DELONG ROSCOE CAR WASH ESS

LOCATION INFORMATION	
LAT/LONG:	(42.429615,-89.014115)
GOVERNING CODES:	
BUILDING	(2015) IBC (INTL. BUILDING CODE)
FIRE	(2015) IFC (INTL. FIRE CODE)
ELECTRICAL	(2014) NEC ELECTRICAL CODE
AHJ	Village of Roscoe
SITE SPECIFICATIONS	
RISK CATEGORY	II
DESIGN WIND SPEED	115
EXPOSURE CATEGORY	C
GROUND SNOW LOAD	25
SEISMIC IMPORTANCE FACTOR	1
SEISMIC RESPONSE COEFFICIENT	TBD
SEISMIC DESIGN CATEGORY	B
CLOSEST ASHRAE STATION:	ROCK COUNTY AP, WI, USA (WMO: 726415)
ASHRAE - EXTREME ANNUAL MEAN MINIMUM DESIGN DRY BULB TEMPERATURE	-24.4°C
ASHRAE - EXTREME ANNUAL MEAN MAXIMUM DESIGN DRY BULB TEMPERATURE	35.2°C
SYSTEM SIZE INFORMATION	
AC RATING (kW)	530.4kW
ESS INFORMATION	
MANUFACTURER	TESLA
MODEL	MEGAPACK 2XL
SYSTEM SPECIFICATIONS	530.4kW/2121.6kWh/650KVA

DEVELOPED BY

CONVERGENCE ENERGY

PROJECT LOCATION

1 VICINITY MAP
NTS

PROJECT LOCATION

2 OVERALL AERIAL MAP
NTS

CHRISTOPHER J. LISKA
062-054524
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

NO.	DATE	REVISION	BY
4	08-19-26	ISSUED FOR PERMIT	ODR
3	07-24-26	RE-ISSUED FOR INTERCONNECTION	ODR
2	02-20-24	RE-ISSUED FOR INTERCONNECTION	MFV
1	09-07-23	ISSUED FOR INTERCONNECTION	ODR

SHEET INDEX

●	NEW DRAWING
Δ	REVISED DRAWING
○	NO CHANGES
-	DRAWING REMOVED
+	REMOVED DRAWING RETURNED TO SET
DATE	ISSUANCE
8/19/2026	*ISSUED FOR PERMIT*

	E0.0 - COVER PAGE	E0.1 - ELECTRICAL NOTES	E1.0 - SITE PLAN - OVERALL	E1.0B - ENLARGED ESS & EQUIPMENT LAYOUT	E1.0C - ESS FEEDER PLAN	E1.0D - ESS DETAILS	E2.1 - SINGLE LINE DIAGRAM	E3.1 - SAFETY PLACARDS	E4.1 - EQUIPMENT SPECIFICATIONS
8/19/2026	●	●	●	●	●	●	●	●	●

3 SHEET INDEX

WIZ O' WASH
11629 MAIN ST
ROSCOE IL 61073

SHEET NAME: COVER PAGE

REVIEWED AND APPROVED BY: CL

DESIGN BY: CL

PROJECT NUMBER 4260003

SHEET NUMBER E0.0

CONTRACT DRAWING REFERENCE

CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM

File Location: C:\Users\ORamirez\DC\ACCDocs\CECo\CES – Delong Roscoe–\Project Files\00 – Project Delivery\ESS Adder\E0.0 COVER PAGE.dwg Designer: ORamirez

GENERAL NOTES:

1. ACTUAL SITE CONDITIONS SHALL BE FIELD VERIFIED AND DOCUMENTED PRIOR TO EXCAVATION OR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON THE DRAWINGS, INCLUDING EXISTING STRUCTURES, AND NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCY IN THE DRAWINGS AND/OR EXISTING CONDITIONS BEFORE STARTING THE WORK.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE REQUIREMENTS OF COUNTY AND REGULATIONS OF APPLICABLE AUTHORITIES HAVING JURISDICTION GOVERNING OR RELATING TO ANY PORTION OF THIS WORK.
3. ALL ELECTRICAL MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF THE FOLLOWING AGENCIES:
   - 3.1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
   - 3.2. INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
   - 3.3. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA)
   - 3.4. NATIONAL FIRE PREVENTION ASSOCIATION (NFPA)
   - 3.5. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
   - 3.6. UNDERWRITER'S LABORATORIES (UL)
   - 3.7. NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA)
   - 3.8. REFER TO OWNER TECHNICAL SPECIFICATIONS FOR FULL LIST OF CODES AND STANDARDS.
4. ALL ELECTRICAL WORK SHALL BE CONDUCTED BY A LICENSED PROFESSIONAL AND APPRENTICES WORKING UNDER THE DIRECT SUPERVISION OF THE LICENSED PROFESSIONAL. ALL WORK MUST BE PERFORMED BY A QUALIFIED PERSON AS DEFINED BY NEC ARTICLE 100. ALL EQUIPMENT IS LISTED AND LABELED PER RECOGNIZED ELECTRICAL TESTING LABORATORY AND INSTALLED PER THE LISTING.
5. FIELD INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO PROJECT MANAGER FOR APPROVAL PRIOR TO MAKING ANY CHANGES. APPROVED CHANGES SHALL BE RECORDED ON THE FINAL RECORD DRAWINGS.
6. ANY AND ALL DEVIATIONS FROM THIS DRAWING SET SHALL BE RECORDED ON THE FINAL RECORD DRAWINGS.
7. INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS IN THE OWNER'S SCOPE OF WORK AND ENGINEERING CRITERIA.
8. INSTALLATION LABOR FORCE SHALL BE RESPONSIBLE FOR NOTING EITHER ON PAPER OR DIGITAL DRAWINGS ANY AND ALL DEVIATIONS FROM DRAWINGS, AND SHALL VERIFY THE ACCURACY OF THESE RECORD DOCUMENTS USED IN THE EXECUTION OF THE WORK. THESE MARKED UP DRAWINGS SHALL BE PROVIDED TO THE PROJECT MANAGER AT THE COMPLETION OF THE PROJECT AND USED AS PART OF THE PROCESS FOR UPDATING THE ISSUED FOR CONSTRUCTION DRAWINGS TO RECORD DRAWINGS.

SITE PREPARATION AND CONSIDERATIONS:

1. A LAY-DOWN YARD OF SUFFICIENT SPACE INSIDE THE FENCE FOR EQUIPMENT DELIVERIES, PERSONNEL PARKING, CONSTRUCTION TRAILERS, EQUIPMENT STORAGE, AND VEHICLE STAGING SHALL BE PROVIDED, OR SECURED SPACE OUTSIDE FENCE SHALL BE DESIGNATED.
2. GRAVEL SHALL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2" STONE IN ORDER TO MAINTAIN A SAFE AND CLEAN PROJECT. AFTER EACH RAINFALL, ANY STRUCTURE USED TO TRAP SEDIMENT SHALL BE INSPECTED AND CLEANED OUT AS NECESSARY. ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED INTO PUBLIC ROADWAYS SHALL BE IMMEDIATELY REMOVED.

SIGNAGE:

1. SIGNS AND MOUNTING METHODS SHALL BE DESIGNED FOR PERMANENT OUTDOOR PLACEMENT AND SHALL BE WEATHER RESISTANT.

PARKING:

1. SUFFICIENT AREA SHALL BE DESIGNATED FOR THE PARKING DURING THE CONSTRUCTION OF THE PROJECT.

LOCAL VILLAGE/CITY (AHJ) SPECIFIC CODES:

INSTALLATION NOTES:

