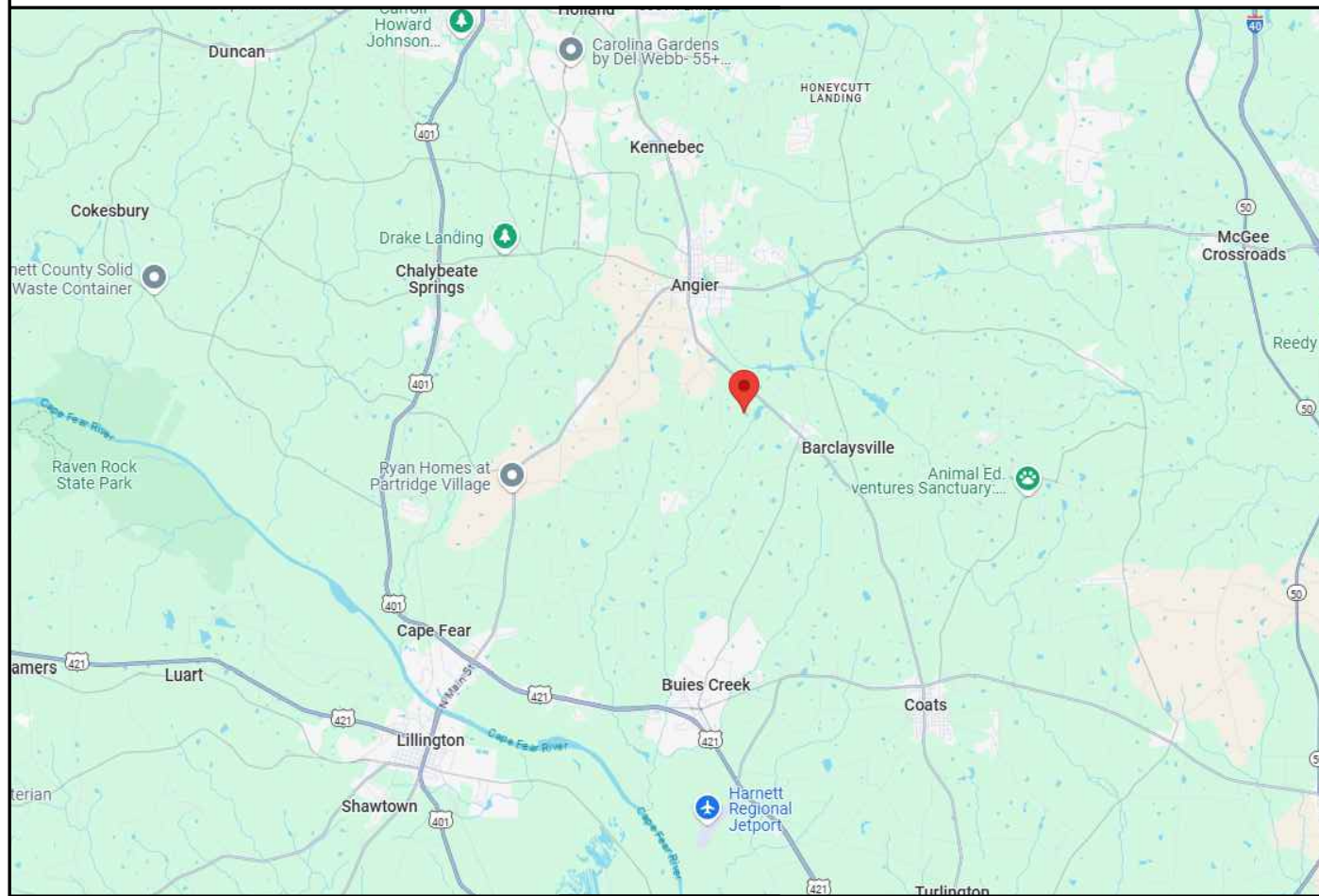
