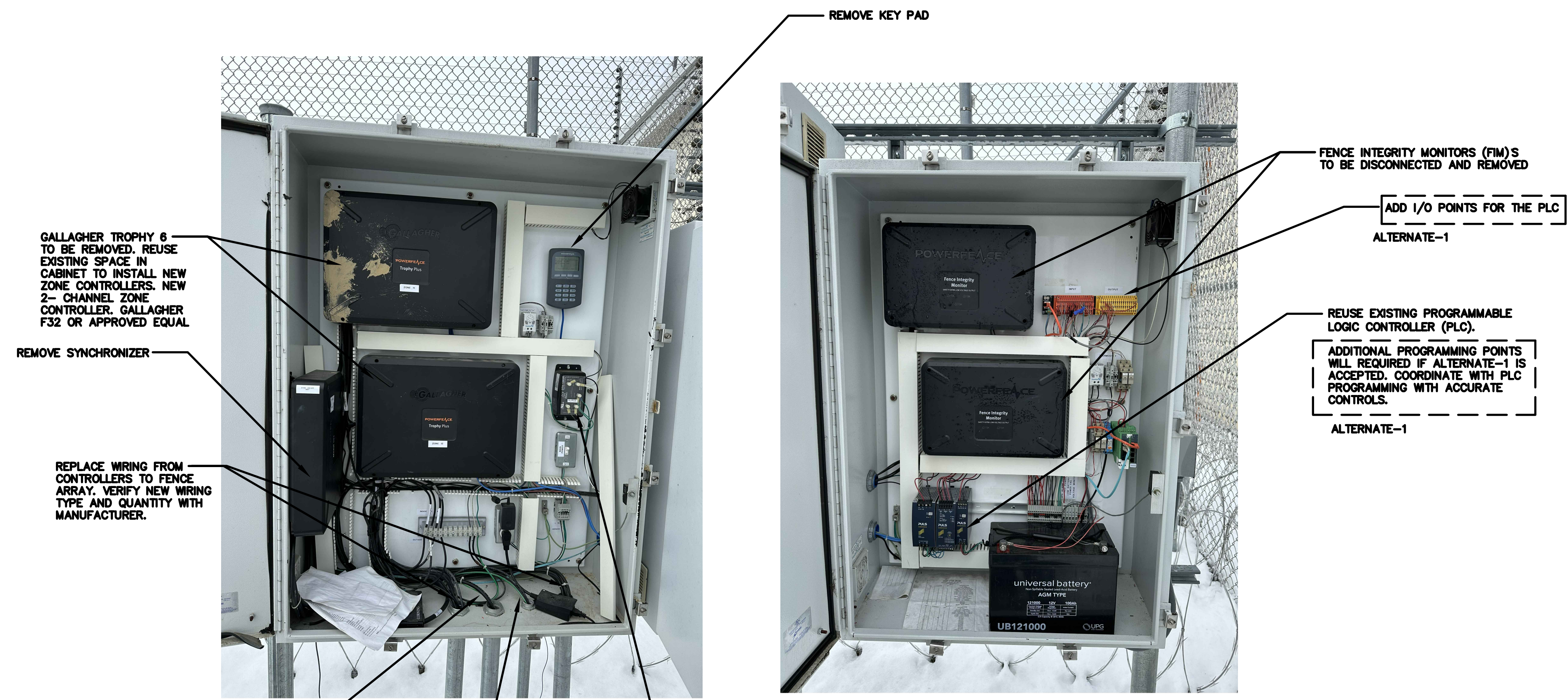
PROVIDE A COMPLETE WORKING NON-LETHAL ELECTRIC SECURITY FENCE. REMOVE TROPHY 6 CONTROLLER AND REPLACED WITH GALLAGHER F32 CONTROLLERS OR APPROVED EQUAL.