1. ALL METAL SHAVINGS SHALL BE REMOVED FROM ENCLOSURES AND ANY OTHER AREAS WHERE THEY MAY CAUSE OXIDATION OR ELECTRICAL SHORT CIRCUITS.
2. ALL SWITCHES SHALL BE IN THE "OFF/OPEN" POSITION AND FUSES SHALL BE REMOVED PRIOR TO INSTALLATION OF DISCONNECT SWITCHES.
3. FUSES AND SWITCHES SHALL BE INSTALLED SUCH THAT THEY ARE READILY ACCESSIBLE FOR INSPECTION AND MAINTENANCE.
4. FUSES SHALL BE INSTALLED SO THAT THE RATING IS VISIBLE.
5. PROVIDE ALL WORKING CLEARANCES AT NEW AND EXISTING EQUIPMENT PER NEC AND MANUFACTURER REQUIREMENTS.
6. ALL EQUIPMENT SHALL BE MOUNTED, SUPPORTED AND ANCHORED IN A MANNER TO ENSURE IT IS SECURELY SUPPORTED AND ANCHORED, IS FREE OF OBSTRUCTIONS (AND DOES NOT CAUSE OBSTRUCTION), IS SQUARE AND PARALLEL TO ADJACENT STRUCTURES AND LEVEL.
7. FOLLOW EQUIPMENT MANUFACTURER INSTALLATION INSTRUCTIONS.
8. FACTORY AND FIELD-MADE MECHANICAL CONNECTIONS, CONNECTIONS, TERMINATIONS, AND EQUIPMENT HARDWARE SHALL BE TORQUED PER MANUFACTURERS' TORQUE SPECIFICATION, DEVICE LISTING, OR INSTALLATION DOCUMENTATION; AND MARKED WITH TAMPER PROOF TORQUE PAINT. SHARPIES OR OTHER MARKERS ARE NOT ACCEPTABLE FOR TORQUE MARKING.
9. TEMPORARY MEANS SHALL BE PROVIDED AS NECESSARY TO RESIST WIND LOADING AND DAMAGE FOR ALL COMPONENTS NOT YET, OR NOT YET FULLY, INSTALLED BOTH DURING WORKING AND NON-WORKING HOURS.
10. ALL CONDUIT MUST BE ROUTED AND EQUIPMENT INSTALLED WITH EXPANSION AND CONTRACTION CONSIDERED. EXPANSION FITTINGS AND HARDWARE MUST BE USED WHERE APPROPRIATE. PER MANUFACTURERS INSTRUCTIONS AND PER NEC.
11. ALL UNDERGROUND PV SOURCE CIRCUITS, PV OUTPUT CIRCUITS, INVERTER OUTPUT CIRCUITS, AUXILIARY POWER CIRCUITS AND MEDIUM VOLTAGE CIRCUITS SHALL BE IN PVC SCHEDULE 40 OR HDPE CONDUIT, BURIED PER NEC BELOW GRADE. DETECTABLE MARKER TAPE SHALL BE PLACED 12" ABOVE CONDUITS IN TRENCHES CONTINUOUSLY OVER CONDUCTORS.
12. COMMUNICATIONS CABLES SHALL BE RUN IN SEPARATE CONDUITS FROM POWER CIRCUIT CONDUCTORS.
13. RMC CONDUIT SHALL BE PERMITTED WHEN TRANSITIONING FROM BELOW GRADE.
14. CONDUIT SIZE CHANGES MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
15. ALL CONDUITS SHALL ENTER ENCLOSURES FROM BELOW UNLESS SPECIFICALLY STATED OTHERWISE. PV SOURCE CIRCUITS SHALL PENETRATE EQUIPMENT THROUGH CONDUIT, CORD GRIPS, OR OTHER APPROVED METHODS THAT WILL PROPERLY SEAL THE PENETRATION AND MAINTAIN THE WEATHERPROOF RATING OF THE ENCLOSURE.
16. EXTERNAL CONDUITS THAT DO NOT TERMINATE INTO AN ENCLOSURE MUST HAVE ETHER HAVE A 90° ELBOW THAT DIRECTS ALL EXITING WIRES HORIZONTAL OR A WEATHER HEAD. THE OPENING OF THE ELBOW OR WEATHERHEAD MUST BE SEALED WITH DUCT SEAL, ELECTRICAL PUTTY OR EXPANDING FOAM THAT IS LISTED FOR USE WITH THE ELECTRICAL WIRE.
17. INTERNAL ENCLOSURE CONDUIT TERMINATIONS MUST BE COMPLETELY SEALED USING APPROPRIATE MEANS AND METHODS – MULTI-CONDUCTOR COMPRESSION WIRE GLANDS, OR DUCT SEAL, ELECTRICAL PUTTY, AND EXPANDING FOAM (THAT CONTAINS PESTICIDE). THIS INCLUDES WEATHERHEADS. ALL MATERIALS USED HAVE TO BE LISTED FOR USE WITH ELECTRICAL WIRE.
18. CONDUITS SHALL BE SET TO MAINTAIN PROPER CLEARANCES AS SPECIFIED IN THE PLAN SET AND AS REQUIRED BY APPLICABLE CODES AND STANDARDS. BUSHINGS AND THROATS SHALL BE INSTALLED FOR FITTINGS, RACEWAYS, AND OTHER ENCLOSURES PRIOR TO INSTALLATION OF CONDUCTORS AND WIRING SYSTEMS.
19. ALL CONDUITS SHALL BE FREE OF ANY OBSTRUCTIONS AND PROPERLY SECURED BEFORE CONDUCTORS ARE INSTALLED.
20. THE TERMINATIONS OF ALL CONDUITS SHALL BE SEALED WITH A RATED AND LISTED PRODUCT FOR USE IN ELECTRICAL APPLICATIONS WITH ELECTRICAL WIRE IN THE WEATHER CONDITIONS PRESENT.
21. ALL AC AND DC CONDUCTORS SHALL BE INSTALLED IN CONDUIT AND SHALL NOT BE DIRECT BURIED UNLESS SPECIFICALLY PRE-APPROVED BY THE OWNER AND THE ENGINEER OF RECORD.
22. CONTRACTOR SHALL PROVIDE PULL OR JUNCTION BOXES OR HANDHOLES WHERE REQUIRED TO FACILITATE THE INSTALLATION OF WIRING IN ADDITION TO THOSE SHOWN ON THE DRAWINGS. BENDS IN CONDUITS BETWEEN ACCESS POINTS SHALL NOT EXCEED THE EQUIVALENT OF FOUR 90 DEGREE BENDS.
23. PV MODULES SHALL ONLY BE HANDLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION GUIDELINES; AND NEVER BE DEFORMED, WALKED ON, KNEELED ON, SAT UPON, TRANSPORTED ATOP A WORKER'S HEAD OR HELD SOLELY BY THE LONG EDGE OF THE FRAME.
24. ALL FIELD WIRING SHALL BE INHERENTLY COLOR CODED TO INDICATE PHASE, POLARITY AND GROUNDING AS APPLICABLE.
25. CIRCUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL FIELD COORDINATE ACTUAL ROUTING OF CONDUITS, BUT SHALL NOT EXCEED THE MAXIMUM CONDUCTOR LENGTHS IDENTIFIED IN THE PLAN SET. CHANGES FROM THE ESTIMATED LENGTH MAY REQUIRE CONDUCTOR SIZES TO BE INCREASED AND MUST BE APPROVED BY THE SYSTEM DESIGNER.
26. INSTALLATION LABOR FORCE SHALL BE RESPONSIBLE FOR NOTING EITHER ON PAPER OR DIGITAL DRAWING ANY AND ALL DEVIATIONS FROM DRAWINGS, AND SHALL VERIFY THE ACCURACY OF THESE AS-BUILT DOCUMENTS USED IN THE EXECUTION OF THE WORK. THESE MARKED UP DRAWINGS SHALL BE COMMUNICATED TO ENGINEER OF RECORD TO BE USED AS PART OF THE PROCESS FOR THE UPDATING OF ISSUED FOR CONSTRUCTION DRAWINGS TO RECORD DRAWINGS.
27. INSULATION RESISTANCE TESTING SHALL BE PERFORMED ON ALL CONDUCTORS IN CONDUIT PRIOR TO TERMINATING AND TORQUEING THEM.
28. BACKFILL AT CONDUIT STUB UPS AT FIRST RACK DRIVEN PILE FOR AC TRACKER POWER AND DC SOURCE CIRCUITS SHALL BE COMPACTED.
29. ALL EXPOSED NON-GALVANIZED FASTENER THREADS AND ALL EXPOSED CUT ENDS OF SLOTTED CHANNEL (UNISTRUT) SHALL BE COATED WITH COLD GALVANIZED SPRAY TO PREVENT RUST, USING RUSTOLEUM BRAND OR APPROVED EQUAL. OVERSPRAY OF COATING TO ADJACENT SURFACES SHALL BE AVOIDED BY PROTECTING THEM DURING SPRAY OPERATION.

CABLE MANAGEMENT NOTES:

1. ELECTRICAL EQUIPMENT AND ALL CONNECTORS AND ALL CABLE AND WIRE TERMINATIONS SHALL BE LOCATED AT LEAST ONE FOOT ABOVE THE 100-YR. FLOOD PLAIN ELEVATION.
2. WHEN INSTALLED, FOR GROUND MOUNTED SYSTEMS, THE WIRE DRIP LOOPS, RUN WITH PROTECTIVE COVERING, LOWER EDGE SHALL BE A MINIMUM OF OF 18" ABOVE GRADE.
3. EXPOSED PV ARRAY WIRING SHALL BE SECURED WITH MECHANICAL OR OTHER UV/SUNLIGHT RESISTANT MEANS. ALL WIRE MANAGEMENT METHODS MUST BE APPROVED BY SYSTEM OWNER AND ENGINEER OF RECORD.
4. WIRING EXPOSED TO DIRECT RAIN AND DIRECT SUNLIGHT IN BETWEEN SECTIONS OF RACKING (AND BETWEEN MODULES WITH A GAP OF GREATER THAN OR EQUAL TO 1") SHALL HAVE MEANS FOR PROTECTION FROM ABRASION AND UV EXPOSURE. PROTECT AND SUPPORT WITH UV AND WEATHER RATED PROTECTION SECURED TO RACKING.
5. ALL CONDUCTORS THAT PASS OVER METAL EDGES THAT ARE NOT ROLLED MUST BE WRAPPED IN PROTECTIVE WRAP AND SECURED WTTH UV RESISTANT CABLE TIES.
6. ALL WIRES SHALL BE SECURED IN A MANNER THAT ENSURES PROTECTION AGAINST ABRASION, SHARP EDGES, THREADED FASTENERS AND OTHER POTENTIAL MECHANICAL DAMAGE.
7. WIRE RUNS AND CONNECTORS SHALL NEVER BE PLACED IN LOCATIONS WHERE STANDING WATER MAY POOL OR IN THE DIRECT FLOW OF WATER.
8. ALL CABLE TIES USED FOR WIRE MANAGEMENT SHALL BE UV STABILIZED, WITH A MINIMUM TENSILE STRENGTH OF 50 LBS. WHEN USED TO SECURE MORE THAN 20 CONDUCTORS, CABLE TIES SHALL HAVE A MINIMUM TENSILE STRENGTH OF 120 LBS.
9. ALL WIRE TIE ENDS SHALL BE CUT FLUSH TO REDUCE SHARP EDGES WITH THE CAPTURE BODY ROTATED AWAY FROM ADJACENT WIRE INSULATION TO PREVENT ABRASION.
10. PLUG CONNECTORS USED FOR PV SOURCE CIRCUIT HOMERUNS SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS: (1) MAKE AND MODEL MATCHING, (2) RECIPROCAL MANUFACTURER APPROVAL, OR (3) NRTL LISTING FOR COMPATIBILITY WIRE GAUGE OF PV SOURCE CIRCUIT WIRING MUST BE COMPATIBLE WITH THE PLUG CONNECTORS USED FOR ALL HOMERUNS.
11. THE CONDUCTORS USED FOR FIELD-MADE PV SOURCE CIRCUIT HOMERUNS SHALL BE COMPATIBLE WITH THE PLUG CONNECTORS IN WHICH THEY ARE TERMINATED.
12. CABLE MANAGEMENT SYSTEM SHALL BE INSTALLED TO PROVIDE EFFECTIVE SEPARATION OF DC, AC AND COMMUNICATIONS WIRING AS REQUIRED BY AHJ AND NEC REQUIREMENTS.
13. CABLE MANAGEMENT SYSTEM SHALL BE INSTALLED IN A MANNER SO AS NOT TO HINDER SOLAR ARRAY OPERATIONS AND MANAGEMENT, INCLUDING, BUT NOT LIMITED TO, GENERAL ARRAY ACCESS (NO AREAS BLOCKED BY TWO CABLE MANAGEMENT SECTIONS), SOLAR ARRAY EQUIPMENT ACCESS (TRACKERS, CONTROLLERS, DAS COMPONENTS ETC.) AND VEGETATION MANAGEMENT (LAWN MOWERS, WEED EATERS, ETC.).
14. ANY PROPOSED ALTERNATE MEANS TO WIRE MANAGEMENT METHODS OR MATERIALS FROM WHAT IS DESIGNATED IN THE DRAWING SET SHALL BE APPROVED IN ADVANCE BY THE OWNER AND ENGINEER OF RECORD PRIOR TO INSTALLATION.

GROUNDING:

1. ALL EQUIPMENT SHALL BE BONDED AND GROUNDED IN ACCORDANCE WITH NEC AND THE MANUFACTURER'S INSTRUCTIONS.
2. MODULE EQUIPMENT GROUNDING CONNECTION SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS INCLUDED WITH THE PRODUCT LISTING.
3. EQUIPMENT GROUNDING CONDUCTORS SHALL BE ROUTED WITH SOURCE CIRCUIT CONDUCTORS WHEN NOT ROUTED UNDER PV MODULES. AN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC, IS REQUIRED IN EVERY RACEWAY/CONDUIT FOR ALL PV OUTPUT CIRCUITS, INVERTER OUTPUT CIRCUITS, AND AUXILIARY POWER CIRCUITS. GREEN GROUNDING CONDUCTORS SHALL HAVE UV RATED INSULATION WHEN NOT IN CONDUIT.
4. GROUNDING CONDUCTORS IN CONDUIT SHALL BE INSULATED WITH GREEN INSULATION. UNDERGROUND DIRECT BURIED GROUNDING CONDUCTORS SHALL BE COPPER CONDUCTORS.
5. ALL NON-CURRENT CARRYING, EXPOSED METAL PARTS OF THE SYSTEM THAT MAY BECOME ACCIDENTALLY ENERGIZED SHALL BE GROUNDED PER NEC.
6. ALL GROUND LUGS INSTALLED IN AN ENCLOSURE SHALL BE LISTED FOR THE APPLICATION.
7. ALL BELOW GRADE CONNECTIONS SHALL RATED AND LISTED FOR THE APPLICATION.
8. ALL INVERTER / TRANSFORMER PADS SHALL UTILIZE A GROUNDING ELECTRODE SYSTEM CONSISTING OF A GROUND RING CONNECTED TO A MINIMUM OF FOUR GROUND RODS.
9. WHEN GROUNDING CONNECTIONS REQUIRE THE MATING OF DISSIMILAR METALS SUCH AS COPPER TO STEEL OR ALUMINUM, A LISTED CONNECTOR SUITABLE FOR THE SPECIFIC MATERIALS BEING MATED SHALL BE USED. ANTI-OXIDANT SHALL BE USED AT ALL GROUNDING CONNECTIONS.
10. AN EFFECTIVE PATH FOR GROUND-FAULT CURRENT SHALL BE VERIFIED BETWEEN THE PV MODULES AND THE BUSBAR IN THEIR ASSOCIATED EQUIPMENT PRIOR TO SYSTEM COMMISSIONING.
11. BONDING JUMPERS BETWEEN ARRAY RACKING SECTIONS SHALL BE IDENTIFIED FOR THE APPLICATION AND BE OF SUITABLE MATERIAL.
12. ALL RACEWAYS AND CONDUITS SHALL CONTAIN THEIR OWN EQUIPMENT GROUNDING CONDUCTOR.
13. EQUIPMENT GROUNDING CONDUCTORS SHALL BE THE SAME METAL AS THE CIRCUIT CONDUCTORS.
14. WHEN GROUNDING CONNECTIONS REQUIRE THE MATING OF DISSIMILAR METALS, SUCH AS COPPER TO STEEL OR ALUMINUM, CONDUCTIVE OXIDE INHIBITOR SHALL FIRST BE APPLIED TO BOTH CONTACT SURFACES.
15. ALL GROUND LUGS SHALL BE TORQUED TO MANUFACTURER SPECIFICATION.

EQUIPMENT AND MATERIAL NOTES:

1. ALL FURNISHED AND INSTALLED COMPONENTS AND MATERIALS SHALL BE NEW, FREE OF DEFECTS, LISTED FOR ITS PURPOSE, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
2. ALL MATERIALS STORED ON OR OFF-SITE SHALL BE DONE SO IN A MANNER TO PREVENT INTRUSION OF MOISTURE AND DUST/DEBRIS. ALL MATERIALS AND TOOLS DELIVERED TO AND USED ON THE SITE SHALL BE CLEAN, UNDAMAGED AND SEALED FOR PROTECTION.
3. ALL OUTDOOR EQUIPMENT SHALL BE LISTED WITH A RATING OF A MINIMUM OF NEMA 3R.
4. ALL MOUNTING HARDWARE AND FASTENERS SHALL BE RATED FOR OUTDOOR USE AND BE EITHER STAINLESS STEEL, GALVANIZED OR NON-FERROUS.
5. PVC SHALL BE DESIGNED FOR THERMAL EXPANSION AND FROST MOVEMENT, AND IS NOT ACCEPTABLE FOR OUTDOOR ABOVE GROUND APPLICATIONS EXCEPT WHERE TRANSITIONING FROM UNDERGROUND PVC.
6. RACEWAYS SHALL COMPLY WITH APPLICABLE CODE AND STANDARDS AND BE SUITABLE FOR OUTDOOR WEATHER CONDITIONS.
7. EMT IS NOT ACCEPTABLE FOR OUTDOOR OR UNDERGROUND LOCATIONS.
8. ALL EXTERIOR CONDUIT FITTINGS SHALL BE LISTED AS RAIN TIGHT.
9. PV INVERTERS SHOULD HAVE THE FOLLOWING MINIMUM FEATURES:
   - 9.1. LOAD BREAK RATED DISCONNECT HANDLE WITH A MEANS FOR LOCKOUT-TAGOUT (LOTO).
   - 9.2. LOAD BREAK DISCONNECT SHALL ISOLATE BOTH THE POSITIVE AND NEGATIVE OF EACH PV OUTPUT CIRCUIT.
   - 9.3. NEMA 3R AND ABOVE RATED ENCLOSURES ARE RATED ENCLOSURES ARE REQUIRED FOR ALL OUTDOOR LOCATIONS.
   - 9.4. TOUCH-SAFE FUSE HOLDER FOR ALL FUSED DC PV SOURCE TERMINATIONS.
   - 9.5. ALL WIRE AND CONDUIT PENETRATIONS SHALL BE FROM THE BOTTOM SURFACE OF THE ENCLOSURE.
   - 9.6. WIRE COLOR TO BE IN COORDINATION WITH APPLICABLE VERSION OF NEC DC PV CIRCUIT WIRE COLOR SPECIFICATIONS. COLOR IDENTIFICATION MUST BE CONSISTENT THROUGHOUT THE ENTIRE DC SIDE OF PV SYSTEM.
   - 9.7. UNGROUNDED OR FUNCTIONAL GROUNDED NEGATIVE = BLACK
   - 9.8. UNGROUNDED OR FUNCTIONAL GROUNDED POSITIVE = RED
     - 9.8.1. A CONTINUOUS RED OUTER FINISH
     - 9.8.2. A CONTINUOUS RED STRIPE DURABLY MARKED ALONG THE CONDUCTOR'S ENTIRE LENGTH ON INSULATION OF COLOR OTHER THAN GREEN, WHITE, GRAY, OR BLACK
     - 9.8.3. IMPRINTED PLUS SIGNS (+) OR THE WORD "POSITIVE" OR "POS" DURABLY MARKED ON INSULATION OF A COLOR THAT IS NOT GREEN, WHITE, GRAY, OR BLACK, AND REPEATED AT INTERVALS NO MORE THAN 24 INCHES.
   - 9.9. GROUNDED = WHITE
   - 9.10. GROUNDING = GREEN OR BARE
   - 9.11. 277/480V AND 347/600V AC CIRCUIT CONDUCTOR COLOR:
     - 9.11.1. PHASE A = BROWN
     - 9.11.2. PHASE B = ORANGE
     - 9.11.3. PHASE C = YELLOW
     - 9.11.4. NEUTRAL = GRAY
     - 9.11.5. GROUNDING = GREEN OR BARE
   - 9.12. 120/208V AC CIRCUIT CONDUCTOR COLOR:
     - 9.12.1. PHASE A = BLACK
     - 9.12.2. PHASE B = RED
     - 9.12.3. PHASE C = BLUE
     - 9.12.4. NEUTRAL = WHITE
     - 9.12.5. GROUNDING = GREEN OR BARE
   - 9.13. 120/240V AC CIRCUIT CONDUCTOR COLOR:
     - 9.13.1. PHASE A = BLACK
     - 9.13.2. PHASE B = RED
     - 9.13.3. NEUTRAL = WHITE
       - 9.13.3.1. GROUNDING = GREEN OR BARE
10. MEDIUM VOLTAGE WIRE CONDUCTOR COLOR SHALL BE IN ACCORDANCE WITH THE NEC, THE NEUTRAL CONDUCTOR SHALL BE GRAY OR WHITE.
11. OUTDOOR RATED, 2000V, UV RESISTANT, PV WIRE SHALL BE USED ON ALL PV DC CIRCUITS.
12. CIRCUIT BREAKERS CONNECTED TO INVERTER FEEDER CIRCUITS SHALL BE APPROPRIATELY SIZED ELECTRONIC CIRCUIT BREAKERS (UL 3-POLE, GROUP MOUNTED, ELECTRONIC TRIP) AND RATED OPERATION AT INTERNAL ENCLOSURE TEMPERATURE BASED ON WEATHER CONDITIONS PER ASHRAE WEATHER DATA, INCLUDING CONSIDERATION FOR SUNLIGHT EXPOSURE.