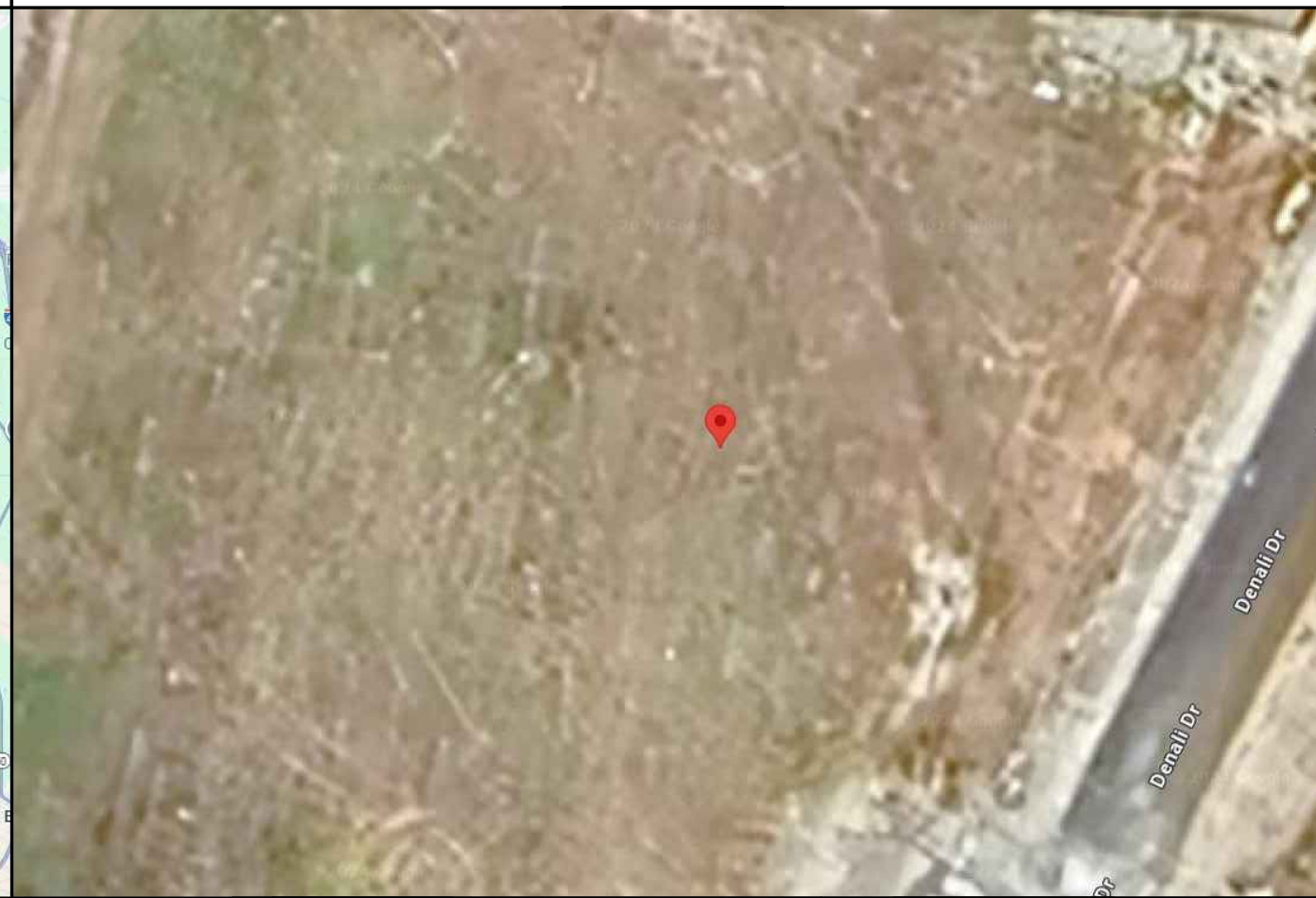