EACH CONTROLLER SHALL HAVE THE FOLLOWING FEATURES:

EACH ZONE TO CONSIST OF (3) GALLAGHER F32 CONTROLLERS OR APPROVED EQUAL PER ZONE. EACH CONTROLLER HAS 2- CHANNELS TO ALLOW:

- (2) CHANNELS TOP
- (2) CHANNELS BOTTOM
- (2) CHANNELS OUT RIGGER (EXTERIOR FENCE)

PROVIDE INTEGRATION WITH CAMERA SYSTEM THROUGH EXISTING PLC'S SO THAT CAMERAS ARE REDIRECTED TO TRIGGERED ZONES. ADDITIONAL PROGRAMING WILL BE REQUIRED FOR THE ADDITIONAL CONTROLLERS IF THE ALTERNATE-1 IS SELECTED.



A
E03 EXISTING FENCE CONTROLLER CABINETS
 NOT TO SCALE

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1			

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SHEET TITLE

**ELECTRICAL
 DETAILS**

E03

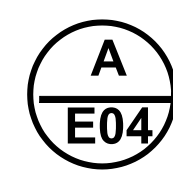
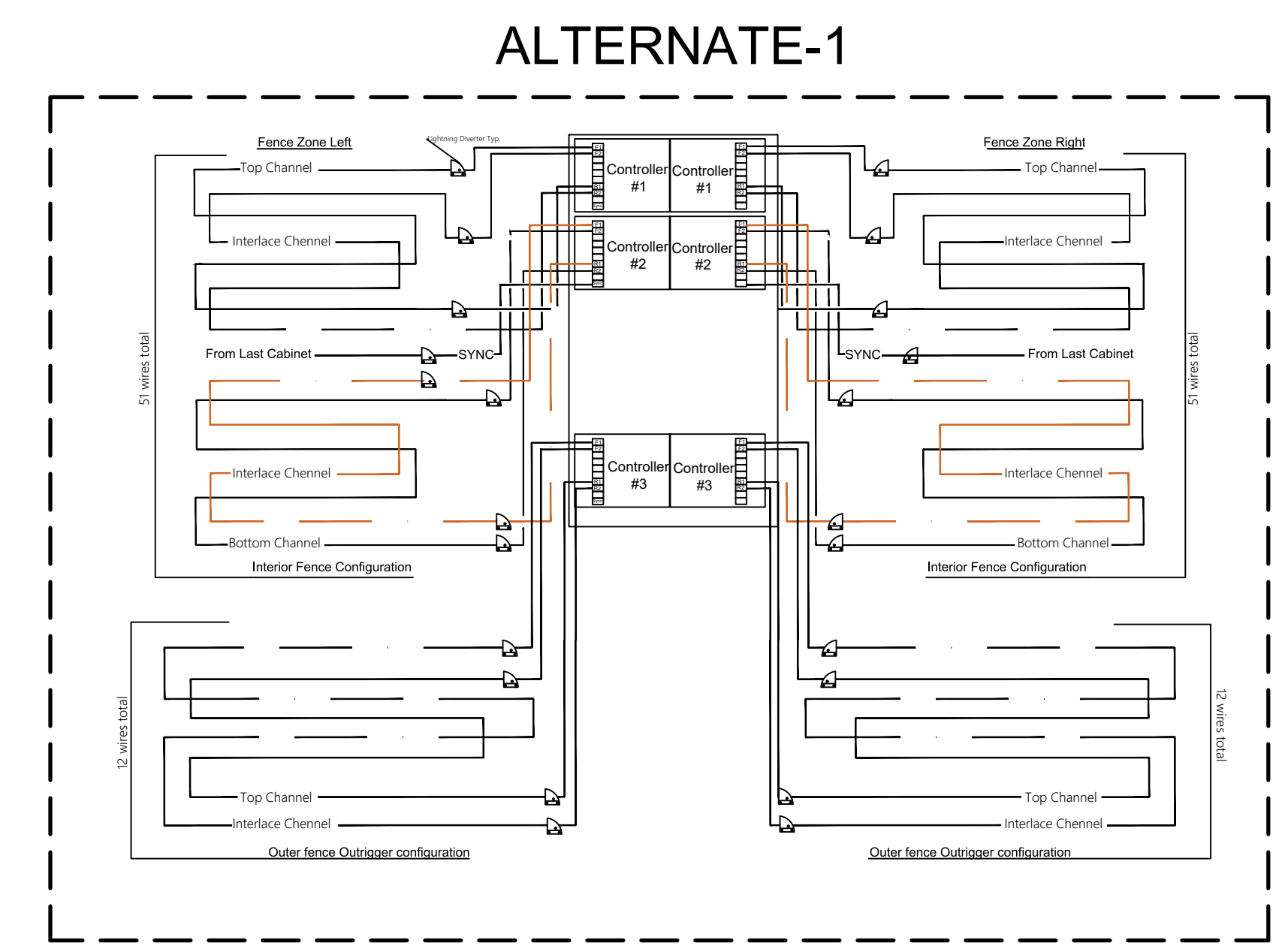
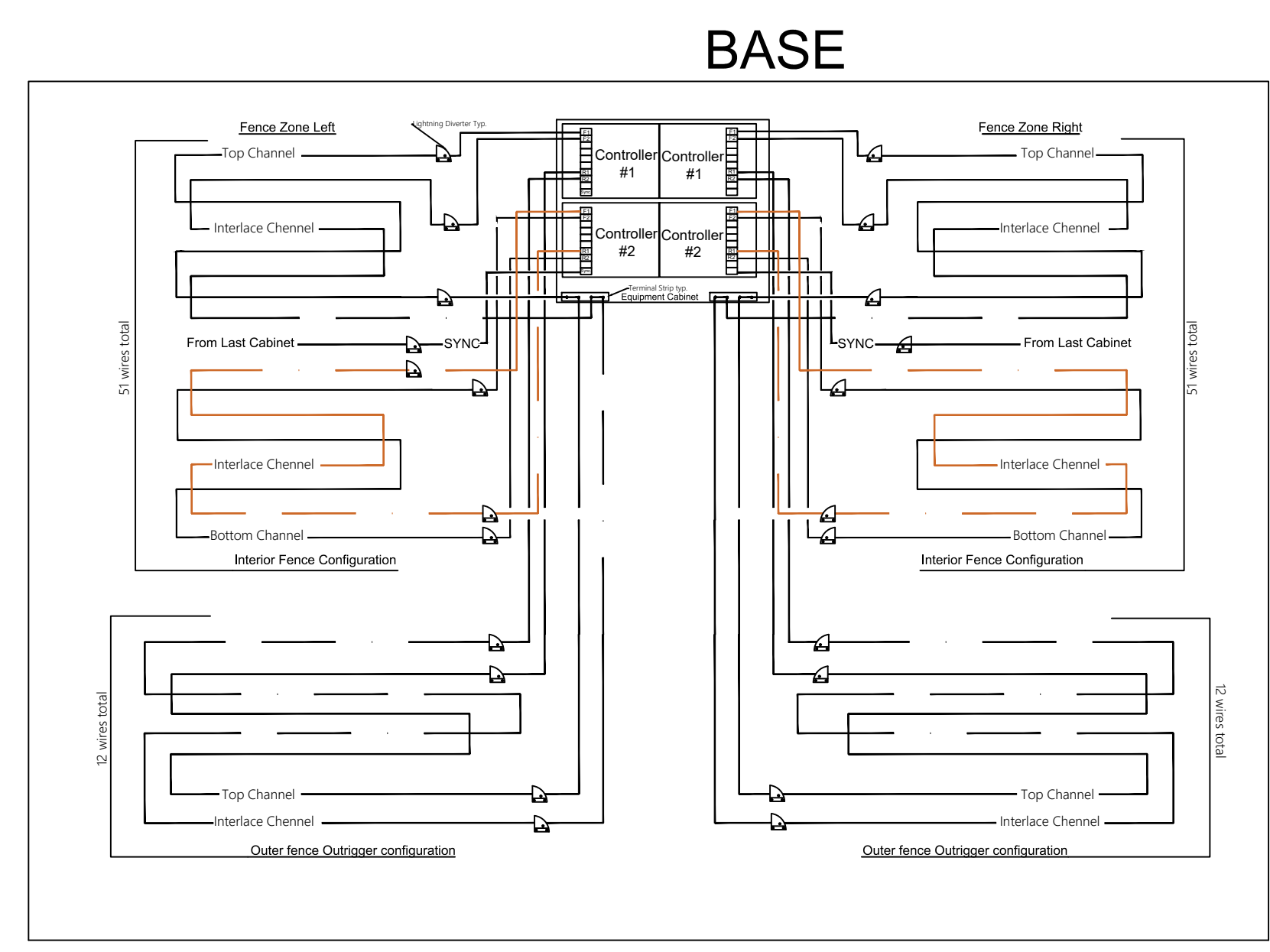
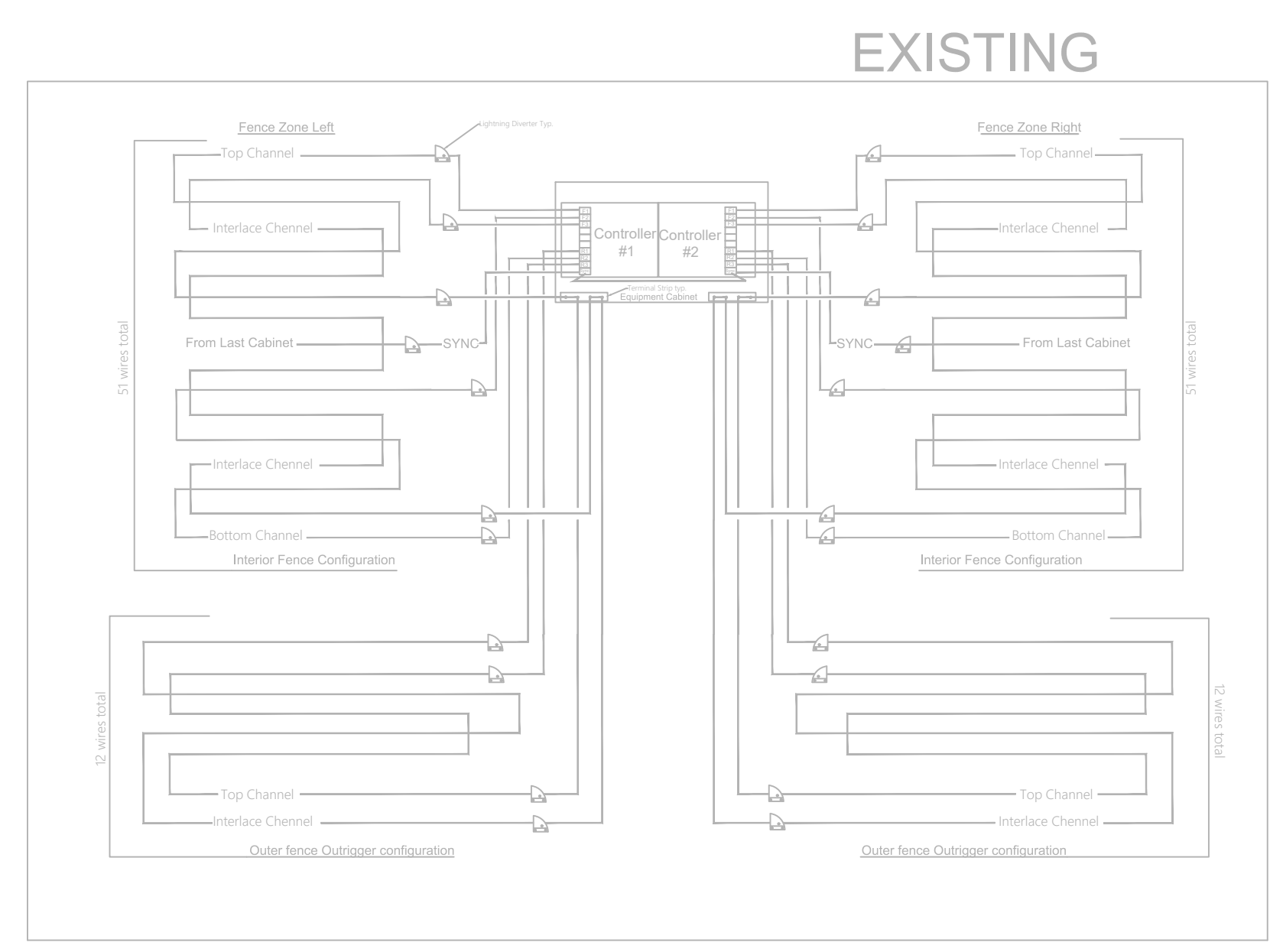