LABELING:

1. ALL LABELS SHALL COMPLY WITH ANSI Z535.4-2014. ALONG WITH APPLICABLE IFC, AND NEC REQUIREMENTS. LABELS NOT INSTALLED IN AN ENCLOSURE SHALL HAVE PASSED TESTING FOR OUTDOOR DURABILITY IN DIRECT EXPOSURE TO THE ELEMENTS FOR GREATER THAN OR EQUAL TO 10.000 HOURS WITH LITTLE OR NO DEGRADATION.
2. REQUIRED SAFETY SIGNS AND LABELS SHALL BE PERMANENTLY ATTACHED BY ADHESIVE, OR OTHER MECHANICAL MEANS, AND SHALL COMPLY WITH ARTICLE 690 OF THE NEC AND OTHER APPLICABLE STATE AND LOCAL CODES.
3. ALL ELECTRICAL EQUIPMENT TO BE SERVICED, INCLUDED BUT NOT LIMITED TO COMBINER BOXES, INVERTERS, TRANSFORMERS, DISCONNECTS, AND SWITCHGEAR SHALL BE CLEARLY LABELED WITH WEATHERPROOF LABELS STATING ARC FLASH HAZARD AND SHOCK PROTECTION BOUNDARY INFORMATION IN ACCORDANCE WITH THE MOST CURRENT VERSION OF NFPA 70E.
4. PANELS AND PANELBOARDS SHALL HAVE TYPED DIRECTORIES OF THE CIRCUITS THEY CONTAIN. DIRECTORIES SHALL BE LAMINATED OR INSTALLED IN WATER RESISTANT JACKETS.
5. ALL CONDUCTORS SHALL BE LABELED ON BOTH ENDS, IN ACCORDANCE WITH THE NOMENCLATURE ON THE PLAN SET, USING PRINTED TAGS. THIS INCLUDES INVERTERS, SOURCE CIRCUITS AND PHASE IDS. TAGS SHALL BE SUITABLE FOR THE ENVIRONMENT.
6. THE OUTERMOST PIERS AT BOTH ENDS OF EACH ROW SHALL BE MARKED TO INDICATE ITS POSITION IN ACCORDANCE WITH THE PLAN SET. MARKING MATERIAL SHALL BE PERMANENT AND SUITABLE FOR THE ENVIRONMENT.

QUALITY CONTROL, TESTING, COMMISSIONING AND ACCEPTANCE:

1. FACTORY TEST RESULTS OF EQUIPMENT.
2. IV TRACE TEST: ALL PV WIRE CIRCUITS AT >400 W/M2.
3. PV WIRE AND DC STRING POLARITY TEST
4. VOC TEST (VOLTAGE, OVER CURRENTOPEN CIRCUIT): ALL PV WIRE STRING CIRCUITS
5. IR (INFRA RED) THERMO IMAGING OF ALL ELECTRICAL CONNECTIONS AND TERMINATIONS DURING FULL IRRADIANCE, HIGH CURRENT CONDITIONS, BETWEEN 12N AND 2PM.
6. HIGH POTENTIAL TESTING: ALL AC MV (OVER 600V) CABLES
7. TRANSFORMER TESTING: AS DESCRIBED BELOW.
8. RECLOSER AND SWITCHGEAR CIRCUIT BREAKERS: SEL RELAY SETTINGS, RELAY TESTING, TRIP SETTINGS, AND TEST REPORT.
9. STRUCTURAL AND MECHANICAL TORQUE TESTING OF ALL NUTS, BOLTS AND CONNECTIONS.
10. STRUCTURAL AND MECHANICAL CONNECTIONS: VISUAL TEST AND MARKING OF EACH CONNECTION.
11. WENNER TEST (ASTM G57) FOR ELECTRICAL RESISTIVITY, AS REQUIRED.
12. WITNESS TEST AS PER IEEE 1547 AND AS REQUIRED BY UTILITY.
13. OTHER TESTING REQUIRED BY UTILITY OR AS DESCRIBED IN THE CONTRACT DOCUMENTS.

TESTING PROCEDURES, OTHER

1. COMPACTION TESTING OF SOIL AND GRAVEL
2. PROOF ROLL TEST OF ROADS AND DRIVEWAYS
3. CAST-IN-PLACE (CIP) CONCRETE TESTING
4. PRECAST CONCRETE TESTING
5. INVERTER VENDOR COMMISSIONING
6. DAS / SCADA VENDOR COMMISSIONING

TESTING, CONDUCTED BY THIRD PARTY TESTING COMPANY.

1. LIQUID TYPE: OIL ANALYSIS AFTER 1 -MONTH OPERATION
2. TURNS RATIO TEST
3. PRIMARY WINDING RESISTANCE TEST
4. SECONDARY WINDING RESISTANCE TEST
5. PAD MOUNT TRANSFORMER CHECKLIST (VISUAL INSPECTION AND CHECK CONNECTIONS)
6. INSULATION RESISTANCE TEST

OTHER REQUIREMENTS OF THE QC PLAN FOR COMMISSIONING.

1. PROVIDE THE PASSING CRITERIA FOR EACH TEST.
2. REPLACE HI-POT WITH VLF OR PD TESTING FOR MV CABLES.
3. INCLUDE COMBINER BOX COMMISSIONING, IF APPLICABLE.
4. INCLUDE LV AC SWITCHBOARD/ PANEL BOARD COMMISSIONING.
5. PERFORM ALL TESTING IN ACCORDANCE WITH NETA STANDARD ASSOCIATED WITH SPECIFIC TESTING AND COMMISSIONING ITEMS.

MEDIUM VOLTAGE METER, IF (LOW VOLTAGE METER) AS APPLICABLE.

