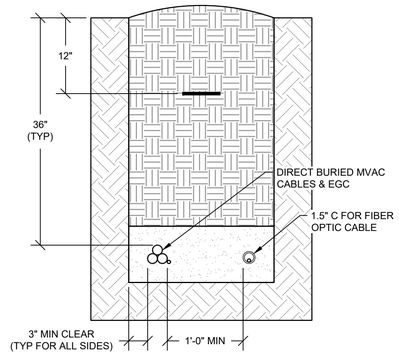
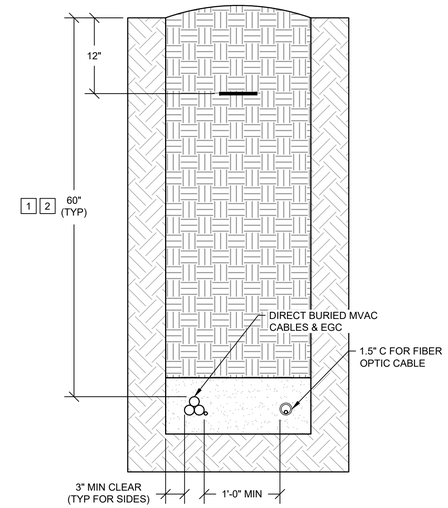
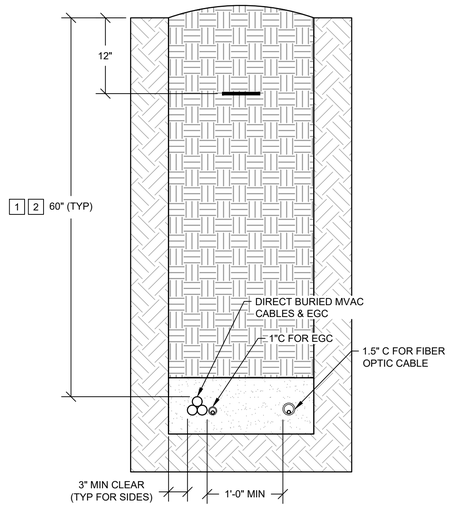
THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22" - THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING



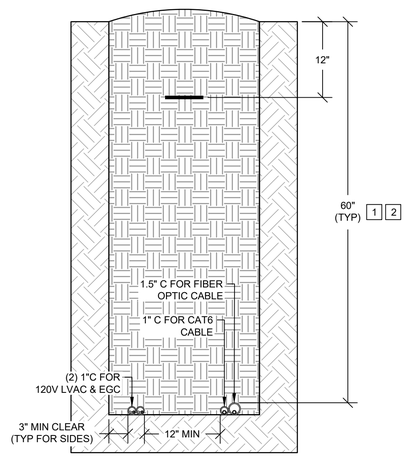
1 UG TRENCH - SINGLE MV CIRCUIT & FIBER (INSIDE SITE FENCE)
SCALE: NTS



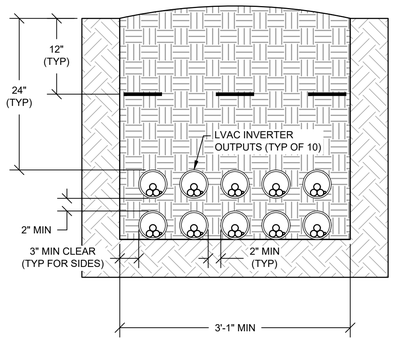
2 UG TRENCH - SINGLE MV CIRCUIT & FIBER (OUTSIDE SITE FENCE)
SCALE: NTS



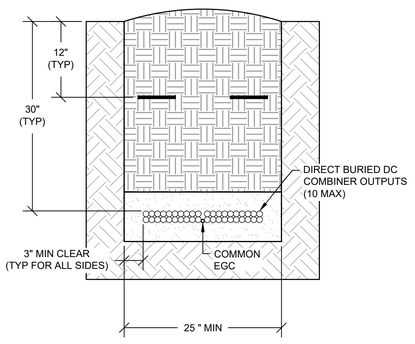
3 UG TRENCH - SINGLE MV CIRCUIT & FIBER (UNDER SITE FENCE)
SCALE: NTS



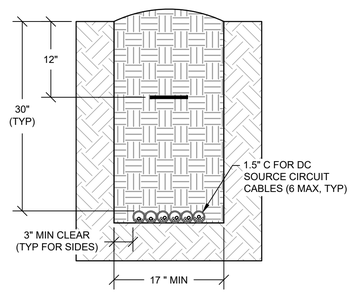
4 UG TRENCH - 120V LVAC CIRCUIT & COMM (OUTSIDE SITE FENCE)
SCALE: NTS



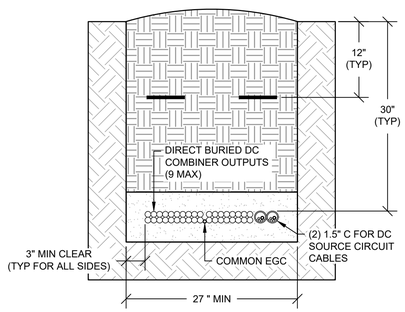
5 UG TRENCH - LVAC INV-X.XX TO SWBD-X
SCALE: NTS



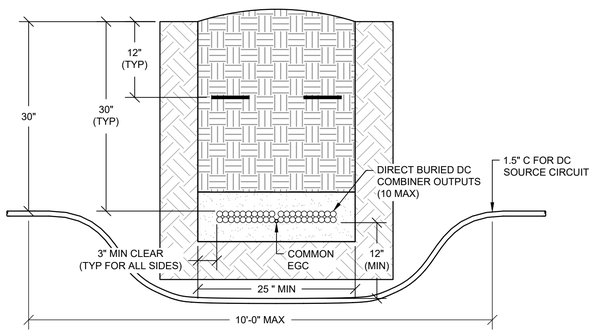
6 UG TRENCH - DC COMBINER OUTPUTS (DIRECT BURIED)
SCALE: NTS



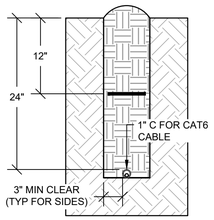
7 UG TRENCH - SOURCE CIRCUIT CABLES
SCALE: NTS



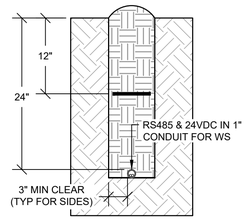
8 UG TRENCH - DC COMBINER OUTPUTS & DC SOURCE CIRCUIT CABLES
SCALE: NTS



9 UG TRENCH - DC COMBINER OUTPUTS & DC STRINGS CROSSING
SCALE: NTS



10 UG TRENCH - CAT6
SCALE: NTS



11 UG TRENCH - WS CABLES
SCALE: NTS

SHEET NOTES:

1. PVC 40 CONDUIT SHALL BE USED BENEATH THE EQUIPMENT PADS. ALL STUB UPS FOR CABLES TRANSITIONING TO DIRECT BURIED SHALL EXTEND 10' BEYOND SWEEP AT THE EQUIPMENT PAD. SEE DETAIL 3 & 6 ON E-605. PVC 80 CONDUIT SHALL BE USED WHERE EMERGING FROM GRADE.
2. COMPACT ALL BACKFILL TO MINIMUM VALUES SPECIFIED IN BELOW THERMAL MODEL TABLE.
3. WARNING TAPE MUST BE DETECTABLE AND SHALL BE 6 INCHES WIDE RED PLASTIC STRIP WITH THE WORDS "CAUTION BURIED ELECTRICAL LINE BELOW" PRINTED IN BLACK. THE TAPE MUST BE INSTALLED FLAT AND DIRECTLY ABOVE CABLES WITH PRINTED SIDE UP.
4. TRENCHES GREATER THAN 18 INCHES IN WIDTH SHALL CONTAIN ADDITIONAL WARNING TAPE. NO MORE THAN 12 INCHES BETWEEN TAPE.
5. TRENCH SIZES MAY VARY, BUT CABLE/TRENCH SPACING SHALL REMAIN CONSTANT.
6. BACKFILL SHALL BE PER GEOTECH STUDY (BY OTHERS). IN PARTICULAR, BACKFILL MATERIALS SHALL BE FREE OF ROCKS AND MATERIALS THAT CAN DAMAGE CONDUIT OR DIRECT BURIED CABLE.
7. NATIVE BACKFILL MAY HAVE ROCKS NO GREATER THAN 3" IN DIAMETER.
8. SELECTED NATIVE BACKFILL BEDDING SHALL BE FREE OF ICE, CLAY, ORGANIC MATTER, ROCKS GREATER THAN 3/8" IN DIAMETER, OR OTHER OBJECTIONABLE MATERIAL, AND SHALL CONFORM TO GRADATION PER ASTM C136. IF REQUIREMENTS FOR SELECTIVE NATIVE BACKFILL CANNOT BE MET, DIRECT BURIED CONDUCTORS SHALL BE ENCASED IN SAND.
9. PER NEC 300.5(J), WHERE DIRECT-BURIED CONDUCTORS, RACEWAYS, OR CABLES ARE SUBJECT TO MOVEMENT BY SETTLEMENT OR FROST, DIRECT-BURIED CONDUCTORS, RACEWAYS, OR CABLES SHALL BE ARRANGED SO AS TO PREVENT DAMAGE TO THE ENCLOSED CONDUCTORS OR TO EQUIPMENT CONNECTED TO THE RACEWAYS.
10. PROVIDE MIN. 3 INCHES OF SELECTED NATIVE BACKFILL OR SAND BEDDING AROUND ALL SIDES OF CABLES/CONDUITS, UON.
11. IMPORTED MATERIALS USED FOR BACKFILL SHALL BE TESTED FOR SOIL THERMAL RESISTIVITY (RHO) VALUE. RESULTS SHALL BE PROVIDED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
13. IF TRENCHING IS REQUIRED NEAR STRUCTURAL PILES, CONSULT STRUCTURAL/GEOTECHNICAL ENGINEER TO CONFIRM GUIDELINES FOR REMEDIATION PRIOR TO EXCAVATION.
14. CONDUIT INSTALLATION MAY BE ADAPTED TO FIELD CONDITIONS AND CONTRACTOR PREFERENCES, PROVIDED THE DEPTH AND THE MINIMUM SPACING ARE MAINTAINED. WHERE CONDUITS CONVERGE TO ENTER EQUIPMENT, THEIR SPACING MAY BE REDUCED BELOW THE MINIMUM FOR A SEGMENT NOT EXCEEDING THE LESSER OF 10' OR 10% OF TOTAL CIRCUIT LENGTH.
15. MAINTAIN A 1' SEPARATION BETWEEN TRENCHES AND DRAIN TILES ON ALL SIDES. A 6" MINIMUM SEPARATION MAY BE UTILIZED IN CHALLENGING AREAS. MAINTAIN CABLE DEPTHS AS SHOWN ON E-604. IF DEEPER DEPTHS ARE REQUIRED, THE ELECTRICAL ENGINEER SHALL BE NOTIFIED FOR AN AMPACITY CHECK.

KEYED NOTES:

1 PER ILLINOIS AIMA, UNDERGROUND ELECTRICAL CABLES LOCATED OUTSIDE OF THE FENCE OF THE SOLAR PANELS SHALL BE BURIED WITH A MINIMUM OF 5' TOP COVER WHERE THEY CROSS FARMLAND.

2 OSHA RESTRICTION FOR TRENCH VIA SLOPING, BENCHING, SHORING, OR SHIELDING SHALL BE FOLLOWED TO AVOID CAVE-INS.

LEGEND:

- ROCK COVER
- UNDISTURBED EARTH
- NATIVE BACKFILL
- SELECTED NATIVE BACKFILL OR SAND
- WARNING TAPE

THERMAL MODEL

TYPE	DC (PV)	MVAC & LVAC
COMPACTION LEVEL (%)	85%	85%
0.0% MOISTURE RHO (°C-cm/W)	243.1	243.1
3.1% MOISTURE RHO (°C-cm/W)	208.9	208.9
MAX AMBIENT SOIL TEMP (°C)	30.55	30.55
LOAD FACTOR (%)	60%	35%

DESIGN COORDINATOR

KNOBELSDORFF
25701 370TH STREET
GOODHUE, MN 55027

PROJECT

138883 CEMETERY SUN, LLC
24638 ADAMS RD.
FREDERICK, IL 62639
40.089020°, -90.442132°

ENGINEER

STELLAVISE
SOLAR ENGINEERING
2535 CAMINO DEL RIO S, STE. 235
SAN DIEGO, CA 92108
IL DESIGN FIRM #184.009162
WWW.STELLAVISE.COM (619) 837-5331

SEAL

LICENSED PROFESSIONAL ENGINEER
BRICE CASEBEER
062-070349
02/27/2026
STATE OF ILLINOIS

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REVISIONS

#	DESCRIPTION	DATE
0	IFC	02/06/2026
1	IFC R1	02/27/2026

ISSUED FOR CONSTRUCTION
FEBRUARY 27, 2026

138883 CEMETERY
SUN, LLC
FREDERICK, IL, 62639

SHEET TITLE

ELECTRICAL DETAILS - UG TRENCHES

SHEET NO.

E-604