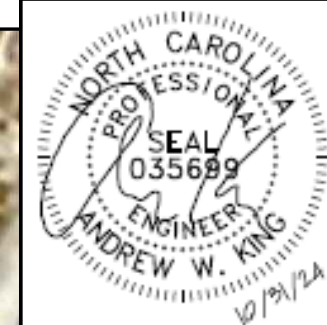
VICINITY MAP



PROPERTY MAP



SEAL:



ENGINEER:

MODEL ENERGY

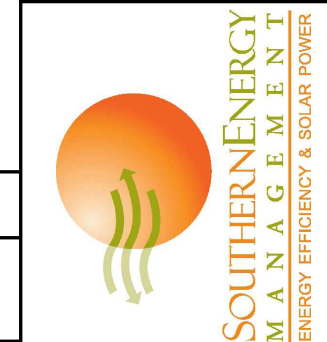
300 FAYETTEVILLE ST.
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919-274-9905
MODELENERGY.COM

P1194

JOB TITLE:

NEW BATTERY ADDITION
MATTAMY HOMES -
RIVERFALL LOT 30
270 DENALI DRIVE
ANGIER, NC 27501

CLIENT:



ISSUED FOR: CONSTRUCTION
DATE: 10/31/24

PROJECT INFORMATION

PV1.1

CONSTRUCTION NOTES

- ALL WORK AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL, STATE, AND LOCAL CODES AND ORDINANCES
- FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS, BEST PRACTICES, AND SPECIFICATIONS
- WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT CONDITIONS
- THE PHOTOVOLTAIC SYSTEM SHALL NOT EXCEED 600 VOLTS OR 800 AMPS
- EACH ELECTRICAL APPLIANCE SHALL BE PROVIDED WITH A NAMEPLATE GIVING THE IDENTIFYING NAME AND THE RATING IN VOLTS AND AMPERES, OR VOLTS AND WATTS. IF THE APPLIANCE IS TO BE USED ON A SPECIFIC FREQUENCY OR FREQUENCIES, IT SHALL BE SO MARKED. WHERE MOTOR OVERLOAD PROTECTION EXTERNAL TO THE APPLIANCES IS REQUIRED, THE APPLIANCE SHALL BE SO MARKED
- WHERE APPLICABLE, GROUNDING ELECTRODE CONDUCTOR TO BE CONTINUOUS. GROUNDING CRIMPS TO BE IRREVERSIBLE
- IN ONE- AND TWO-FAMILY DWELLINGS, LIVE PARTS IN PHOTOVOLTAIC SOURCE CIRCUITS AND PHOTOVOLTAIC OUTPUT CIRCUITS OVER 150 VOLTS TO GROUND, SHALL ONLY BE ACCESSIBLE TO QUALIFIED PERSONS WHILE ENERGIZED.
- PHOTOVOLTAIC SYSTEMS SHALL BE PERMANENTLY MARKED AT VARIOUS EQUIPMENT LOCATIONS TO IDENTIFY THAT A PHOTOVOLTAIC SYSTEM IS INSTALLED AND THAT VARIOUS DANGERS ARE PRESENT.
- EACH PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A PHOTOVOLTAIC SYSTEM DISCONNECT
- WHERE ALL TERMINALS OF A DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A WARNING SIGN SHALL BE MOUNTED ON OR ADJACENT TO THE DISCONNECT
- A PERMANENT LABEL FOR THE DIRECT-CURRENT PHOTOVOLTAIC POWER SOURCE SHALL BE PROVIDED BY THE INSTALLED AT THE DC DISCONNECT MEANS
- A PERMANENT PLAQUE OR DIRECTORY, DENOTING ALL ELECTRIC POWER SOURCES SERVING THE PREMISES, SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION AND AT LOCATIONS OF ALL POWER PRODUCTION SOURCES.
- A PERMANENT PLAQUE OR DIRECTORY SHALL BE PROVIDED DENOTING THE LOCATIONS OF THE SERVICE DISCONNECT MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECT MEANS IF THEY ARE NOT LOCATED AT THE SAME LOCATION.
- ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC SECTION 690.4 (C)

ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
DC	DIRECT CURRENT
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METAL TUBING
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GND	GROUND
I	CURRENT
IMP	CURRENT AT MAXIMUM POWER
ISC	SHORT-CIRCUIT CURRENT
KVA	KILOVOLT AMPERE
KW	KILOWATT
MAX	MAXIMUM
MIN	MINIMUM
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
NOM	NOMINAL
NTS	NOT TO SCALE
PnOM	NOMINAL POWER
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
SN	SOLAR NOON
STC	STANDARD TEST CONDITIONS
TYP	TYPICAL
V	VOLT
VMP	VOLTAGE AT MAXIMUM POWER
Voc	OPEN-CIRCUIT VOLTAGE
W	WATT

CODE REFERENCES

2017 NATIONAL ELECTRIC CODE
2018 NORTH CAROLINA BUILDING CODE
2018 NORTH CAROLINA RESIDENTIAL CODE
2018 NORTH CAROLINA FIRE CODE

SHEET INDEX

PV1.1 - PROJECT INFORMATION
PV2.1 - SITE INFORMATION
PV3.1 - ELECTRICAL INFORMATION
PV4.1 - EQUIPMENT LABELS

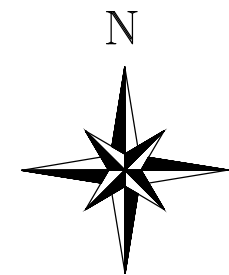
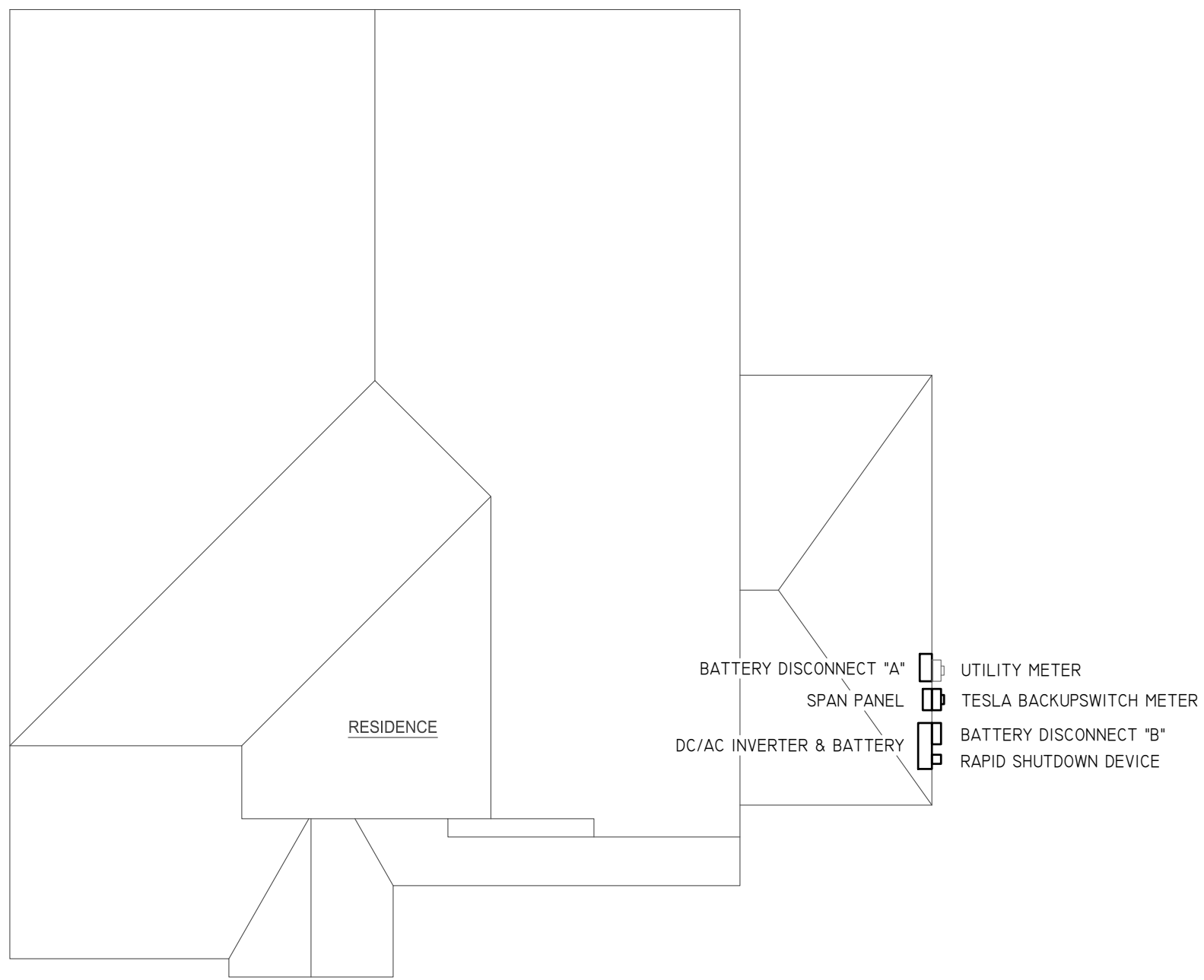
SITE CONDITIONS