1. CHECK PTS AND CTS, VISUAL.
2. VERIFY RATIO WITH DESIGN DRAWINGS.
3. TEST VOLTAGE RATIOS OF PTS
4. TEST CURRENT RATIOS OF CTS
5. INSULATION RESISTANCE TEST

CHRISTOPHER J. LISCA
062-054524
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

NO.	DATE	REVISION	BY
4	08-19-26	ISSUED FOR PERMIT	ODR
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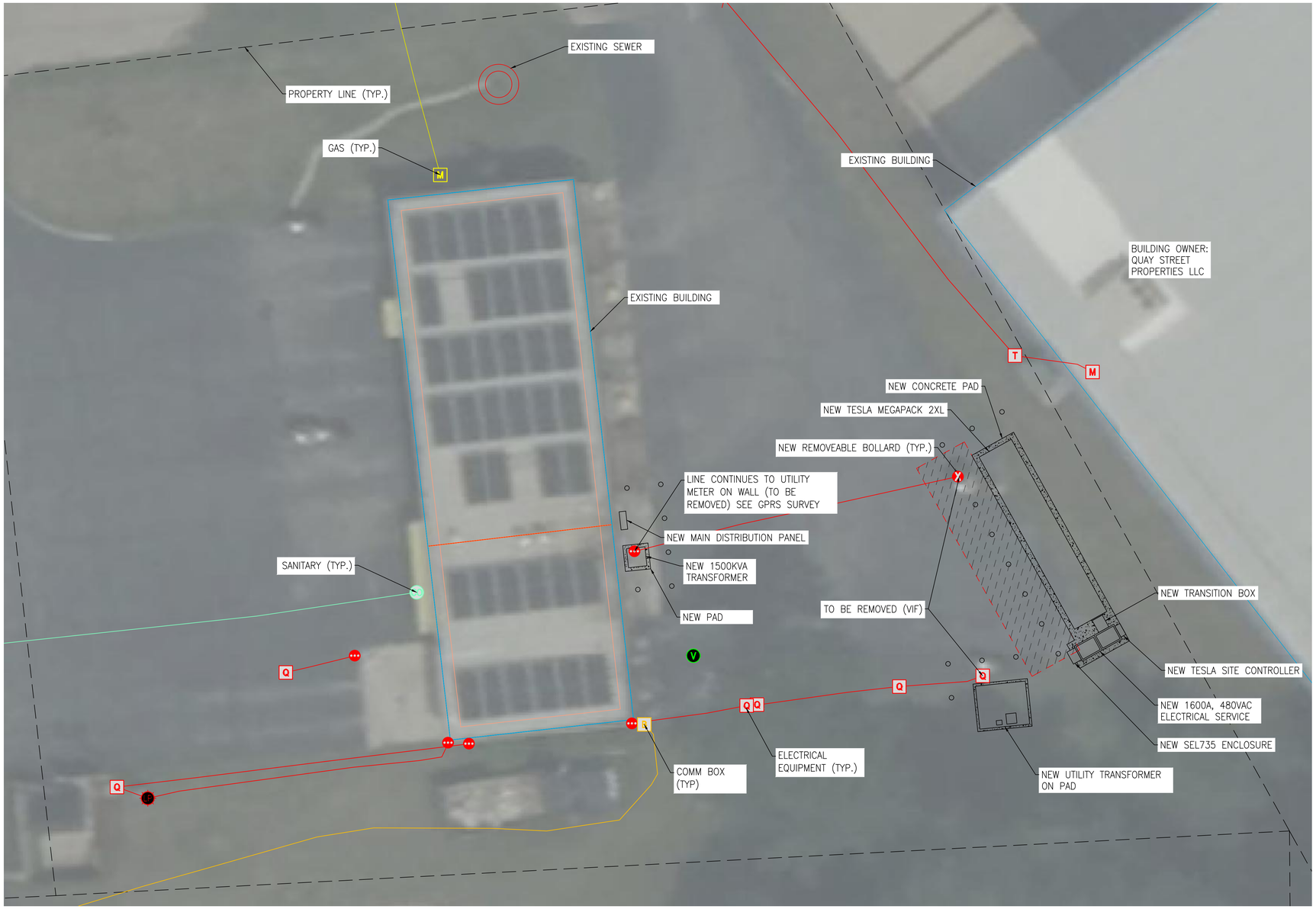
2	02-20-24	RE-ISSUED FOR INTERCONNECTION	MFV
1	09-07-23	ISSUED FOR INTERCONNECTION	ODR

WIZ O' WASH
11629 MAIN ST
ROSCOE IL 61073

SHEET NAME: ELECTRICAL NOTES

REVIEWED AND APPROVED BY:	PROJECT NUMBER 4260003
DESIGN BY:	SHEET NUMBER E0.1
CONTRACT DRAWING REFERENCE	

CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM



1 OVERALL SITE PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. NO NEW INTERIOR OR EXTERIOR LIGHTING PROPOSED AS PART OF THIS PROJECT.
2. NO GRADING OF EXISTING SOIL PROPOSED AS PART OF THIS PROJECT.
3. ALL WORK SHALL COMPLY WITH APPLICABLE RULES, REGULATIONS, AND STANDARDS OF THE AUTHORITY HOLDING JURISDICTION (AHJ).
4. EXISTING FEATURES, INCLUDING TREES AND UTILITIES, ARE TO REMAIN PROTECTED DURING CONSTRUCTION.
5. DISPOSE OF ALL CONSTRUCTION DEBRIS AND SPOILS OFF SITE, IN ACCORDANCE WITH APPLICABLE LAWS, RULES, AND REGULATIONS.
6. UTILITIES SHALL BE PRE-LOCATED AND MARKED ABOVE GROUND PRIOR TO CONSTRUCTION. RACKING POSTS SHALL BRIDGE PRE-LOCATED UTILITIES.
7. FOR DETAILS RELATED TO EROSION PREVENTION, PLEASE REFER TO THE PROVIDED, SITE-SPECIFIC SWPPP & LANDSCAPING PLAN.
8. FOR DETAILS RELATED TO SITE STABILIZATION & MAINTENANCE, PLEASE REFER TO PROVIDED, SITE-SPECIFIC LANDSCAPING PLAN.
9. ARC-FLASH HAZARD WARNING MARKINGS WILL BE PROVIDED ON ELECTRICAL EQUIPMENT THAT IS LIKELY TO REQUIRE EXAMINATION,ADJUSTMENT,SERVICING, OR MAINTENANCE WHILE ENERGIZED TO WARN QUALIFIED PERSONS.
10. WHEREVER CIRCUIT CONDUCTORS ARE SPLICED IN A BOX, ALL EQUIPMENT GROUNDING CONDUCTORS ASSOCIATED WITH THESE CIRCUITS SHALL BE BONDED ("PIGTAILED") TO THE BOX.
11. 3' MINIMUM CLEARANCE WILL BE PROVIDED AROUND ALL FUNCTIONING ELECTRICAL EQUIPMENT.
12. INSTALLATION TO BE IN COMPLIANCE WITH NFPA 855. A PROEJCT SPECIFIC HAZARD MITIGATION ANALYSIS (HMA) MUST BE PREPARED, AND INSTALLATION SHOULD BE IN COMPLIANCE WITH THE PROJECT SPECIFIC HMA.

LEGEND:

TESLA 2XL MEGAPACK

NO.	DATE	REVISION	BY
4	08-19-26	ISSUED FOR PERMIT	ODR
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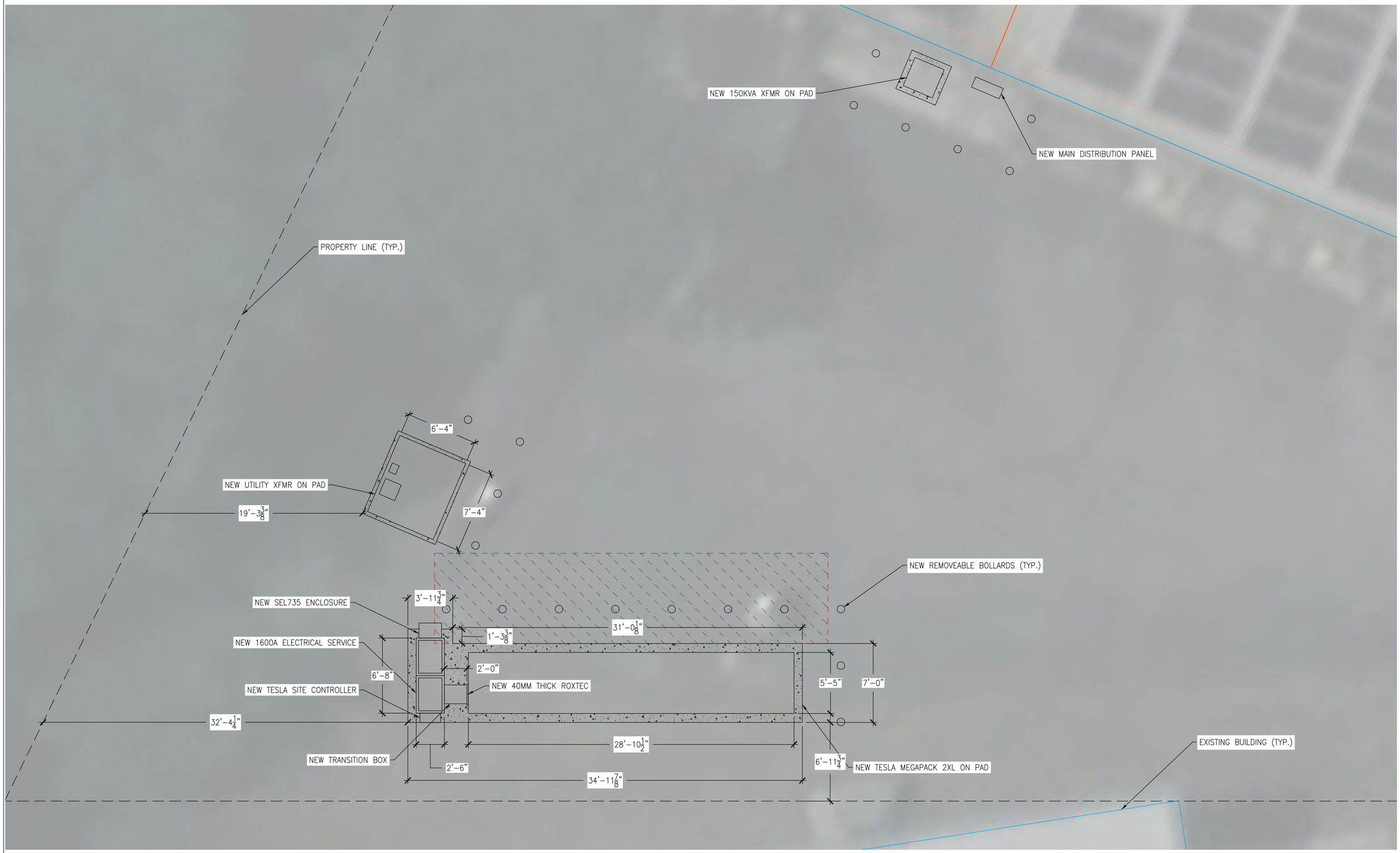
WIZ O' WASH
11629 MAIN ST
ROSCOE IL 61073