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GENERAL ELECTRICAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.) AND GOVERNING MUNICIPAL, STATE AND LOCAL CODES. ALL MATERIAL SHALL BE NEW AND SHALL BEAR THE U.L. LABEL WHERE APPLICABLE.
2. CONTRACTOR SHALL MAKE ALL NECESSARY CUTTING AND DO ALL THE REPATCHING AS NECESSARY FOR THE PROPER EXECUTION OF THIS WORK.
3. AFTER COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS.
4. WHERE ELECTRICAL CONDUCTORS ARE INSTALLED IN CONDUIT, THE CONDUIT SHALL COMPLY WITH THE N.E.C. REQUIREMENTS.
5. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE ANCHORED TO COMPLY WITH LOCAL CODE FOR WIND RESISTANCE.
6. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
7. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY THE OWNER.
8. LOAD DATA IS BASED ON INFORMATION GIVEN ENGINEER AT TIME OF DESIGN. VERIFY ALL EQUIPMENT AND PANEL SIZES BEFORE ORDERING AND BEFORE INSTALLATION.
9. ALL BRANCH CIRCUITS SHALL HAVE GROUND CONDUCTORS.
10. THE ELECTRICAL CONTRACTOR SHALL PROVIDE, IF REQUIRED, ADJUSTMENTS (±) 6"-0" IN THE LOCATION OF ALL SYSTEM DEVICES, FIXTURES, OUTLETS, PANELS, ETC. IN ORDER TO EXPEDITE THE ELECTRICAL WORK. THE POSITION OF ALL WORK AS SHOWN IS INTENDED TO BE FIXED AND IN THE PROPER LOCATION. SUCH REQUIRED ADJUSTMENT SHALL BE DETERMINED BY THE A/E.