ASCE 7-10 WIND SPEED - 115 MPH
EXPOSURE CATEGORY - B
RISK CATEGORY - II

LEGEND

	DISCONNECT SWITCH
	FUSE
	CIRCUIT BREAKER
	EQUIP. GROUND

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 P-1194

JOB TITLE:

NEW BATTERY ADDITION
MATTAMY HOMES -
RIVERFALL LOT 30
 270 DENALI DRIVE
 ANGIER, NC 27501

CLIENT:

SOUTHERN ENERGY
MANAGEMENT
 ENERGY EFFICIENCY & SOLAR POWER

ISSUED FOR:	DATE:
CONSTRUCTION	10/31/24

SITE INFORMATION

PV2.1

DC/AC INVERTER & BATTERY	
MAKE	POWERWALL3
MODEL #	1707000-XX-Y
TECHNOLOGY	TRANS-LESS
NOMINAL BATTERY ENERGY	13.5 kWh
DC INPUT:	
MAX. POWER	20000 WATTS
MAX. VOLT	600 VDC
NOM. VOLT.	60-550 VDC
MAX. CURRENT	13 AMPS
MAX. SCC	15 AMPS
STRINGS INPUTS	6 STRINGS
AC OUTPUT:	
MAX CONT. DISCHARGE POWER	11500 WATTS
MAX CONT. CHARGE POWER	5000 WATTS
NOM. VOLT.	240 VOLTS
MAX. CURR.	48 AMPS
GFP (Y/N)	YES
RPP (Y/N)	YES
GFCI (Y/N)	YES
AFCI (Y/N)	YES
DC DISC. (Y/N)	YES
RAPID SHUTDOWN	AUTOMATIC
PROTECT. RATING	NEMA 4X

CONDUCTOR SCHEDULE													
TAG	CURRENT CARRYING CONDUCTORS				GROUNDING CONDUCTORS				CONDUIT/RACEWAY				NOTES
	QTY.	SIZE	MATERIAL	INSULATION	QTY.	SIZE	MATERIAL	INSULATION	QTY.	SIZE	MATERIAL	LOCATION	
C1	3	6 AWG	COPPER	THWN	1	10 AWG	COPPER	THWN	1	3/4"	NOTE 5	EXT	2,4,5
C2	3	6 AWG	COPPER	THWN	-	-	-	-	1	3/4"	NOTE 5	EXT	2,4,5,6
C3	3	3/0	COPPER	THWN	-	-	-	-	1	1-1/2"	NOTE 5	INTERIOR	2,4,5
XC	-	-	-	-	-	-	-	-	-	-	-	-	3

NOTES:

1. MANUFACTURER PROVIDED, UL LISTED WIRING HARNESS FOR USE ON EXPOSED ROOFS
2. CONDUIT SIZE SHOWN IS CODE MINIMUM. LARGER SIZES ARE ALLOWED.
3. EXISTING CONDUCTORS, FIELD VERIFY
4. EQUIPMENT TERMINAL RATING SHALL BE A MINIMUM OF 75°C AT BOTH END OF CONDUCTOR
5. PVC, EMT, ROMEX, LFNMC & FMC ARE ACCEPTABLE WHEN USED IN ACCORDANCE WITH ARTICLES 330, 334, 348, 350, 352, 356, & 358 OF THE 2017 NEC
6. SERVICE CONDUCTORS SHALL NOT BE LONGER THAN 5' AND SHALL TERMINATE AT THE FIRST POINT OF DISCONNECT.