SHEET NAME:
OVERALL SITE PLAN

REVIEWED AND APPROVED BY: CL
PROJECT NUMBER 4260003
DESIGN BY: CL
SHEET NUMBER E1.0
CONTRACT DRAWING REFERENCE

CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM



1 ENLARGED ESS & EQUIPMENT LAYOUT

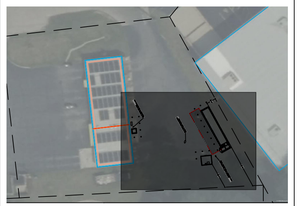
SCALE: 1/4" = 1'-0"

NOTES:

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE REQUIREMENTS OF THE LOCAL AUTHORITY HOLDING JURISDICTION (AHJ).
2. ALL EQUIPMENT IS LISTED AND LABELED PER RECOGNIZED ELECTRICAL TESTING LABORATORY AND INSTALLED PER THE LISTING.
3. ALL OUTDOOR EQUIPMENT SHALL BE MINIMUM NEMA 3R.
4. VERIFY ALL EQUIPMENT AND DIMENSIONS WITH APPROVED EQUIPMENT RECORD DRAWINGS PRIOR TO BEGINNING WORK.
5. EQUIPMENT AND INSTALLATION DETAILS SHALL BE COORDINATED WITH FINAL EQUIPMENT CUT SHEETS.
6. CONDUIT SHOWN IS DIAGRAMMATIC AND DOES NOT REFLECT ANY/ALL OBSTRUCTIONS.
7. CONTRACTOR TO DETERMINE EXACT ROUTE OF CONDUIT BASED ON EXISTING CONDITIONS.
8. CONTRACTOR TO COORDINATE PLANNED CONDUITS ROUTES WITH CONTINENTAL ENERGY SOLUTIONS.
9. CONDUIT MUST BE IDENTIFIED AT BOTH ENDS.
10. PROVIDE A PULL STRING AND SEAL WITH AN APPROVED SEALANT AT BOTH ENDS.
11. ALL WIRE SHALL BE COPPER UNLESS NOTED OTHERWISE (U.N.O.).

LEGEND:

TESLA 2XL MEGAPACK



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WIZ O' WASH

11629 MAIN ST
ROSCOE IL 61073

SHEET NAME:
ENLARGED ESS & EQUIPMENT LAYOUT

REVIEWED AND APPROVED BY: CL

PROJECT NUMBER 4260003

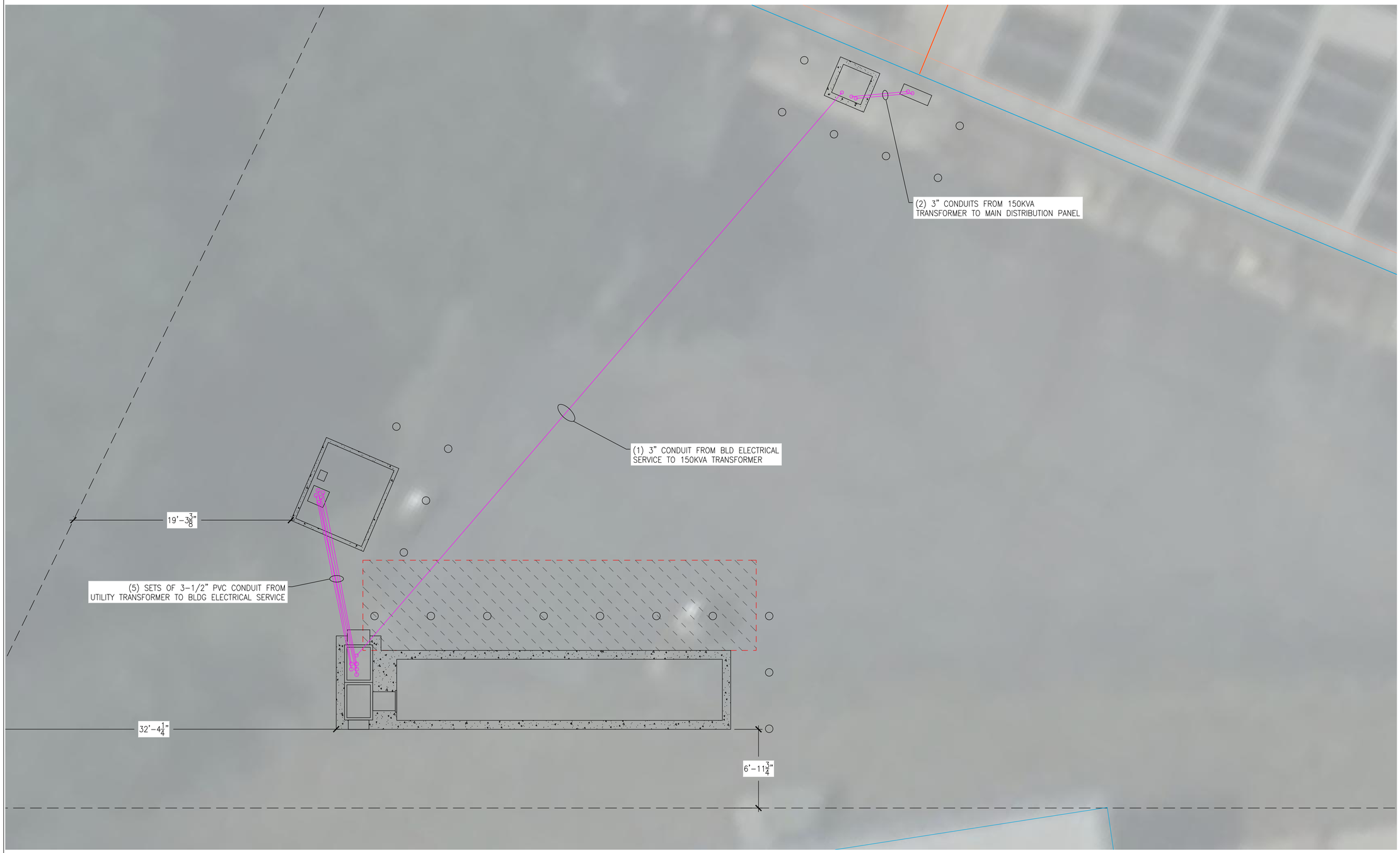
DESIGN BY: CL

SHEET NUMBER E1.0B

CONTRACT DRAWING REFERENCE

CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM

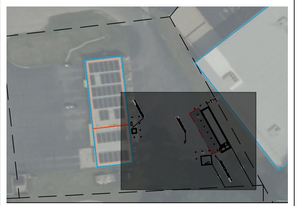
File Location: C:\Users\ORamirez\DC\ACCDocs\CECs\CES - Delong Roscoe-\Project Files\00 - Project Delivery\ESS Adder\E1.0 SITE PLAN.dwg Designer: ORamirez



1 ESS FEEDER PLAN
SCALE: 1/4" = 1'-0"

LEGEND:

TESLA 2XL MEGAPACK



NOTES:

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3. ALL OUTDOOR EQUIPMENT SHALL BE MINIMUM NEMA 3R.
4. VERIFY ALL EQUIPMENT AND DIMENSIONS WITH APPROVED EQUIPMENT RECORD DRAWINGS PRIOR TO BEGINNING WORK.
5. EQUIPMENT AND INSTALLATION DETAILS SHALL BE COORDINATED WITH FINAL EQUIPMENT CUT SHEETS.
6. CONDUIT SHOWN IS DIAGRAMMATIC AND DOES NOT REFLECT ANY/ALL OBSTRUCTIONS.
7. CONTRACTOR TO DETERMINE EXACT ROUTE OF CONDUIT BASED ON EXISTING CONDITIONS.
8. CONTRACTOR TO COORDINATE PLANNED CONDUITS ROUTES WITH CONTINENTAL ENERGY SOLUTIONS.
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11. ALL WIRE SHALL BE COPPER UNLESS NOTED OTHERWISE (U.N.O.).