THE ONE-LINE DIAGRAM IS BASED ON THE CALLAHER F12. SUBSTITUTIONS MUST BE PRE-APPROVED AND MUST MEET ALL PROJECT REQUIREMENTS.



FENCE ZONE CONTROLLER ONE-LINE (CONTROL WIRING DIAGRAM IS SHOWN FOR REFERENCE ONLY)

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 FENCE DETERENT SYSTEM
 REPLACEMENT
 2111 330TH AVE
 FT. MADISON, IOWA 52627

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**ELECTRICAL
 NOTES &
 ONE-LINE**

E04

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- FENCE SITE NOTES:**
1. RAZOR WIRE BELOW WEATHER HEADS ARE APPROXIMATELY 7' TALL AND 7" WIDE AT THE BASE AND WILL NOT BE REMOVED.
 2. RAZOR WIRE ABOVE THE WEATHER HEADS MAY BE RELOCATED BY THE FACILITY IF NEEDED, BUT MUST BE BACK IN PLACE AT THE END OF EACH DAY. PLAN ON 30 MINUTES AT THE BEGINNING AND END OF EACH DAY FOR RAZOR WIRE RELOCATION.
 3. FOR A PRE-BID SITE VISIT CONTACT ANDY KROGMEIER 319-372-5432



A
E05

MISCELLANEOUS PROJECT PHOTOS OF THE ZONES, WEATHER HEADS, ZONE WIRING, AND RAZOR WIRE.

NOT TO SCALE



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**PROJECT
PHOTOS**

E05

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