CRITICAL LOADS PANEL (NEW)	
MAKE	SPAN
MODEL	1-00800-XX
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
BUS RATING	225 AMPS
UL LIST. (Y/N)	YES
MAIN BREAKER (Y/N)	YES
BREAKER RATING	200 AMPS

BATTERY DISCONNECT "A"	
MAKE	EATON
MODEL	N/A
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
AMP RATING	60 AMPS
UL LIST. (Y/N)	YES
FUSED (Y/N)	YES
FUSE RATING	60 AMPS

BATTERY DISCONNECT "B"	
MAKE	EATON
MODEL	N/A
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
AMP RATING	60 AMPS
UL LIST. (Y/N)	YES
FUSED (Y/N)	YES
FUSE RATING	60 AMPS

NOTES:

- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- INSTALL ADJACENT TO METER
- DISCONNECT TO BE READILY ACCESSIBLE TO UTILITY COMPANY PERSONNEL AT ALL TIMES

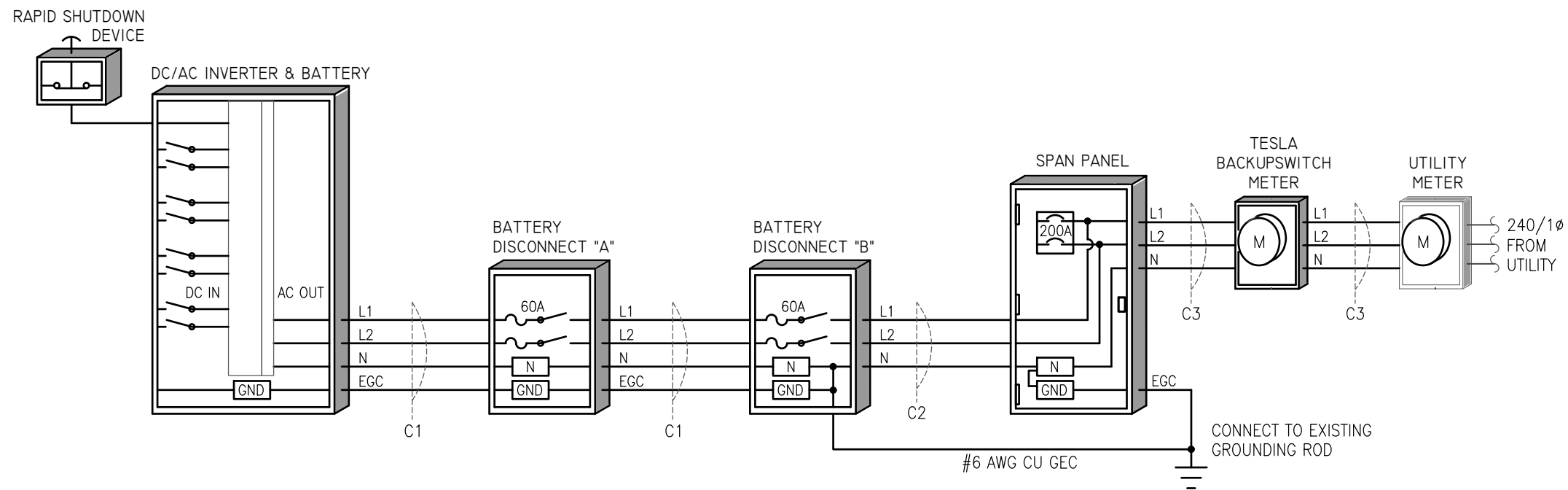
NOTES:

- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- INSTALL ADJACENT TO METER
- DISCONNECT TO BE READILY ACCESSIBLE TO UTILITY COMPANY PERSONNEL AT ALL TIMES
- SERVICE RATED
- PROVIDE NEUTRAL/GROUND BONDING JUMPER
- PROVIDE PLAQUE SHOWING SERVICE DISCONNECT LOCATIONS