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WIZ O' WASH
11629 MAIN ST
ROSCOE IL 61073

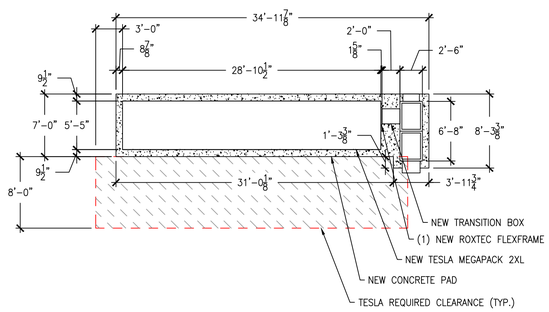
SHEET NAME:
ESS FEEDER PLAN

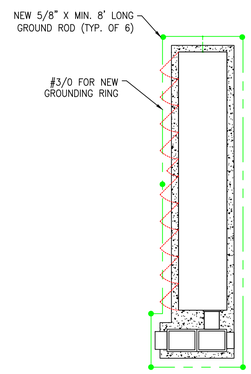
REVIEWED AND APPROVED BY: CL
DESIGN BY: CL
PROJECT NUMBER 4260003
SHEET NUMBER E1.0C
CONTRACT DRAWING REFERENCE

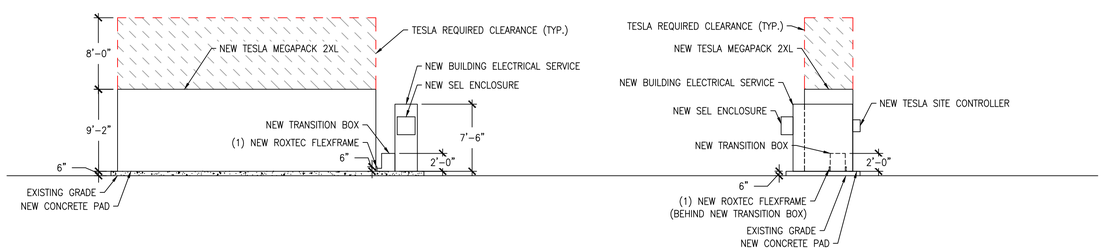
CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM

GENERAL NOTES

1. CONCRETE PAD SIZE SHOWN IS FOR REFERENCE ONLY, FINAL PAD DESIGN TO BE DETERMINED AND STAMPED BY THE SEOR.
2. WHEN POSSIBLE EQUIPMENT TO BE PAINTED RAL9016 TRAFFIC WHITE

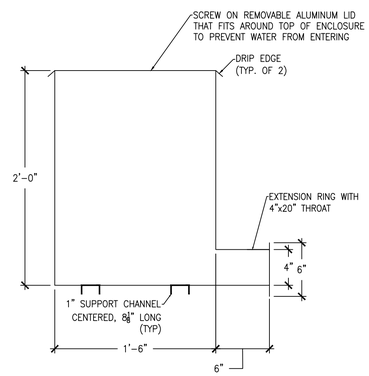


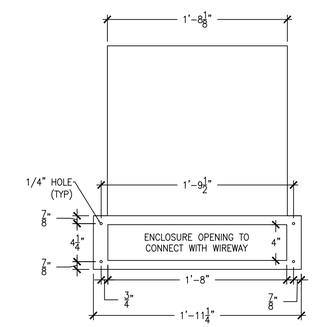




1 OVERALL CONCRETE PAD PLAN

SCALE: 1/8" = 1'-0"





2 TRANSITION BOX SPECIFICATIONS

SCALE: NTS

NO.	DATE	REVISION	BY
4	08-19-26	ISSUED FOR PERMIT	ODR
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WIZ O' WASH

11629 MAIN ST
ROSCOE IL 61073

SHEET NAME:

ESS DETAILS

REVIEWED AND APPROVED BY: CL

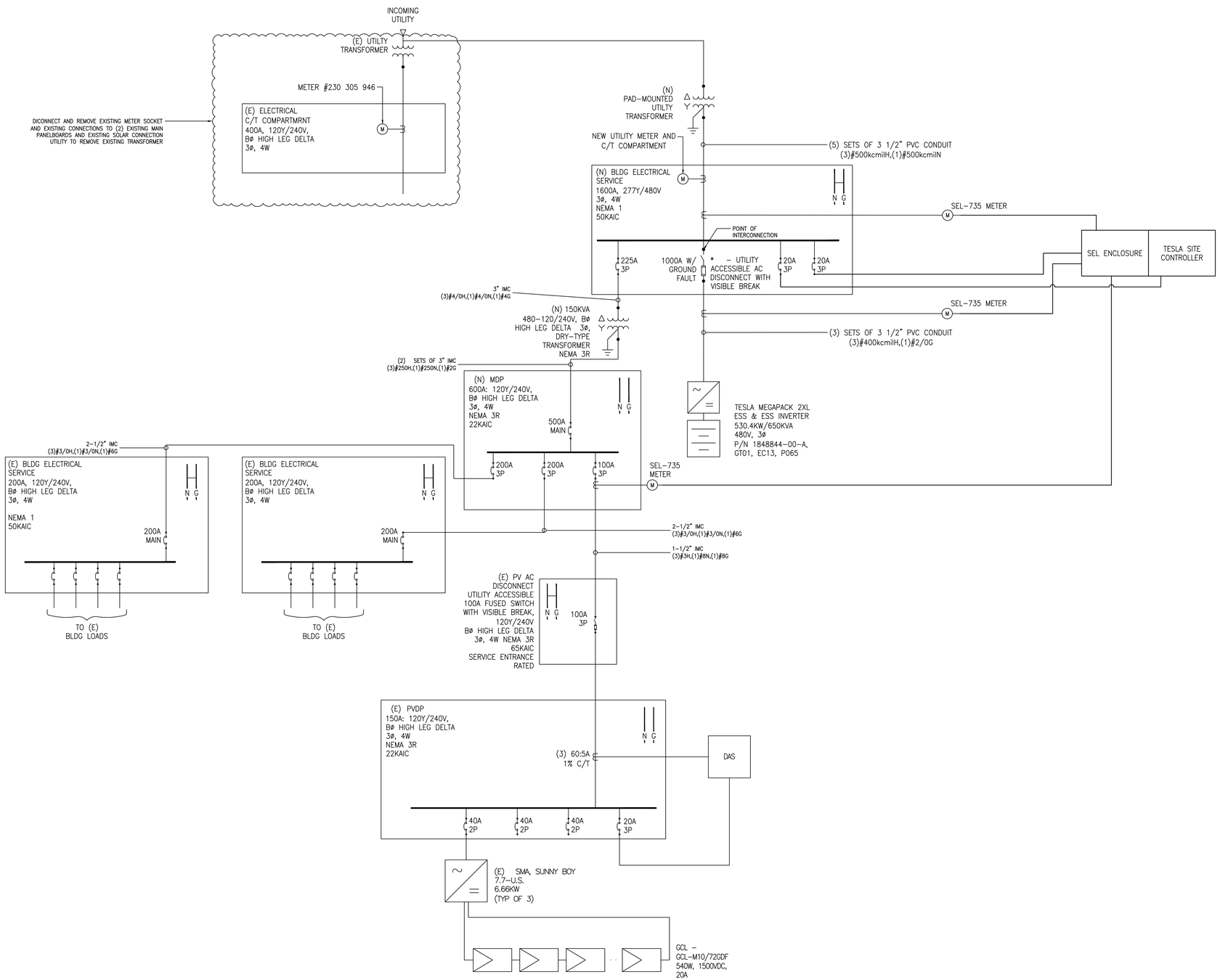
DESIGN BY: CL

PROJECT NUMBER 4260003

SHEET NUMBER E1.0D

CONTRACT DRAWING REFERENCE

CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM



1 ONE-LINE DIAGRAM
NTS

CHRISTOPHER J. LISKA
062-054524
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

NO.	DATE	REVISION	BY
4	08-19-26	ISSUED FOR PERMIT	ODR
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WIZ O' WASH
11629 MAIN ST
ROSCOE IL 61073

SHEET NAME: ONE-LINE DIAGRAM

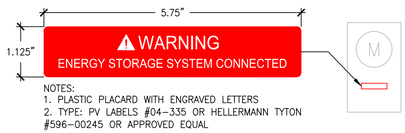
REVIEWED AND APPROVED BY: CL
PROJECT NUMBER 4260003
DESIGN BY: CL
SHEET NUMBER E2.1
CONTRACT DRAWING REFERENCE

CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM

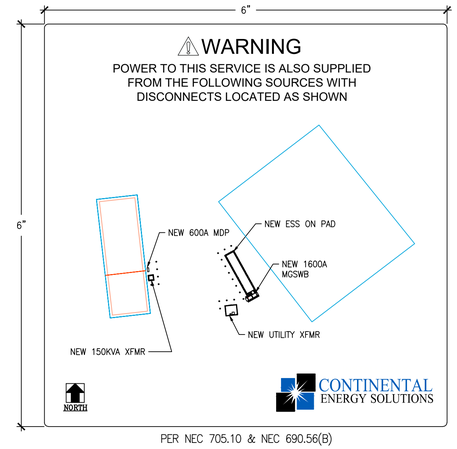
File Location: C:\Users\ORamirez\DC\ACCDocs\CECCo\CES - Delong Roscoe-\Project Files\00 - Project Delivery\ESS Adder\E2.1 ONE LINE DIAGRAM.dwg Designer: ORamirez

LABELING NOTES:

1. ALL NECESSARY SIGNAGE MUST MEET REQUIREMENTS OF ART. 110, 690 AND 705 AS OUTLINED IN THIS SIGNAGE SCHEDULE.
2. ALL SIGNAGE SHALL MEET THE REQUIREMENTS BELOW:
   - BE LABEL TYPE (LAMINATED STICKER WITH POLYESTER FILM) OR PLACARD TYPE (MIN. 1/16" PLASTIC PLACARD WITH ENGRAVED LETTERS)
   - APPLICATION BY ADHESIVE BACK, WITH ADHESIVE SUITABLE FOR LIFE OF PV SYSTEM
   - LISTED TO UL 969
   - REFLECTIVE AND SUITABLE FOR THEIR ENVIRONMENT. SIGNAGE LOCATED OUTSIDE SHALL BE SUITABLE FOR DIRECT SUNLIGHT, RAIN, SNOW, ICE, FOG, AND SALT AIR WITH A MINIMUM TEMPERATURE RATING OF −40 TO 176 DEG FAHRENHEIT.
   - RED BACKGROUND, WHITE LETTERING
   - LETTERING SHALL BE ALL CAPITAL LETTERS WITH ARIAL OR SIMILAR FONT, NON−BOLD
3. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY DIMENSIONS ON SITE PRIOR TO PROCUREMENT TO ENSURE ADEQUATE SPACE FOR APPLICATION OF SIGNAGE
4. NO FIELD MODIFICATION OF SIGNAGE INCLUDING HAND−WRITING LABELS SHALL BE PERMITTED
5. SIGNAGE IN THIS SCHEDULE REPRESENT THE MINIMUM REQUIREMENTS FOR SIGNAGE, CONTRACTOR TO PROVIDE ANY ADDITIONAL SIGNAGE REQUIRED TO FACILITATE A SUFFICIENTLY LABELED SYSTEM

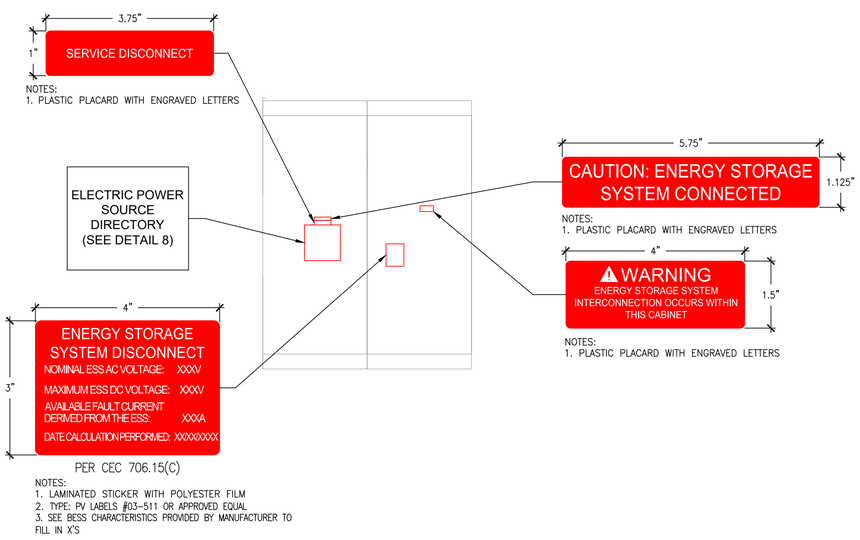


1 UTILITY/ METER LABELING DETAIL
NTS



PER NEC 705.10 & NEC 690.56(B)

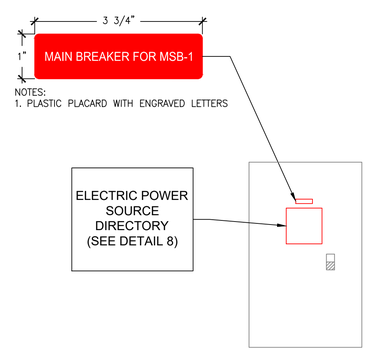
2 BUILDING/STRUCTURE LABELING DETAIL
NTS



PER CEC 706.15(C)

NOTES:
1. LAMINATED STICKER WITH POLYESTER FILM
2. TYPE: PV LABELS #03−511 OR APPROVED EQUAL
3. SEE BESS CHARACTERISTICS PROVIDED BY MANUFACTURER TO FILL IN X'S

4 MICROGRID SWITCHBOARD LABELING DETAIL
NTS



4 AC ENCLOSED C/B LABELING DETAIL
NTS

CHRISTOPHER J. LISKA
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WIZ O' WASH
11629 MAIN ST
ROSCOE IL 61073

SHEET NAME: SAFETY PLACARDS

REVIEWED AND APPROVED BY: CL
PROJECT NUMBER 4260003
DESIGN BY: CL
SHEET NUMBER E3.1
CONTRACT DRAWING REFERENCE

CONTINENTAL ENERGY SOLUTIONS
815 COMMERCE DRIVE
SUITE 280
OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM

File Location: C:\Users\ORamirez\DC\ACCDocs\CECCo\CES - Delong Roscoe-\Project Files\00 - Project Delivery\ESS Adder\E2.1 ONE LINE DIAGRAM.dwg Designer: ORamirez

MEGAPACK 2 XL DATASHEET

TESLA.COM/MEGAPACK

Grid transformation for the world's largest energy projects
- Best-in-class energy density and round-trip efficiency
- Industry-leading power electronics and thermal system performance
- Rapid and cost-effective deployment with factory-assembled and pre-tested solution

Scaled and rigorously tested product safety and reliability
- Comprehensive in-house reliability testing by the leading experts in the industry
- Engineered for safety and performance at every level
- Continuous improvement based on large-scale operational experience

Designed with flexibility and configurability in mind
- Modular architecture that allows for a range of configurations across multiple applications
- Industry experts available to identify site-specific needs
- Integrated solution that allows for battery augmentation over time

POWER AND ENERGY

Megapack duration is configurable. Standard configurations are 2-Hour and 4-Hour durations. Nominal energy is specified at 25°C (77°F).

	AC Power per Megapack	Energy per Megapack
2-Hour	1927 kW	3854 kWh
4-Hour	979 kW	3916 kWh

ELECTRICAL

Nominal AC Voltage	480 V AC 3-phase	
Nominal Frequency	50 or 60 Hz	
Inverter Power per Megapack[1]	2-Hour Max: 4-Hour Max:	2400 kVA 1320 kVA
Round-Trip Efficiency[2]	2-Hour: 4-Hour:	91.7% 93.7%

[1] Scalable from 400 kVA minimum in increments of 50 kVA
[2] Full-depth cycle including all power conversion and thermal system losses, at 25°C (77°F)

WARRANTY

Coverage	All-inclusive, equipment and energy retention
Term	15 years standard, extendable to 20 years

PART NUMBER

1848844-XX-Y Where X is a number between 0-9 and Y is a letter

MECHANICAL AND MOUNTING

Ingress Ratings	IP66/NEMA 3R (Main Enclosure) IP20 (Thermal System)	
Enclosure Dimensions +/- 13 mm (½ in)	Width: 8800 mm Depth: 1650 mm Height: 2785 mm	(346 ½ in) (65 in) (110 in)
Maximum Weight	38,100 kg (84,000 lb)	
Operating Ambient Temperature	-30°C to 50°C (-22°F to 122°F)	

REGULATORY

System is compliant to grid codes and safety standards of all major markets.

System	NRTL listed to UL 1973, UL 9540, UL 9540A, UL 1741 SB, IEC 62619, IEEE 1547
Cells	NRTL listed to UL 1642

CONTROLS AND COMMUNICATIONS

Protocols	Modbus TCP / DNP3 / REST API	
Core Control Modes	Direct Real Power Direct Reactive Power Frequency Support Virtual Inertia	Ramp Rate Control Site Control Power Factor Control Voltage Control

MONITORING

Powerhub	Free-to-use cloud monitoring portal

TESLA

MEGAPACK 2 XL DATASHEET • REV. 1.6 • April 21, 2023

1 ESS SPECIFICATIONS

CHRISTOPHER J. LASKA
062-054524
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

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WIZ O' WASH
11629 MAIN ST
ROSCOE IL 61073

SHEET NAME: EQUIPMENT SPECIFICATIONS

REVIEWED AND APPROVED BY: CL
PROJECT NUMBER 4260003
DESIGN BY: CL
SHEET NUMBER E4.1
CONTRACT DRAWING REFERENCE

CONTINENTAL ENERGY SOLUTIONS
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OAK BROOK, ILLINOIS 60523
WWW.CESNRG.COM