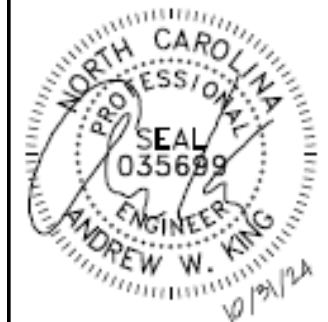
BACKUP SWITCH (NEW)	
MAKE	TESLA
MODEL	BACKUP SWITCH
ENCL. RATING	NEMA 3R
VOLT. RATING	120/240 VOLTS
AMP RATING	200 AMPS
UL LIST. (Y/N)	YES
SHORT CIRCUIT RATING	NO
COMMUNICATION	CAN

NOTES:

- PROVIDE NEW METER BASE TO CONNECT BACKUP SWITCH DEVICE.



SEAL:



ENGINEER:

MODEL ENERGY

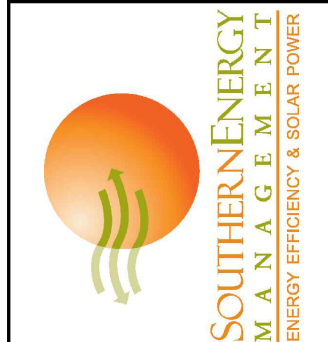
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JOB TITLE:

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CLIENT:



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ELECTRICAL INFORMATION

PV3.1

WARNING
DUAL POWER SUPPLY
 SOURCES: UTILITY GRID
 AND PV SOLAR ELECTRIC SYSTEM

NEC 705.12 (B)(3)
 PLACE ON ALL EQUIPMENT THAT IS SUPPLIED
 BY BOTH POWER SOURCES

WARNING
 ELECTRIC SHOCK HAZARD
 TERMINALS ON THE LINE AND
 LOAD SIDES MAY BE ENERGIZED
 IN THE OPEN POSITION

NEC 690.13 (B)
 PLACE ON PV SYSTEM DISCONNECTING MEANS.

PCS CONTROLLED
CURRENT SETTING: 200 AMPS
 THE MAXIMUM OUTPUT CURRENT FROM
 THIS SYSTEM TOWARDS THE MAIN PANEL IS
 CONTROLLED ELECTRICALLY. REFER TO
 THE MANUFACTURER'S INSTRUCTIONS FOR
 MORE INFORMATION.

NEC 705.13
 PLACE ON PANELS CONNECTED TO GATEWAY

WARNING
 POWER SOURCE
 OUTPUT CONNECTION
 DO NOT RELOCATE THIS
 OVERCURRENT DEVICE

NEC 705.12 (B)(2)(3)(b)
 PLACE ADJACENT TO BACK-FED BREAKER

WARNING
 FED BY MULTIPLE POWER SOURCES

TOTAL RATING OF ALL
 OVERCURRENT DEVICES EXCLUDING
 UTILITY OVERCURRENT
 DEVICE SHALL NOT EXCEED
 AMPACITY OF BUSBAR

NEC 705.12 (B)(2)(3)(c)
 PLACE ADJACENT TO BACK-FED BREAKER

<i>EQUIPMENT LABEL NOTES</i>	
1.	LABELS SHOWN ARE 1/2 THEIR ACTUAL REQUIRED SIZE.
2.	LABEL MATERIAL SHALL BE SUITABLE FOR THE EQUIPMENT ENVIRONMENT.
3.	CONDUIT SHALL BE MARKED WITH REQUIRED LABEL EVERY 10 FEET.

SEAL:



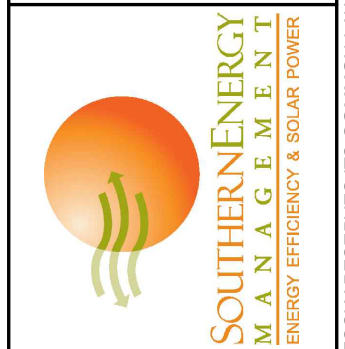
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EQUIPMENT LABELS

PV4.1

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